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The compatibility condition for expressives revisited: A big data-based trend analysis

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A B S T R A C T

The main goal of this paper is to reevaluate the Compatibility Condition on the polarity/ degree of emotional attitude for multiple expressive elements including slurs, epithets, anti-honorifics, intensifiers, and mitigators in Korean. The project provides new results obtained from a big data-based trend analysis including usages in Twitter, news articles, and blogs. Yoon (2015) investigated ethnic slurs that occur with other regular expressive elements, in order to examine the systematicity with which these expressive items interact with one another in determining emotional attitude. This prior analysis led to several important theoretical claims, but is limited in depending on intuition-based judgments and co-occurrence patterns in a relatively small corpus. For a general theory of compatibility of expressives, Korean is particularly important because its extensive use of expressives across lexical categories offers a perfect testing ground for examining dynamic interactions of various expressive items, and yet the findings are highly applicable to other languages. The present paper provides a follow-up study of Korean with more rigorous analysis of a larger data set that allows assessment of the validity of earlier claims. Two main issues are reexamined here: one concerns constraints on the Compatibility Condition and how to measure the degree of compatibility; and the second concerns how strict the compatibility condition of expressives is, and what happens if the condition is flouted. The new results from the big data-based trend analysis reveal which part of the prior theoretical analysis is valid in reality and which part requires revision.

One implication of the current study is that, by specifying an Emotional Index for expressive items in the sentiment lexicon, *the Compatibility Condition, as a grammatical constraint*, predicts how multiple occurrences of compatible expressives can be used to strengthen a speaker's positive or negative emotion. Furthermore, we suggest a condition for *rescuing by pragmatic effects* as a secondary mode of pragmatic sanctioning in exceptional cases of co-occurrences of conflicting attitudinal components.

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1. Introduction

Yoon (2015) proposed the Compatibility Condition for different types of expressives in Korean. She discussed cases in which the condition is intentionally flouted and the consequential pragmatic effects of such flouting:

(1)   *Compatibility Condition of multiple expressives:*
   a.   The polarity (negative or positive attitude) of expressives must match within an utterance;
   b.   The degree of emotional attitude (e.g., weak or strong negativity) at the expressive level does not have to match exactly as long as there is sufficient overlap.

To discover the regularity with which various expressive items interact with one another in determining the final attitudinal meaning (e.g. doubly strengthened negativity by two instances of negative expressive elements), Yoon examined a corpus of expressive items (the Sejong corpus)[1] such as slurs, pejoratives, (anti-)honorifics, intensifiers, and mitigators. This earlier analysis led to several important theoretical claims, but most depended on intuition-based judgments about the data or occurrence patterns in the corpus, which yielded only a small number of target entries. Korean is particularly valuable for exploring the interaction of different types of expressives because it makes extensive use of expressives across lexical categories. Despite being special in that way, findings from a study of Korean are highly applicable to other languages. (cf. Giannakidou and Yoon, 2011 for metalinguistic comparatives, Yoon, 2012, 2013 for evaluative negation, among others). Given the value of studying Korean use of expressives and the limitations of the prior study, a follow-up study was conducted with a more systematic analysis of a larger data set. The results obtained from this investigation of "big data" allow us to assess whether the earlier claims are valid in general.[2]

The linguistic contexts in the data sources that we sampled are of a special type. One of the main sources is the social networking site Twitter. As Scott (2015):8) put it: "Twitter facilitates one-to-many, asynchronous communication, and so tweeters are unlikely to be able to assume that they share contextual assumptions with all or any of their audience." Scott also characterizes Twitter as an "unpredictable and largely anonymous discourse context." The second data source, blogs, can be assumed to have the same properties. News articles are the third data source; they are more controlled in that they are categorized by topics and are not anonymous. All three online sources of data, however, are unstructured. (More discussion on the nature of unstructured data will follow in Section 3.)

Despite the special nature of online data sets, however, the current analysis of the online big data will be useful in offering a general picture of the most recent trends in use of particular expressive items. It therefore allows an understanding of how precisely previous theoretical assumptions regarding the notion of multidimensionality in meaning (Potts, 2005) and the interaction of descriptive and expressive dimensions (Yoon, 2015) are in play in reality. We thus reexamine a variety of possible permutations of expressive items with a *big data-based trend analysis* of their most recent uses (within 1 year) in the social networking site Twitter, news articles, and blogs. In doing so, the current study aims to review two main questions that Yoon raised.

First, given that multiple occurrences of identical expressives within an utterance are possible in general (e.g. multiple instances of *damn* within an utterance in English; Potts, 2005), do those expressive elements interact with each other to determine a conjoint meaning? If so, are there constraints on their mutual compatibility (a compatibility condition), and, if so, how can their degree of compatibility be measured.

Second, if expressives do interact in their impact on an audience, how precisely do they have an impact? What about co-occurrences of different expressives that imply different attitudes, including ones that conflict? Do they freely co-occur within one utterance? What happens if any compatibility condition is flouted?

Exploring the dynamic paradigm of multiple expressives in Korean, we examine the validity of Yoon's proposed *Compatibility Condition Model (CCM)* and the *Compatibility Condition Index (CCI)* that is meant to explain how a language community constrains the possible co-occurrences of various types of expressives such as ethnic slurs, and other pejoratives such as epithets, anti-honorifics, intensifiers, or mitigators.

In section 2, we briefly summarize Yoon's (2015) analysis of five instances of slurs as expressives. In section 3, we discuss the advantages and limitations of online big data, and we show how the results of current big data analysis can be displayed using three visualization techniques (i.e., word clouds, topic maps, and popular keywords). In section 4, we offer a big-data-based trend analysis of slurs in Korean, analyzing the emotional attitude of each expressive element found in the big data sample [CF1] based on salient words in the three visualizations; in 4.1, we show how emotions are systematically reflected in variants of color terms in Korean; and in 4.2, we show how such emotions in color terms are carried over to color-term-based racial slurs and how the analysis of big data exhibits a regularity. In section 5, we move on to the issue of compatibility between slurs and other expressive elements; in 5.1, the compatibility between expressive nouns and slurs is revisited with new results from big data; in 5.2, we reexamine the compatibility between expressive case markers and slurs; and in 5.3, a case of nonconformity (i.e. intentional flouting) of the compatibility condition is discussed to illustrate how it gives rise to stronger pragmatic effects such as sarcasm, irony, hyperbole, or humor. The conclusion follows in section 6.

2.   Slurs as expressives: Yoon, 2015

Yoon (2015) examined the properties of slurs, which have the core characteristics of conventional implicature (CI), i.e., an utterance modifier. She suggested that the expressive sense of racial slurs can be understood as CI, in the sense of Potts (2005).

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[1]   The Sejong corpus is available at the following address: https://ithub.korean.go.kr/user/guide/corpus/guide1.do.
[2]   Big Data generally refers to an extremely high volume of data. One of the characteristics of big data is its exponential growth—it is well known that 90% of current big data has been created within the last 2 years. The current study analyzes the data extracted from the social media, internet news articles, and blogs.