

## Constituent Order in Language and Thought

Traditionally, due to the availability of technology, psycholinguistic research has focused mainly on Western languages. However, this focus has recently shifted toward a more diverse range of languages, whose structures often throw into question many previous assumptions in syntactic theory and language processing. Based on a case study in field-based comparative psycholinguistics, this pioneering book is the first to explore the neurocognition of endangered “object-before-subject” languages, such as Kaqchikel and Seediq. It draws on a range of methods – including linguistic fieldwork, theoretical linguistic analysis, corpus research, questionnaire surveys, behavioural experiments, eye tracking, event-related brain potentials, functional magnetic resonance imaging, and near-infrared spectroscopy – to consider preferred constituent orders in both language and thought, examining comprehension as well as production. In doing so, it highlights the importance of field-based cross-linguistic cognitive neuroscientific research in uncovering universal and language-particular aspects of the human language faculty, and the interaction between language and thought.

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# Constituent Order in Language and Thought

*A Case Study in Field-Based Psycholinguistics*

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In memory of Hideyuki Hirano

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## Preface

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In many flexible word order languages, sentences with a transitive verb (V) in which the subject (S) precedes the object (O) (SO word order = SOV, SVO, VSO) are reported to be “preferred” over those in which the opposite occurs (OS word order = OSV, OVS, VOS). For example, SO sentences are easier to process and are produced more frequently than OS sentences in Finnish, Japanese, Sinhalese, and others (Sekerina 1997; Bader and Meng 1999; Mazuka, Itoh, and Kondo 2002; Kaiser and Trueswell 2004; Tamaoka et al. 2005; Kanduboda and Tamaoka 2012). This empirical evidence of the preference for SO word order, however, is not conclusive, because it comes exclusively from SO languages, that is, languages in which SO is the most syntactically simple word order. It is, therefore, necessary to study OS languages to investigate whether or not the same preference holds as well as identify underlying factors determining word order preference in sentence comprehension and production. To this end, my colleagues and I have been conducting a research project on Kaqchikel, a Mayan language spoken in Guatemala, whose syntactically basic word order is VOS.<sup>1</sup>

This book assembles some of the major findings we have obtained through this project over the last decade. Most of our Kaqchikel experiments discussed in the following chapters were conducted in the central highland of Guatemala, home of the Kaqchikel people. We visited the region more than ten times with equipment such as an EEG amp and an eye tracker at hand. The several remaining experiments were carried out in Japan by inviting Kaqchikel speakers to our labs at Tohoku University and Tokyo University because they required an MRI or NIRS scanner, which are too large to transport to Guatemala. This monograph, therefore, presents a case study in field-based comparative psycholinguistics.

Core members of the project include (alphabetically, by first name) Apay Tracy Tang, Daichi Yasunaga, Filiberto Patal Majzul, Godai Saito, Hajime Ono, Hiromu Sakai, Hitoshi Goto, Jiro Gyoba, Juan Esteban Ajsivinac Sian, Jungho Kim, Katsuo Tamaoka, Keiyu Niikuni, Koichi Otaki, Koji Sugisaki, Kuniya Nasukawa, Kuniyoshi L. Sakai, Laura Rodrigo, Lolmay Pedro Oscar García Matzar, Manami Sato, Masataka Yano, Mikihiro Tanaka, Noriaki Yusa,

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## NOTE

1. This is part of a larger project, which has come to be known as the FALCOHN (Field-Based Approaches to Language, Cognition, and Human Nature) project.

## Abbreviations

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*	ungrammatical
-	morpheme boundary
1	first person
2	second person
3	third person
A	Set A = ergative or genitive
ABS	absolutive
ACC	accusative
AV	agent voice
B	Set B = absolutive
CAU	causative
CL	classifier
DAT	dative
CP	completive
DET	determiner
ERG	ergative
GEN	genitive
GV	goal voice
IC	incompletive
NOM	nominative
pl	plural
POS	possessive
PM	plural marker
PRF	perfective
PST	past tense
sg	singular
TOP	topic
VT	transitive verb