# Introduction

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## Scope and overview

The volume you now hold in your hands (or see on your electronic device) aims to represent the state of what we know about how humans acquire a language in addition to their native language. This is no easy aim to achieve because what we can now call a field rather than an area of inquiry has expanded tremendously in the last half century. Some attribute this to the need for more of us to acquire a second language (L2). In reading Margaret Thomas' chapter on the history of second language acquisition (SLA), it will be apparent that this need is nothing new, and in the western world was already documented during the early days of the Roman Empire when education involved learning Greek to read the classics written in that language. There are doubtless many more individuals in absolute terms who need to acquire the twenty-first-century lingua franca, English. But for native speakers of English, there are no signs of an increased widespread need to acquire an additional language. These observations dovetail with another one: that most of the work in second language acquisition is still on English. This state of affairs is slowly changing, in no small part due to those who supervise non-native English-speaking PhD students encouraging them to work on the second language acquisition of their native language. Moreover, much of the work in second language acquisition is still on adults and still on classroom learners. This, too, is slowly changing as several chapters (one of which is dedicated to child second language acquisition) in this handbook reveal.

As Thomas' and several other chapters show, second language acquisition as a field of inquiry did not exist until researchers began to investigate the topic systematically; Lado's (1957) application of Contrastive Analysis to second language acquisition paved the way for such inquiry. Research that began as a search for better methods of teaching had by the 1980s completely divorced itself from the need to make reference to any pedagogical

applications of findings presented. In keeping with trends that have only strengthened in the last two decades, few of the chapters of this handbook mention teaching. The handbook – in addition to covering the traditional issues in second language acquisition such as transfer, age of exposure, universals and other internal factors – covers as well various external factors and components of language such as syntax, phonology and vocabulary. This volume identifies new trends in issues considered relevant to the study of SLA from electronic interaction to literacy and presents a set of theories about second language development. Internal factors at the forefront of SLA research now include psycholinguistic processing and neurolinguistic functioning; perspectives range across connectionist, interactional practices, attrition, social context and related issues. Studies along these lines, as the chapters show, have contributed substantial new findings to deepen our understanding of the acquisition of a second language and its relationship to other developmental profiles.

The *Cambridge Handbook* brings together the latest work in traditional and newer areas of inquiry to provide a comprehensive and current overview of the state of the field. It deals with questions such as the following concerning non-native language acquisition: What is language? How can we investigate its acquisition? What perspectives exist from which to view this acquisition? What is the scope of research and which methodologies best address research questions? How does the learner's grammar develop? What are the internal constraints on acquisition? What external factors are held to be relevant? What is linguistic competence and how can we investigate it? In answering these questions, the handbook chapters necessarily take various perspectives from generative to cognitive to interactionist to environmental; the handbook also includes extensive information on recent relevant linguistic, psycholinguistic and neurolinguistic research, new interpretations of input, interaction and intake, and new sources of input, namely via electronic communication. Its chapters on psycholinguistic research, electronic interaction/input, conversation analysis, child L2A, third language acquisition, attrition and poststructuralist approaches to identity construction are particularly cutting-edge and point to directions in which much research is heading.

The handbook is divided into six parts whose chapters are described in detail in the transitional introductions to each area. Part I, "Theory and practice," provides the theoretical foundation of scholarship on second language acquisition. The first two chapters situate this scholarship philosophically and historically, while Chapters 3 and 4 give overviews of current approaches and methodologies. The second and third parts elaborate respectively on factors related to L2 acquisition. Part II, "Internal ingredients," includes what the individual learner brings to the task of acquisition such as cognition or native tongue. Part III, "External ingredients," covers crucial social and interactive factors involved in input and intake. The chapters in Part IV, "Biological factors," refer to physiological constraints of maturation

and real-time processing, L2 acquisition within the assumed critical period, influence of the L2 on the native language, third language acquisition and the brain's processing of language. Part V, "Properties of interlanguage systems," covers the acquisition of linguistic competence in the lexicon, semantics, discourse and pragmatics, morphosyntax and phonology. The handbook closes with Part VI, "Models of development," with chapters that delineate stages and mechanisms of change in the L2A process ranging over theoretical perspectives such as autonomous induction, processability, MOGUL, Organic Grammar, input processing, emergentism and sociocultural theory. It closes with a comprehensive chapter, reviewing many themes of the collection.

We wish to make a few helpful points for users of this handbook. The following terms are used interchangeably: development, learning and acquisition; L2A, SLA and non-native language acquisition. Often native language, first language and L1 are used interchangeably and the term L2 usually stands for any language acquired subsequent to the first. The handbook includes helpful ancillary resources: a shorter end-of-volume list of selected references and an exhaustive online version, a glossary, an appendix and index. The reader will also find helpful the cross-referencing of chapters within chapters.

Please visit www.cambridge.org/herschensohn-youngscholten to access the exhaustive list of references that accompanies this volume.

# Part I

## Theory and practice

# INTRODUCTION TO PART I

Part I, "Theory and practice," provides the themes of the handbook, namely: theories of language, central topics in SLA in the past and present, SLA theory families and research methodologies. It thus provides the theoretical underpinning for the chapters to follow and gives an overview of the range of topics covered in the handbook.

The first chapter in the handbook covers the main ways – since Plato through to Descartes, but primarily focusing on the present, the "Chomskyan revolution" and its aftermath – that knowledge of language has been viewed. It traces rationalist and empiricist theories that have influenced issues taken up in language acquisition and ultimately second language acquisition. This thought-provoking lead chapter situates contemporary theories of language with respect to their antecedents of earlier centuries. Focusing on the late twentieth and early twenty-first centuries, and invoking the traditional nature/nurture contrast, it analyzes the Chomskyan notion of biolinguistics. Koster argues that language is most appropriately described as an agentive functionality by which humans evolutionarily adapted an innate brain structure to a new cultural application.

The basic aim of the second chapter is tracing the study of L2A from its early history through the 1950s Contrastive Analysis (CA) to twenty-first-century connectionism. The chapter goes beyond mere chronology to elaborate those themes that are not new, but continue to be re-explored from fresh perspectives: the role of the L1 (cf. 1950s CA), interlanguage competence (cf. 1960s error analysis), order of acquisition (cf. 1970s morpheme order studies), access to Universal Grammar, cognitivist/emergentist proposals, and social context approaches (cf. studies starting in the 1980s). This chapter complements Chapter 1 in filling in the theoretical precedents of language and its acquisition from ancient scholars through Renaissance, Enlightenment and modern writers. Thomas traces empiricist/rationalist debates through three

themes, native language influence, the role of cognition and the importance of social interaction in L2A, thus foreshadowing the main themes of the next parts.

The third chapter presents the main theory families that currently exist in L2A research. These broadly include interlanguage architecture approaches that see a role for Universal Grammar; cognitive approaches that focus on the roles of input, output, processing and memory; and sociocultural approaches that take into consideration individual and social factors such as those relating to identity and interaction. The chapter gives an overview of three major theoretical families, formal linguistic, cognitive and social. After establishing the necessity of a theoretical basis to L2 research (that links directly to the preceding chapters), Myles lays out criteria for comparing the approaches in terms of areas of inquiry, theoretical presuppositions and research findings.

The fourth chapter summarizes the range of empirical data examined and the methodologies employed for their collection in L2 research. The various methodologies to be discussed include oral production databases from longitudinal and cross-sectional studies, instructional experiments, metalinguistic and interpretive tasks, statistical analyses, ethnographic documentation, learner corpora, and conversation analysis. The chapter focuses on the methodologies – both quantitative and qualitative – that are exploited by two theoretical families, the psycholinguistic (Myles' linguistic and cognitive, the handbook's "internal ingredients") and the sociolinguistic (Myles' sociocultural or the handbook's "external ingredients"). Whong and Wright outline the paradigms of linguistic, processing and corpora-based research as well as more qualitative techniques in both naturalistic and instructed settings.

# 1

# Theories of language from a critical perspective

Jan Koster

## 1.1 Introduction

Since antiquity, a central concern of theories of language has been whether language is predominantly a matter of *nature* or of *nurture*. One version of this dilemma is whether language is primarily a biological phenomenon or a sociocultural reality. British empiricism and German Romantic ideas, interacting in complicated ways, set the stage for much of nineteenth-century linguistic thinking, which culminated in the various so-called *structuralist* schools of the first half of the twentieth century. Often, this tradition emphasized culture, nurture and diversity. In the second half of the twentieth century, nativism, influenced by Chomsky and the idea of Universal Grammar, made a powerful comeback. This culminated in the "biolinguistic" idea that language has a core that can be compared to an organ, or rather, to a computational system of the kind found in mammalian vision. Instead of embarking upon the impossible task of giving an overview of all current theories of language, I will give a historical sketch of how the Chomskyan-style linguistics fared with respect to the perennial tension between culture and biology in the study of language and how this tension can be resolved with current neurobiology. It is my hope that this story suggests some lessons about other theories of language as well.

## 1.2 The Chomskyan revolution

During the second half of the twentieth century, linguistic theorizing was dominated by the so-called Chomskyan revolution. This type of linguistics rose to ascendancy with Chomsky's 1957 book, *Syntactic Structures*, and had its greatest popularity during the 1960s, culminated in the 1970s, but steadily lost ground after the 1980s. At the time, the Chomskyan perspective was generally seen as revolutionary, although there were always critics. It is

questionable whether the new theories were as revolutionary as believed at first. In retrospect, a good case can be made that early generative grammar, rather than superseding older theories, was largely ignorant of them. Let me explain.

Pre-Chomskyan linguistics, at least in Europe, was dominated by the Saussurian idea that language is primarily a system of signs, of which words are the most important (Saussure 1916). Signs were thought to have a public face (*signifiant*) and a conceptual side (*signifié*). In the most common case the public face of a linguistic sign is formed from the sounds of speech. But the conceptual side of language was also believed to have a public aspect, as it was assumed that the concepts of a language represented particular choices from a universal but more or less amorphic conceptual space. Conceived this way, language was seen first and foremost as a sociocultural reality. Of course this did not exclude such sociocultural realities being possible only on the basis of psychological or biological capacities.

Next, signs (words) were believed to enter into paradigmatic and syntagmatic relations. If we limit ourselves to syntax, we can say that paradigmatic relations define a class of elements that can take the same position in a sentence, such as *John* and *The father of John* in (1):

(1)    a.    *John* left
       b.    *The father of John* left

In American structuralism such a paradigm is also called a substitution class or a distribution class.

Syntagmatic relations are the horizontal relations in a phrase or clause, like the relation between *John* or *The father of John* with the following verb *left* in (1). It was generally recognized that the syntagmatic relations of language are not between single words but between *groups of words* (also known as phrases or constituents). As a result, sentences were analyzed as having a hierarchical structure. It was also recognized that parts of phrases could be "self-similar," meaning that noun phrases could contain noun phrases or clauses could contain clauses, a self-similarity referred to as *recursion*. Both phrase structure and recursion, were, terminology aside, within the scope of pre-Chomskyan structuralism.

There were claims in early Chomskyan linguistics that pre-Chomskyan theories of phrase structure were construction-bound, but this was not actually the case: the notion of a word group or phrase under structuralism is more abstract than the notion of a construction (active, passive, question, etc.). Both active and passive constructions, for instance, were analyzed in terms of word groups built up from the same ingredients (such as heads, complements and adjuncts). More generally, word groups (phrases, constituents) were seen to express the combinatorial potential of a word (the head or the core of the group). This potential was often referred to as the valency of the word (Tesnière 1959), which was ultimately believed to be a reflection of the semantic properties of the word. In somewhat anachronistic