



Can isomorphism address second language acquisition? Comprehension of Korean suffixal passives by adult Chinese-speaking learners of Korean

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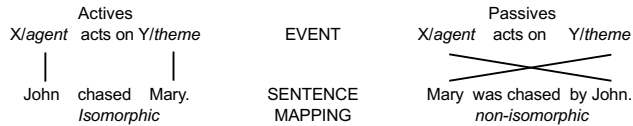
BACKGROUND

FOCUS

The applicability of IHM to L2 acquisition by investigating comprehension of Korean suffixal passives by Chinese-speaking learners of Korean

1. Mapping discrepancy in passives

- Isomorphic mapping hypothesis (IMH): increased processing difficulty when the order of arguments does not follow the typical order of event composition^{[1][2]}



- IMH has explained agrammatical comprehension deficits \Rightarrow the applicability of IMH to the acquisition of passives in second language (L2) contexts (RQ1)

2. Acquisition of suffixal passives by L2 learners of Korean

- Suffixal passives in Korean
 - Passive markers (-i, -hi, -ji, or -ki) attached to a verb stem with a nominative -i/ka-marked theme subject and a dative -eykey/hanthey-marked agent oblique^[3]

totwuk-i kyengchal-eykey cap-hi-ess-ta.
thief-NOM police-DAT catch-PSV-PST-SE
'The thief was caught by the police.'

- Different mappings of thematic roles and grammatical relations in case markers
 - Nominative: denoting agent in actives \leftrightarrow denoting theme in passives
 - Dative: denoting dative in actives \leftrightarrow denoting agent in passives

\Rightarrow Learners' task: understanding novel associations of thematic roles and grammatical relations inherent in case marking for passives (RQ2)

3. Passives in Mandarin Chinese

- Word order: *theme-bei-agent-verb*^[4]
 - bei*: to signal thematic role reversal in passives (i.e., theme before agent)

Zhangsan bei Lisi da-le.
Zhangsan psv Lisi hit-PERF
'Zhangsan was hit by Lisi.'

- Cross-linguistic difference: Mandarin Chinese lacks overt case marking by postpositions
- \Rightarrow Possible to measure the contribution of case marking to the interpretation of non-isomorphic mapping in Korean

Glossing ACC = accusative marker; DAT = dative marker; NOM = nominative marker; PERF = perfective marker; PST = past tense marker; PSV = passive marker; SE = sentence ender

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 [3] Sohn, H. M. (1999). *The Korean language*. Cambridge University Press.
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 [5] McDonald, J. L. (2006). Beyond the critical period: Processing-based explanations for poor grammatical judgment performance by late second language learners. *Journal of Memory and Language*, 55, 381-401.
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METHOD

Participants

- Native speakers of Korean (n=30; mean age: 32.5)
- Chinese-speaking learners of Korean (n=56; mean age: 23.1)
 - Two proficiency group: Higher (n=25) & Lower (n=31)
 - Proficiency measured by the Test of Proficiency in Korean (TOPIK)

Stimuli

- 16 test items (8 active transitives & 8 suffixal passives) + 48 fillers

은서가 현주를 만났어요.
unse-ka hyencwu-lul manna-ass-eyo
unse-NOM hyencwu-ACC meet-PST-SE
'Unse met Hyencwu.'
agent-theme

미나가 영미한테 밀렸어요.
mina-ka yengmi-hanthey mil-li-ess-eyo
mina-NOM yengmi-DAT push-PSV-PST-SE
'Mina was pushed by Yengmi.'
theme-agent

- Animacy controlled: human name as agent/theme^[5]
- Canonical word order in each construction

Procedure

- Acceptability judgment task (4-point Likert scale) (\leftarrow checking explicit knowledge of Korean suffixal passives)
- Reaction time (\leftarrow measuring processing load with respect to Korean suffixal passives)
- Online platform: Qualtrics

Results

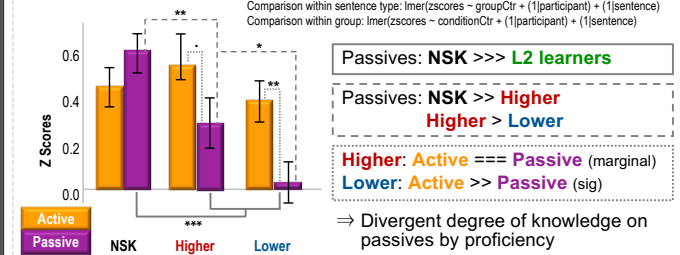
	p_a/_W/O_cCv	p_a/_W/O_cCv	p_a/_W/O_cCv	p_a/_W/O_cCv
4 (매우 자연스)	4,066	4,066	6,084	1
2 (다소 불자연)	7,998	7,998	10,175	1
4 (매우 자연스)	11,693	11,693	14,065	1
4 (매우 자연스)	2,441	2,454	3,277	2
3 (다소 자연스)	2,599	4,35	4,955	4
4 (매우 자연스)	5,359	5,367	5,851	2
4 (매우 자연스)	12,28	12,292	13,361	2
4 (매우 자연스)	4,645	4,665	7,319	2

Training & Actual Task

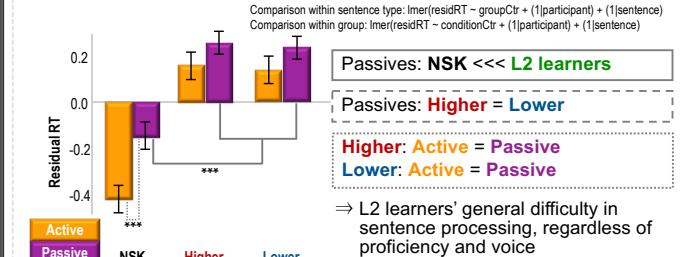
	1 (매우 불자연)	2 (다소 불자연)	3 (다소 자연)	4 (매우 자연)
Training	1,589	1,589	1,589	1,589
Actual Task	1,589	1,589	1,589	1,589
Click Count	1,589	1,589	1,589	1,589

RESULTS & DISCUSSION

Acceptability Judgment (Z-transformed \rightarrow linear mixed-effects model)



Reaction Time (log-transformed & residualised \rightarrow linear mixed-effects model)



Mean of residual reaction time within the higher group

Proficiency score of TOPIK (out of 20)	Number of participant	Mean of residual reaction time in active (A)	Mean of residual reaction time in passive (P)	Difference (P - A)
20-18	3	0.002	0.174	0.172
17-16	10	0.218	0.296	0.078
15-13	12	0.223	0.282	0.059

- \rightarrow Performance of the highly proficient L2 learners of Korean might be masked by that of the other individuals
- \Rightarrow Impact of mapping discrepancy on L2 learners' processing

Acceptability Judgment vs. Reaction Time

- Stable understanding of actives (no mapping issue) \leftrightarrow divergence in comprehending passives (mapping discrepancy) by proficiency
- Relationship between proficiency and knowledge on passives
- Parallel to L2 learners' general limitation of sentence processing^{[5][6]}
- Case marking for thematic roles of arguments during the task without context \rightarrow increased processing load & no difference by proficiency

Despite processing load, increased proficiency may bring success to understanding mapping discrepancy & to computing precise thematic roles of arguments in passives

Ability to learn new pairings of thematic roles and grammatical relations involving case marking may be correlated to the success of comprehending passives

PREDICTION

	NSK vs. L2 learner	Higher vs. Lower
Acceptability Judgment	L2 learners will rate passives lower than native speakers of Korean NSK > L2 learner	The higher group will rate passives higher than the lower group Higher > Lower
Reaction Time	L2 learners will show slower reaction times in passives than native speakers of Korean NSK < L2 learner	The higher group will show faster reaction times in passives than the lower group Higher < Lower