Veronique Hoste

Review
Annnely Rothkegel / Sonja Ruda (eds.) *Communication on and via Technology.* (Text, Translation, Computational Processing 10.) Berlin/Boston: De Gruyter Mouton 2012, 269 p.

Communication on and via Technology is the tenth volume in the book series "Text, Translation, Computational Processing." This volume presents contributions of 11 authors on the role of communication in technology. The book is organized in three broad chapters, which cluster three lines of research: the transfer of technological knowledge in communication (Chapter 1), the information transfer through languages and pictures (Chapter 2) and the relationship between technology, communication and culture (Chapter 3).

The first article of the book, written by co-editor **Annely Rothkegel**, discusses the tension between theory and practice in the communication on technology. The author describes the interfaces between analysis, description, explication (theory) and production, execution (practice) in four thematic fields, which she groups as 'knowledge' (describing the structuring of and communication on knowledge), 'actions' (dealing with topics such as the actors and speech acts involved in human-technology interaction), 'text as a mediation form' (discussing issues such as text structuring, usability, text quality, etc.), and 'cultural aspects' (focusing on the culture-specific aspects of communication on technology). She argues in favor of an interdisciplinary and intercultural approach given the increasing focus on humans in technology use.

In a second article, **Franck Ganier** presents an overview of the main models, which have been proposed in the literature to describe the mental activities involved in the use of procedural documents. The chapter starts with a short description of the methodologies used to study the processing of instructions, such as video recordings, self-paced presentation techniques or eye-movement recordings. The main focus, however, is on the description of six processing models, ranging from local models on the processing of procedural instructions to models describing more global, interactive processes. The author gives a clear and up-to-date description of the different types of models. The local or serial models, as described by Wright and Wilcox (1978) and by Kieras and Bovair (1986) are linear processing models as processing begins with reading and goes on until the actions are carried out. The model described by Dixon, Harrison and Taylor (1993) describes different layers of representation taking into

account both the environment and user's knowledge and cannot be considered strictly sequential anymore. In more recent approaches, the focus has shifted to more interactive models (e.g. Guthrie/Bennett/Weber 1991; Ganier 2004). At the end of the chapter, the author also discusses how these models can also serve educational purposes: to show technical writers the effects of different ways of presenting information, to show which principles of technical writing facilitate understanding, etc.

In the article of **Sonja Ruda,** a model is outlined for determining as well as optimally arranging the "right" questions and answers. In order to determine these questions and answers, the author first presents an overview of a number of knowledge survey techniques such as different types of interviews, expert observation techniques as introspection or think aloud protocols, or indirect knowledge survey techniques such as hierarchical clustering. After this more general description, the author focuses on which knowledge survey techniques would be particularly suitable for experts and users in order to compose a good instruction text. She argues in favor of the think aloud method with the concurrent recording for both the expert and first user, supplemented with a structured interview. These video recordings and their transcripts then serve as the basis for the interpretation in terms of "right" questions and answers from both the expert's and user's point of view. Analysis questions are for example: where is which information to be placed?, which technical terms are essential?, which illustrations are necessary?, which problems do occur?, etc.

The last contribution of the first chapter on technological knowledge in communication is written by **Karl-Heinz Pogner**, who offers a social perspective on writing in the workplace. The author does so by presenting two central concepts in text and knowledge production, viz. "discourse community" (Pogner 2003) and "community of practice" (Wenger/Snyder 2000). Whereas discourse communities (e.g., school, workplace, academic research communities) can be characterized as social groups with common rules for language, language use and even for approaching problems, communities of practice are defined as groups of people sharing an interest, problem area, which exchange knowledge and expertise through continuous interaction. Both communities are not mutually exclusive concepts, as they both describe the social aspects of knowledge creation, but they have a slightly different focus on discursive versus non-discursive practices. The author clearly shows by means of three use cases how important it is to be conscious of the potential of discourse communities and communities of practice for successful text and knowledge production.

The second chapter of the book focuses on the conditions of the linguistic or visual construction of meaning. The first study, by **Klaus Schubert**, presents a model of specialized communication of four closely interconnected dimensions, viz. the traditional dimensions technical content and linguistic form, and the dimensions technical medium and work processes. The dimension technical medium can have an immediate influence on the dimension linguistic form (e.g. caused by space and time constraints such as in software localization) and on the work processes (e.g. when translation memories or terminology databases are used) in technical communication and vice versa. The

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author also argues in favor of not differentiating between monolingual (technical writing) and multilingual (technical translation) technical communication and distinguishes four features which are constitutive for the one and occasional for the other communication type: interlinguality, source document, researched information and change in audience design. Whereas the first two features are constitutive for technical translation, they are occasional for technical writing (e.g. interlinguality may occur when foreign-language sources are used). The last two features, on the other hand, show an opposite behavior: e.g. adapting the content, language and the medium to the intended target audience is considered a constitutive feature of technical writing. The author concludes that the two sections of technical communication are not watertight compartments, but rather poles of a continuum.

The contribution of **Colette Cortès** shows that in German for special purposes, adjectives play a decisive role in the formation of compound terms. After a description of the class building use of German adjectives based on the work of Milner (1978), the author documents the class building potential of adjectives in German technical and advertising texts by means of a corpus-based study on a mail order catalogue. The author shows that the class building feature offers an explanation for both the inflected adjective + noun structure (as in “mechanische Waage”) and the noun + non-inflected adjective structure (as in “Bank klein”) in the technical text; she furthermore argues that gradability (e.g. “strahlend schön”) seems to be an important feature for the non-class building use of adjectives in the advertising text.

The article of **Clemens Schwender** focuses on the use of technical illustrations for instructional purposes. The article starts with a historical overview of technical illustration, which goes back to the Ancient World. In order to describe the basis of all representational techniques in use today, the author pays special attention to two types of technical drawings both originating in the fifteenth-sixteenth century: the technical and anatomical sketches of Leonardo da Vinci and the woodcuts of Georgius Agricola. Da Vinci, on the one hand side, drew multiple sketches from various points of view, enlarged individual details and depicted the working of machines by introducing an exploded view on the different assembled components (this concept is nowadays for example used in the furniture assembly instructions from IKEA). Agricola’s drawings, on the other hand, depict complete scenarios, in which tools are arranged in such a way to recognize the most important components and in which the figures are frequently in motion, which adds to the lively nature of the illustrations. In the remainder of the chapter, the author also pays attention to pictograms, the use of technical drawings in technical inventions and the representation of action in drawings. He concludes with some thoughts on the future of technical illustrations in a video-display culture.

In Chapter 3, technology is related to communication and culture and comprises three articles. The article of **Vasco Alexander Schmidt** focuses on software documenttation, which comprises many possible texts such as menu items, error messages, tutorials, FAQ’s, and describes the software documentation problem from a

semiotic point of view. Following Bremer (1999), the author differentiates between three mental models for software documentation: the system-oriented model in which documentation is oriented towards the system, the task-oriented model in which documentation is oriented towards the tasks a user performs, and the interface model which can be situated between the system and application domain. The author, however, stresses that the main target lies on the expected audience of the documentation and should therefore take into account their knowledge, their reading strategy and their attitude to work with the software. He also discusses the ideal of a consistent language use.

The contribution of **Marc Hermeking** deals with the influence of culture on the usage of technology and technical documentation. He illustrates this with some relevant theories and models from the field of intercultural communication. The first example given by the author is the usage of the internet, which he connects to the differentiation between low-context and high-context cultures and to dichotomy between monochromic and polychromic time orientation (Hofstede 1991; Hall/Hall 1990). As a second example, the author presents several cases illustrating cultural influence (low-context versus high-context) on technical offline documentation. In a third example, the focus shifts towards online instructions. The author demonstrates that the airplane collision of Ueberlingen (Hermeking 2008) can also be explained by a difference in cultural preferences: the preference towards online instructions given by human beings (the Russian pilots coming from a high-context culture) versus digital technology (the German pilots coming from a more individualistic, low-context culture).

The final article, by **Gerhard Base** and **Andreas Metzner-Szigeth**, describes the CULTMEDIA European research network on “cultural diversity and new media”. The

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authors present some background to the network and discuss the three areas of research involved in the project, viz. privacy and the public sphere (research area 1), identity and the community (2) and knowledge and the economy (3) as well as the cross-sectional topic of security/insecurity and trust. This research is carried out on three levels: the abstract-conceptional, discursive-comparative and the synthetic-conciliar level. Finally, the authors conclude that the interaction between culture, society, technology and the media has resulted in a research field, which goes beyond the expertise of the different specialisations and they add some prospects for future research.

This book presents a broad overview of different articles, all related to communication and technology. Different topics are discussed, such as the tension between theory and practice in the communication on technology, the mental activities involved in the use of procedural documents, the use of technical illustrations for instructional purposes, the influence of culture on the usage of technology and technical documentation. Also different perspectives are taken, including a social perspective on writing in the workplace or a semiotic perspective on software documentation. Although the structuring of the book in three chapters seems a bit artificial, the editors overall did a good job in joining the expertise of the authors in a set of articles, which are not always equally transparent, but which will certainly provide the reader with a multifaceted view on technology communication.

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Reviewer

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