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Semantic factors in the choice between ethnic adjectives and PP counterparts: Quantitative evidence

Introduction

Many languages offer competing strategies for expressing the participant roles associated with event nominalizations, such as the use of a denominal adjective ((1a)) vs. a PP ((1b)):

(1)   a. **French** agreement to participate in the negotiations
          b. agreement **by France** to participate in the negotiations

Since Kayne (1981) theoretical work on nominalizations has focused mainly on whether such PPs and adjectives are true arguments of the nominalization or simply modifiers

which happen to provide participant role information, with no conclusive results (see e.g. Grimshaw 1990, Alexiadou 2001, Van de Velde 2004, McNally & Boleda 2004); little attention has been devoted to the factors determining when one or the other option is used (but see Bartning 1986). The goal of this research is to address this latter question, in the hope that a better understanding of these factors will also offer new insight into the argument vs. adjunct debate.

Methodology

We hypothesize that the choice between (1a)-(1b) depends on various factors, including whether the noun is deverbal, the argument structure of the underlying verb, prior or subsequent mention of the participant in question (in (1), France), and what we call concept stability – the degree to which the full noun phrase describes a well-established class of (abstract or concrete) entities. We tested for these factors in a study on the British National Corpus. To reduce unintended sources of variation, we limited our study to so-called ethnic adjectives (Alexiadou and Stavrou to appear) and their nominal counterparts, such as *French-France*. We examined Adjective+N and N+P+Nation_noun examples from 49 different nations whose adjective (*French*) and proper noun (*France*) forms occur 1,000-30,000 times in the BNC, filtering the examples whose head noun was too infrequent (≤ 24 occurrences) or too nation-specific (e.g., *reunification*). To determine the semantic class of the head nouns, we used the WordNet-based Top Concept Ontology (Álvez et al. 2008). For the analysis of nominalizations, we considered only data involving a manually-selected list of 45 nouns.

Results

Unlike nouns denoting physical objects, abstract nouns, including nominalizations, prefer the prepositional construction (see Figure 1; note that nouns in the Top Ontology categories *Part* and *Place*, e.g. *border*, *area*, are an exception).

FIGURE 1. DISTRIBUTION OF HEAD NOUNS ACROSS TOP CONCEPT ONTOLOGY CONCEPTS IN THE ADJECTIVE (AN) AND PREPOSITIONAL (NPN) CONSTRUCTIONS. THE Y-AXIS DEPICTS THE RATIO (AN_CONCEPT/AN)/(NPN_CONCEPT/NPN).
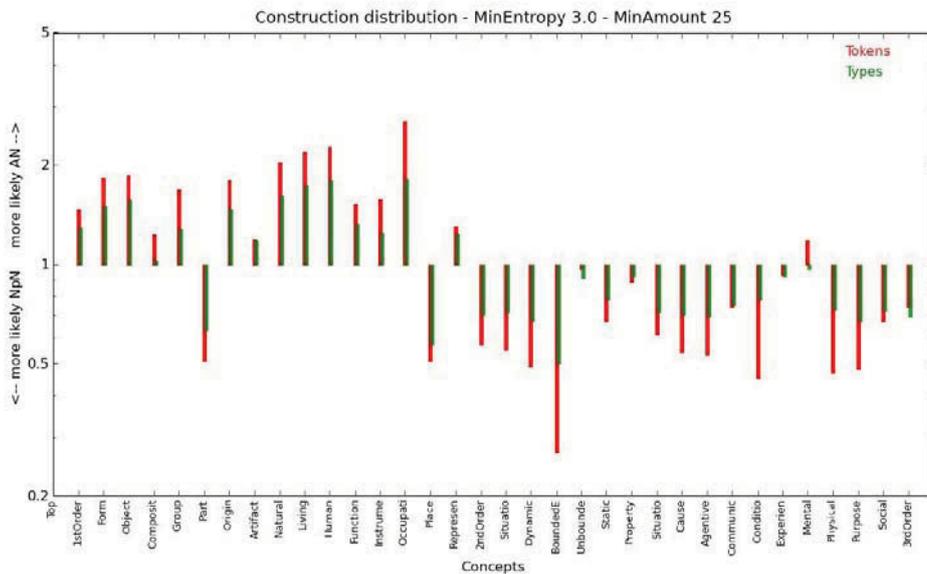
The adjective construction occurs with a much smaller range of nouns than does the PP construction, an effect that is more pronounced with infrequent nations and when only nominalizations are considered (see Figure 2 and Table 1). These results suggest that use of the adjective construction positively correlates with concept stability: Adjective+nominalization combinations are arguably less likely to form stable concepts than adjective+concrete noun combinations (cp. e.g. *a French wine* vs. *a French agreement*).

FIGURE 2. VARIATION OF HEAD NOUNS IN THE ADJECTIVE (AN) AND PREPOSITIONAL (NPN) CONSTRUCTIONS. PERCENTAGES (Y-AXIS) OVER THE LEMMATA THAT OCCUR IN THE AN AND NPN CONSTRUCTIONS POOLED TOGETHER. GRAPH B EXCLUDES THE 20 MOST FREQUENT NATIONS, WHILE GRAPH C DEPICTS ONLY THESE (AS THERE ARE TOO FEW DATA WITH NOMINALIZATIONS FOR INFREQUENT NATIONS).
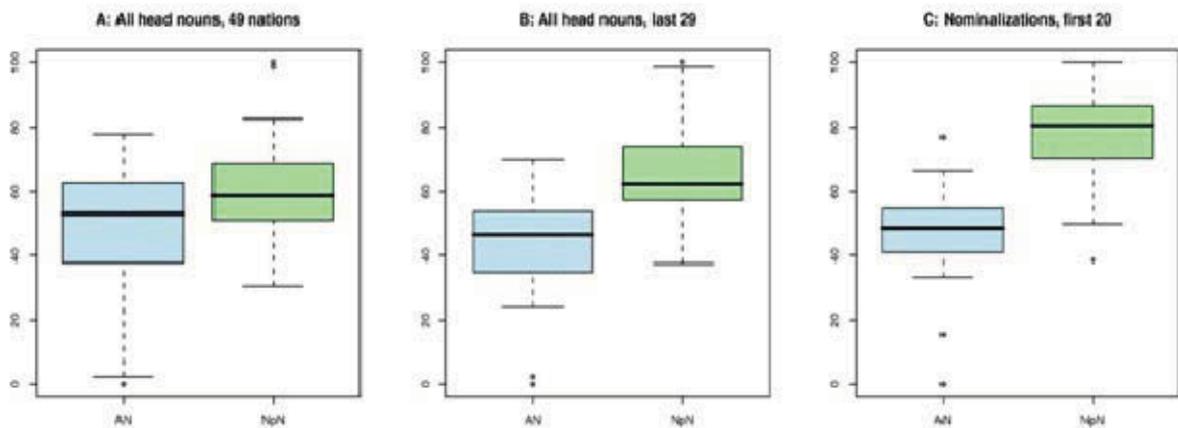

TABLE 1. RESULTS OF PAIRED T-TESTS ON DATA IN FIGURE 2.

data	t	df	p-value
A	-2.49	48	0.016
B	-3.77	28	0.0008
C	-4.36	19	0.0003

Conclusion

Though the other factors are pending analysis, these initial results indicate an asymmetry in the distribution of the constructions in (1); and the strong association between the use of the adjective construction and concept stability specifically lends support to an analysis of ethnic adjectives as classifying modifiers rather than as argument-saturating expressions as posited in related work. To this respect, note that if ethnic adjectives were able to saturate arguments, we would expect them to appear more frequently with, and with a wider variety of, nominalizations.

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