Book Review

Peter Robinson (ed.): *Cognition and second language instruction.* Beijing: Beijing World Publishing Corporation, 2007, pp. 453, paperback, ¥36.00. ISBN 978-7-5062-8288-8/H·974.

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Cognition and second language instruction is a highly welcome addition to the Cambridge Applied Linguistics series which has the following qualities: respect for the significance of theory, accountability to empirical findings, and rational argument. In this reprint edition of a world-famous edited work, the editor and authors investigate the question of what the cognitive correlates and constituents of learning are, and to what degree these are influenced by instructional manipulations, and distinct learning conditions. Answers to these questions regarding the influence of cognitive learner variables on second language acquisition (SLA) and on the development of effective second language (SL) instruction are a subject of major interest to SLA researchers, language teachers, and all those involved in the practice of language teaching. The book is an impressive collection of twelve chapters written by the most influential researchers in their respective paradigms. It is divided into two sections and includes two prefaces, references, and an index. The two prefaces are enlightening and elegantly formulated. The first is written by series editor Michael H. Long and Jack C. Richards; the second one is written by Peter Robinson.

Section 1, including six chapters, deals with the principal cognitive resources and processes. This section contains (in this order) six chapters by Richard Schmidt on attention; Nick Ellis on memory; Brian MacWhinney on connectionist models of representation and learning; Michael Harrington on sentence processing; Robert DeKeyser on automaticity and automatization; and Kevin Gregg on learning ability and SLA theory. Therefore, this section moves from a focus on key cognitive resources drawn on in SLA, attention, and memory, to broader issues of their implications in second language processing and learning.

Chapter 1 is written by Richard Schmidt, who is an associate professor at University of Connecticut. The major goal of this chapter is to provide some details of the role of attention, as that fits within a broader cognitive approach to have a better understanding of SLA. The essential claim of this chapter is that the concept of attention is extremely necessary to understand almost every aspect of SLA, including the development of interlanguages (ILs) over time, variation within IL at particular points in time, the development of L2 fluency, the role of individual differences such as motivation, aptitude, and learning strategies in L2

learning, and the ways in which interaction, negotiation for meaning, and all forms of instruction contribute to language learning. He also believes that attention is a limited selective cognitive process, which is to some degree controlled by people's subjective initiative. He then further explores some highly controversial theoretical issues related to attention in the field of SL teaching. What's more, what these two kinds of learning, namely, implicit learning and explicit learning, have to do with each other still remains a topic of great debate within SLA and elsewhere. In SLA, the question has frequently been posed in terms of whether or not "learned" knowledge can become "acquired" knowledge or whether the learner's conscious hypothesis can become internalized (Krashen 1982).

In Chapter 2, the author, Nick C. Ellis, examines the issue of memory for language. Ellis explains that working memory (WM) is a cognitive system with a limited capacity which is responsible for temporarily holding information available for processing. This term is often used synonymously with short-term memory, but in fact working memory allows for the manipulation of stored information, while short-term memory merely refers to the short-term storage of information. Ellis points out that the essence of the Working Memory Model is that we have specialist systems for perceiving and representing, both temporarily and in the long run, visual and auditory information, along with a limited resource attentional system.

In Chapter 3, Brian MacWhinney dwells on the competition model: input, context, and the brain. To be more specific, the focus is on what language learning is. MacWhinney holds that it is a three-way interaction between the input, the learner, and the interactional context. This three-way interaction offers a guiding framework to better understand first and second language acquisition, in both naturalistic and formal contexts. The competition model regards both L1 and L2 learning as constructive, data-driven processes, which rely not only on the universals of linguistic structure, but also on the universals of cognitive structure. This model also attributes development to learning and transfer, rather than to the principles and parameters of Universal Grammar.

As reflected in the title of Chapter 4, Michael Harrington explores the notion of sentence processing. The major goal of this chapter is to describe the goals, methodology, and current theoretical approaches in sentence processing research, and to explore implications that this field has for our interpretation of SLA. The first section introduces the basic research paradigm and the experimental logic used in sentence comprehension research. Then, in the second section, three approaches to sentence processing are analyzed and models of representative of each are also explored. Following the survey of the three approaches, the final section concludes with a discussion about the contribution that sentence processing research can make to SLA theory and pedagogy. Finally, impressive insights into online processing by L2 learners inform individual differences models of L2 development, and offer a window on transfer in interlanguage (IL) development.

However, Harrington also points out that sentence processing research is still in its infancy, and the need to develop a transition theory of SLA is becoming increasingly important.

In the next chapter, Robert M. DeKeyser delves into the issue of automaticity and automatization. DeKeyser points out that the ultimate example of automaticity perhaps is our ability to use language. This chapter aims to investigate how psychologists conceptualize the layman's experiences with automaticity and automatization, to assess how automatization operates in L2 learning, and to draw tentative conclusions regarding what classroom activities and what curricular sequences are conducive to the automatization of the second or foreign language skills. What's most exciting in this chapter is that classroom research on automatization of L2 rules provides a chance of focused hypothesis-testing in an area that benefits not only theory-building in cognitive psychology and SLA research, but also language teachers and learners.

In the final chapter of part 1, the author, Kevin R. Gregg, dwells on the issue of learnability and second language acquisition theory. One highlight of this chapter is that Gregg points out the fundamental goal of a theory of SLA, which is to explain the acquisition of competence in a second language. Then he illustrates the main proposals that have been offered to solve the problems of SLA theory construction within a learnability framework. Next, he examines the question of the learner's initial and final cognitive states concerning knowledge of L2. After taking up the question of input, he finally discusses the issue of learning mechanisms and learning principles, which might act on the input to produce new knowledge.

Section 2, with six chapters, examines the concepts and constructs explained in Section 1 and relates them to issues in instructed SLA. What's more, this section contains chapters on the design of pedagogic tasks (Skehan and Foster); the cognitive processes triggered by focus on form (Doughty); intentional and incidental learning of vocabulary (Hulstijn); cognitive complexity, task sequencing and syllabus design (Robinson); aptitude, individual differences, and program design (Sawyer and Ranta); and the insights provided by protocol analysis into the cognitive processes underlying second language skill acquisition (Jourdenais). This section also moves from a relatively narrow focus, for example, on issues of L2 task design and methodology, to broader pedagogical issues such as syllabus and program design and skill learning.

In the first chapter of Section 2, the authors, Peter Skehan and Paulie Foster, make a major claim that there are attentional limitations for the L2 learner and user and that distinct areas of performance compete with one another for the available resources. To be more specific, native-like morphosyntactic competence is an expensive optional extra. "The redundancy of much syntax in successful second or foreign language communication serves to underlie warnings about a task-based approach to language instruction" (Haley and Swain 1984). Thus, if it is not

appropriately handled a task-based approach can overemphasize the importance of just "getting the job done" at the expense of the major purpose of pedagogy: improving target language ability.

In Chapter 8, Catherine Doughty examines focus on form in cognitive processing terms by postulating plausible, psychologically real, cognitive correlates for a host of L2 learning processes that have become prevalent in instructed SLA literature. In addition, the author also discusses a set of specific pedagogical recommendations and three fundamental issues regarding the feasibility and timing of recommended focus on form (FonF) interventions.

In the next chapter, Jan H. Hulstijn looks at what various theories have to say about incidental and intentional vocabulary learning in three main sections. Section 1 provides some background information; Section 2 deals with theoretical, methodological, and pedagogical uses of the notions of incidental and intentional vocabulary learning; Section 3 explores the pedagogical implications regarding elaboration at initial exposure, rehearsal, and automaticity.

In Chapter 10, Peter Robinson describes a theoretical rationale for empirical research into criteria to be adopted when progressively increasing the cognitive demands of L2 tasks. What's more, he also considers further implications of the framework and findings which are described for sequencing tasks in task-based approaches to syllabus design.

In the next chapter, Mark Sawyer and Leila Ranta hold that the relationships among language aptitude, additional individual differences (IDs), and instructional treatments provide a large number of overlapping areas where future work is likely to be productive. In addition, some of the most immediately promising areas of future endeavor are also discussed.

In the final chapter of Section 2, the author examines the strengths of protocol analysis, which is regarded as a method for looking at various cognitive processes of interest to SLA researchers. Then, the methods involved in the collection and analysis of protocols are addressed. Finally, both the limitations and benefits of this method of data collection for language acquisition research are considered.

After reading this book, I am highly intrigued by the issue of learner language. According to Bates et al. (1991), a llearner's language does not come directly from their genes, but rather from the structure of adult language, from the structure of their cognitive and social cognitive skills, and from the constraints on communication inherent in expressing non-linear cognition into the linear channel provided by the human vocal-auditory apparatus. What are the exact components of a successful acquisition of a language? To be more specific, what are the major areas one has to pay attention to if one wants to be proficient in a specific language? I cannot agree more with Bates et al. on this issue concerning the following aspects. Firstly, a learner's language does not come directly from their genes. Secondly, I believe, the structure of adult language, and the structure of adults' cognitive and social cognitive skills suggests that one needs to be immersed in the target

language to fully mimic, practice, acquire, and internalize the target language in terms of its vocabulary, cognition, and culture. To be more specific, one needs to learn not only linguistic forms, but also the worldview, values, and all sorts of ideology that are carried in those linguistic forms. Only in this way can one truly acquire linguistic competence in communicating with foreigners effortlessly and effectively. Lastly, the constraints on communication inherent in expressing non-linear cognition into the linear channel provided by the human vocal-auditory apparatus means that the meaning of messages is most important in most SLA contexts. In my opinion, here expressing non-linear cognition means expressing the message that the speaker wants to convey in a certain context. Furthermore, the linear channel refers to linguistic forms and gestures.

One fascinating feature of this book, I believe, is that Ellis employs constructivist approaches to explore language acquisition. Here are some insights that in my opinion are of great significance for SLA researchers, language teachers, and all those involved in the practice of language teaching. To begin with, constructivist views of language acquisition consider that it is mainly these systems (for perceiving and representing) that the child uses in acquiring language. What's more, constructivists deny any innate linguistic universals at all (Robinson 2007). I agree with his opinion about specialist systems for perceiving and representing, but his view about innate linguistic universals seems far too absolute. In fact, there exists a more relevant Universal which involves process and learning instead of content. The key words here are learning processes rather than learning content. Then, the complexity lies in the language, not the learning process. "[M]any universals are so inevitable given a certain 'problem-space' that extensive genetic writing is unnecessary... Just as the conceptual components of language may derive from cognitive content, so might be the computational facts about language stem from nonlinguistic processing" (Bates 1984, cited in Ellis 1996: 362). Constructivist approaches also predict the following stages of learning a target language: gradual emergence, an absence of productivity, and item-by-item acquisition. Next, language learning results from general processes of human inductive reasoning, which are applied to the specific issue of language. In my view, human inductive reasoning is highly important for learners who want to truly have a good command of a target language. To be more specific, learners need to interpret and summarize all kinds of grammar rules in their own words. For instance, when I learn the rules of the plural forms of nouns, I find that it is of vital significance for me to summarize those specific rules for nouns that end with different letters. Although there are certain special nouns that don't abide by these rules, it is still efficient in learning and acquiring new words. The general rule of the plural forms of the nouns, adding "s" at the end of the nouns also has crucial guiding significance for learners, especially for beginners.

In addition to the above highlights, this book also has the following merits. One of the noticeable features of this book is its continued attempt to combine

cognition, SLA, and SL instruction, which enables readers to have a deeper understanding and appreciation of the application of SL instruction. Also unique in this book is that the leading figure on SLA and language teaching, Professor Robinson has assembled an impressive line-up of acknowledged experts on the issues covered. Another remarkable feature is the thorough exploration of the key issues related to the practice of second language instruction. What's more, the format of this book is highly clear, which makes it conducive for use as a textbook in a postgraduate course on cognition and SL instruction

Apart from these merits, some minor flaws also exist. What's most exciting about this book is its interdisciplinary nature. However, it is also this interdisciplinary nature that may be burdensome for some readers. Another demerit of this book is the extensive use of tables, figures, and graphs, which can be challenging for some potential readers who are interested in cognition and second language instruction. Furthermore, researchers might have doubts regarding the cited studies due to various issues such as the sources of the tables and lack of methodological clarity, which makes the book less convincing. In addition, this book also contains a large number of detailed technical descriptions of the multiple facets of SLA, which may demand a great deal of effort from the readers.

Overall, this book is characterized by its orderly organization and clear presentation, its distinctive perspectives and provoking insights, its breadth and depth in cognition and SL instruction, and its use of the evidence and quotes marshaled for all the noteworthy claims that are made. Therefore, I strongly recommend this book to postgraduates, SLA researchers, pre-service and in-service language teachers, and all those in charge of teacher preparation programs.

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