On the impact of NP-length on sentence word order:
Evidence from Basque native and non-native speakers

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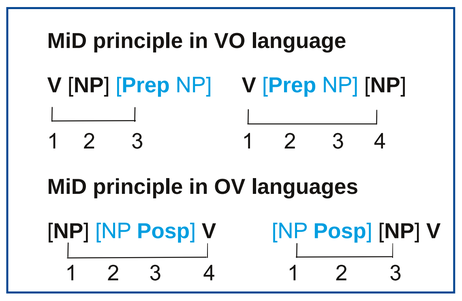
Introduction

A mirror-effect of length has been found in sentence word order preferences in VO (SHORT-BEFORE-LONG) and OV languages (LONG-BEFORE-SHORT) [1, 2, 3]. Here we study sentence word order preferences in L1Spanish (VO)/L2Basque (OV) bilinguals when using their non-native language. Non-native data can shed light on the source of sentence word order preferences.



(1) Hawkins (2004) claims that the SAME EFFICIENCY PRINCIPLE (MINIMIZE DOMAINS) YIELDS OPPOSING PRODUCTION PATTERNS in both VO and OV languages [4]: No predicted differences as a function of length between native and non-native speakers.

(2) Connectionist models of language production claim that exposer to LANGUAGE-SPECIFIC FEATURES DETERMINES WORD ORDER PREFERENCES [5].
For bilinguals, the larger exposure to L1-specific features would be expected to affect L2 speakers' word order preferences [7]: L2-Basque speakers may show a weaker long-before-short preference than L1-Basque speakers because of their lower exposure to Basque (OV) and larger exposure to L1-Spanish (VO).

⇨ Compatible with results in Korean (OV, long-before-short): English-Korean bilinguals did not show any effect of length [8], as they produced almost only SOV canonical order. This preference, though, might be due to a preference of L2-Korean speakers to produce easy-to-process canonical word orders [9, 10].

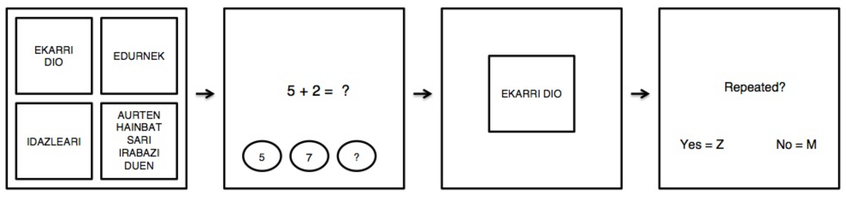
In this study we explore whether L2-Basque speakers are affected by length differently from L1-Basque speakers.

Methods

PARTICIPANTS: 24 Basque native and 24 high proficient L2-Basque speakers

	LANGUAGE EXPOSURE (7-point Likert scale: 1: Only Basque; 7: Only Spanish)	
	0-3 years	At present
Natives	1.3 (.4)	1.7 (.7)
Non-natives	6.1 (1.2)	4.5 (1.4)

TASK: Cued recall production task + memory task



Materials

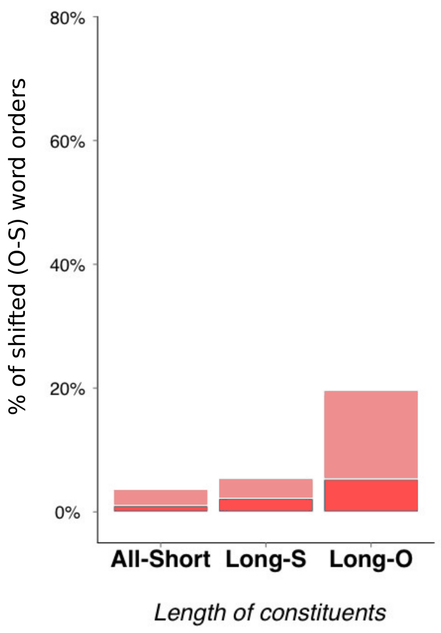
LENGTH of NPs of transitive and ditransitive sentences was manipulated [2].

CONDITIONS	Transitives
All-Short	Andreek gizona agurtu dute. Women man greeted have
Long-S	[Geltokian trenaren zain egon diren andreek] gizona agurtu dute. [Station-in train-of waiting are-that women] man greeted have
Long-O	Andreek [trenaren zain egon den gizona] agurtu dute. Women [Station-in train-of waiting are-that women] greeted have

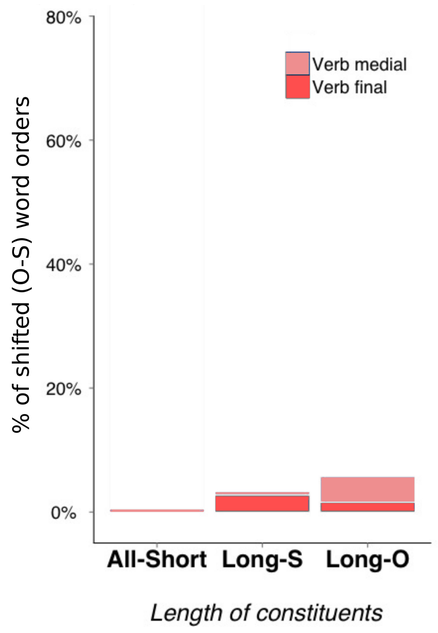
EXPERIMENT 1: 24 transitive sentences + 56 filler sentences
EXPERIMENT 2: 30 ditransitive sentences

Experiment 1: Transitive sentences

Native speakers

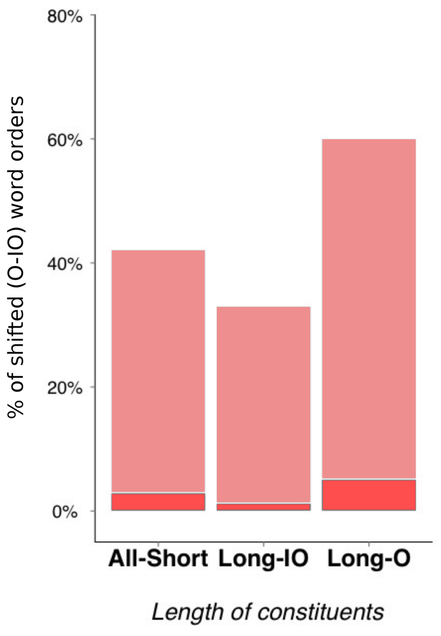


Non-native speakers

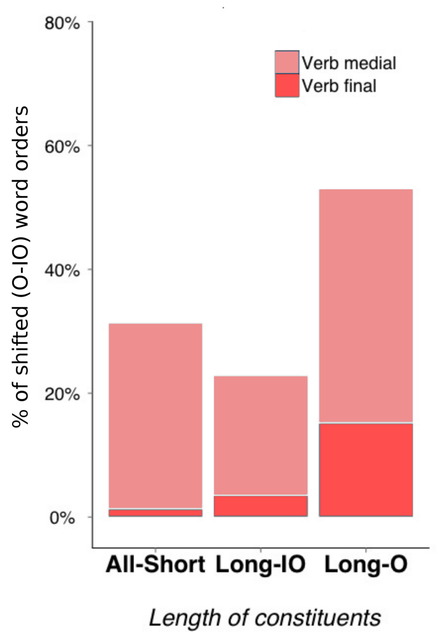


Experiment 2: Ditransitive sentences

Native speakers



Non-native speakers



Results

SAME EFFECT OF LENGTH FOR NATIVES AND NON-NATIVES

– Both native and non-native speakers favour a long-before-short strategy in transitive and ditransitive sentences (more shifted structures in Long-O than in All-Short condition, ps < .01).

NON-NATIVE LARGER PREFERENCE FOR CANONICAL ORDERS

– NP-position: Non-native speakers showed a larger preference than native speakers for canonical word orders in all conditions in transitive (S-O) and ditransitive (O-IO) sentences (group effect: ps < .001)

– Verb-position: Non-native speakers showed a smaller preference than native speakers to produce shifted verb-medial orders in ditransitive sentences when O was long (group X length: p < .02).

Discussion

THE LEVEL OF EXPOSURE TO THE LANGUAGE DOES NOT SEEM TO SHAPE PRODUCTION PREFERENCES IN THE CASE OF LENGTH [5, 6].

However, overall, there was a GREATER PREFERENCE FOR CANONICAL WORD ORDERS IN NON-NATIVE SPEAKERS compared to native speakers (consistent with the SOV preference in English-Korean bilinguals [9]). This cannot be due to influence of their L1-word order preferences, Spanish (VO) [5, 6, 7], but might be because non-natives have a larger preference for simplicity (e.g., canonical order is the computationally less demanding order [9, 10]).

Our results do not conform to predictions of connectionist models [5] and suggest that word order preferences in both native and non-native speakers are affected by A SINGLE MINIMIZE DOMAINS PRINCIPLE, which differentially influences OV and VO languages [4].

Further evidence from low proficient bilinguals with less exposure to L2 is needed to strengthen our conclusions.

Acknowledgments

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