Turing machine (the author asserts that it has never been built!), nonstandard logics, or nonmonotonic reasoning. The chapter on expert systems does not really explain what an expert system is, nor how it works, nor how it could be used by a CALL system. So these topics will be rather confusing for the nonspecialists.

To conclude, it seems to me that this book will not contribute to familiarizing language teachers with notions of computer science and artificial intelligence.

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Camilla Schwind is a computer scientist at Centre National de la Recherche Scientifique, working on natural language understanding and nonclassical logics. In the last few years, her research has concentrated on applying AI results, methods, and techniques to computer-assisted language learning. She has conceived and implemented a language tutoring system for German. Schwind's address is: Groupe intelligence artificielle, Faculté des sciences de Luminy, Case 901, 163 Avenue de Luminy, 13288 Marseille, France.

AN INTRODUCTION TO CHINESE, JAPANESE AND KOREAN COMPUTING

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Readers of *Computational Linguistics* who might have been led by the title of this book to expect an introduction to computational problems in the Chinese, Japanese, and Korean languages will in fact find little of relevance. The title is misleading: the book is not about Chinese, Japanese, and Korean *computing*. It is almost entirely about the problems of input, coding, and display of Chinese *characters*. It has a great deal to say about the nature and history of Chinese characters, and about the problems of using them in computation. It ignores the phonetic scripts used in conjunction with characters in Japan and Korea, and discusses Chinese characters mainly from the perspective of Taiwan rather than the People's Republic of China.

If you want to learn about Chinese characters, or to develop computer systems for the Chinese market, you should probably read this book, because it has a lot of information on the subject. If not, you might like to read the book for amusement, since rarely does such a personal, egotistic, chauvinistic, and polemic book see the light of day. (It is certainly rare for a book author to give himself "ten thousand thanks" for his own work on a standardization committee; and we do not accept the *yin-yang*–based symbol of the *I Ching* as evidence that the Chinese invented the fundamental theory of computation.)

Chapter 2, "About the Chinese language," is actually about Chinese characters rather than the language. This chapter gives a good account of history, structure, and sounds of characters, and includes many figures and tables. Other chapters and several appendices give statistical data on characters and phonetic symbols. These parts of the book could be very useful to someone interested in the details of Chinese character input, coding, and display.

The book is written in a "Chineselized" version of English (to use a word much favored by the authors). It would have benefited greatly from a reading by an English-speaking copyeditor, and a typographer should have been consulted about the design. The content should also have been checked more carefully, as illustrated by Rule 3 of the *Dai-E* coding method, the complete text of which is: "If the character is comprised of a container without another radical, then rule 3 will not apply" (p. 137).

In Chapter 7, the book goes beyond Chinese I/O to consider Chinese programming languages and operating systems, though the authors seem to have some misconceptions about what is available to non-Chinese speakers. "Total control of a given computer system means that the human users must be able to communicate with the computer system in their human native language without hinderance [sic]" (p. 253). "Could you imagine English speaking people having to write their programs in another language? What would the result be?" (p. 254). "It is not an English operating system, if it cannot communicate with the user in plain English" (p. 255). Readers of *Computational Linguistics* will presumably now step up their research so that they can develop the first English operating system.

FORTH is the sole programming language that merits the authors' approval, seemingly because it emulates Chinese philosophy:

The second similarity between Chinese philosophy and FORTH can be found in the dual functions of the FORTH interpreter/compiler. The FORTH interpreter is an interpretive compiler as well as compilative interpreter. It is one of two, two of one. This is similar to

Chinese thoughts on the combinations of heaven and man. Heaven is the man, and man is the heaven. Good is evil, and evil is good. The universe is but one. It is very Zen-ish. If you look from this angle, it is yin, but, if you look from another angle, it is also yang. Yin and Yang are one. (p. 267)

An unintentionally self-referential comment (actually used about the work of the People's Republic of China on character coding) occurs on page 211: "What kind of mad joke this mess is?" As the authors mysteriously say (p. 49): "The history of Shr^3 Huang^2 Di^4 of the Chin^2 Dynasty should be a mirror for all of us to reflect on and learn from."

M. Martin Taylor obtained his B.A.Sc. in engineering physics at the University of Toronto, his M.S.E. in industrial engineering at the Johns Hopkins University, and his Ph.D. in psychology at the Johns Hopkins University. He holds the position of Senior Experimental Psychologist at the Defence and Civil Institute of Environmental Medicine in Toronto. *Insup Taylor* obtained her B.A. at Seoul National University, and her M.A. and Ph.D. at the Johns Hopkins University, all in psychology. She is a Research Fellow at the McLuhan Centre for Culture and Technology, University of Toronto. They are the co-authors of *The psychology of reading* (Academic Press, 1983) and *Psycholinguistics: Learning and using language* (Prentice-Hall, 1990). Martin Taylor's address is: DCIEM, P.O. Box 2000, North York, Ontario, Canada M3M 3B9: Insup Taylor's address is: McLuhan Program, University of Toronto, 39A Queen's Park Crescent East, Toronto, Ontario, Canada M5S1A1. E-mail for both authors: mmt@ben.dciem.dnd.ca

BRIEFLY NOTED

COGNITIVE LINGUISTICS [JOURNAL]

Dirk Geeraerts (ed.)

Berlin: Mouton de Gruyter, quarterly ISSN 0936-5907,
   Institutional subscriptions: $85 or DM 154, plus postage.
Available to individuals through membership in the
   International Cognitive Linguistics Association. Send $35 or
   DM 70 (students, $18) to Johan Vanparys, Facultés
   Universitaires Notre Dame de la Paix, Rue de Bruxelles 61,
   B-5000 Namur, Belgium.

Cognitive Linguistics will be a forum for high-quality research into language as an instrument for organizing, processing, and conveying information. . . . The formal structures of language are studied not as if they were autonomous, but as reflections of general conceptual organization, categorization principles, processing mechanisms, and experiential and environmental influences. As language is not to be isolated from the other faculties of man, cognitive linguistics has an interdisciplinary openness to the other cognitive sciences. Consequently, contributions to the journal may adopt either a linguistic point of view, such as language-specific description, typological comparison, historical and variational studies, theoretical and formal modeling; or they may assume that perspective of a neighboring discipline such as psycholinguistic experimentation, anthropological fieldwork, computer simulation,

and philosophical analysis—*From the Editorial Statement,* issue 1(1), 1990

TRANSLATING AND THE COMPUTER 10: THE TRANSLATION ENVIRONMENT TEN YEARS ON

Pamela Mayorcas (ed.)

London: Aslib, 1990, xv + 176 pp.
Hardbound, ISBN 0-85142-254-3, £24

This is the Proceedings of the Tenth Conference on Translating and the Computer London, November 1988. The contents of the volume are:

Ten years of machine translation design and application: From FAHQT to realism, by Juan Sager
The role of computer-aided translation in translation services, by A. T. Zirkle
Criteria for selecting MT systems, by Isabella Moore
Multilingual word processing for translation, by David C. Jackson
International (tele)coms: A guide for the faint-hearted, by Barry Mahon
Information on demand: Online retrieval for external databases, by J. A. Large
Low-cost information retrieval packages, by Forbes Gibb
Text-typology and translation: An overview, by Douglas Arnold
Pre-editing and the use of simplified writing for MT, by Peter Pym
User experience of Termbase, by Alain Paillet
The automated translation of software, particularly the user interface and user manuals, by Mike Scott
Machine aids for translators: What does the future betoken? by Francis E. Knowles
Language conversion in the audiovisual media: A growth area with new technical applications and professional qualifications, by George-Michael Luyken
Themes in the work of Margaret Masterman, by Yorick Wilks

AN INTRODUCTION TO TEXT PROCESSING

Peter D. Smith
(California State University, Northridge)

Cambridge, MA: The MIT Press, 1990, xii + 300 pp.
Hardbound, ISBN 0-262-19299-3, $32.50

Those who process natural language necessarily process text. Smith's *Introduction to text processing* covers nuts-and-bolts implementation matters of text processing from data entry through encryption and compression to concordance generation and machine translation. Other topics covered are document storage and retrieval, text editors, string matching, macroprocessors, text formatters, hyphenation algorithms, spelling checkers, writers' tools, statistical authorship studies, and automatic abstraction. Some topics are treated in considerable detail; some that would normally require books of their own, such as IR and MT, receive overviews. Generally speaking, the technical material is strong and well presented.

   Curiously omitted is any discussion of character sets: ASCII, its limitations, and the many recent proposals for extensions. (The