



Chapter II

Coherent, Consistent and Comprehensive Modeling of Communication, Information, Action and Organization

Jan L.G. Dietz
Delft University of Technology, The Netherlands

INTRODUCTION

We live in a time in which more and more organisations need to become innovative, competitive, and flexible enterprises, in order to survive. This does not only hold for commercial companies, but also for organisations with a public function. A prerequisite for being an innovative, competitive and flexible organisation, is that the business processes are efficient, easy to manage and easy to change, and that they are effectively supported by information systems. To enable this, all hope is placed in technology, particularly modern information and communication technology (ICT). However, this hope turns out to be vain if one does not dispose of the right expertise.

Concerning the understanding of the potential benefits of digital (electronic) technology, we have faced a paradigm shift already, around 1970. Until then, the focus was on the efficient transforming and processing of syntactic items (words, numbers). The common term to denote this application of the digital technology was EDP (Electronic Data Processing). Otherwise said, the technology was deployed as

a *substitute* for existing technologies, like analog technology and mechanical technologies. The change has been that after 1970 the focus was put on the semantics of the processed and transmitted signs. Because of the conscious separation of content and form, drawn from the field of semiotics, the path was cleared for the *innovative* application of ICT. The notions of database and application logic emerged, as well as new analysis and design methodologies. Also the term Information Technology (IT) became common, comprising the whole body of (theoretical) knowledge and (practical) know-how regarding the provision of information to support the execution of tasks by people in organizations. The term “EDP” made way for “IP” (Information Processing) and “IS” (Information Systems).

During the last decade “IT” is succeeded by “ICT,” thereby emphasizing the integration of technologies for processing, storing and transmitting information. Meanwhile, the demand now is not to develop and implement ICT-applications, but to help organizations to become more efficient and flexible. Otherwise said, there is a need to go beyond ICT, to conceive of organization technology, to develop knowledge and know-how regarding the design and optimization of organizations. A new paradigm is needed to cope adequately with the apparent demand for an engineering attitude towards organizations. New questions are raised. What is the ‘working principle’ of organizations? How are business processes ‘constructed’? What is the essential difference between organizations and information systems? The OER-paradigm, presented hereafter, has the pretension to provide an appropriate way of thinking about organization and ICT, a way that radically differs from the current ways of thinking. These current ways are mostly just gradual modifications of existing approaches in the field of Computer Science, Information Systems, Organizational Management, or Logistics. (Note. The word “OER” is a Dutch word, meaning “primal”, “original”. The name expresses that one seeks for the essence by abstracting from the (current) realization of that essence.)

The OER-paradigm fits in a fairly new and promising perspective on business processes and information systems called the Language/Action Perspective, or L/A Perspective for short. The theoretical foundation of this new perspective is constituted by Speech Acts Theory (Austin, 1962), (Searle, 1969) and the Theory of Communicative Action (Habermas, 1981). The pioneer of the L/A Perspective is undoubtedly Fernando Flores (Flores et al., 1980). Contrary to the prevailing notion that communication is exchanging sentences, expressing some proposition with regard to the world, the L/A Perspective assumes that communication is a kind of

Figure 1. The core concepts of the OER-paradigm



action in that it creates commitments between the communicating parties. To communicate, then, is to perform language acts (Searle, 1969) or communicative acts (Habermas, 1981), like requesting or promising. Other approaches in the same L/A Perspective can be found in e.g. (Taylor, 1993), (Auramäki et al., 1988) and (Medina-Mora et al., 1992). Four international workshops have been held up to now focussing on the L/A Perspective

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