

*Invited paper to the LAP workshop, Tilburg, The Netherlands, May 3-4, 2017  
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## **LAP revisited: Articulating information as social relation**

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### **Abstract**

The language action perspective (LAP) has contributed with a pragmatic understanding of business processes and information systems (IS). It originated in the early 80's based on pragmatically oriented language philosophy (speech act theory, communicative action theory). This paper investigates the achievements of the LAP tradition and how it can be pushed further. Its focus is on four different conceptions of (digitized) information. The LAP approach departed from a representational view of information dominant in IS (1). Based on speech act theory an alternative view was introduced in IS: information as communicative action (2). The language action perspective made also an important addition to this action view. Communicative actions form patterns of conversations. This is a third view analyzed in the paper: information as conversational move (3). A fourth view of information has been latent and implicit in the LAP tradition: information as establishing social relations (4). An articulation of this relational view is a main contribution of the paper. This view is theoretically and empirically investigated. A case study of digitization of social welfare allowances with six digitized information sets is used for analysis of different kinds of social relations that are established through these information sets. Different categories of communicative actions and social relations emerge through this empirical analysis.

### **1 Introduction**

#### ***1.1 Background and purpose***

The language action perspective emphasizes that the use of language in utterances and writing should be seen as human action with social purposes. This is also the case when digital artifacts are the carriers of information. Digitized information is an element of such language action.

This is an inquiry into the language action perspective (LAP) as developed and applied in the discipline of information systems (IS). It revisits the foundations of LAP and its origins in speech act theory and communicative action theory. The paper investigates what has been achieved and also what has not (yet) been achieved through the LAP approaches. The paper is driven by a knowledge interest to understand and elaborate the essence of LAP and see if this type of theorizing can be pushed further.

It revisits classical texts of LAP and its parent theories (speech act theory, communicative action theory) and investigates paradigmatic knowledge patterns through its historical evolution. This inquiry should not be seen as systematized historical account of the LAP development; confer Weigand (2005; 2006) for brief historical overviews. The language action perspective developed initially as two streams of thought; one American and one European. The main contribution in the American stream is Winograd & Flores (1986) with fore-runners such Flores & Ludlow (1980) and Winograd (1980). This line of thought was later further developed in the Action Workflow approach among other things (Winograd, 1988; Medina-Mora et al, 1992; Denning & Medina-Mora, 1995). This thinking has had a great impact on further LAP development. A key contribution in the European development was Goldkuhl & Lyytinen (1982b), which also coined this kind of approach as “language action view”. There were fore-runners such as Goldkuhl (1980), Lyytinen (1981) and Goldkuhl & Lyytinen (1982a). This line of thought was later elaborated in works such as Goldkuhl & Lyytinen (1984), Goldkuhl (1984), Lyytinen (1987) and Auramäki et al (1988).

Instead of being a historical LAP account, this paper rather uses different contributions of this historical development as key sources to understand and reconstruct core dimensions of the language action perspective to information systems. The author has been an active contributor to LAP for several years, but also a critical investigator. LAP is considered to be an important contribution to IS theory but unfortunately an underestimated and not sufficiently acknowledged IS theory (Lyytinen, 2004). It builds on specialized language philosophy (speech act theory), which might be considered as arcane for many IS scholars.

This inquiry is pursued through four views of information. These views can be seen as evolutionary stages of how to conceive of information:

1. Information as representation
2. Information as communicative action
3. Information as conversational move
4. Information as social relation

The first view (the representational view) is actually what is abandoned from through the language action perspective. A strict representational view is rejected in favor of an action view which is the second view. This action view is what is derived from the language philosophical vantage point of speech act theory. The third view (information as conversational move) is actually an important theoretical addition made by LAP scholars through the meeting of speech act theory and the IS discipline. The fourth view (information as social relation) is what has been latent and implicit through the LAP development, but never made sufficiently explicit and clear. It is claimed to be a great potential to have this view made more articulate. One main contribution of this essay is to articulate this view and make it explicit on a similar footing as the other views.

This endeavor is of course of interest to IS scholars with a LAP orientation in their research. However, the claim of this author is that a view of information as social relation is fundamental to the IS community in inquiring and theorizing information systems. In LAP, there has been a claim to view information as action. As a complement to this view, it is here claimed that the communicative action of expressing some piece of information is to be seen

as a way to establish social relations of temporary or enduring character. Such social relations should not be dismissed in IS practices or in research on IS practices.

## **1.2 Demarcated domain: digitization of information**

This is an essay on information, communication and language use. Even if it addresses such linguistic phenomena, its ambition and scope is not to address these issues in general. It has a clear orientation towards phenomena with IS practices. What is said below should be viewed with this as a background. This is the case even if general theories on language and communication are investigated and some every-day communication examples are used that lie outside the IS context. There is some use of such every-day examples of communication in the text below, but these are only used for the sake of illustrating and clarifying the on-going conceptual discourse. Some empirics from the IS area are presented (section 6) and these data should be interpreted as giving partial empirical validation for the main thesis advocated in this paper.

The scope of this essay is how we conceive of information within the IS discipline. When I use the term 'information' I mean something expressed by the use of language, i.e. something written or spoken. In IS it may of course be something digitally codified, i.e. digitized information as parts of digital artifacts (or what we call these phenomena; IT artifact, IS artifact, IT system, information system or any other similar term). The digitized information may appear on user-interfaces, as records in databases, as actively processed through computer code or transported between different digital artifacts.

Within IS there is not only an interest for digitized information. There is a broader interest for how digital artifacts (with digitized information) appear in their social contexts with communicating and otherwise interacting humans. This means that there is an interest for how digitized information sets<sup>1</sup> are elements of broader communication patterns in social settings. We need to understand not-digitized information when it is related to digitized information. In IS we have thus an interest for digital artifacts in use contexts. But, we have also a broader interest into other practice contexts of digitization, such as planning, design and development, evaluation and change of digital artifacts. In these practice contexts, information and communication are vital, so our interest as IS scholar for information is definitely broader than just such information that has become digitized. Oral communication and written communication in planning, design and evaluation contexts is (or should at least be) of great interest for IS scholars.

IS has broadened its disciplinary scope due to a broadening of digital applications outside organizational settings. However, the scope here is limited to *digitization in professional-institutional settings*. This means that communication in more private social-networking settings is excluded from the analysis. This delimitation is done for practical and empirical reasons. This author's empirical material is restricted to such professional settings and it is these experiences that inform the theoretical analysis in this essay. I also think that there may be some important differences between 1) actors communicating in their main social roles as friends and 2) actors that represent different legal bodies and conduct their communication

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<sup>1</sup> I am using the term 'information set' to denote an utterance (or a set of closely related utterances) or a written text consisting of one or more sentences. An information set is thus a meaningful collection of words used in a communication context.

in the context of some work (i.e. actors in roles as producers respectively clients). I do not want to raise claims that go beyond my knowledge base and limited study domain.

Finally, just some notes here on the used terminology: I use the terms 'speech act', 'communicative action' and 'language action' in a fairly interchangeable way. There are definitely different theoretical origins for these terms; as speech act theory by Austin (1962) and Searle (1969); communicative action theory by Habermas (1984); and language action as in the language action perspective). The use of these terms is mainly reflected in what theoretical context I mainly have an emphasis in the following discussion. I find 'communicative action' to be fairly straightforward term and I would actually prefer using it. However, there might be some habermasian connotations associated with term, which might give some readers problems. The term 'speech act' is however more problematic due to its lexical restriction to one communication medium, namely speech. This has been observed by Lyons (1981) who would like to replace 'speech act' with 'language act'. However, I do not interpret that Austin and Searle deliberately excluded written communication from the domain of their theoretical analysis. This means that 'speech act' should be interpreted in a broad and inclusive way in the following. Lyons (1981 p 172) accentuates: "It must constantly be borne in mind, however, that 'speech act' ... is intended to cover the production of both written and spoken language". The term 'language action' can be found to be fairly straightforward. It is important to note it is not language that is acting; there are actions performed through the use of language.

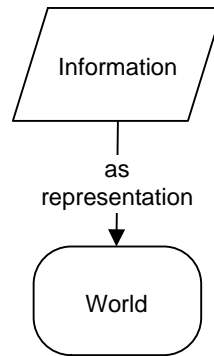
## **2 Information as representation: what departed from**

Research efforts are responses to something perceived as problematic as pointed out in the pragmatic inquiry view (Dewey, 1938). LAP can be seen as a response to what is comprehended as a too restricted view of information in contemporary IS research. This is a view that emphasizes the fundamental descriptive function of information. But is it possible to deny that information is used to inform people about states of affairs? This may seem to be a counterfactual position.

The position of LAP is to refuse the totalization of descriptive claims concerning information. This position is based on the insights from Austin (1962) about the *descriptive fallacy* concerning language use; i.e. the misconception that we use language purely or mainly for descriptive purposes and that its validity can only be resolved through assessing the truth or falsity of such statements.

In the early LAP contributions (e.g. Goldkuhl & Lyytinen, 1982b) there was a clear objection against a simplistic view of information (as parts of IS) to be considered as true facts of an external world. Lyytinen (1987) elaborated this further when contrasting a language development view (following LAP) with a reality mapping view as two opposing views of IS development. In reality mapping a mirror conception is made of the information base of an IS (e.g. Borgida, 1985). This mirror conception is described by Lyytinen (1987, p 12) that "all sentences in an IS codify facts or their invariances, laws. From a linguistic point of view this position limits the functions of language to just one to describe reality in a way that can be asserted or denied". The reality mapping view, with emphasis on information as factual descriptions, seems to be well established in mainstream IS (e.g. Wand & Weber, 1995; Wand

& Wang, 1996). This view is depicted in figure 1. What is thematized in this view is the role of information to represent the world as true descriptions of it.



*Figure 1. Information as representation*

Weber (2003, p 2) makes it clear what a mirror view in IS implies: “the *essence* of an information system is that it is a *representation* of some other real-world system. For instance, an order-entry system represents states and events that relate to customers and some business.” “We build information systems to represent real-world systems because either (a) we cannot observe a real-world system directly (e.g., the states and events are microscopic), (b) the costs of observing a real-world system are too high (e.g., customers are physically remote from a business), or (c) the real world is an ‘imagined’ world (as with some simulations)”. What comes out very clear from this quotation is 1) the idea to use an information system as an *alternative window* to observe the real-world and 2) as a consequence of this that the information system (only or mainly) contains descriptions of the real-world. It is actually interesting that Weber (2003) uses an order-entry system as an example in the argumentation. From a LAP point a view, questions arise such as “What real-world entity represents the business order?” “Is not a business order something very real in a business interaction setting?” “If we think away business orders from a business interaction reality, does not such a reality cease to exist as such?” The representationalists do not acknowledge that such communicative actions, as a business order is a created and has been established as a real entity in the socio-pragmatic world of business interaction. They seem to reduce the order to just some kind of representation of a future delivery of products. They do not acknowledge that an information system (as an order system) can be a part of the real-world and hold real communicative elements (such as business orders) as parts of that system.

The representational view is what LAP has departed from and it has instead developed an approach with emphasis on pragmatic aspects (see sections 3 and 4 below). However, in speech act theory, even if pragmatic aspects are emphasized, the conceptualization of such speech acts covers both descriptive and pragmatic aspects. Austin (1962) labels these aspects locutionary (for descriptive) and illocutionary (for pragmatic). Searle (1969) uses the terminology propositional (for descriptive) and illocutionary (for pragmatic). Perhaps the abandonment of representational-descriptive aspects has gone too far in LAP. This is at least what the two LAP-researchers Ågerfalk & Eriksson (2004) in a kind of LAP self-criticism claim: “In an attempt to incorporate the intentional action aspect into business and system modelling, [LAP approaches] have actually swung the pendulum too far and neglected the coupling between the propositional content and the illocutionary component of speech” (ibid,

p 90). Ågerfalk & Eriksson (2004) has made an attempt to re-conceptualize conceptual modelling (i.e. a primary domain for representation-focused IS scholars), through a reconciliation of such classic conceptual modelling with pragmatic LAP thinking.

### **3 Information as communicative action: the pragmatic foundation**

The language action perspective should be seen in this context as a reaction against a simplistic view of information as pure descriptive facts as appearing in mainstream IS. The human actors are more or less excluded in a reality mapping approach. The action character of expressing information is disregarded. The LAP initiative can be seen as a restoration of the human and social character of information. It is not only an issue of a sign and its relations to the signified world. The issuing of a piece of information is done by someone (a locutor) and directed to someone else (addressee) as a part of performing an action. The action character is clearly thematized through this approach. Confer the different labels used: The language *action* perspective as the name of this knowledge tradition. The original theorizing: Speech *act* theory (Searle, 1969), communicative *action* theory (Habermas, 1984), “How to *do* things with words” (Austin, 1962). Names of different approaches within the LAP tradition: *Action* workflow (Medina-Mora et al, 1992), business *action* theory (Goldkuhl 1998; Goldkuhl & Lind, 2004).

#### **3.1 Parent theories of LAP**

One starting point was the seminal work by Austin (1962). He did not actually use ‘speech act’ as the key concept. Instead he introduced ‘performative’ as his core conceptualization<sup>1</sup>: “I propose to call it a performative sentence or a performative utterance, or, for short ‘a performative’.” “The name is derived, of course, from ‘perform’, the usual verb with the noun ‘action’: it indicates that the issuing of the utterance is the performing of an action – it is not normally thought of as just saying something.” (ibid, p 6-7).

Austin (1962) uses many examples of a performative to illustrate its meaning. The same does Searle (1969) when clarifying its equivalent the speech act. Both authors differentiate aspects (sub-acts) of speech acts. Austin makes a principal division into locutionary act, illocutionary act and perlocutionary act. Searle makes a similar division, but uses the ‘propositional act’ instead of ‘locutionary act’. He also has ‘utterance act’ as an explicit sub-act; Austin comprise this aspect within the locutionary act. The essence of conceptualizing speech acts are the illocutionary acts; i.e. what is done *in* saying. When introducing his four different sub-acts, Searle (1969) is presenting characterizations of each of them, except for the illocutionary act. This act is introduced by giving examples: “stating, questioning, commanding, promising” (ibid p 24). I would say that one of the key ideas behind speech act theory is the acknowledgement of the great diversity of action types in communicating. Austin (1962) introduced a classification of speech acts consisting of five classes: verdictives, exercitives, commissives, behabitives and expositives. Searle (1979) re-worked this classification into one of his own, also consisting of five classes: assertives, directives, commissives, expressives, declarations. Searle develops several criteria to be used for this classification. These criteria do not only serve as division instruments but also as general characteristics for speech acts. Some of the more important criteria/characteristics are: purpose of the act (also called

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<sup>1</sup> In his book (Austin, 1962) there are 10 occurrences of ‘speech act’ and 252 occurrences of ‘performative’.

illocutionary point of the speech act), direction of fit between word and world, psychological state during expressing, force or strength of speech act, relations to communicators' interest, relations to communicators' position/status, relations to other parts of discourse. These characteristics can thus be seen as conceptual means to describe speech as action and to differentiate between types of actions. These elements of the theory are instruments to avoid seeing utterances as pure descriptions; and instead acknowledging the many different kinds of actions through language use.

Austin (1962) elaborates between illocutionary and perlocutionary acts as parts of a performative (speech act). This is also to be seen as an important part of the action conceptualization of communicating. He is doing this by distinguishing between what is done *in* saying (illocutionary) and what is done *by* saying (perlocutionary). The illocutionary act is what pragmatic function that is contained in the utterance itself. The perlocutionary act is the specific intentional influence on the addressee that the locutor tries to achieve; e.g. persuading, convincing or surprising. Such intentional influences may be achieved or not. Other possible, unintentional, consequences may also arise from some speech act.

This action orientation of speech act theory has also been further elaborated by Habermas (1984) in his communicative action theory. Habermas has, among other things, added a conceptual framework on validity claims concerning different types of communicative action.

### ***3.2 The communicative action emphasis in LAP***

The action emphasis elaborated in these parent theories is widely used in LAP contributions. The differentiation into separate types of communicative action can be found in many LAP publications. Flores & Ludlow (1980) used the speech act classification of Searle (1969; 1979) to object to an information transmission view of the office and to unfold an alternative action-oriented view that acknowledges a greater action variety of communication. This view was further elaborated by Winograd & Flores (1986) in their conversation for action scheme. I will not go into this specific scheme here in this section; this will be done in the following section. What is acknowledged here is their emphasis on the action character of language use and the variety of different types of actions. The action character of communication was emphasized by Goldkuhl & Lyytinen (1982) although any action variety was not exposed through examples. This was however made in later contributions (Goldkuhl & Lyytinen, 1983; Goldkuhl 1984; Auramäki et al, 1988).

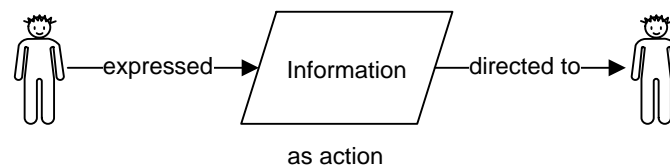
LAP contributes thus with an openness to action variety concerning information and communication. This can be found in several other LAP publications. Schoop (1998) has investigated and identified typical communicative actions in healthcare applying a language action perspective. A variety of communicative actions in business interaction have been clarified through the LAP-based approaches of DEMO (Dietz, 1999; van Reijswoud et al, 1999) and BAT (Goldkuhl 1998; Goldkuhl & Lind, 2004).

Goldkuhl (1995) has made an explicit positioning of a LAP-based conception of information in relation to a classical contents-view of information in mainstream IS; confer also Ågerfalk (2002). Goldkuhl (1995) has used the information concept of Langefors (1993) called elementary message. This is in line with the representational view elaborated in section 2 above, even though Langefors (1993) acknowledges the information recipient and the need

for an appropriate pre-understanding in order to interpret and use the message. The e-message (of Langefors) consists of three elements: object, property and time. This is equivalent to many classical IS conceptualizations of information (e.g. Codd, 1970; Chen, 1976), although Langefors added time as a necessary component. It is also equivalent with the notion of propositional content as expressed in the speech act theory of Searle (1969).

Goldkuhl (1995) has made an explicit expansion of the e-message concept to include two more components: 1) the communicator (locutor) and 2) the action type (i.e. the illocutionary character). The addressee is not explicitly put into this “action-expanded” information notion, although it is well recognized in the auxiliary text. Ågerfalk (2002) has explicitly added the recipient/interpreter into the model of an action-expanded e-message concept.

To see utterances and messages (and other information sets) as actions is a key insight in speech act theory. This insight is brought into the language action perspective and as a primary contribution of LAP there is a suggested re-conceptualization of information as action and communication (figure 2).



*Figure 2. Information as communicative action*

The communicative action character of (digitized and other) information sets is emphasized. This implies an accentuation of the communicators (locutor and addressee) and the action character of the expressed information set (its illocutionary function). It is a pragmatic view of information as a contrast to a mirror view of information.

## **4 Information as conversational move: a necessary addition**

### **4.1 Structured conversations**

To conceive of information as results of action is a fundamental contribution of LAP. This is a direct utilization of insights from speech act theory. However, there are more to LAP than just this action emphasis. In speech act theory there is a focus on single acts. There are minor comments concerning relations between different speech acts, but this does not have a prominent place in the theories of Austin and Searle. One of the twelve criteria for speech act classification by Searle (1979) refers explicitly to the speech act’s role in a discourse. Critique has been raised against speech act theory for not taking into account the surrounding communication context of single speech acts (Allwood, 1977; Linell, 1998; Ljungberg & Holm, 1996); i.e. to be a monologicistic theory. The link to prior communication is vital for production, meaning and understanding of speech acts. Linell (1998, p 209) expresses the following critique: “Classical speech act theory characteristically treats all speech acts as interventions of the part of the speaker, as (more or less pure) initiatives ... while virtually all responsive links in connected discourse are being neglected”.



The language action perspective builds heavily on speech act theory, but in the applications of LAP there are important extensions made in order to cope with a discourse greater than single acts. In Winograd & Flores (1986) the important LAP notion of *Conversation for action* (Cfa) was introduced as a pattern of communicative acts when some actor requested something to be performed by another actor. The authors explain the constructed pattern in the following way: “The relevant regularities are not in individual speech acts (embodied in sentences) or in some kind of explicit agreement of meanings. They appear in the domain of conversation, in which successive speech acts are related to one another.” (ibid p 64). Already in Flores & Ludlow (1980), the notion of conversation was put forth. It was there described with explicit reference to Searle’s speech act classes: “we adopted the perspective of looking at organizations in terms of networks of directives and commissives” (ibid p 107). In the Cfa schema the different speech acts are organized in this kind of pattern dependent on the speech act type (e.g. request, promise, assert, declare). The Cfa schema was a foundation for development of methodological approach of Action Workflow (e.g. Medina-Mora et al, 1992; Denning & Medina-Mora, 1995). In this prominent LAP approach a pattern is described by the four subsequent phases: 1) Proposal (customer requests), 2) agreement (performer promises), 3) performance (performer declares completion), 4) satisfaction (customer declares satisfaction). All these actions are communicative actions. This means that there is no conceptualization of the actual performance (e.g. a delivery) in the Action Workflow (AW).

A fairly similar approach – DEMO – has been developed by Dietz (1999); confer also van Reijswoud et al (1999). Its basic concept is the OER-transaction consisting of three phases: 1) Order-phase (consisting of request and promise), Execution-phase, 3) Result-phase (consisting of delivery statement and acceptance). The DEMO O-phase corresponds to the first two AW phases and DEMO R-phase corresponds to the last two AW phases. In DEMO the actual performance (E-phase) is inserted between the communicative phases/actions. As said, in Action Workflow this actual performance is left out from the analysis.

#### **4.2 Conversation vs. discourse**

The LAP tradition of Winograd & Flores (1986) has thus led to the conversation patterns of Cfa and AW, and seems to have inspired the development of the OER-pattern of DEMO. The LAP tradition emanating from Goldkuhl & Lyytinen (1982b) did not lead to such patterns. However, the interest for conversations consisting of communicative actions arose also in this LAP tradition. In a following publication, Goldkuhl & Lyytinen (1983) also thematize conversations as meaningful constellations of communicative acts: “Information systems comprise communicative acts. These acts are related to other communicative acts in the organizational environment. Together these acts ‘form’ a language game (a conversation). The language game is constituted not only by rules for each type of communicative act, but also by rules which interrelate the communicative acts.” (ibid p 88). These authors presented a notation (conversation diagram) to be used for modelling a conversation consisting of communicative actions; confer also Goldkuhl (1984) and the SAMPO approach of Auramäki et al (1988). There is a fundamental difference here in relation to Action Workflow and DEMO. There was no predefined pattern as in AW and DEMO. The conversation diagrams could be used to model different conversation structures without any pre-defined pattern. Goldkuhl & Lyytinen (1983) describe the expressibility of conversation diagram in the following way: It “describes initiation, sequences, alternatives, conjunctions, iterations and

terminations of the conversation path. A conversation path describes a meaningful pattern of communicative acts in conversation.” (ibid p 88).

It has been a controversy within the LAP community during history to what extent and degree to use of pre-defined generic patterns for describing, analyzing and designing actual conversations (confer e.g. De Michelis & Grasso, 1994; Holm & Ljungberg, 1996). Should we rather see communication patterns as situated and emerging. This is a discussion concerning how to inform design in terms of stucture vs. flexibility. Holm & Ljungberg, (1996) have conceptualized this as two views of communication patterns: conversation vs. discourse.

### ***4.3 Conversation analysis as theoretical grounding***

The conversation concept as used in LAP is a fundamental addition in relation to just single speech acts. LAP as it has emerged in the IS discipline can be said to consist of these two basic notions: communicative action + conversation. Concerning the notion of communicative action there is a clear theoretical base in speech act theory and communicative action theory. What about the conversation concept? Did it receive any theoretical backing in the early LAP publications, such as Flores & Ludlow (1980), Goldkuhl & Lyytinen (1983) and Winograd & Flores (1986)? I would say no. It seems that it was the meeting between the abstract speech act concepts and the empirical IS practice that inspired this conceptual development. The reality of contextual IS practices comprise complex communication patterns that need to be addressed in design, inquiring and theorizing. It is obvious that the IS reality contains more than single and isolated communicative acts.

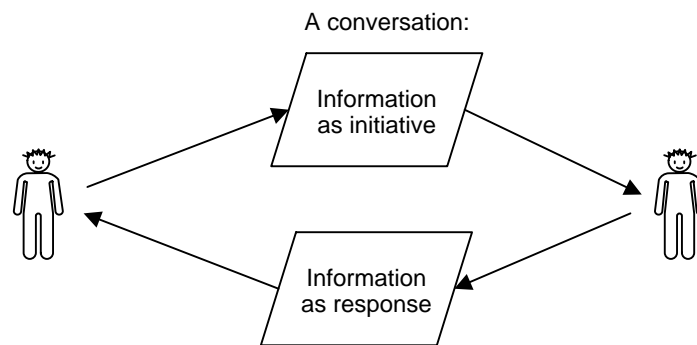
However, the concept of conversation has of course been theorized in different disciplines, e.g. in linguistics and sociology. A specific way of studying and theorizing conversations, called *conversation analysis*, originated within the ethnomethodological tradition of sociology (Sacks, 1992; Silverman, 1998). This kind of knowledge has later been integrated into linguistic pragmatics (Levinson, 1983; Schiffrin, 1994, Halliday, 1994; Clark, 1996; Linell, 1998).

There has been a particular interest into sequencing of conversations. Sacks (1992) introduced the concept of *adjacency pair*. An adjacency pair is an ordered pair of utterances (a first and a second) produced by different speakers. A first requires a second, but not everything counts as a second. Examples of adjacency pairs are question – answer, offer – acceptance, request – acceptance, complaint – excuse. The concept of adjacency pair has been further used and developed in discourse theory (e.g. Linell, 1998; Schiffrin, 1994). The first is categorized as an *initiative* and the second as a *response*. However, most utterances can be classified as both initiative and response. This is due to the principle of *double contextuality* of utterances in conversations. An utterance is both context-shaped (i.e. dependent on prior utterances) and context-renewing (i.e. creating conditions for possible next utterances).

The orientation towards conversational patterns in conversation analysis (following Sacks, 1992) seems to correspond well with what has been theorized within LAP in approaches such as Goldkuhl & Lyytinen (1983), Winograd & Flores (1986), Auramäki et al (1988), Medina-Mora et al (1992) and Dietz (1999). There have later on been some attempts to bring in conversation analysis according to Sacks (1992) as an explicit theoretical ground for LAP

approaches. Holm & Ljungberg (1996), in developing their LAP approach of COMMODIUS, integrated elements from conversation analysis. Steuten (1998) made an attempt to integrate conversation analysis in the DEMO approach. Goldkuhl (2003) made an explicit analysis of how conversation analysis could fit into the LAP knowledge base as a theoretical complement to speech act theory. The conclusion was that conversation analysis is an appropriate theoretical companion, although there are some important differences in epistemological background between conversation analysis and speech act theory. Aakhus (2004) acknowledges this theoretical link and suggest further theoretical expansion through the concepts of felicity condition and genre.

The basic construct of a conversation is thus an adjacency pair of an initiative and a response (figure 3). This also entails a dialogic view on communication participants, i.e. shifting roles between being a speaker and listener. Each communicative action may be both a response in relation to prior acts and an initiative in relation to subsequent acts. In LAP, information is not only to be seen as a communicative action, it is also a move in a conversation structure.



*Figure 3. Information as conversational move*

## **5 Information as social relation: what has been implicit**

The two cornerstones of LAP (communicative action and conversation) were investigated above. There is still more in LAP, but not yet fully articulated. A social dimension is obvious in both communicative action and conversation. A communicative action is a social act as being conducted by someone (the locutor) and directed to someone else (the addressee). A conversation is obviously social when (at least) two actors are interacting through language use.

### **5.1 Social relations in LAP and parent theories**

The thesis here is that the conduct of a communicative action means that a social relation is established between locutor and addressee (figure 4). This insight was mentioned in early LAP contributions, however not clearly articulated. Goldkuhl & Lyytinen (1982b) describe the illocutionary aspect of a communicative action in the following way: “perform something, i.e., to establish interpersonal relations”. Flores & Ludlow (1980) describe speech acts conversations with a focus on issuing of commitments. It is expressed in the following way: “We adopt a unified approach in which communication is analyzed in terms of the issuance of commitments in conversations; the approach also takes into account that managers create,

take care of, and initiate new commitments within organizations.” (ibid p 95). This means that the type of social relation that is thematized by Flores & Ludlow is commitments (as a kind of self-imposed obligation).

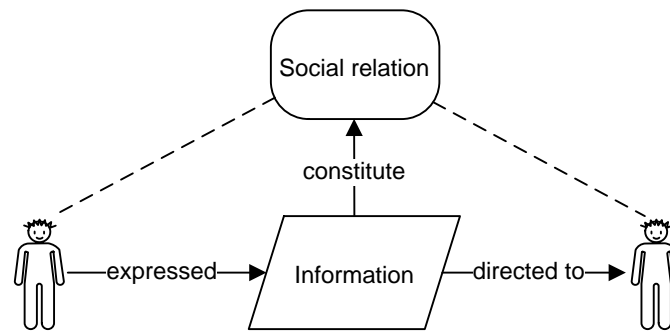


Figure 4. Information as social relation

The position taken by Goldkuhl & Lyytinen (1982b) to see the illocutionary acts as establishment of social relations cannot be found in such a radical shape in speech act theory. When analyzing different illocutions, Searle (1969) identifies commitment for future actions as an “essential illocutionary point” for the speech act class of commissives. The class of assertives is also described using the concept of commitment; i.e. the speaker commits that something is the case. The other speech act classes are not characterized in ways that associate clearly to establishment of inter-personal relations. A directive is described as an *attempt* to get the hearer to do something; an expressive is described as an *expression of psychological state* of the speaker; a declaration is a way of *bringing about a change* in some state of the world. The aspect of social relations is not made explicit in these speech act classes.

The communicative action theory of Habermas (1984) is more explicitly oriented towards inter-personal relations through communicative actions. Habermas describes communicative actions as having an “illocutionary binding force” (ibid p 305f). He further describes the consequence of performing a communicative action in the following terms: “between [the speaker] and the hearer an intersubjective relation will come about which is recognized as legitimate” (ibid p 307). In a critical assessment of Searle’s speech act taxonomy, Habermas states that Searle “restricts himself to the perspective of the speaker and disregards the dynamics of the negotiation and intersubjective recognition of validity claims – that is the building of consensus. The model of two linguistically mediated relations between a solitary actor and the one objective world has no place for the intersubjective relation between participants in communication who come to an understanding with one another about something in the world.” (ibid p 323f).

Based on critical examinations of several speech act classifications (Austin’s, Searle’s and others) and an extensive empirical material of communication, Kreckel (1981) has generated a more comprehensive speech act taxonomy. It is built from three dimensions: 1) a temporal dimension (past – present – future), 2) a communicants dimension (speaker – hearer), 3) a content dimension (cognition-oriented, person-oriented, action-oriented). Kreckel restricts the past temporal dimension only to a person orientation; the present dimension to cognition orientation; and the future dimension to action orientation. This seems to be an unnecessary restriction in the taxonomy. However, it is beyond the scope and purpose of this paper to

make a thorough analysis of presented speech act classifications. The point here is rather what Kreckel (1981) concludes from her analysis. The six generic interactional types (speech act classes) “are all concerned with different aspects of relationship-regulating interaction” (ibid 186).

## **5.2 Social relations and social interaction**

The radical claim here, that all communicative action implies the establishment of social relations can be further clarified through an illustrative example of an every-day action (a greeting) made by the ethnomethodologist Heritage (1984). He describes the situation where a person is walking down the corridor of an office building. “From the moment this actor is greeted by another, his or her circumstances are radically reconstituted from a situation of mutual disengagement between the parties to one in which some, at least minimal, engagement is proposed by the other” (ibid p 106). The greeting is to be seen as an initiative, a first in a conventional adjacency pair. As such, it is expected to be reciprocated by the addressed actor through a second in an utterance pair. A greeting is normally, following social conventions, responded by a greeting. Heritage (ibid) continues his description: “This first greeting transforms the scene for both parties – for the greeter (who moves from a circumstance of disengagement to one of engagement which he or she proposes, via the norm, will be reciprocated) and the recipient of the greeting (who must deal with this reconstituted circumstance).” When confronted with a communicative act, such as a greeting, an actor is also confronted with a situation of social choice. “It should now be obvious that regardless of whether the recipient consciously ‘chose’ to respond in a particular way, he or she was nonetheless placed in a ‘situation of choice’” (ibid p 107). A responded greeting or ignorance is a social choice of action.

Following Searle’s speech act theory, a greeting is an expressive, i.e. an expression of psychological state. From the standpoint of ethnomethodological sociology (Sacks, 1992; Heritage, 1984) this is not a complete characterization. A greeting, as an initiative is associated with expectations of responses. To greet is to courteously acknowledge another person and as such it puts a social demand for reciprocating. This social demand implies the establishment of social relations between speaker and listener. In a normal every-day situation where both parties perceive each other, it will be obvious to both parties that such a social relation has been established through the first greeting.

A communicatively established social relation is defined as a mutually recognized intersubjective relation between communication parties and occurring as a result from a communicative act and a corresponding interpretive act. This social relation occurs as a changed social state between parties and is dependent on the locutor’s intended communicative meaning and its recognition by the recipient based on linguistic conventions, circumstances in the situation and other prior conditions. A communicatively established social relation lies not within the locutor’s control and reach since it is dependent on the recipient’s interpretation. It is an intended social relation (by the locutor) and appears as an aimed consequence of the communicative act due to the recipient’s accordingly performed interpretation. There can be different obstacles to the creation of a mutually recognized social relation, such as linguistic vagueness, disturbing circumstances in situation and the ability and attitude of the recipient. A social relation is instated through the conduct of a

communicative action and it may have a shorter or longer duration (see section 5.3-5.4 below).

### **5.3 In-situational social relations**

The initiative – response pair in a situated conversation entails the continuous shaping of inter-personal relations. An initiative may give rise to an expectation (as a kind of situated social relation) and the adjacent utterance of a response reciprocates something and as such it may resolve the initially instated relation. This response can also function as an initiative and thus instate a new relation between the communicators that need to be handled subsequently in some way. This continual instating and resolving of social relations in a situated conversation can be called in-situational. Such *in-situational social relations* are managed by the communicators during the situated communication and may not lead to any direct changes of social states. What was communicated and how it was done, in the course of the conversation, may of course influence the general social relations of the participants in concerning affinity or hostility or any other emotional bonds. There may also be knowledge kept by the participants for future situations and such communicatively established knowledge may represent a social relation if the link to the communicator is kept; as for example “he was the one who advised me to keep this kind of diet”.

### **5.4 Trans-situational social relations**

There are many communicative actions with appurtenant social relations that have purposes transcending the immediate communication situation. The speech act classes of declarations (Searle) and verdictives (Austin) have purposes to establish some social fact that transcends the immediate situation. Examples of such actions are all kinds of official acts of legal or otherwise regulative character. All kinds of decisions made, and thus communicated, by public authorities institute a new social fact (Searle, 1995). This is also the case for all kinds of external actions made by organizations and other legal subjects. This kind of social relations, constituted by communicative actions, is here called *trans-situational social relations*. We can call them social facts as residing in intersubjective reality.

This kind of action establishes social relations not only between the issuer and the immediately intended addressee. Think of the wedding ceremony in which an authorized person declares the two as married couple. The instituted marriage between the persons, as a result of this wedding declaration, is not only a social fact restricted to these two persons, but an established social state that influences many kinds of interactions with other actors.

In the speech act class of declarations (by Searle, 1979), the illocutionary point/purpose is the case of establishing a social fact (decisions, appointments etc.) through the very performance of a communicative act. However, this function of establishing social facts (as elements of intersubjective reality) is not restricted to this speech act class. It is obvious that a directive (e.g. a purchase order) and a commissive (e.g. purchase promise/confirmation) also have the communicative power of establishing social relations that transcend the immediate communicative situation. This is also what Ballmer & Brennenstuhl (1981) find in an analysis of the different speech act classes. They claim that the declarative role in language equals its performative role as stated by Austin (1962). According to these authors the speech act class of declarations is a residual category: “The inclusive nature of the category of declaration

explains why it lends itself as wastebasket for speech acts not falling into one of the first four classes” (Ballmer & Brennenstuhl, 1981, p 56-57).

The duration of the social state/fact established through a communicative act will vary depending on situational and institutional circumstances. There is a great difference in duration and reach between 1) an oral request at a family breakfast table about passing the butter and 2) the public issuing of a new national law well documented in official archives. The first communicative act (the request) may be responded and resolved as a request immediately and then forgotten by the participants. While the other, through the aid of public records and other institutional arrangements will have a pervasively institutionalized place in the society. Anyhow, both communicative acts instate social relations between sender and recipients.

### **5.5 Different types of social relations**

One problem of classical speech act theory is that it does not acknowledge the multi-functionality in language use (Linell, 1998). The classical language theory of Bühler (2011) enunciates three basic functions of language: 1) the symptom function (as speaker expression), 2) the symbol function (as representing some states of affair), 3) the signal function (as an appeal to the recipient). Ordinary communication realizes these three inherent language functions. This condensed multi-functional view of language has been expanded from three functions to six functions by Jakobson (1960). It is not the place here to go through all functions by Jakobson, but one function should be noted here: the phatic function. It is described as a contact function that enables the communicators to enter and stay in the communication.

As described above, the social relation aspect of communicative action has been noted by the LAP originators (Flores & Ludlow, 1980; Goldkuhl & Lyytinen, 1982b; Winograd & Flores, 1986). However, any thorough conceptualization on these aspects has not been found in LAP publications, although aspects of this have been thematized now and then. Some conceptual sub-classes have been introduced by Goldkuhl & Lind (2007) in a refinement of their BAT model. The focus is on understanding different (communicative) actions of business interaction with an emphasis on social relations as antecedents and consequences of such actions. The authors investigate the meaning and existential place of social relations: “In order to discuss this matter, we need to use the concepts of a focused actor (“ego”) and another actor (“alter”). Relations exist as ego’s apprehension of the alter and vice versa. In order to succeed in social interaction, parts of these relational apprehensions need to be intersubjective and not only intrasubjective” (ibid p 78). Communicative actions that relate to some future state may comprise *expectations* and *commitments* (both from ego to alter). This is typically the case in offers and orders. Goldkuhl & Lind (2007) also discuss the kind of social relations in response actions. These are based on some social relation established through some prior action (as an initiative). A business offer made by a supplier may be responded to in different ways. One possibility is to order in accordance with the offer. An order (as an initiative for future actions) establishes expectations of confirmation and delivery to be done by the supplier and commitments (by customer) to pay for future delivery. These are new instated social relations. However, in this kind of business interaction, the order is also a response to prior actions (such as the offer). This means that

the response action is a *reciprocation*<sup>1</sup> in relation to prior action and its appurtenant social relation. In being a response, the order *fulfils* the expectations of the offer. An alternative response could be a counter-bid made by the customer. This is a reciprocation in relation to the offer and this response does not fulfil the expectations. In introducing a new social state (counter-bid) between customer and supplier it is a *deviation* from the previously instated social state (the offer). A reciprocation changes, through this social interaction, the previously established social relation. For example the offer is no longer valid if an action has been conducted that abolishes it in some way.

In summary, social relations can be instated concerning future states and actions as expectations and commitments. Communicative actions can concern prior actions and as such they are reciprocations to these previous actions. A reciprocation 1) may be in accordance with a previously established social relation and, thus being an fulfilment, or it 2) may not be in accordance with a previously established social relation thus being a deviation.

## **6 Analysis through an empirical case**

### **6.1 A social welfare allowance case**

There have been some embedded example illustrations in the text above. It is now time to make a directed empirical analysis by the aid of a proper IS case. This case is used for an explicit study of the main thesis in this paper, i.e. to conceive of the production of information as an establishment of a social relation. I am using a case study which I have first-hand knowledge of through participation in a combined action research (Davison et al, 2004) and design research (Hevner et al, 2004) endeavor. The domain of this case is social welfare allowances. The case has been reported elsewhere (e.g. Eriksson & Goldkuhl, 2013).

In this research study, we as researchers participated in a project working with digital development within the social welfare sector. The focus was on social welfare allowances and the case handling of such allowances. Several municipalities participated in the project in order to develop joint digital solutions.

The responsibility for social welfare allowances resides within welfare boards of municipalities. Clients can apply for allowances if this is the last resort for monetary support from the public. Applications need to be checked by municipal welfare officers concerning the total economic situation of the applying client. There may exist allowances and benefits from other parts of the public sector which abolish or reduce the right to receive a social welfare allowance. The social welfare officers need to contact different state agencies and inquire whether other allowances are given to the client. These contacts have been very cumbersome and time-consuming for the social welfare officers.

The main reason for starting the project was a new regulation that gives the municipalities better possibilities to obtain information about clients. The handling and transfer of client information within the public sector is severely restricted due to data protection regulations. The new regulation made it easier for municipalities to digitally obtain information about clients' economic situation. Information can now, on demand, be transferred digitally and

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<sup>1</sup> Goldkuhl & Lind (2009) use the term 'replication'. It has here been replaced by 'reciprocation'.



immediately from state agencies to the social welfare offices in the municipalities. Besides the municipalities, two state agencies participated in the IT development: the Social Insurance Agency (SIA) and the Board for Study Support (BSS).

A new digital design is depicted in figure 5<sup>1</sup>. The social welfare case handling is now supported by an integrated IT support, a social welfare digital artifact (SWDA). It is a compound digital artifact, actually consisting of three interrelated systems: 1) an e-service for digital applications from clients, 2) a social welfare case handling system, and 3) a multi-query application for collecting information about clients from state agencies. The process is conducted in several steps: application made by the client, information collection from state agencies, further inquiry by the social welfare officer and finally a decision (approval or dismissal).

I am re-using this empirical case for an analysis of the proposed thesis of “information as social relation”. Six main digitized information sets are analyzed. A clarification is made of these information sets as results of digitized communicative actions. Further, a reconstruction is made of what kinds of social relations (if any) that are established through the conduct of these digitized communicative actions. This means that this empirical example is limited to the study of digitized information as social relation. As said above, in the IS domain there may be other than digitized information sets to study. But, this is out of the scope of this empirical investigation.

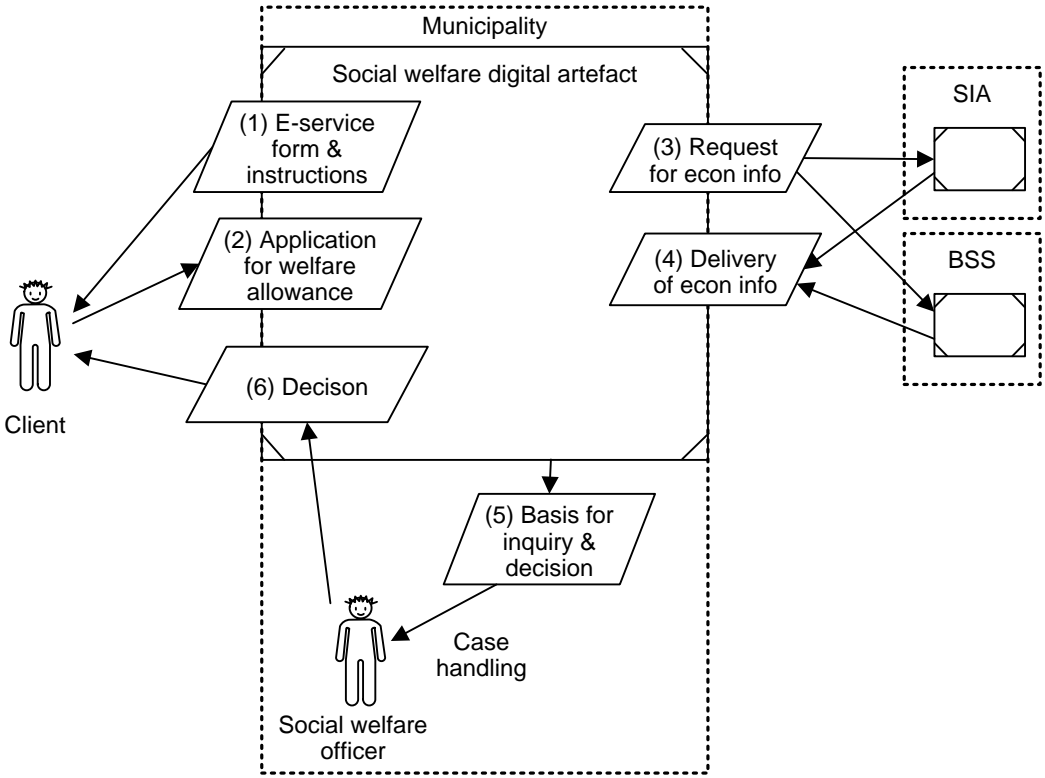


Figure 5. Digitization in social welfare allowances

<sup>1</sup> The case description is here simplified and adapted to the purpose at hand. I have selected some parts that are suitable for the intended analysis. The case description is true to the essence of the conducted case.

## 6.2 An analysis of communicative actions and social relations

The result of this communicative action analysis is summarized in table 1. For each digitized communicative action, the locutor, the addressee and the established social state are described. Further comments will be made below. The way of thinking in analyzing the communicative actions is as follows: For each communicative action clarify what kinds of social relations that exist after the performance of this action; i.e. 1) what has changed from before the action and 2) what is prevailing before the next conversation move (in subsequent communicative actions).

Table 1. A communicative action analysis of six digitized information sets in the social welfare allowance case

<b>Communicative action</b>	<b>Locutor</b>	<b>Addressee</b>	<b>Established social state</b>
1. Instruction & e-service form	Municipality (agent: SWDA)	Potential clients	Conveying the <i>regulating</i> of social welfare allowances. <i>Invitation</i> to apply. <i>Commitment</i> to handle applications. <i>Guiding</i> for how to apply.
2. Application for social welfare allowance	Client	Municipality (receiving agent: SWDA)	<i>Reciprocating</i> invitation ( <i>acceptance</i> ). Request ( <i>expectation</i> ) for welfare allowance. <i>Commitment</i> about true & complete personal account.
3. Request for info about client	Municipality (agent: SWDA)	Authorities (= SIA & BSS)	Request ( <i>expectation</i> ) for info about client. <i>Commitment</i> that an open case exist concerning the client.
4. Info about client transactions	Authorities (= SIA & BSS)	Municipality (receiving agent: SWDA)	<i>Reciprocating</i> request. <i>Certifying</i> economic transactions with client.
5. Basis for inquiry & decision	SWDA transfer from client & authorities	Social welfare officer	Compilation of: <i>Request</i> with <i>assured</i> personal account (2) & <i>certified</i> economic transactions (4).
6. Decision on social welfare allowance	Municipality (social welfare officer via SWDA)	Client	<i>Reciprocating</i> application. <i>Decision</i> concerning social welfare allowance; either <i>approval</i> , i.e. a <i>fulfilment</i> of application (with a <i>commitment</i> to disburse) or <i>dismissal</i> , i.e. a <i>deviation</i> from application (with <i>instruction</i> how to appeal).

I have included as an information set (1) the application form in the e-service. This is the information that guides the client when formulating the application digitally. Social welfare allowances are regulated by the social service act and other regulations. The e-service conveys these *regulative* information sets to the clients. These legal statutes regulate the conduct and interaction between clients and authorities; their respective rights and obligations. The

digital exposure of these legal acts is a kind of deployment of already existing regulative relations between the state, different authorities and citizens. This regulative communicative act reminds and alerts of social states already existing. The communicative action serves the function of explicitly establishing the social background of this socio-digital interaction. This action connects the communication situation to its overall institutional preconditions of regulating social welfare allowances.

The municipal information to potential clients is also an *invitation* to apply for social welfare allowance if the client is fitting the demands of the regulations. The invitation entails also a *commitment* of the municipality to handle application in a legally correct way.

The e-service is arranged as a way to simplify for clients to apply for social welfare allowances. The e-service guides the client through the process of filling out the digital application form. A relation of *helpfulness and guidance* is realized through the e-service.

The client can apply for social welfare allowance through the e-service. This means formulating and submitting an application digitally (2). This communicative action is a response to the municipality's invitation to submit an application, thus it is a *reciprocation* to this invitation. It changes the relation between municipality and client from an invitation relation to an *accepted invitation* relation between the parties. The application is also an initiative for further actions by the municipality. Through the application, the client is *requesting* allowance. There is an *expectation* by the client to receive a positive decision and a payout of allowance. The application should contain information about the client's personal economic situation. The client needs to assure that this information is true and complete. The client needs thus to make a *commitment* concerning claims of truth and completeness in relation to the municipality.

After the application is received by the municipality, as a digitized information set in the digital artifact SWDA, this artifact sends *questions* digitally to the state agencies for more information about the client (3). This communicative action (a question) is thus a *request* for specific information from the agencies. The municipality *expects* that the state agencies will reply and send information. According to social welfare and data protection regulations, there needs to be an open social welfare case concerning the specific individual. When sending the query to the state agencies, the municipality makes a *commitment* that there exists an open welfare case. The opening of a social welfare case is done automatically by DSWA after receipt of an application.

The state agencies (the Social Insurance Agency and the Board for Study Support) will handle the municipal query in a completely digital fashion. Information about the client will be retrieved in their databases and a reply (4) will be sent digitally to the municipality (SDWA) with information about the client. This information will contain exposure of all relevant economic transactions (decisions and disbursements) concerning the client. The state agencies *certify* that this information is correct. As a reply, this implies a *reciprocation* to the information request from the municipality. Each state agency *resolves the requesting relation* established through the query (3) by the performance of this reply.

The social welfare digital artifact compiles the information from the client (the *application* including *assured* personal accounts) and from the state agencies (*certified* economic

transactions) and presents this information (5) in a structured way for a social welfare officer. This officer (as an agent for the municipality) makes an investigation if the client is entitled to receive any social welfare allowance.

As a result of this investigation the social welfare officer makes a decision (on behalf of the municipality) concerning social welfare allowance. The *decision* is recorded in the social welfare case handling system and sent to the client (6). The decision can be an *approval* of the application. If the decision is so, an appurtenant *commitment* for disbursing is made. There is also a possibility for a negative decision, i.e. a *dismissal* of the application. In this case the client will be *instructed how to appeal* this decision. The decision is a reciprocation to the application made by the client (2). This means that the *request relation* between the client and the municipality (as established through submission of the application) *is resolved*. The approval decision is a *fulfilment* of the application relation. The dismissal decision is a *deviation* from the application relation. The social state between the client and municipality has changed when the case handling is terminated through this decision. The case is closed.

### **6.3 Learnings from the case analysis**

The analyses of the communicative actions above give some empirical evidence in favor of the thesis “information as establishment of social relation”. All six information sets imply an establishment of and influence on social relations. Each of these is not just some simple and distinct illocutionary point. The social relations following each communicative action are fairly complex which can be found from table 1 and the textual comments in section 6.2. To just assign one illocutionary point from Searle’s five speech act classes to each communicative action does not suffice if one is aiming for an illuminating inquiry.

It could perhaps be objected that the information set “basis for inquiry and decision”, which is digitally presented to the social welfare officer (5), does not imply any new social relation, since it is a compilation of previous information sets (2 and 4). However, it is first here that the social welfare officer (as an agent of the municipality) receives and interprets this information and starts handling it within those social relations which need to be recognized. The case handling, if it is initiated by the officer, is based on the assumption that it is a sincere and serious application for social welfare allowances. If the case handler has any doubts, she will probably make inquiries concerning the client’s sincerity. The case handling is also based on a recognition of the state agencies’ accounted and certified transactions with the client. She will rely on that this information is correct. If she may have any doubts, she will probably try to contact some representative of the state agency to sort out the doubts.

The digitally mediated work communication depicted in figure 5 can be said to form a coherent communication situation; or a “language game” if we want to use a wittgensteinian term as Goldkuhl & Lyytinen (1983) do. It is typically a conversation in LAP terms. In this communication situation it is possible to distinguish between *in-situational social relations* and *trans-situational social relations* following the discussion in section 5 above. One example of a trans-situational social relation is the regulations for social welfare which are brought into the situation through appropriate information in the e-service (1). In-situational relations are such relations that are established within the communication situation and also resolved in it. A typical such social relation is the query from the municipality to the state agencies (3). One could possibly also say that another example of in-situational social relation

is the client application (2) and its resolution through the municipality decision (6). However, these conducted actions are important social facts related to the municipality's social welfare practice and they need to be remembered. This is necessary in order to inspect and audit them concerning legal compliance. This is of course necessary if the client makes an appeal when a negative decision was given. Records of these social relations should be kept in order to make these historical events accessible if desired. Information as *traces of social relations* should be kept. We need in many cases to remember the occurrence of certain social relations that has existed and been resolved. The application – decision communicative pair is both in-situational (as initiated and resolved within the communication situation) and trans-situational (since it needs to be inspectable and remembered for potentially future actions).

Applications and their subsequent decisions are social facts of enduring character due to their roles in public authority. A decision on social welfare allowance is a *common concern* since it should be a case of exercising public authority in compliance with prevailing regulations. How do public agencies treat citizens in relation to regulations; and how do these public agencies handle public money? A social welfare decision is a response to individual needs and social welfare acts regulating allowances in this respect. A social welfare is a matter of concern for not only a social welfare officer and a client. It is a social fact beyond this resolved social interaction.

The social welfare communication situation comprises several acts of constituting social facts (Searle, 1995). There are generated social facts such as:

- Application for social welfare allowance
- Open social welfare case
- Certified transactions (basis for/parts of the decision)
- Decision on social welfare allowance
- Closed social welfare case

Digitized information (or records in some other way) is needed for keeping a memory of such social facts.

Based on this empirical analysis several classes can be generated of the compound constructs of communicative action/information/social relation. The following categories can be found from the analysis of this case:

- Communicative actions with continual information and that new social relations may be established, such as invitation to apply (1) and commitment to handle (1)
- Communicative actions with creation of new information and that new social relations are established, such as request (2, 3), approval (6), dismissal (6)
- Communicative actions with re-using of extant information (in a new communicative context) and that new social relations arise, such as assuring (2) and certifying (4)
- Communicative actions with re-using of extant information and that existing social relations are reminded and alerted, such as regulatives (1)
- Responsive communicative actions with creation of new information or re-using extant information and that existing social relations are changed through reciprocations (2, 4, 6)

## **7 Concluding discussion**

### ***7.1 Concluding clarifications***

This essay has investigated the central notion of information in the IS discipline. This has been done with a focus on how it has been treated and evolved within the language action perspective. In this tradition the key message is to understand information in terms of communicative action. This is advised in order to avoid the so called descriptive fallacy (Austin, 1962; Lyytinen, 1987). This essay has extended the language action view by emphasizing the establishment of social relations as a consequence of performing communicative actions. These three notions (communicative action, information, social relation) are interrelated and it is time to make a concluding clarification in this final section.

There are ambiguities in the notions of communicative action and speech act. Do we mean the process of producing something linguistically or do we mean the resulting linguistic expression (in this essay called information) or do we mean both process and product? Lyons (1981) distinguishes clearly between the process of expressing something (speaking or writing) and the product that appear as result (spoken or written inscription). However, a linguistic act is so interwoven concerning process and product that it is often hard to maintain a sharp line between these two. In material action it is easier to distinguish between process and product. For example, it is straightforward to distinguish between the action of chopping of woods and resulting chopped woods. In speaking, the utterances are pronounced in a direct and immediate fashion which makes it hard sometimes to separate them. However, in a scholarly analysis it is important to acknowledge these different aspects of process and product.

I would like to claim that the notion of communicative action often is used in an inclusive sense; i.e. that it denotes both the process of communicating (speaking, writing) and the product of what has been expressed. When we want to pinpoint the result, we delimit it to notions such as utterance, text, expression or information. The contribution of this essay is the claimed addition of social relations as natural consequences of producing information in communicative actions. This means that the concept of communicative action also should comprise this dimension. A communicative action consists of:

- The process of acting = expressing something orally or in writing
- The product/result of the act = the expressed information as utterance or written text
- The relational consequence = the established/changed social relation

We should be cautious about when we mean this compound construct or when we designate just some of its parts (process of acting or result or consequential relation).

It is also important to distinguish between the established social relation and the potential perlocutionary effects of the communicative action (Austin, 1962). A perlocutionary effect is what is achieved in terms of influenced subsequent actions of addressees.

### ***7.2 Digitized information in different information views***

LAP has emphasized the action character of digitized information; that information should not just be conceived of as representation of real-world phenomena. In figure 6 the reality

mapping view of digitized information is depicted. It is showing that the user is utilizing the digital artifact as an alternative window to reality.

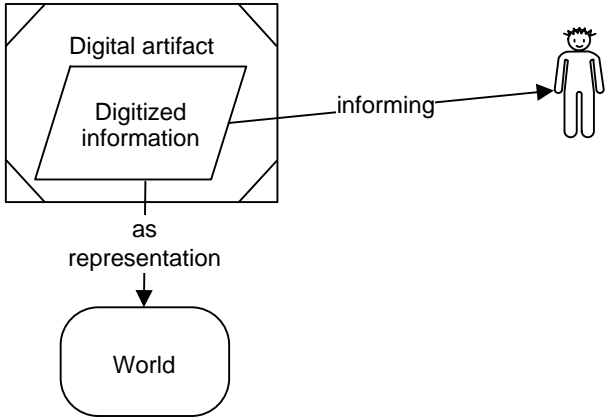


Figure 6. The reality mapping view of digitized information

The language action perspective adds an important action dimension to how we view digitized information (figure 7). The information that appears digitized in our digital artifacts is an element of communicative action. It has an origin in a locutor communicating and it is intended to be communicated to addressees. What does not come across in figure 6 is the conversational character of the digital artifact. Confer figure 3 for this dimension of the LAP approach.

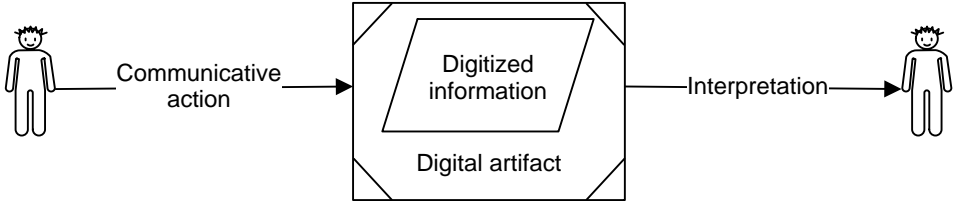


Figure 7. The language action view of digitized information

What has been presented in this essay is an extended language action view; that is a view that emphasizes the establishment of social relations through the conduct of communicative actions. As shown, this view has appeared as latent and implicit in LAP already from its inception. The contribution in this paper is to give it more attention and make an attempt to articulate it more properly. This extension adds one more dimension to how we view digitized information. Digitized information is not only an action element; it also constitutes social relations between different actors. *When we have information in our digital artifacts, we have also, as a consequence of this, social relations that are established through such digitized information.* This is a key message of this essay; and it is not only directed to the LAP community, but to the whole IS community. When we are dealing with information as elements of digital artifacts, we should be aware of that we are also dealing with social relations. The call in this paper is to be fully aware of this social and relational dimension when studying, theorizing and developing information systems.

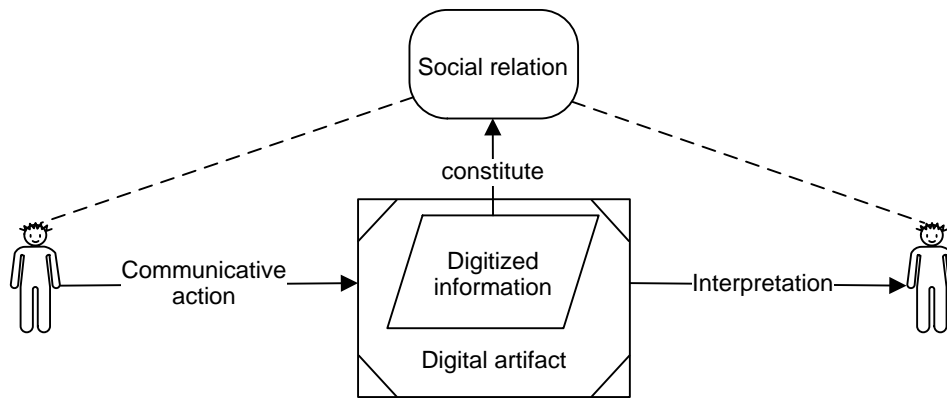


Figure 8. An extended language action view of digitized information: information as establishment of social relations

The differences in the four information views imply different aspects of information foregrounded. It follows from this that the meaning of information is different in the four views. It gives thus four complementary definitions of information (table 2).

Table 2. Meanings of information in different views

Information view	Meaning of information
Information as representation	Facts of the real-world
Information as communicative action	Trace of doing
Information as conversational move	Trace of interrelated doing
Information as social relation	Record of social state

How strong is the thesis of *information as social relation* as put forth in this paper? I fully acknowledge the provisional character of this claim. I have stated that a delimitation is made to professional-institutional settings of IS. The claim has in this paper been substantiated through a conceptual analysis and the provision of evidence from one case study in e-government. Future studies will hopefully give more nuances of this claim and it might confine the scope of the thesis. This author has been researching e-government for several years and this can have biased the comprehension of this emphasis on social relations due to this domain's pervasive legal and institutional character. The author has also studied business interaction (e-business) where the relational character also is quite obvious. Perhaps more intra-organizational studies of IS are needed in order to create harder test aiming for finding counter-arguments. It is also necessary in future studies to focus other aspects of IS; in practices such as planning, designing and evaluating information systems. Future research is expected to give more nuances to thesis of the role of social relations.

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