

Linguistic Theory in Second Language Acquisition

Edited by
SUZANNE FLYNN and WAYNE O'NEIL

Kluwer Academic Publishers

LINGUISTIC THEORY IN SECOND LANGUAGE ACQUISITION

Edited by

SUZANNE FLYNN

*Department of Foreign Languages and Literatures,
Massachusetts Institute of Technology, Cambridge, U.S.A.*

and

WAYNE BONEIL

*Department of Linguistics and Philosophy,
Massachusetts Institute of Technology, Cambridge, U.S.A.*



KLUWER ACADEMIC PUBLISHERS

DORDRECHT / BOSTON / LONDON

Library of Congress Cataloging in Publication Data

Linguistics in second language acquisition / edited by Suzanne Flynn and Wayne O'Neill.

p. cm. -- (Studies in theoretical psycholinguistics)

Includes bibliographies and indexes.

ISBN 1-556-08084-0 (U.S.). ISBN 1-556-08085-9 (U.S. pbk.)

1. Second language acquisition. 2. Grammar, Comparative and general. I. Flynn, Suzanne. II. O'Neill, Wayne A. III. Series.

P118.2.L56 1988

401'.9--dc19

88-21811

CIP

ISBN 1-55608-084-0

Published by Kluwer Academic Publishers,
P.O. Box 17, 3300 AA Dordrecht, The Netherlands.

Kluwer Academic Publishers incorporates
the publishing programmes of
D. Reidel, Martinus Nijhoff, Dr W. Junk and MTP Press.

Sold and distributed in the U.S.A. and Canada
by Kluwer Academic Publishers,
101 Philip Drive, Norwell, MA 02061, U.S.A.

In all other countries, sold and distributed
by Kluwer Academic Publishers Group.
P.O. Box 322, 3300 AH Dordrecht, The Netherlands.

All Rights Reserved

© 1988 by Kluwer Academic Publishers

No part of the material protected by this copyright notice may be reproduced or
utilized in any form or by any means, electronic or mechanical
including photocopying, recording or by any information storage and
retrieval system, without written permission from the copyright owner.

Printed in The Netherlands

ORIGINAL PROGRAM
October 25-October 27, 1985
Massachusetts Institute of Technology, Cambridge, Mass.

FRIDAY, OCTOBER 25

I. INTRODUCTORY REMARKS

Jay Keyser, Associate Provost, Massachusetts Institute of Technology

II. CONFERENCE OVERVIEW

Suzanne Flynn, Massachusetts Institute of Technology

III. OVERVIEW PERSPECTIVES

a. *Linguistic Theory*

Ken Hale, Massachusetts Institute of Technology

b. *Linguistic Theory and L2 Acquisition*

F. Newmeyer and S. Weinberg, University of Washington

c. *L1 Markedness and Implications for L2 Acquisition*

Ken Wexler, University of California, Irvine

IV. SYNTAX

a. *Island Effects in L2 Acquisition*

Lydia White, McGill University

Commentator: Wayles Browne, Cornell

b. *Nature and Development in L2 Acquisition and Implications for Theories of Language Acquisition in General*

Suzanne Flynn, Massachusetts Institute of Technology

Commentator: Loraine Obler, City University of New York

- c. *Parameterized Grammatical Theory and Language Acquisition. A Study of the acquisition of verb placement and inflection by children and adults*
Harald Clahsen, Dusseldorf
Commentator: Wayne O'Neil, Massachusetts Institute of Technology

SATURDAY, OCTOBER 26

V. SYNTAX (2)

- a. *L2 Learnability: Delimiting the Domain of Core Grammar as distinct from the Marked Periphery*
Juana Liceras, University of Ottawa
Commentator: Tom Roeper, University of Massachusetts
- b. *The Acquisition of Infinitive and Gerund Complements by L2 Learners*
Irene Mazurkewich, St. John's
Commentator: Jim Gair, Cornell
- c. *The Categorical Status of Modals in L2 Acquisition*
Liliane Haegeman, Geneva
Commentator: Barbara Lust, Cornell
- d. *Discussion*

VI. OVERVIEW

The Mental Lexicon. Current Theories and L2 Implications
Jean Aitchison, London

VII. MORPHOLOGY AND PHONOLOGY

- a. *UG and Transfer in the L2 Acquisition of the English Dative Rule*
Chris Adjemian, Ottawa
Commentator: Steve Pinker, Massachusetts Institute of Technology
- b. *Theory of Intermorphology*
Raj Singh, University of Montreal
Commentator: Sascha Felix, University of Passau

- c. *Prosodic Phonology and the Acquisition of a Second Language*
Ellen Broselow, Stony Brook
Commentator: John McCarthy, University of Massachusetts
- d. *Discussion*

VIII. CODE-SWITCHING AND CREOLES

- a. *Pidginization as Language Acquisition*
Donaldo Macedo, University of Massachusetts, Boston
Commentator: Francisco d'Introno, University of Massachusetts, Amherst
- b. *Code-Switching*
Ellen Woolford, Pennsylvania State University
Commentator: Esther Torrego, University of Massachusetts, Boston

SUNDAY, OCTOBER 27

IX. ADDITIONAL PERSPECTIVES

- a. *Linguistic Theory, Neurolinguistics and L2 Acquisition*
Lisa Travis, McGill University
Commentator: Lyle Jenkins, Harvard University
- b. *Syntax Project at University of Texas, Austin*
Robert Bley-Vroman, University of Texas
- c. *Discussion*

X. OVERVIEW: OTHER CONSIDERATIONS OF UG FOR L2 ACQUISITION

- a. *Language Typologies*
William Rutherford, University of Southern California
- b. *Language Transfer*
Susan Gass, University of Michigan
- c. *Typological and Parametric Views of Universals in Second Language Acquisition*
Fred Eckman, University of Wisconsin

- d. *Neurolinguistics*
Karl Diller, University of New Hampshire

- e. *Discussion*

XI. CONCLUSION AND SUMMARY
Wayne O'Neil

ACKNOWLEDGEMENTS

This volume and the original conference from which these papers originated were made possible through a grant from the National Science Foundation, BS # BNS-8510947.

The editors of this volume would also like to acknowledge the support received throughout this entire project from the faculties of Foreign Languages and Literatures, and Linguistics and Philosophy at MIT. A special note of appreciation is also owed to Ann Friedlaender, Dean of Humanities and Social Sciences at MIT, for her unwavering support from the earliest planning stages of this project.

We would also like to thank Marilyn Silva of the Linguistics and Philosophy Department for her much needed expertise and assistance in procuring the necessary funding. Special thanks are also owed to Brian Sietsema for his help in editing and for his thoroughness in compiling the indexes. One final debt of gratitude is also owed to Chris Pomiecko of the Foreign Languages and Literatures Section for his help in assembling this volume for publication. Needless to say, this volume would not have been possible without all this support.

TABLE OF CONTENTS

ORIGINAL PROGRAM	ix
ACKNOWLEDGEMENTS	xiii
S. FLYNN and W. O'NEIL / Introduction	1

PART A THEORETICAL AND HISTORICAL CONTEXT FOR SECOND LANGUAGE ACQUISITION

K. HALE / Linguistic Theory: Generative Grammar	26
F. NEWMAYER and S. WEINBERGER / The Ontogenesis of the Field of Second Language Learning Research	34

PART B PARAMETERS

H. CLAHSSEN / Parameterized Grammatical Theory and Language Acquisition: A Study of the Acquisition of Verb Placement and Inflection by Children and Adults	47
S. FLYNN / Nature of Development in L2 Acquisition and Implications for Theories of Language Acquisition in General	76
L. TRAVIS / Linguistic Theory, Neurolinguistics and Second Language Acquisition	90
L. JENKINS / Second Language Acquisition: A Biolinguistic Perspective	109
L. OBLER / Neurolinguistics and Parameter Setting	117

PART C
MARKEDNESS IN
SECOND LANGUAGE ACQUISITION

I. MAZURKEWICH / The Acquisition of Infinitive and Gerund Complements by Second Language Learners	127
L. WHITE / Island Effects in Second Language Acquisition	144
M. SHARWOOD SMITH / On the Role of Linguistic Theory in Explanations of Second Language Developmental Grammars	173
J. LICERAS / L2 Learnability: Delimiting the Domain of Core Grammar as Distinct from the Marked Periphery	199
J. W. GAIR / Kinds of Markedness	225

PART D
ADDITIONAL EVIDENCE FOR
UNIVERSAL GRAMMAR

L. HAEGEMAN / The Categorical Status of Modals and L2 Acquisition	252
S. FELIX / UG-Generated Knowledge in Adult Second Language Acquisition ✓	277
E. BROSELOW / Prosodic Phonology and the Acquisition of a Second Lan- guage	295
B. LUST / Universal Grammar in Second Language Acquisition: Promises and Problems in Critically Relating Theory and Empirical Studies	309

PART E
COMPLEMENTARY PERSPECTIVES

D. MACEDO and F. D'INTRONO / Pidginization as Language Acquisition	330
J. AITCHISON / All Paths Lead to the Mental Lexicon	346
R. SINGH and G. MARTOHARDJONO / Intermorphology and Morphological Theory: A Plea for a Concession	362

PART F
UNIVERSAL GRAMMAR FROM A
TRADITIONAL PERSPECTIVE

S. GASS / <i>Second Language Acquisition and Linguistic Theory: The Role of Language Transfer</i>	384
W. RUTHERFORD / <i>Grammatical Theory and L2 Acquisition: A Brief Overview</i>	404
F. ECKMAN / <i>Typological and Parametric Views of Universals in Second Language Acquisition</i>	417
LIST OF CONTRIBUTORS	431
INDEX OF NAMES	433
INDEX OF SUBJECTS	438

INTRODUCTION

Suzanne Flynn and Wayne O'Neil
Massachusetts Institute of Technology

1. INTRODUCTION

The theory of Universal Grammar (UG) as explicated e.g. in Chomsky, 1986, has led to explosive developments in the study of natural language as well as to significant advances in the study of first language (L1) acquisition. Most recently, the theory of UG has led to important theoretical and empirical advances in the field of adult second language (L2) acquisition as well. The principle impetus for this development can be traced to the work in linguistics which shifted the study "from behavior or the products of behavior to states of the mind/brain that enter into behavior" (Chomsky, 1986:3). Grammars within this framework are conceived of as theoretical accounts of "the state of the mind/brain of the person who knows a particular language" (Chomsky, 1986:3). Research within fields of language acquisition seeks to isolate and specify the properties of the underlying competence necessary for language learning. Full development of a theory of UG demands study and understanding of the nature of both the formal properties of language and of the language acquisition process itself.

However, while there is a tradition of debate and dialogue established between theoretical linguistics and L1 acquisition research, relatively few connections have been made between linguistic theory and L2 acquisition research. As a result, critical feedback necessary for continued development and refinement of hypotheses within the field of L2 acquisition which emerges from such a dialogue is not forthcoming. In addition, the scope of linguistic theory remains unnecessarily limited due to the lack of integration of this significant body of data into the mainstream of linguistic thought.

In order to provide an initial remedy for this situation, we held a conference at MIT in the Fall of 1985. We brought together three groups of individuals: theoretical linguists working within a UG framework, psycholinguists interested in UG formulations, and those active in L2 acquisition research within a UG framework. The purpose of this conference, at its most general level, was to examine the extent to which a theory of UG could be useful in explaining the L2 acquisition process. That is, can we find any evidence for the role of UG in L2 acquisition? If so, in what ways and in

what domains? In addition, we also sought to delineate a set of questions that could serve as a focus for continued research within this paradigm and others. Finally, we sought to examine the extent to which L2 acquisition findings might uniquely contribute to the development of a theory of UG.

A series of several different types of papers was presented: overview papers that sought to place the field of L2 acquisition within a theoretical context, empirical papers that documented work conducted within the field of L2 acquisition, and discussion papers that attempted to evaluate the juxtaposition of linguistic theory and empirical work in the experimental papers. The contents of this book are the result of this conference. It contains a significant number of revised versions of papers presented at this earlier conference (see *original program*) documenting several ways in which this research has proved promising. For example:

*By moving beyond an analysis of surface structure contrasts between the L1 and the L2 alone and by utilizing units of analysis provided by a generative theory of UG, L2 researchers have been able to elicit data not previously considered in past theoretical constructs. In this volume, for example, Clahsen focuses on the role of INFL (inflection), Liceras considers the role of COMP (complementizer), White focuses on WH-Island constraints, Mazurkewich looks at the role of the theory of markedness in the acquisition of gerundive and infinitival complements, Flynn examines the role of the head-direction parameter in the acquisition of anaphora, and Broselow considers production errors of Arabic speakers of English and perception errors made by English learners of Arabic in terms of syllabic theory.

*By taking seriously claims made by a UG theory with respect to deductive consequences for specific parametric settings, researchers have been able to explain sets of language phenomena previously thought unrelated and thus left unexplained in past paradigms. In this volume, such findings emerge in the work of Clahsen, Liceras, White, Haegeman, and Flynn.

*By exploiting the concepts of parameters and principles within UG theory, some results demonstrate how UG can be used to provide the theoretical space within which traditionally isolated components of contrast and construction in L2 acquisition can be reconciled within one framework. This is demonstrated in, for example, the work of Liceras, White, and Flynn.

*By isolating patterns of acquisition common to both L1 and L2 acquisition, this initial body of work provides the basis for the development of unified theories of language acqui-

sition. For example, the papers by Mazurkewich and Flynn outline such developmental patterns.

Finally, at a more general level, this work advances our understanding of the character of UG.

These are not necessary results. As we will discuss in more detail below and as discussed in the papers by Lust, Eckman, and Rutherford, and Schachter (1986), a theory of UG holds independently of its role in L2 acquisition. In addition, results such as these, we will argue, are more than just confirmatory. They can, as Liceras, White, Felix, Travis, and Jenkins (this volume); Broselow (1983, this volume); and Flynn (1987) demonstrate, offer essential new insights both into the nature of the properties of the hypothesized biological component for language and uniquely shed light on claims made with respect to the role of experience in language learning.

At the same time, some of the results of the studies reported in this volume suggest several ways in which adult L2 acquisition might differ from child L1 acquisition. Such results can be found in the papers by Clahsen and Gass. These findings, although not completely understood, help us to define the scope of UG; they also suggest several ways in which UG may interact with other domains of cognition in the language learning process as suggested for example, in the papers by Liceras and Lust. They may even isolate ways in which adult cognition may modulate the role of UG in L2 learning.

It is important to emphasize again that the pursuit of the study of L2 acquisition both within a generative framework or any other principled theoretical paradigm is new. As is evident with the papers in this book, there is yet no fully agreed upon set of questions that must be asked, thus no critical agreement about what constitutes the necessary data base and no real agreement about methodologies to be used in these research programs. Thus, our intention in this chapter is to establish an initial set of questions that need to be answered about the study of L2 learning. We will do this by deriving a set of empirical predictions from a theory of UG for L2 learning and by isolating common themes that emerge from the papers in this book. At the same time, we will outline ways in which evidence provided by the empirical studies reported in this book answers these questions. We will also suggest directions for future research. Our discussion in this chapter will not always follow the organization of the book. The book's format more closely follows that of the original conference. We hope that such a discussion will provide the reader with a richer perspective of the issues to be considered and suggest new ways in which one can critically evaluate the claims made.

We have divided this chapter into the following sections: section 1.1, Basic Assumptions; section 1.2, Background; section 1.3, Requirements for a Theory of L2 Acquisition; section 1.4, Theory of Universal Grammar; section 1.5, Universal Grammar and L2 Acquisition; section 1.6, Future Directions, and section 1.7, Organization of the Book.

1.1 *Basic Assumptions*

Our primary assumption is that the empirical study of L2 acquisition can be brought into line with the rigorous demands of current theoretical psycholinguistic research. This means several things: first, we will argue that consistent with the tenets of mentalism, we believe that what determines adult L2 behavior is not only the stimuli adults are exposed to but also the way they interpret those stimuli. We argue that the nature of the hypotheses adults bring to the language learning task are computationally complex. In contrast to empiricist models of language learning, L2 acquisition is not primarily a matter of discrimination learning: selective reinforcement, imitation or translation from surface structure forms of the L1 onto the L2 (see discussion for L1 acquisition in Chomsky, 1959, 1980, 1986; Fodor, Bever, and Garrett, 1974, among many others).

Second, given that the goal of psycholinguistic research is the empirical assessment of language knowledge, we believe that we can experimentally evaluate the language knowledge of the adult L2 learner. This evaluation is achieved principally through the measurement and analysis of various modes of language behavior, primarily, speaking (production) and listening (comprehension). Each task used for this purpose assumes (1) that the adult L2 learner's developing language competence does not match an adult native speaker's and (2) that the linguistic behavior elicited from each learner with each task maps the territory lying between the target language grammar and the adult's developing grammar. In this way, evaluation of the variance in the adult's behavior allows us to measure an L2 learner's development with respect to the native speaker's model. At the same time, such experiments allow us to evaluate what aspects of the incoming data language learners are sensitive to and use for the construction of the L2 grammar (see discussion in Flynn, 1986; Lust, Chien, and Flynn, 1987).

Third, to the degree "that generative grammar provides a theory of sentence structure which amounts to a detailed and sophisticated account of the categories in terms of linguistic stimuli, it becomes possible for us to begin to characterize the mental processes involved in effecting such integrations" (Fodor, Bever, and Garrett, 1974:14). In the case at hand, a generative theory of UG provides the basis for such a characterization in the adult L2 acquisition process. More to the point, we take seriously the claim that UG is a theory about a biologically programmed language faculty that characterizes the initial state of the human organism. As such, it predicts that in the case of L1 acquisition, language learning will proceed along a certain constrained course. This means that we should be able to empirically evaluate this course of development, as has already been demonstrated in numerous studies in L1 acquisition research (see for example Roeper and Williams, 1987; Lust, 1986). For our purposes, assuming adult L2 acquisition to be a legitimate focus of psycholinguistic inquiry, we believe that we can generate a set of testable hypotheses that can determine whether or not UG has any empirical consequences for the adult L2 acquisition process.

Finally, we argue that the sentence is an appropriate unit of analysis for discovering the nature of the hypotheses adults bring to the L2 learning task. The sentence is the smallest linguistic unit over which some computation can take place, for example, asking a question, assigning coreference, construing anaphora. This is not to say that this is all there is to be learned in order for a speaker to take part in a full communicative act. It does, however, provide a minimal basis for such acts. How learners integrate knowledge of non-linguistic contexts with linguistic knowledge is an important and necessary question to pursue. It allows us, for example, to discover important ways in which adults and children differ in this regard thus revealing ways in which hypothesized language specific knowledge interacts with other domains of cognition. Pursuit of such issues is, however, beyond the scope of this book.

In short, we believe L2 acquisition is an important and viable domain of psycholinguistic inquiry. As such, we seek both theoretically and empirically to establish the relevance of a theory of UG for the adult L2 acquisition process. Results of such investigations can uniquely contribute to our understanding of L2 learning and at the same time uniquely contribute to the development of a theory of UG in much the same way that results of L1 acquisition do.

1.2 *Background*

We all know that adults are capable of learning L2s. However, how this learning occurs is not well understood, in spite of the fact that adults have been acquiring L2s for millenia. What principles guide the adult's construction of the L2 grammar? Does the learning of an L2 follow from a set of principles distinct from those that determine the learning of the L1? Or is it possible that a comparable set of principles, at least in some domains, guides the L2 acquisition process as well?

Let's consider the adult learner. First, in contrast to the study of L1 acquisition, the study of adult L2 acquisition involves individuals who have reached steady states in terms of their L1 development. This means, that unlike the L1 learner, the adult already "knows" a particular language. And second, unlike the L1 learner, the adult L2 learner has reached maturity in terms of overall cognitive development.

These differences alone suggest that the learning of the L2 may in fact be distinct from the learning of the L1. One early approach to L2 acquisition, Contrastive Analysis (CA) (Fries, 1945; Lado, 1957), claimed this. Within this framework, L2 learning, as did L1 learning, consisted of the learning of a fixed set of habits over time. In L2 acquisition, the learner, it is argued, attempts to transfer the linguistic habits from the L1 to the L2. Where the L1 and the L2 match, positive transfer takes place; where they do not match, there is a negative transfer of habits. At points of interference, the learner must acquire the new habits for the L2 through modification of the L1 habits, for example, by addition or deletion. The chapter by Newmeyer and Weinberger neatly elucidates these issues and docu-

ments the chronology of this approach to language learning (see also review in Gass and Rutherford).

Stripping this theory away from its behaviorist foundations, we can see that it captured an important aspect of the adult L2 acquisition process--the role of the L1 knowledge in L2 acquisition. Yet, it failed to provide a complete theory of L2 acquisition for the following reason: it could not reliably predict when "interference" would occur in L2 acquisition. That is, surface structure contrasts between the L1 and the L2 do not reliably predict L2 acquisition problems.

Perhaps then the learning of the L2 is like the learning of the L1 in some fundamental way. Such was the point of view of another major theory advanced for L2 acquisition: Creative Construction (CC) (Dulay and Burt, 1974). Within this theory, the L1 and L2 acquisition processes are not distinct but are argued to follow from the same set of innate principles. In contrast to CA, a CC theory claims that prior L2 experience does not determine subsequent L2 acquisition. Rather, the structure of the language to be learned and the creative construction powers of the L2 learner, which all learners share as part of the human competence, determine L2 acquisition patterns.

Similar, however, to a CA theory, while a CC theory succeeds in capturing the sense of another important aspect of the L2 acquisition data--evidence for constructive processes independent of the L1 experience, it also fails to provide a complete theory of L2 acquisition. 1) The nature of the deep principles argued to determine L2 acquisition are never specified. Thus, the principles remain unfalsifiable. 2) A CC theory is unable to account for documented systematic differences that emerge among different language groups learning a common L2 (see review in Flynn, 1987, and references cited therein).

What do the repeated failures and successes of these two theories tell us? Empirically, results from work within the CA framework suggest, in contrast to a CC theory, that the L2 experience plays some role in the L2 acquisition process. While the strength of the predictions of CA for L2 learning is best in terms of phonological interference, the theory still captures the fact that, different language groups learning a common L2 may in fact differ from each other in some very fundamental ways. For example, it has been demonstrated that the nature of the errors made by Spanish and Japanese speakers learning English as a second language differs at various points in the acquisition process (Flynn, 1987). At the most general level, this suggests that knowledge of the L2 is an important factor in L2 learning. More specifically, results such as these suggest that one does not start with a clean slate; if this were the case, then we would expect no differences among various groups of L2 learners acquiring a common L2. Using the example above, we would expect to find no significant differences in patterns of acquisition between the Spanish and Japanese speakers. Furthermore, since we are dealing with adults, the fact that these differences emerge suggests that they might follow from differences and similarities in properties of the L1 and the L2 grammar and that they do not follow from deficits that hold in other domains of cognition. There is no