

Torsten Kai Jachmann, Heiner Drenhaus, Francesca Delogu, Myeongju Lee, Matthew Crocker  
Saarland University (corresponding author: jachmann@lst.uni-saarland.de)

## Goals

**Test "Expected-First" Strategy:** Do initial NP properties (discourse accessibility / grammatical role) drive processing?  
**Investigating "Implied" Status:** Does it pattern with "Given," "New," or take intermediate position?  
**Cross-Linguistic Impact:** How are expectations shaped by language specific properties such as case marking and argument drop?

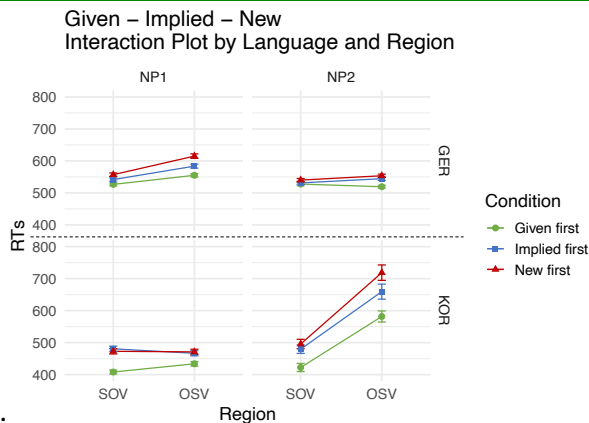
## Background

**Word Order (WO):** Non-canonical orders increase processing effort (Bahlmann et al., 2007; Schlesewsky et al., 2003; Kim, 1992; Lee and Cho, 2003; Son, 2001)  
**Information Status (IS):** Comprehenders prefer "Given-before-New" (Kaiser & Trueswell, 2004; Krifka & Musan, 2012; Arnold et al., 2013)  
**Expectation & Surprisal:** Predictable structures yield lower processing costs (Hale, 2001; Levy, 2008)  
**Typology:** German uses clear case marking; Korean allows ambiguous topic-drop

## Design

		Ein Bäcker ging auf ein Konzert. Ich habe gesehen, dass ... A baker went to a concert. I saw that ...	한 제빵사가 콘서트에 갔다. 나는 ... A baker went to a concert. I ...
Givenness	WO	German Sentence Continuation	Korean Sentence Continuation
G-first	SOV	... der Bäcker dort gestern {I:den Musiker ; N:einen Piloten} ... ... the baker [SUBJ] there yesterday {I: the musician ; N: a pilot} [OBJ] ...	... 제빵사가 어제 그곳에서 {I:음악가를 ; N:조종사를} ...
I-first	SOV	... ein Musiker dort gestern {G:den Bäcker ; N:einen Piloten} ... ... a musician [SUBJ] there yesterday {G:the baker ; N:a pilot} [OBJ] ...	... 음악가가 어제 그곳에서 {G:제빵사를 ; N:조종사를} ...
N-first	SOV	... ein Pilot dort gestern {G:den Bäcker ; I:den Musiker} ... ... a pilot [SUBJ] there yesterday {G:the baker ; I:the musician} [OBJ] ...	... 조종사가 어제 그곳에서 {G:제빵사를 ; I:음악가를} ...
G-first	OSV	... den Bäcker dort gestern {I:der Musiker ; N:ein Pilot} ... ... the baker [OBJ] there yesterday {I:the musician ; N:a pilot} [SUBJ] ...	... 제빵사를 어제 그곳에서 {I:음악가가 ; N:조종사가} ...
I-first	OSV	... den Musiker dort gestern {G:der Bäcker ; N:ein Pilot} ... ... the musician [OBJ] there yesterday {G:the baker ; N:a pilot} [SUBJ] ...	... 음악가를 어제 그곳에서 {G:제빵사가 ; N:조종사가} ...
N-first	OSV	... einen Piloten dort gestern {G:der Bäcker ; I:der Musiker} ... ... a pilot [OBJ] there yesterday {G:the baker ; I:the musician} [SUBJ] ...	... 조종사를 어제 그곳에서 {G:제빵사가 ; I:음악가가} ...
		... angesprochen hat. ... talked to.	... 부르는 것을 목격했다. ... call out to witnessed.

## Results



	NP1		Effect	NP2	
	<b>GER</b>	$\beta = 44.50$	$z = 5.3$	WO	$\beta = 5.66$
	$\beta = -26.64$	$z = -3.8$	I vs G	$\beta = -15.31$	$z = -2.7$
	$\beta = 26.90$	$z = 3.4$	I vs N	$\beta = 8.03$	$z = 1.2$
	$\beta = -14.16$	$z = -1.3$	WO : I vs G	$\beta = -21.47$	$z = -2.3$
	$\beta = 14.19$	$z = 1.3$	WO : I vs N	$\beta = 0.49$	$z = 0.0$
<b>KOR</b>	$\beta = 3.18$	$z = 0.4$	WO	$\beta = 187.80$	$z = 5.2$
	$\beta = -56.84$	$z = -5.5$	I vs G	$\beta = -65.44$	$z = -3.3$
	$\beta = -0.79$	$z = -0.1$	I vs N	$\beta = 40.70$	$z = 1.7$
	$\beta = 41.26$	$z = 2.7$	WO : I vs G	$\beta = -23.23$	$z = -0.5$
	$\beta = 12.08$	$z = 0.8$	WO : I vs N	$\beta = 44.38$	$z = 1.2$

**German:**  
**IS:** Graded processing costs at NP1 (Given < Implied < New)  
**WO:** Effects at NP1 (Subject < Object)  
**Interaction:** WO and IS interaction at NP2 (Given < Implied = New for OSV)

**Korean:**  
**IS:** Implied treated as New (Given < Implied = New) at NP1 & NP2  
**WO:** Main Effect only at NP2 (SOV < OSV)  
**Interaction:** WO and IS interaction at NP1 (Given < Implied = New mainly for SOV with consistent Main Effect of IS)

## Discussion

While both languages support a **expectation-driven comprehension system** combining syntactic and information structural expectancies, their surface manifestations differ based on language-specific resources:

### Commonality

In both systems, processing cost increases when NP1 violates discourse (manifest on NP1 for both GER & KOR), or grammatical expectations (manifest on NP1 for GER & NP2 for KOR)

### Differences

**IS:** German treats "Implied" as a distinct intermediate, while Korean treats it more as "New"  
**Timing:** German identifies roles immediately (via case); Korean shows delayed effects due to structural uncertainty (topic-drop)

## References

Arnold et al., (2013), WIREs Cognitive Science; Bahlmann et al., (2007), Human Brain Mapping; Kaiser & Trueswell, (2004), Cognition; Kim, (1992), The University of Wisconsin-Madison; Krifka & Musan, (2012), In The Expression of Information Structure; Lee & Cho, (2003), Studies in Generative Grammar; Schlesewsky et al., (2003), Brain and Language; Son, (2001), The University of Wisconsin-Madison.