

# **Inner Speech – L2**

# Educational Linguistics

Volume 6

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María C.M. de Guerrero

# Inner Speech – L2

Thinking Words in a Second Language

 Springer

María C.M.de Guerrero, Inter American University of Puerto Rico,  
Metropolitan Campus, Puerto Rico, USA

Library of Congress Cataloging-in-Publication Data

Guerrero, María C.M. de

Inner speech—L2 : thinking words in a second language / María C.M. de Guerrero.

p. cm. (Educational linguistics ; v.6)

Includes bibliographical references and index.

ISBN-10: 0-387-24577-4 ISBN-13: 9780387245775

e-ISBN-10: 0-387-24578-2 ISBN-13: 9780387245782

1. Second language acquisition. 2. Thought and thinking. I. Title  
Printed on acid-free paper

P118.2.G84 2005  
418—dc22

2005043227

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Printed in the United States of America.

9 8 7 6 5 4 3 2 1

SPIN 11381921

springeronline.com

*To Giovanna and Marcela*

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## PREFACE

According to Vygotsky (1986),

The decreasing vocalization of egocentric speech denotes a developing abstraction from sound, the child's new faculty to "think words" instead of pronouncing them. This is the positive meaning of the sinking coefficient of egocentric speech. The downward curve indicates development toward inner speech. (p. 230)

The purpose of this volume is to explore the faculty to "think words," not as the ability to mentally evoke words in the native (or first) language (L1) but as the faculty to conjure up in the mind words in a second language (L2).<sup>1</sup> To think words—rather than to pronounce them—is possible through inner speech, a function that humans develop in the course of childhood as they internalize the speech of the social group among which they grow. This means internalizing and being able to conduct inner speech in a particular linguistic code, the L1. But humans, at a very early or more mature age, may also come into contact and interact verbally with speakers of other languages, in classrooms or natural settings. The possibility thus emerges of internalizing an L2 in such a way that inner speech in the L2 might evolve. In this book, it is argued that, given certain conditions of L2 learning, it is possible for learners to attain inner speech in the L2. This book examines the distinctive nature of L2 inner speech and the processes that engender it and characterize its development.

Inner speech in the L1 has been substantially investigated, especially after Vygotsky made it a central theme in his book *Thought and Language* (1986). The same has not occurred in the second language acquisition (SLA) field, perhaps because the construct of inner speech, which is tightly related to a view of language learning as a predominantly social phenomenon, does not seem to fit the theoretical premises and goals of the mainstream SLA information-processing approach. A few attempts to explore inner speech and its connections to L2 learning have been made within the sociocultural theory perspective. These efforts, however, have remained in the form

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<sup>1</sup> A second language (L2) is understood in this book as a language other than the primary one learned from birth, this one also referred to as the native language or first language (L1). When specific references to a "foreign" language (FL) are made in the literature cited, the term FL will be respected. In addition, at certain points in the discussion, it will be necessary to be more precise about the conditions in which a new language is learned or used. In these cases, the term FL will be employed to denote languages that are learned primarily in the classroom, when contact with target language speakers is mostly limited to the instructional setting or when the learners are not immersed in a community where the target language is spoken.

of isolated articles and short sections in larger volumes.<sup>2</sup> A recognition of the crucial role inner speech plays in mediating verbal thought in any language and the absence of an extended and comprehensive treatment of the topic from an L2 perspective have provided the main impetus for writing this book. The book also addresses a need in L2 research for studies that focus on the internal, rather than external, uses of the L2. As Cook (1998) has pointed out, exclusive attention to the social and interactive uses of the L2 misses covert language functions that are vital for L2 users.

The book draws mainly from sociocultural theory<sup>3</sup> for insights into the nature, origin, and development of inner speech in the L2. Based on the work of Vygotsky and others, sociocultural theory views the mind as a fundamentally social construct. Central to sociocultural theory is the notion that intellectual activity is rooted in the social world. One of the theory's strongest claims is that higher mental processes are mediated by signs, that is, tools of a psychological nature. Inner speech, or internalized social speech, is the most powerful tool of thought mediation. Children develop inner speech as they first engage in and then internalize the verbal practices of the community. Thus, the child's ability to "think words" has a social and cultural origin. As social, communicative speech is transformed into mental speech for oneself, it undergoes important changes in form and function. It should be clarified from the start that emphasis is given in this volume to the *internal* (covert) and nonaudible forms of speech for oneself, such as mental rehearsal and internal self-talk, rather than to the external (overt) manifestations of self-directed speech, such as vocalized private speech and audible language play. These phenomena are treated and receive due attention as important aspects in the development of L2 inner speech, but they do not constitute the main focus of this book.

The book is intended for researchers, educators, and students in the fields of L2 and FL learning, applied linguistics, language and cognition, and psycholinguistics. Although some previous knowledge of the concept of inner speech and of the tenets of sociocultural theory might be useful to readers, the book provides extensive background information on the historical, theoretical, conceptual, methodological, and empirical bases of the study of inner speech, both from an L1 and an L2 perspective, which may facilitate understanding of the main arguments and ideas presented in this book. In particular, researchers interested in the application of sociocultural theory to L2 learning will find in this volume an L2 perspective on one of sociocultural theory's most salient core concepts: how the mind gets to be mediated by an interiorized system of signs, in this case, the L2. The volume includes pedagogical implications and suggestions for the development of inner speech that might be of interest to practicing language teachers as well as teacher educators and students in language teaching programs. The book's critical review of the methods that have been and could be

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<sup>2</sup> See, for example, Ohta's (2001) treatment of the development of inner speech in L2 learning in her book *Second Language Acquisition Processes in the Classroom* (pp. 18-21).

<sup>3</sup> Rather than pointing to a unified theory of mind, the term "sociocultural theory" is used in this book to refer broadly to a host of approaches inspired in the sociohistorical school of psychology associated with Vygotsky and others. For a more extended discussion of sociocultural theory see Chapter 1.

applied in studying inner speech might be of value to those researchers interested in pursuing further study of the phenomenon.

In summarized form, the book comprises a discussion of the historical and theoretical foundations of the concept of inner speech; a review of studies related to L1 and L2 inner speech and its methodology of research; an interpretive account of the origin, nature, and development of L2 inner speech from a sociocultural theory point of view; and various pedagogical implications and suggestions for further research.

Chapter 1 provides an overview of the historical trajectory and theoretical foundations underlying conceptualizations of inner speech. In one of the earliest references to inner speech, Plato refers to thinking as the soundless dialogue the soul has with itself, thus establishing the essential link between thinking and speaking—thought and language—that would characterize all other later conceptions of the phenomenon. The philosophical treatment of inner speech as a unit of thought and language has continued until present times, although the main perspective has been from an implicit L1 point of view. An important dimension of the phenomenon was brought about by Vygotsky's insistence that inner speech is a derivative of social speech and should thus be examined from a genetic (developmental) point of view. The chapter addresses the significant contribution of Vygotskian sociocultural theory to the topic of inner speech as well as of other theoretical and methodological approaches. A review of the main lines of research on inner speech is offered. This includes studies in psychology, psychophysiology, neuropsychology, education, communication theory, and the philosophy of language. Chapter 1 also introduces the main principles of sociocultural theory that are most relevant to a study of inner speech and ends with an explanatory section defining inner speech and other constructs frequently associated with it.

Chapter 2 focuses on research and theoretical views on inner speech in the L1. The chapter is organized in three main sections. In the first section, the work of representative sociocultural theorists on inner speech is discussed. The section starts with Vygotsky's view of inner speech as the convergence of two distinct lines of development, speech and thought. Synthesizing ideas from various sources, Vygotsky provided a unique and indelible account of the nature of inner speech—its form and functions—as well as of the psycho-social processes in which inner speech is involved: internalization, thought formulation, and externalization. Vygotsky's views are followed in the chapter by those of Luria, a colleague of Vygotsky who chose to concentrate on the neurophysiological aspects of inner speech, that is, on the brain correlates of inner speech activity. Three other sociocultural perspectives in this chapter are A. A. Leontiev's (1981) model of speech production—including an inner programming stage—, Sokolov's (1972) psychophysiological research of inner speech activity, and Vocate's (1994b) approach to inner speech as a form of intrapersonal communication. The second part of the chapter presents cognitive perspectives of inner speech, including Frawley's (1997) sociocomputational theories, Clark's (1998) supracommunicative view of language and cognition, Carruthers's (1996; Carruthers & Boucher, 1998) modularist approach to inner speech, and research within the information-processing paradigm. The third major section of Chapter 2 introduces a

recent and highly revealing line of investigation on inner speech: the application of brain imaging techniques, such as PET and MRI. To conclude the chapter, a series of questions with implications for L2 inner speech are drawn from the review of the literature on L1 inner speech.

In Chapter 3, the aim is to review research on inner speech from an L2 perspective. Although there are not many studies dealing strictly with inner speech in the L2, the literature offers a wide range of investigations on related topics. The first area of research to be reviewed is the issue of verbal thought in an L2. A frequent concern among L2 educators is the belief that learners need “think in the L2” to learn the language successfully. The ramifications of this belief as well as viewpoints on the role of the L1 and gestures in L2 verbal thought are looked into. An important aspect of verbal thought is the question of conceptual change in the acquisition of an L2 and how this change may affect the learner’s access to an L2 or L1 in the process of making meaning. The implications of conceptual change for the creation of an L2 identity are also explored. A second area of research is the process of internalization of L2 social speech and its impact on the development of the L2 as a tool for thought. A third area of review is the research linking inner speech and L2 reading and writing. Within this area, Sokolov’s (1972) psychophysiological study of inner speech during FL reading stands out. The fourth group of studies reviewed in this chapter deals with mental rehearsal of the L2 and its relationship to inner speech. Mental rehearsal, defined as the “covert practice of the L2,” underlies several internal phenomena implicated in the development of L2 inner speech, such as spontaneous playback of the L2 and covert language play. Lastly, the chapter presents studies within the emerging neuroimaging L2 field, already showing how languages are organized in the bilingual brain and neural areas that are involved in L2 inner speech activity.

In Chapter 4, the methodological challenge of investigating inner speech is addressed. Because of its covert and elusive nature, inner speech is an exceedingly difficult phenomenon to examine empirically. Vygotsky overcame the problems posed by the inaccessibility and fluidity of inner speech by looking at it from an experimental-developmental viewpoint, a method that allowed him to make inferences about inner speech through the observation of egocentric speech. Following Vygotsky, many have employed the “genetic” method by focusing on private speech, that is, on the ontogenetic predecessor of inner speech. Alternative methods in the study of inner speech are then analyzed. One of the most productive of these is the employment of verbal report data. Verbal report methodology, such as questionnaires, interviews, think-aloud techniques, first-person narratives, learner diaries, and thought-sampling, takes advantage of those aspects of inner speech that are available to intro- or retrospection. Another strong methodological line of research on inner speech that is discussed is the use of laboratory tools and techniques, such as speech interference, electrophysiological measurements, and neuroimaging. The chapter points out the pros and cons of the various methodologies of research and offers ideas on how to deal with the problem of method in further studies of inner speech.

Chapter 5, based on the author’s verbal report data, provides a classroom learners’ perspective on how inner speech in the L2 is developed and experienced. A major

section of this chapter is devoted to describe the purpose, methodology (questionnaires and interviews), and findings of two studies conducted by the author on inner speech and mental rehearsal of the L2 (Guerrero, 1990/1991, 1994; and Guerrero, 1999). The studies sampled a large number of Spanish-speaking English-as-a-second-language (ESL) learners with proficiency levels ranging from the most basic to the most advanced. These studies were instrumental in showing how inner speech in the L2 develops across time as well as in throwing light on the multifunctional nature of mental rehearsal. A second major section of this chapter details another investigation by the author (Guerrero, 2004), this one focusing on the very early stages of L2 inner speech. In this study, verbal report data in the form of learner diaries and stimulated recall feedback were inspected in order to learn about the nature of incipient L2 inner speech and the covert efforts that learners make in internalizing the language. The chapter concludes with a critical appraisal of the methodology utilized in the studies.

Chapter 6 takes note of the insights afforded by preceding chapters and attempts to integrate them in a discussion of the origin, nature, and development of inner speech in the L2, coherent with principles of sociocultural theory. L2 inner speech is first viewed as the culmination of a process of internalization of L2 social speech. It is argued that private speech may be for some learners an important phase in this process; however, the interiorization of the L2 seems to occur for the most part as covert activity, including such behaviors as inward repetition of the L2, recall and delayed reprocessing L2 speech, and preparatory use of the L2. The externalization of inner speech in the L2 is also attended. L2 inner speech may be externalized in two ways: as self-regulatory private speech and as overt speech production (speaking and writing). Two complementary hypotheses are presented regarding the extent to which the L2 is implicated in the inner speech processes leading to production: (a) in early stages of L2 development and when L2 instruction is decontextualized, learners will formulate thought first through the medium of the L1 and then translate their L1 coded thoughts into the L2, and (b) learners who have attained a very high level of development in their L2 and have somehow reconstructed their conceptual and semantic bases through an L2 will be able to mediate their thinking through a wider linguistic foundation consisting of both the L1 and the L2. Chapter 6 identifies two “macro” functions of L2 speech for oneself: the cognitive/regulatory or thinking function and the rehearsal one. The role of inner speech as a tool for the processing and performance of verbal tasks in the L2 (reading, writing, listening, and speaking) is also recognized. Chapter 6 attempts to explain the changing nature of L2 inner speech relative to proficiency as a gradual transformation that starts as the inward reproduction of social speech and culminates with its appropriation and conversion into a rich and powerful tool for thought. Finally, the chapter focuses on the way inner speech contributes to the creation of an L2 identity.

This aim of Chapter 7 is to discuss the pedagogical implications of the view of L2 inner speech presented in previous chapters for the benefit of educators and other professionals interested in L2 teaching. The chapter starts with the caveat that developing the faculty of “thinking words in another language” is an exceedingly complex achievement and that there are no simple pedagogical formulas for its

attainment. To understand the role of teachers in the development of L2 inner speech, it is suggested that teachers should first acknowledge the fact that thinking “in” an L2 goes beyond the mere translation into the L2 of thoughts already coded in the L1. To properly “think” in an L2 is to engage the new language in the creative process of concretizing thought in the form of words. Another important issue in this chapter is the need to recognize the L1 as a critical cognitive resource that learners will resort to whether teachers discourage it or not. The chapter also examines the role of inner speech in becoming literate in an L2. Learner strategies, such as covert repetition, which learners naturally deploy to internalize the L2, as well as forms of instructional mediation helpful in the development of L2 inner speech are presented.

Chapter 8 provides a synthesis of the theoretical ideas, empirical findings, and teaching implications presented in the book and offers suggestions for further research on the topic of “thinking words” in the L2.

It is hoped this book will contribute to an overall understanding of how the minds of L2 learners get to be shaped and enriched by the language they are learning and what it means to be able to think words in a language other than the L1.

## ACKNOWLEDGMENTS

As I wrote this book, I was privileged to receive the help and encouragement of many individuals, friends, colleagues, and family members. I would like to express my gratitude to all of them.

First and foremost, I want to thank Inter American University of Puerto Rico (IAU) for granting me the sabbatical leave that allowed me to write a major portion of the book. Likewise, I extend my appreciation to the administrative and library staff at IAU-Metro for facilitating my research endeavors related the book.

I am greatly indebted to various people who generously took the time to read and make comments on various parts of this book: Linda Borer, Pete Brooks, Millie Commander, Mark Darhower, Tim Murphey, Walter Murray, Amy Ohta, Aneta Pavlenko, Elizabeth Platt, Merrill Swain, and Olga Villamil. To Jim Lantolf, my deep gratitude for sharing his expertise in the field of sociocultural theory and for making the journey into the realm of “inner speech” a genuinely mediated learning experience. Special thanks go to several scholars for sending me research that was essential to the book—Beatriz Centeno-Cortés, Fred DiCamilla, Rick Donato, Xavier Gutiérrez, Antonio Jiménez, Tim Murphey, Aneta Pavlenko, Jim Lantolf, and Robert W. Schrauf—and to Dr. Sukhi Shergill and Dr. Eraldo Paulesu for their permission to reproduce fMRI and PET images, respectively. I am grateful to Leo van Lier (Educational Linguistics Series General Editor), Renée de Boo, Marie Sheldon, Mary Panarelli, and Deborah Doherty at Springer/Kluwer for their editorial support and assistance. I also thank profusely the anonymous readers of the final manuscript for their helpful suggestions for revision as well as for their positive remarks.

Finally, I thank my relatives across the American continent, my extended family in Puerto Rico, and my friends and colleagues at IAU for their continued encouragement and interest in the book, and very especially my husband and two daughters for their love, understanding, and support.

María C. M. de Guerrero