vanced learners are shown, particularly when parsing morphemes and multi-word phrases to find what constitutes a word-concept (Altman, Arnaud, & Savignon), and (d) often invisible difficulties of learners are vividly described (Grabe & Stoller, Laufer, or Parry's demonstrations of uncertainty, Altman's presentation of avoidance, Nation & Newton's discussion of dangers of associative learning).

In distinguishing important facets of vocabulary acquisition or learning, providing extensive references for further study, and describing good pedagogical practice, this volume has great value for both teachers and researchers.

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THE VISUALIZATION OF FOREIGN LANGUAGE VOCABULARY IN CALL.
Angela Heidemann. (Duisburg Papers on Research in Language and Culture No. 28). Frankfurt am Main: Peter Lang, 1995. Pp. 128. $32.95 paper.

This book, which is one of a series of papers from the University of Duisburg, is a justification of the visual elements of a particular computer-assisted language learning program for learning Dutch called EuroLex. About one third of the book is a description of the EuroLex program. Because of this, it suffers from the seemingly unavoidable problem that many accounts of CALL programs face, and that is the need for elaborate step-by-step description of the operation of the program when five minutes working with the actual program would convey more information more effectively.

The book begins by reviewing research, starting with neurons and dendrites, moving quickly into the storage, analysis, and retrieval of knowledge, and then focusing on foreign language vocabulary learning and the visualization of foreign language vocabulary in CALL. The most interesting part of the book for foreign language educators will be the principles for the visualization of foreign language vocabulary. These consist of approximately 50 principles organized under three main sections: learner-oriented principles, picture features, and picture functions. Typical principles include: (a) Maintain learner motivation by avoiding elements of the target language culture that carry strongly negative connotations for learners, (b) present vocabulary items in semantically related groups, (c) present key items in the picture as wholes and unobliterated by other items if possible, and (d) pictures are remembered better than words and can therefore act as mediators for new knowledge.

The book reviews a wide range of research, but its major weakness is that the wide range means that particular areas are not thoroughly reviewed. Let us look at a couple of critical examples of this.

Translation is dismissed as a means of conveying information, especially in the initial stages of learning (p. 78). However, there are numerous experiments (Nation, 1982) that show that translation is the most effective way of conveying information in early vocabulary learning and for most learners is more effective than pictures. The criticisms of translation are just as easily applied to pictures.

One of the picture feature principles is "present vocabulary in semantically related groups." An increasing amount of research (Higa, 1963; Tinkham, 1993, 1997; Waring, 1997) shows that this is not good advice. Items grouped in lexical sets, synonyms, opposites, and free associates are actually more difficult to learn together than unrelated items. Items in thematically related sets (syntagmatic rather than paradigmatic) are easier to learn together.

The breadth of the review gives a veneer of respectability to the principles, but closer examination indicates that, although the principles seem very commonsense, their research base is not fully reviewed.

The book suffers from poor editing. There are frequent errors of formatting, spelling, word formation, and expression. On page 51, the taxonomy of processing depth is from Bloom and others, not originally from Stern.

The book will be of interest to users of the EuroLex program to give them an appreciation of some of the careful thought that went into the design of the visuals.

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INVESTIGATING SECOND LANGUAGE ACQUISITION. *Peter Jordens and Josine Lalleman* (Eds.). Berlin: Mouton, 1996. Pp. vii + 469. DM 158 cloth.

A fattish edited volume on SLA based on a Dutch summer course held in 1991, the book is divided into eight chapters, each containing between one and three contributions by experts in various specialized areas. These chapters are headed as follows:

In the General Introduction, Lalleman's opener is a rambling state-of-the-art-in-SLA, coping with the difficult task of compression; this is followed by a neat and tidy summary of the history of transfer with respect to the acquisition of grammar by Sharwood Smith—I particularly enjoyed his apocryphal dialogue between a Ladonian, a Dulayo-Burtian, and a Selinkerian on the interpretation of *No is true!*