



Systems, Signs & Actions

An International Journal on
Communication, Information Technology and Work
Vol. 1 (2005), No. 1, pp. 1–5

<http://www.sysiac.org/>

EDITORIAL

Systems, Signs and Actions: Launching a New Journal

Peter Bøgh Andersen^a and Göran Goldkuhl^{b,c}

^a Department of Information and Media Studies, University of Aarhus.

^b Department of Computer and Information Science, Linköping University.

^c Department of Informatics, Jönköping International Business School.

Abstract

This editorial describes the purpose of the journal and the reasons for its editorial policy, and introduces the articles in this inaugural issue.

Keywords: editorial

1 Introduction

Here is – at last – the first issue of *Systems, Signs and Actions*. The new journal is defined by a particular perspective. It deals with communication, representations, and actions mediated by information technology in work organizations. In this editorial we explain why this is so.

2 Why a New Journal?

The reasons for starting the journal are twofold.

Firstly, the importance of communication and meaning in organizations has been growing in the past decades, both in reality and in theory development. In some theoretical approaches, communication is what makes organizations hang together in the first place. The spread and interpenetration of information technology in organizations makes representational issues crucial: a still larger part of the properties of the organization and its environment is accessed by digital representations and a still larger part of the work consists in interpreting these representations. In addition to this, a growing portion of organizations are concerned with analyzing and producing representations, i.e. they sell symbolic products. The journal wants to focus on this development, but with a particular point of view. Traditional communication theory often selects the interpretation process as the most important aspect, but since we are concerned with communication in work organizations, we need to emphasize its action aspect too. Organizations are there to produce goods and services and they use representations and communication to do it.

This is evident in organizations with mixed material and communicative work. The captain does not command the helmsman to set the rudder to 10 degrees starboard in order to increase the knowledge of the helmsman; he does it in order to turn the ship. Similarly, he does not read sea-maps just to understand them, but to plan the course of the ship. However, the action-aspect is important in any organization: we say things in order to do things. At first sight, the opinion research institute is expected to produce tables representing the political preferences of the voters correctly, but we all know that politicians act on this knowledge, and that the respondents often respond tactically because they know this.

The second reason for launching a journal is to create a forum for a number of smaller conferences that focus on these issues. The LAP-conferences (Language Action Perspective) and the OS-conferences (Organisational Semiotics) have been around for a decade, while the ALOIS-conferences (Action in Language, Organisations and Information Systems) are relatively new. We hope the journal will be used as a platform of discussion for these communities. In particular, we hope that the journal can help strengthening the conceptual framework used by these communities and enhancing their scientific rigor. The motivation is this: when new approaches use existing journals for publication, they must adapt their language to the existing audiences. This means on the one hand that they have to spend time explaining very basic concepts and, on the other hand, that more intricate problems are difficult to discuss because the readers will not appreciate the point. This journal hopes to attract an audience where in-depth discussions will flourish.

3 Humans, Information and Machines

The western societies have undergone a systematic change during the past century. To a still larger degree, we live in networks consisting of changing constellations of machines and humans. At first it happened in material production – older people remember Chaplin's *Modern Times* as an emblem of humans caught between the cogs and wheels of industrial machines. Then, during the eighties, office work was slowly invaded by information technology; the media business was enrolled in the development in the next decade, and now leisure time and private life seems on the verge of being engulfed by pervasive technology.

Which intellectual resources are needed to comprehend this gradual and systematic interpenetration of humans and machines? One thing is clear: an understanding that separates the life-world of humans from the instrumental world of machines is no longer adequate. Reality has already merged them.

What seems to be needed is a new organization of the division of knowledge. Fewer and fewer issues can be treated as purely technological or purely humane. Human "nature" can no longer – if ever – be studied separately from the technology it uses. The adequate object of study is the constellation human-and-artefact. It is networks of this type that exists in reality, and therefore it is about such networks that empirical evidence can be collected.

We can establish with certainty that a network of programmers, operators and the IBM chess program Deep Blue beat grandmaster Kasparov on May 4th 1997. That is indisputable. However, it is more difficult to pick out one of the participants of the network as the main character and the winner of the match. The programmers? The chess literature they used? The operators? Deep Blue? As it happened, it was the de-

velopment team behind Deep Blue that took home the \$700,000 first prize. Thus, in practice, the development team was singled out as the main character of the story; but was it only because it presented legal problem to donate \$700,000 to a piece of software that is not a legal entity?

We clearly need to develop new articulations of the human-with-artefact dyad. Which divisions and perspectives are the best is an important research issue; however, one position that will not work is one that builds an iron-curtain between the two parties.

4 The Focus

This journal focuses on three aspects of socio-technical networks:

1. Actions, signs, and sign-usage.
2. Information technology.
3. Work organizations.

We thus focus on socio-technical networks where *actors* use *computer-mediated signs* in order to conduct *activities* together with *other actors*. As the Deep Blue example shows, the relative importance of the elements of the chain and the roles the elements assume constitutes the research field of the journal. Therefore we invite papers with different focuses, as long as the others are treated as important parts of the context. For example, technical papers are welcome as long as technology is viewed as media for action and communication. Conversely, organizational analyses are appreciated as far as technical mediation is part of the scenario.

Fig. 1, which is a combination of C.S. Peirce's and Morris's ideas with Ronald Stamper's exemplifications, sums up the scope of the journal. It is concerned information technology that represents actions, norms, and beliefs in the context of a work organisation.

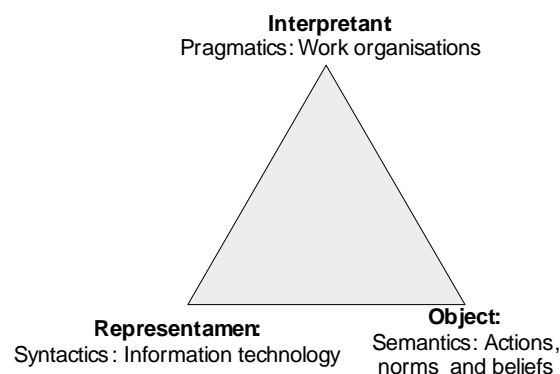


Fig. 1: The journal, Peirce, and Morris

As the list below shows, the journal is not characterized by selecting specific topics.

1. *Representations*, ranging from their physical nature (signals, physical distinctions) via their statistical properties (variety, noise, entropy, channel capacity, redundancy, speed) to their formal syntax (protocols, languages, design patterns, inference, data structures, models).
2. *The object* represented by the representations (meanings, propositions, validity, truth, denotations).
3. *The interpretation* of the representations (expectations, intentions, negotiations, commitments, activities, actions, contracts, law, norms, culture).

Its particular perspective is characterized by a belief that these three dimensions hang together and are active in the real world as a unity. As an example, consider the following authentic email:

“Here is the questionnaire plus my invitation. The homepage of the Ministry emphasizes that the chairman for the steering committee must be independent. One must admit that they have succeeded with respect to the professional aspect.”

The general interpretant of the mail is the perpetual struggle for research grants in a research community. An invitation has been sent out for a meeting taking place in a few weeks, and several stakeholders have not been invited. What can and should be done?

The speed (two minutes), the date (Saturday), and the attachments of the representation are interesting because they are symptoms of the nature of fundraising: panic is easily created, information is very quickly disseminated, and it is read at a time outside the normal working hours. Working time invades leisure time.

The object of the e-mail is an ironic comment on two texts: the attachment and a homepage. It refers of course to the attitude of the sender but resonates with a general mildly cynical attitude in the research community.

Finally, the Interpretant is the kind of action that should be taken in this situation: alliances to be made, feelers to be put out.

Taken together, all three aspects of the mail give important information about the fund raising situation. The speed of the reactions and the fact that they happen outside working hours is an indication of the collapse of the boundaries between work and private life. The irony reveals a skepticism regarding the professional quality of the planning process. Finally, the pragmatics relates to continued emails and telephone calls, formation of new alliances, and termination of old ones.

The point of the example is simply to show that all three aspects of the mail – the syntactic, the semantic, and the pragmatic – are equally important and are interesting subjects of research if seen on the background of the other two.

This is the meaning of our editorial policy: “the emphasis may be on any of the three components, as long as the others are treated as important parts of the context”.

5 Articles in This Issue

In this first issue of *Systems, Signs & Actions* we present five papers. They represent a good coverage of the journal's scope. Geoff Walsham contributes with an article "Knowledge Management Systems: Representation and Communication in Context". This is a critical investigation on assumptions in knowledge management based on a social action perspective. With inspiration mainly from works by Giddens and Polanyi and the use of an empirical case study, Walsham examines some crucial underpinnings of knowledge management. This article is an expansion of an invited paper at the 2nd ALOIS conference in 2004. Jeremy Rose and Matthew Jones contribute with an article on "The Double Dance of Agency: A Socio-Theoretic Account of How Machines and Humans Interact". This article addresses a much debated issue: How to conceive the work performed in computerized information systems. Is it possible to view IS in terms of social agency? Drawing on analyses of both structuration theory and actor network theory, this article develops a theoretical account of the interaction between human and machine agency that is called the "double dance of agency". The article originates from a paper presented at the ALOIS'2004 conference. Kecheng Liu contributes with an article "Requirements Reengineering from Legacy Information Systems Using Semiotic Techniques". The article presents a semiotic approach to requirements reengineering, i.e. recovering the requirements of an existing (legacy) system. This approach consists of three stages (Behaviour capture, Dynamic behaviour modelling, Requirements derivation) and is demonstrated through a University Library case study. Mareike Schoop contributes with an article "A Language-Action Approach to Electronic Negotiations". In this article she demonstrates how the language-action perspective can inform the design of a support tool for negotiations between business parties. She combines a communication-centred and a document-centred approach to electronic negotiation. This article originates from a paper at the LAP'2003 conference. Jonas Sjöström and Pär J Ågerfalk contribute with an article "Investigating Communicative Features of User Interfaces". The authors investigate user interfaces from the perspective of information systems actability and they make a critical examination of an information system (a syllabus database) based on this perspective. This article originates from a paper presented at the ALOIS'2004 conference.