

## Functional/corpus linguistics/grammaticalization

### Frequency effects in grammaticalization: from relative clause to clause connective in Korean

A corpus-based approach to grammaticalization reveals that frequency analysis based on large collections of language production can provide evidence for language change. Increased frequency of a construction over time offers statistical proof for grammaticalization (Hopper & Traugott 2003). This paper investigates the role of frequency in grammaticalization by examining the evolution of the clause connective *-nuntey* ‘and, and so, then, but, however’ in Korean (see examples (1)-(3)). While scholars of Korean generally agree that *-nuntey* derives from the erstwhile relative clause consisting of the pronominal suffix *-nun* (< *-nu-n*) and head noun *tey* ‘place’, there has been little attempt at a corpus-based analysis of its diachronic development. Using a large-scale corpus drawn from both spoken data (approximately 150,000 words) and historical texts (two million words), this paper examines the textual frequency of clause connective versus relative clause, and the contexts for the grammaticalization of *-nuntey*.<sup>1</sup>

Statistical quantitative analysis of the historical corpus reveals that in early texts (15<sup>th</sup> C-16<sup>th</sup> C.), *-nuntey* is predominantly more frequent in relative clauses than as a clause connective. Its frequency in relative clauses, however, has decreased sharply over the past five centuries whereas the use of *-nuntey* in clause connective has become dominant over time. The skewed distribution provides empirical evidence for the diachronic cline from relative clause ‘the place where’ to clause connective.

The emergence of *-nuntey* as clause connective is observed in historical contexts where the head noun *tey* functions as a locative argument of a sentence. Being combined with a lexical head noun denoting ‘place’, *-nun-tey* naturally develops into a locative argument, which permits further grammaticalization into clause connective expressing background or circumstantial information for a main clause event (K. Lee 1993; H. Lee 1999; Park 1999; Sohn 1999).<sup>2</sup> The occurrence of *-nuntey* with a locative particle *-ey* ‘at; in’ as in (3) reflects the trace of an intermediate stage.

The frequency effect is manifested in reanalysis and a formal reduction. With increased frequency, the boundary between the erstwhile relativizer *-nu-n* (> *-nun*) and the head noun disappears, leading to the reanalysis (*-nu-n + tey* > *-nuntey*) as reflected in modern orthography. The “reduction effect” in frequently used items (Bybee & Hopper 2001) is further observed in a phonological contraction in relatively recent conversational data. The spoken corpus for this study shows that when *-nuntey* is attached to the demonstrative predicate *kuleh-* ‘be such a way’, the form (*kulen-tey* ‘by the way’) is contracted into *kuntey*, at the ratio of 10% (full form) vs. 90% (reduced form). When *tey* retains its referential meaning (‘place’), however, it does not get reduced in spite of the same surface string (i.e., *kulen tey* ‘such a place’), suggesting that the frequency effect is constrained by the original lexical meaning. In short, this study illustrates that quantitative corpus study is a useful tool in providing empirical evidence for a suspected grammaticalization.

**Examples:**

- (1) Relative clause: ‘the place where ...’  
 kalbi cal ha-**nun tey** a-sey-yo?  
*kalbi* well do-*nun tey* know-SH-POL  
 ‘Do you know a good place for *kalbi* (Korean barbecue)?’  
 (Lit. ‘Do you know a place which makes *kalbi* very well?’)
- (2) Clause connective ‘and; but; however; while’  
 pi-ka o-**nuntey** wusan-i eps-eyo.  
 rain-NM fall-*nuntey* umbrella-NM not have-DEC-POL  
 ‘It is raining *nuntey*, I don’t have an umbrella.’
- (3) anc-ki silh-**un tey-(ey)** anc-ula-ko hay-yo.  
 sit -CP hate-*nun tey*-LOC sit-IMPER-QT say-POL  
 ‘He is telling me to sit down in a place where I don’t want to’

**References**

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<sup>1</sup> For an accurate count of frequency, original Chinese version as well as Korean texts were examined.

<sup>2</sup> See Y. Park (1999) for the discourse functions of *-nuntey* in utterance-final position.