

## Acquisition of English plural non-head constraints by adult Korean learners

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**Key issue:** Researchers have claimed that the frequency of particular combinations in linguistic input is critical in learning a second language (L2) (Kempe & MacWhinney 1998; Ellis 2002). While the statistical properties of linguistic input and the frequency with which learners are exposed to them are important for some kinds of language learning, this cannot be the whole story. Consider the case of learning English determiners such as *the* (O'Grady et al. 2009). Despite their high frequency, second language learners (L2ers) have difficulties learning them, presumably because the form-meaning mapping is not a simple 1:1 mapping.

**Research questions:** The question of how L2ers learn low-frequent constructions of a target language leads us to investigate following questions: 1) If L2ers do not cognize the same morpho-syntactic constraints that native speakers do when learning infrequent L2 constructions, does the problem lie solely with the low frequency of the construction? 2) Or, does some internal factors (e.g., knowledge of the first language or L1) get in the way of learning the target constraints? The current study investigates how adult Korean learners' L1 grammatical knowledge is represented and processed in learning the constraints of English noun-noun compounds and whether the frequency of the constructions in the input constrains L2 learning.

**Background:** English compounding infrequently marks plural in compound non-heads. Specifically, English compounding rejects regular plurals in the left constituent of noun-noun compounds (e.g., *\*rats eater*) while irregular plurals can occur in this non-head position (e.g., *mice eater*) (Gordon 1985; Pinker & Prince 1994). Even though the question of whether the rejection of regular plural non-heads is due to innate constraints is still under debate (Ramscar & Dye 2011), few studies to date have attempted to specify when native English speakers allow regular plural non-heads (e.g., *admissions office*) (Alegre & Gordon 1999; Senghas et al. 2005). The studies that exist have suggested that the constraints are absolute, not gradient (e.g., regularity of non-heads). Thus, in order to determine whether Korean L2ers employ the same kinds of constraints as native English speakers, we also need to investigate how native English speakers process noun compounds with bare non-heads and plural non-heads.

**Current study:** 19 native English speakers (M = 21.7) 18 Korean learners of English (M = 28.3) participated in a forced-choice experiment. Participants looked at 128 pictures depicting either a single object or multiple objects with two written words under the picture: bare noun non-head compounds (e.g., *banana eater* and *ox trainer*) and plural noun non-head compounds (e.g., *bananas eater* and *oxen trainer*).

**Results and conclusions:** The results showed that the native English speakers chose regular plural non-heads over bare non-heads, contradicting what previous studies have shown. The results also suggested the native English speakers employed various constraints simultaneously (e.g., animacy and regularity of non-heads). The Korean L2ers showed nearly the same pattern as the native English speakers when analyzing non-heads. Unlike the native English speakers, L2ers' reaction times did not show any facilitation effects. Rather, their response patterns seem to reflect an L1 transfer effect. Additionally, L2ers' language background data revealed that the more proficient the L2er, the closer to the native English pattern the L2ers were. In short, the current study demonstrated that if there is a constraint on learning plural non-heads, it is not absolute. Instead, the constraint on learning is gradient and such infrequent L2 constructions are learnable even in Korean L2ers at an intermediate level of proficiency.

## References

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