Non-canonical word order in the English NP: An FDG analysis of prenumeral adjectives

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1. Introduction: word order in the English NP

The order of elements within the English noun phrase is highly fixed, in particular in the pre-head zone, where determiners, pre-modifiers and classifiers each have their own 'slot'. A general overview of these slots, and the kinds of elements that typically fill them, is given in Table 1.

Table 1: The internal structure of the English noun phrase (based on Quirk et al. 1972: 146; 1985: 1340)

pre-det	det	post-det₁	post-det ₂	precentral	central	postcentral	prehead	head
				modifier	modifier	modifier		
all	article	ordinal	cardinal	adjective	adjective	adjective	adjective	noun
both	demonstr.		quantifier			participle	noun	
half	genitive							
such	poss. pron.							
by far								

Many studies have been devoted to the question of how many subtypes of determiners and modifiers need to be distinguished, on the basis of relative position, syntactic properties, semantic scope and/or pragmatic function (e.g. Quirk et al. 1985: 1338-1341; Ferris 1993; Tucker 1998; Giegerich 2005; Cinque 2010; Halliday & Matthiessen 2014: 379-383; Matthews 2014; Feist 2012; Ghesquiere 2014; Davidse & Breban 2019). More fine-grained classifications have been developed over time, especially within the premodifier zone; an example of such a classification is given in Table 2.

Table 2: Subcategories within the premodification zone (from Ghesquière 2014: 24)

modification		categorizatio	categorization			
degree modi	fication		descriptive mo	dification		
noun-	adjintensifier		subjective	objective	classifier	head
intensifier						
	bleached	non-		·		
		bleached				
	really		pretty	little	garden	flowers
utter						madness
		lovely		long		legs

2. Non-canonical word order: adjective + numeral

Although the various classifications proposed differ with regard to the exact number and kinds of prehead dependents, one thing they have in common is that determination is assumed to precede modification. Nevertheless, as shown in (1), modifiers do sometimes precede cardinal numerals:¹

- (1) a. an *impressive 200* books; a *mere four of five* people (cf. Keenan 2013: 89; Halliday & Matthiessen 2014: 373)
 - b. a *pleasant three* days in Philadelphia (Keenan 2013: 87); a *lousy two* weeks in New Jersey (Halliday & Matthiessen 2014: 373)
 - c. the famous two towers of Bologna (cf. Halliday & Matthiessen 2014: 373)
 - d. the left(most) three columns; the upper three rows (cf. Marušič & Žaucer 2013: 41)
 - e. the *largest two* buildings (Payne & Huddleston 2002: 453); my *largest three* shirts (Tucker 1998: 83)

So far, only some of these adjective-numeral constructions have been analysed in any depth, and then only from a generative point of view. Keenan (2013), for instance, looks at the constructions in (1a&b) — which she refers to as AANN (Article + Adjective + Number + Noun) constructions — and lists a number of distinctive properties. First of all, she points out, the adjective and the numeral can only occur in the specified order, while neither can be omitted (Keenan 2013: 88) (*a three pleasant weeks; *a three weeks; *a pleasant weeks). Keenan (2013: 88-89) further observes that the adjective is either emphatic (as in (1a)) or descriptive (as in (1b)); that some constructions take a plural verb (a mere four or five people were there; a delicious four courses were served), while others require a singular verb (a pleasant three days in the country was all I needed); and that these constructions occur most naturally with nouns indicating a measure (*a delicious three muffins). Finally, when it comes to their meaning, Keenan (2013: 89) observes that AANN with descriptive adjectives "encodes a collectivity reading on the subsequent plural noun phrase"; a phrase like (1b), for instance, is only be felicitous if the three days are interpreted as forming a continuous unit.

As for the analysis of these constructions, Keenan (2013: 94) concludes that in many respects "AANN resembles a collective pseudopartitive"; she accordingly provides the construction with a pseudopartitive-like underlying structure which contains a measure phrase headed by the non-expressed measure element <GROUP> to account for the collective reading of the phrases in question (a pleasant three days = a pleasant *period* of three days). What her analysis fails to capture, however, is the difference in the scope of the adjectives in (1a) and (1b): whereas in (1b) the descriptive adjective *pleasant* does indeed modify the set denoted by the head (*days*), in (1a) the emphatic adjective *impressive* clearly only scopes over the following numeral (it is the number that is impressive, not the books) (i.e. [pleasant [three days]] vs. [[impressive 200] books]). Nor can her analysis be extended to the examples in (1c-e).

Although Marušič & Žaucer (2013) focus on the use of prenumeral adjectives in Slovenian, some of their observations are also relevant for English. Thus, they observe that adjectives in prenumeral position can

¹ There are also exceptions in the ordering of adjectives and ordinal numerals; in these cases, however, the two orders clearly differ in meaning, due to a difference in scope (e.g. *the second brightest child* vs. *the brightest second child*; Payne & Huddleston 2002: 453). These will not be discussed in the present paper.

only have a stage-level interpretation (attributing a temporary property), not a individual-level interpretation (attributing a permanent/intrinsic property) (Marušič & Žaucer 2013: 45). In addition, on the basis of Slovenian examples, they suggest that prenumeral adjectives can only be restrictive, while in their default postnumeral position (and this is well known, also for English) they can have either a restrictive or a non-restrictive interpretation (Marušič & Žaucer 2013: 45). Note, however, that the example in (1c) seems to suggest this is not necessarily the case for English: in this particular example the most likely interpretation of the prenumeral adjective *famous* is clearly a non-restrictive one.

In addition, Marušič & Žaucer (2013: 41) note that "the group of adjectives which can appear in front of numerals is actually quite diverse", as it includes not only emphatic and descriptive adjectives, but also locational ones, such as *left(most)* and *upper* in (1d). They also point out that in these cases, both orders are acceptable, but result in different interpretations, with the adjective-numeral order suggesting the existence of a contextually determined unique/exhaustive set (e.g. a set of 'two rows': [upper [two rows]]; Marušič & Žaucer (2013: 52)). The authors also offer a unified (pseudo-)partitive-like analysis, arguing that "these [prenumeral] adjectives violate only apparently, as the noun phrases with such adjectives actually contain additional covert structure." (2013: 39).

Note finally that, as shown in (1e), there are also instances of descriptive prenumeral adjectives whose acceptability depends on the form of the adjective. Thus, in (1e) the non-canonical order only seems to be fully acceptable with the comparative and superlative forms of the adjective (**the large two buildings). Moreover, in these cases there does not seem to be a straightforward semantic difference between the two orders, leading Payne & Huddleston (2002: 453) to conclude that they are "more or less equivalent".

3. The current paper

So far studies on prenumeral adjectives seem to have been based almost entirely on a small number of made-up examples presented without any context. In order to find out what the actual use of these constructions tells us about their functional and formal properties, the present paper will use corpus data (from a variety of corpora, including the *British National Corpus*, the *Contemporary Corpus of American English* and *the News on the Web Corpus*) to answer the following questions:

- Which subtypes of modifiers can occur in the prenumeral position: degree (interpersonal) modifiers,
 descriptive (representational) modifiers?; objective or subjective descriptive modifiers?; classifiers?
- Which forms of adjectives do we find in this position (e.g. normative/comparative/superlative; adjectives/participles)?
- As for the semantic features of the adjectives involved: are they restrictive/non-restrictive; stage- or individual-level; referent or reference modifying, etc.?
- Which (central/post-) determiners can precede the prenumeral adjective? (definite/indefinite article, possessives, demonstratives?; (an)other, further, previous, additional etc.?); do these determiners exhibit number agreement with the noun and/or the finite verb?
- Which kinds of nouns can be found in these constructions?
- Under which conditions are prenumeral adjectives allowed? Are both orders acceptable, and if so, which specific discourse-pragmatic or semantic properties trigger the non-canonical order?

These data will form the basis for an FDG analysis of adjective-numeral constructions given in (1). It will be clear that, although the idea of providing (some of) these constructions with a pseudo-partitive(-like) analysis is definitely an interesting one, the kind of analyses offered by Keenan (2013) and Marušič & Žaucer (2013), which combine syntactic and (elided) semantic information in a single representation, are not acceptable in FDG. Instead, given the functionally-inspired placement rules employed in FDG, these constructions need to be provided with plausible analyses at the Interpersonal and/or Representational Level which will subsequently trigger the correct placement of adjective and numeral at the Morposyntactic Level. In addition, it will be argued that a single analysis cannot account for the specific functional and formal features of the five subtypes given in (1); instead different (interpersonal and representational) analyses will be provided for each of these subtypes.

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Corpora

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