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An amazing four doctoral dissertations

Abstract

We examine the construction exemplified in the title, in which the singular indefinite determiner *a* is followed by an adjective, a numeral, and then unexpectedly a plural nominal. We discuss the syntactic structure of the construction, present new generalizations about its properties, and sketch a syntactic constructional analysis in the LFG framework.

Keywords: LFG, agreement, noun phrases, constructions, English

1 The construction

We examine the English construction in which the singular indefinite determiner *a* is followed by a modifying adjective, a numeral, and then unexpectedly a plural nominal. Keenan (2013) refers to this as the AANN (Article + Adjective + Numeral + Noun) construction; we follow her nomenclature.

- (1) a. Prof. Tibor Laczkó authored *an amazing four doctoral dissertations*.
 b. We spent *a beautiful five days in Debrecen*.

Solt (2007) distinguishes four subtypes of modifiers in the AANN construction, on the basis of two crossclassifying properties. The first property is whether the adjective semantically modifies the nominal ('qualitative') or the quantity ('quantitative'), illustrated in (2):

- (2) a. *a lucky three students* (qualitative)
 b. *a mere two pages* (quantitative)

As Solt observes, qualitative modifiers support entailments as in (3a), but quantitative modifiers do not as in (3b).

- (3) a. Qualitative:
A lucky three students got fellowships ⇒ *The three students who got fellowships were lucky*

b. Quantitative:

A mere three students got fellowships \nRightarrow **The three students who got fellowships were mere*

The second property which distinguishes subtypes of AANN is whether the nominal is a measure phrase or not, illustrated in (4).

- (4) a. *a whopping 1000 miles* (measure)
b. *a whopping 1000 soldiers* (non-measure)

This gives us four subtypes of AANN:

(5)

	Qualitative	Quantitative
Non-measure	<i>a lucky 3 students</i>	<i>a whopping 8000 soldiers</i>
Measure phrase	<i>a busy 3 weeks</i>	<i>a meager 2 pages</i>

Rough paraphrases of the construction are as follows:

- (6) a. Qualitative non-measure: *(a group of) 3 students who are lucky*
b. Qualitative measure: *(a period of) 3 weeks that was a busy time*
c. Quantitative non-measure: *8000 soldiers, which is a lot of soldiers*
d. Quantitative measure: *2 pages, which is a meager amount*

Our analysis proceeds from the following observations about the AANN construction, though (like previous analyses) we do not provide a full account of all of these observations in this paper.

- The AANN construction requires the presence of a modifier. For some types of AANN, the modifier must be a prenominal adjective, while for others, either an adjective or a relative clause may appear. We observe that modification by a relative clause is restricted to the qualitative measure subtype (Section 3).
- Keenan (2013: 89) uses the term ‘emphatic’ for what Solt (2007) calls ‘quantitative’ modifiers, and ‘descriptive’ for what Solt calls ‘qualitative’ modifiers. Keenan claims that ‘emphatic’ modification is emotive in some sense.¹ We observe that quantitative uses are not always emphatic or emotive, e.g., the modifier *extra* in *an extra 25 feet of rope* is quantitative but not emotive or emphatic.
- Solt (2007) observes that qualitative modifiers must precede quantitative modifiers, and the other order is not found. We further observe that coordinated modifiers in the AANN construction must be uniformly qualitative or quantitative, and examples of mixed coordinated modifiers including a quantitative modifier and a qualitative modifier are not possible (Section 3). These patterns are problematic for Ionin and Matushansky’s (2018) claim that there is no need to distinguish the quantitative and qualitative adjectives in the syntax.

¹ Keenan (2013: 89): The adjective “may be emphatic, in which case it serves to intensify or downtone the force of the numeral [...], or it may be descriptive, in which case it ascribes a property or characteristic to the subsequent noun phrase”.

- Jackendoff (1977) and Keenan (2013) claim that the AANN construction is possible only with numerals greater than one. This generalization does not hold; attested examples include the numerals *zero* and *one* (see Maekawa 2013 for additional examples with the numeral *one*):
 - (7) Not bad if we compare 4 years of waiting to *a mere one year of waiting time to grow your dreadlocks to 6 inches starting from a buzz cut or short hair.* (iWeb)
 - (8) In his 16 years as a federal prosecutor, Gowdy lost *an astounding ZERO cases.* (iWeb)
- Keenan (2013) and Maekawa (2013) note that variable verb agreement (singular or plural) is found with the construction. Singular verb agreement is possible only when it is also possible with the nominal complement on its own (Section 5).

As far as we are aware, Jackendoff (1977) was the first to provide an analysis of the syntactic structure of the AANN construction (though, as Jackendoff points out, it was briefly described by Jespersen (1954: volume 1, p. 112)). The construction has resurfaced in the literature sporadically in subsequent years, with a recent resurgence in interest (Honda 1984; Gawron 2002; Ionin & Matushansky 2004; Kayne 2005; Solt 2007; Ellsworth et al. 2008; Keenan 2013; Maekawa 2013; Bylinina et al. 2016, Marušič & Zaucer 2016; Ionin & Matushansky 2018). In this paper we pull together previous claims and generalizations about the AANN construction, contributing several new generalizations, confirming previous claims with naturally-occurring corpus examples,² and providing counterexamples to some previous claims. We first discuss the phrase structure (Section 2), modification requirement (Section 3), two-tiered structure (Section 4), and verb agreement (Section 5). Then in Section 6, we sketch a constructional analysis within the theory of Lexical Functional Grammar (LFG: Dalrymple 2001; Bresnan et al. 2016). We focus on the syntactic structure of the AANN construction, arguing that the separation of constituent and functional structure in LFG in conjunction with the INDEX and CONCORD treatment of agreement (Wechsler & Zlatic 2003; King & Dalrymple 2004) accounts for the AANN's constructional properties while capturing the properties it shares with standard English nominal syntax. Keenan (2013), Bylinina et al. (2016), Ionin and Matushansky (2018) and others discuss additional semantic constraints on the interpretation of AANN, especially as concerns the interpretation of the nominal. We leave a full semantic analysis for future research.

2 Phrase structure constituency

Following Gawron (2002), Keenan (2013), Maekawa (2013), and Ionin and Matushansky (2004, 2018), we argue that the AANN construction has a right branching phrase structure. The strongest support comes from coordination, as observed by Ionin and Matushansky (2004):

² Besides examples from the previous literature, many of the examples we discuss come from the BYU corpus (corpus.byu.edu). We use the following abbreviations: COCA (Davies, 2008-); NOW (Davies, 2013); iWeb (Davies, 2018-).

- (9) a. *a long [2 hours and 14 minutes]*
 b. *an amazing [12 performances and 602 rehearsals]*

In fact, all of the subconstituents coordinate as expected for a uniformly right-branching structure:

- (10) Full DP: *[[a lucky 4 boys] and [an unfortunate 6 girls]]*
 Post-determiner: *[a [lucky 4 boys] and [unfortunate 6 girls]]*
 Post-adjective: *[a lucky [4 boys and 2 girls]]*
 Post-numeral: *[a lucky 6 [boys and girls]]*

Analyses which do not assume right branching have also been proposed (Jackendoff 1977; Honda 1984; Ellsworth et al. 2008; Hristov 2013). In all of these analyses, the adjective and numeral form a constituent. Jackendoff's (1977, 126 ff.) original analysis is shown in (11), with the adjective and numeral forming a constituent which then combines with the determiner.

- (11) *[[a [beautiful three]] weeks]*

Ellsworth et al. (2008) propose the structure in (12) for the AANN construction (which they call the 'whopping construction'). It differs from Jackendoff's proposal in that the adjective and numeral form a constituent with the noun rather than the determiner:

- (12) *[a [[whopping nine] touchdowns]]*

As noted by Ionin and Matushansky (2004), the coordination facts in (9) are problematic for both of these proposals, since the adjective cannot be analyzed as forming a constituent with the numeral in the AANN. In addition, Maekawa (2013) points out that the relative clause examples in Section 3 (*a four days that we will all look back on...*) are problematic for the view that the adjective and numeral form a constituent to the exclusion of the nominal.

Once we assume a right branching structure for the AANN construction, the question arises as to the phrasal category of the numeral and following nominal. We analyze this constituent as an NP, not a full DP. Ionin and Matushansky (2018) note that alongside simple examples like (13a), examples with complex numerals like (13b) are also possible:

- (13) a. It's been a long *[ten years]_{NP}* since we got to look through Samus's visor. (iWeb)
 b. While authorities captured or killed two dozen of the 37 most wanted drug capos during his term, Calderon's time in office was marked by *a staggering [[more than 70,000] drug-related murders]_{NP}* between 2006-2012. (iWeb)

The phrases *ten years* and *more than 70,000 drug-related murders* in (13) are both NPs, and can appear with a determiner such as *the*:

- (14) a. *The [ten years]_{NP}* went by, and the emperor asked him for the drawing of the crab. (iWeb)
 b. Housing Minister Mick de Brenni said the historic review would lead to fairer tenancy laws for *the [[more than half a million] households renting in the state]_{NP}*. (NOW)

In contrast, nominals with modified numerals like *at least/at most/exactly ten miles* are DPs and cannot follow a determiner like *the*. These forms also cannot occur in the AANN construction, as in (15).

- (15) a. **the [[at least half a trillion] books]_{DP}*
 b. **The library houses a staggering [[at least/at most/exactly half a trillion] books]_{DP}.*

Similarly, Ellsworth et al. (2008) observe that examples like (16a) are not possible with numeral expressions of the form *from X to Y*. (16b) demonstrates that these are not NPs, and hence we correctly predict that they also will not occur in the AANN construction.

- (16) a. **a whopping [from 300 to 400 admirals]_{DP}*
 b. **The [from 300 to 400 admirals]_{DP} gathered for the funeral.*

3 The modification requirement

A distinctive characteristic of the AANN construction is that the nominal must be modified. Canonically, this modification takes the form of an adjective preceding the numeral. However, in some situations relative clause modification is also possible. We first consider word order restrictions on prenominal modifiers, and we then examine cases in which the modifier is a relative clause.

3.1 Prenominal adjectives

All AANN allow both qualitative and quantitative prenominal adjectives. Here we explore the phrase structure associated with the adjectives and how qualitative and quantitative adjectives interact with one another.

Relative Ordering of Adjectives Multiple modifiers are possible in the AANN. Iterated adjectives may be of the same type, as in (17) and (18):

- (17) Iterated qualitative modifiers:
- a. Thomas Bott fired home a brilliant hat-trick, while Carl Price notched a brace to give their side *an unexpected easy three points* in what was a five goal romp. (iWeb)
 - b. This is *a solid basic 5 steps* that should be a foundation of every website and online marketing program – the ability to easily opt-in subscribers who you can then communicate with frequently with the purpose of nurturing a business relationship in the future. (iWeb)
 - c. mine has just failed after an issue with the temp sensor (-3 outside probe showing *a nice balmy 10 degrees*) (iWeb)
- (18) Iterated quantitative modifiers:
 It's *a whole whopping thirty degrees* here. I know what we are not packing: golf shoes. (iWeb)

With modifiers of different types, there is a fixed word order requirement: as observed by Solt (2007), qualitative modifiers precede quantitative modifiers, and the other order is ungrammatical. This suggests the presence of distinct adjectival positions for qualitative and quantitative adjectives.

(19) Qualitative modifiers preceding quantitative modifiers:

- a. In *a swaggering mere forty minutes*, The Who proved that their invention, their power, their genius, wasn't a chimera conjured by the loftier ambitions of Tommy: ... (iWeb)
- b. He changes his route home from the train, noting with resentment that the move adds *a wintry extra two blocks* to his walk. (COCA)
- c. To end the games offer everyone a chance to earn *a quick extra five points*. All they have to do is eat a spoonful of cat food. (iWeb)
- d. Using Sigma's own OS technology, the image stabilisation gives *a useful extra four stops in exposure* allowing for smaller apertures to be set giving better depth of field and extended low light capability. (iWeb)

Coordination In the AANN both qualitative and quantitative modifiers can be coordinated. However, the coordinated modifiers must be of the same type, either qualitative or quantitative. Examples with coordinated qualitative modifiers are well attested:

(20) Coordinated qualitative modifiers:

- a. For Pastrana, it's been *a long and frustrating three years* since the peace process began. (COCA)
- b. It took me *a restless and anxious three months of tutorage in the German tongue* (while storage charges piled up on my beads) before I could start learning Anula from the expriest, Herr Krapp. (COCA)
- c. Three and a half years later Edwina weighs in at *a hairy and muscular 85 pounds*; examining her, says the vet, is "like palpating a bowling ball." (COCA)

Examples with coordinated quantitative modifiers are less frequent, but can also be found:

(21) Coordinated quantitative modifiers:

- a. Bill Cosby dominated the field through the '60s with *an amazing and unparalleled six wins in a row*. (iWeb)
- b. Of note, Serena has won *an astounding and unprecedented 10 Grand Slam singles titles* since reaching that milestone. (NOW)

In contrast, constructed examples of coordinated qualitative and quantitative adjectives sound awkward, and we did not find any such examples in our corpus search.

(22) *??a thirsty and whopping five days in the Sahara*

This provides further confirmation of distinct phrase structure positions for qualitative and quantitative adjectives.

3.2 Pre- vs post-nominal modification

Interestingly, although the AANN construction requires modification, that modification does not have to be adjectival: relative clause modification can also license the construction. This was first observed by Maekawa (2013), who provides (23a), and is further attested by corpus examples like (23b, c).

- (23) a. By the end of the four days, my group and I were ready to leave, but it was *a four days [that we will all look back on with great memories]*. (Maekawa 2013: example 11)
- b. An event to celebrate together the freedom of mountain-biking. *A three days that aspires to be a standing appointment for those who want to escape to the Mountain leaving the daily routine behind.*
https://www.livigno.eu/en/magazine/News_20_07_2018_great-days-recap-and-future_15856
- c. While one might argue developmental differences could account for the differences, it is highly unlikely that students' free writing would change significantly during *a three weeks in which no intervention is occurring.*
<https://files.eric.ed.gov/fulltext/ED264537.pdf>

There are two restrictions on relative clause modification. First, relative clause modification is restricted to the qualitative subtype. The prohibition against quantitative adjectives is straightforward: quantitative adjectives cannot be predicative, either in a main clause or in a relative clause.

- (24) a. *The three pages are mere.
 b. **The three pages that were mere* were disappointing.
- (25) a. The 8000 soldiers are astounding. [wrong meaning: means that the soldiers are astounding, not that 8000 is an astounding number of (possibly ordinary) soldiers]
 b. *The 8000 soldiers that were astounding* died in battle. [wrong meaning]

Second, relative clause modification in AANN is restricted to measure nominals, as shown in (26). Non-measure nominals require adjectival modification and not relative clause modification in the AANN. We do not have an explanation for this restriction: we leave this to future research.

- (26) a. *a lucky three students*
 b. **a three students who were lucky*

4 Two-tier structure

We follow Kayne (2005), Solt (2007), Keenan (2013), and Bylinina et al. (2016) in adopting a two-tier, (pseudo)partitive-like analysis of the AANN (see Section 6 for how this is realized in our analysis). Evidence for a two-tiered structure is provided by determiner agreement. Wechsler and Zlatić (2000) propose that two types of agreement features are associated with nouns: CONCORD features and INDEX features. CONCORD features generally control agreement

within the noun phrase, while INDEX features generally control agreement between a noun phrase and a bound pronoun and often control verb agreement. King and Dalrymple (2004) adopt the CONCORD/INDEX distinction in their analysis of determiner agreement in English: singular determiners like *a* are specified as requiring singular CONCORD, but are unspecified for INDEX. On this analysis, the phrase *a man and woman*, with coordinated singular nouns, has plural INDEX accounting for plural verb agreement (*A man and woman are/*is in the kitchen*), but singular CONCORD accounting for the presence of the singular determiner *a*, which agrees in CONCORD with each of the singular nouns *man* and *woman*. We adopt this analysis of agreement features within the noun phrase for the AANN, and in particular the claim that singular determiners combine with nominals which have singular CONCORD features.

In an AANN example like *a remarkable four doctoral dissertations*, then, we assume that the singular determiner *a* specifies singular CONCORD (that is, we do not assume a special plural version of the determiner *a* in this construction). Under a single-tier analysis, a plural determiner would incorrectly be expected, since the determiner would be required to agree with the plural nominal *four dissertations*. On a two-tiered analysis of the AANN construction, the matrix tier has singular CONCORD, consistent with the requirements of the singular determiner *a*, while the embedded tier has plural CONCORD as reflected by the plural noun. We discuss the INDEX value in Section 6.

Restrictions on qualitative adjectival modifiers also provide evidence for a two-level, pseudopartitive-like structure. As observed by Keenan (2013), Bylinina et al. (2016), and Ionin & Matushansky (2018: chapter 8) among others, “stubbornly distributive” adjectives (Schwarzschild 2011), which describe individuals rather than groups, are not possible as modifiers in the AANN. Bylinina et al. (2016) provide the examples in (27) to illustrate this point.

- (27) a. ??I met *a tall five people* the other day.
 b. *She bought *a blue six pencils*.

We interpret this restriction as support for our view that the AANN is syntactically a two-tiered structure, with a matrix tier representing the group and a subordinate tier representing the individuals.

In light of these patterns, we propose that qualitative modifiers appear in the matrix tier, which has plural concord and a group denotation. In contrast, quantitative modifiers appear in the lower tier. Section 6 provides a concrete analysis, showing how the separation of phrase structure and functional structure in LFG allows us to capture the complex phrasal and abstract syntactic properties of this construction. Since this paper focuses on the syntax of the construction, we leave the detailed semantics for future work.

5 Verb agreement

Keenan (2013: 91) notes that variable verb agreement is found in the AANN:

- (28) a. *A mere fifty cents* for a cup of coffee sounds/*sound reasonable to me!
 b. *A delicious four courses* *was/were served in the main dining room.
 c. *A healthy two runs* weekly was/were prescribed by the doctor.

According to Keenan, this supports a general analogy from the AANN construction to the pseudo-partitive, which can show variable agreement if the two nouns in the pseudopartitive have different number (e.g. *a herd of elephants*).

However, variable agreement in the AANN construction is not found in all of the subtypes of the construction. In fact, we observe that the AANN exhibits the same agreement patterns as for the complement NP without the determiner and adjective, i.e. when not in the AANN (see Maekawa 2013 for similar observations). Plural complement NPs may control singular agreement but may also control variable agreement, as is typical for measure nouns (for discussion of the general phenomenon of variable agreement, see Hristov 2012 and references cited there). Singular agreement is possible for the AANN construction with measure phrases when it is possible for the corresponding nominal without the determiner and adjective, as in (29) and (30).

(29) *A cool 68 degrees* is thought to be the most conducive to sound slumber. (COCA)
cf. *Seventy-two degrees* is considered sweltering and in need of fans and air conditioning.
(iWeb)

(30) And on a boat, *an extra 25 feet* is a world of difference. (COCA)
cf. *Two feet* is a great height for a bong. (iWeb)

In contrast, plural non-measure examples never show singular agreement. The following constructed examples disallow singular verb agreement, and we found no examples of singular verb agreement with non-measure nominals in our corpus search.

(31) *A lucky three students* were/*was awarded prizes.
cf. *Three students* were/*was awarded prizes.

(32) *An incredible 8000 soldiers* were/*was killed in the battle.
cf. *8000 soldiers* were/*was killed in the battle.

We propose that the INDEX number value of the matrix tier of the AANN construction is inherited from the subordinate tier, i.e. the numeral+nominal. If the subordinate tier on its own exhibits variable agreement, the AANN construction as a whole exhibits variable agreement.

6 Analysis

We sketch a constructional analysis of the syntax of the AANN construction, as advocated by Maekawa (2013), within the theory of LFG (Dalrymple 2001; Bresnan et al. 2016; Dalrymple et al. 2019).³ LFG assumes two distinct but related syntactic representations: c(onstituent)-structure encodes phrase structure (i.e. precedence and dominance) relations, and f(unctional)-structure encodes grammatical functional relations (e.g. subjects, objects). The two structures are related by a function that maps parts of the c-structure to their corresponding f-structures.

³ For a discussion of the status and treatment of constructions and constructional rules in LFG, see Asudeh et al. (2013).

Furthermore, the f-structure is distinct from the semantics. This provides flexibility in encoding the syntactic anomalies of the construction that are independent of the semantic interpretation. We leave a detailed semantic analysis for further work, but we assume that the more standard the syntactic structures, the more straightforward the mapping to the semantics.

Our analysis requires a special phrase structure rule (33) expanding the NP daughter of D' (labelled NP₁ in (36)), reflecting the constructional nature of our analysis. This is the only special rule that is needed in the analysis of the construction.

$$(33) \text{ NP} \Rightarrow [\text{AP}_{\text{qual}}^* \quad \text{AP}_{\text{quant}}^* \quad \text{NP} \quad (\text{CPrel})] \ \& \ \text{BRANCHING}$$

$$\downarrow \in (\uparrow \text{ADJ}) \quad \downarrow \in (\uparrow \text{OBJ ADJ}) \quad @\text{AANN-GROUP} \quad \downarrow \in (\uparrow \text{ADJ})$$

The right-hand side of this phrase structure rule consists of two regular expressions which are intersected (&), meaning that any use of the rule must meet both constraints. The first regular expression allows three dedicated modifier positions, each of which is optionally filled:⁴ the first for the qualitative AP, the second for the quantitative AP, and the third for the qualitative manner relative clause. The second constraint is a simple regular expression BRANCHING, defined as in (34), where Σ represents any category with any annotation; it requires the presence of at least two daughters, capturing the constraint that the obligatory head NP and at least one modifier daughter must appear.

$$(34) \text{ BRANCHING} = [\Sigma \Sigma^+]$$

Maekawa's (2013) constructional analysis similarly has a numeral+noun head which requires the presence of a modifier and a determiner. However, his analysis does not capture ordering restrictions between the qualitative and quantitative adjectives, and would need additional specifications to do so.

The annotation on the daughter NP node is a template call, and the definition of the template is given in (35). According to the template definition, the NP projects the f-structure associated with the abstract group meaning and captures the requirements for the indefinite determiner and the numeral specifier.

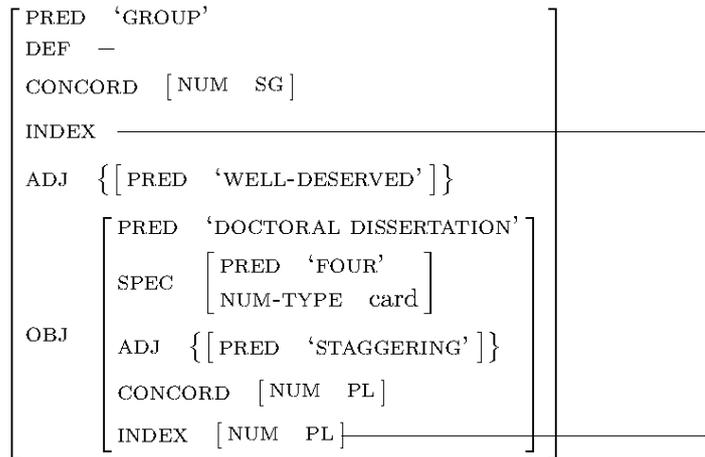
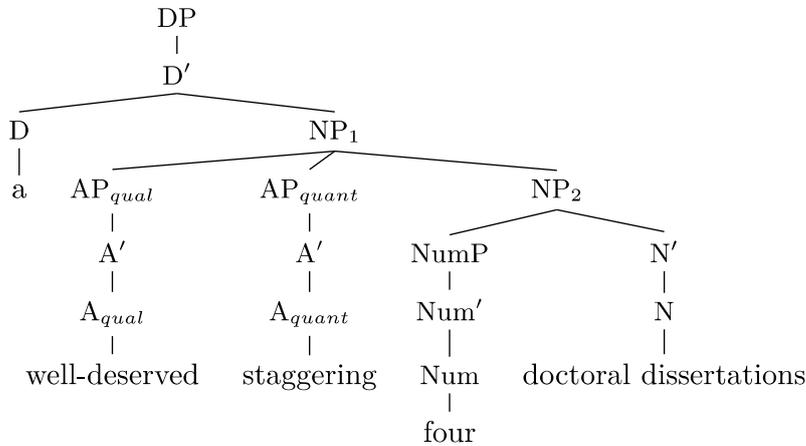
$$(35) \text{ AANN-GROUP} =$$

(\uparrow PRED) = 'GROUP'	introduce the GROUP predicate
(\uparrow DEF) = c –	require indefinite singular determiner
(\uparrow CONCORD) = c sg	
(\uparrow OBJ) = \downarrow	specify the NP as OBJ of the GROUP
(\downarrow SPEC NUM-TYPE) = c card	require cardinal numeral modification ⁵
(\uparrow INDEX) = (\downarrow INDEX)	number of the DP is determined by that of the NP

⁴ The Kleene star (*) indicates zero or more instances, thereby allowing for iterated adjectives.

⁵ We place the numeral in SPEC of the noun, similar to Huddleston and Pullum's (2002) analysis of phrases like *ten books* (in contrast with their analysis of *those ten books* where *ten* is a modifier). This is also the analysis adopted by the LFG PARGRAM grammars (<https://typo.uni-konstanz.de/redmine>).

(36) a well-deserved staggering four doctoral dissertations:



The numeral and nominal (*four doctoral dissertations*) form an NP (labelled NP₂ in (36)), which is required by the constraints in (35) specified in the special construction-specific phrase structure rule in (33) to include numeral modification. This in turn is embedded under an NP (NP₁) which contains the modifiers: the qualitative and quantitative adjectives and the relative clause. Here we posit that the adjectives have specific c-structure types which control their distribution: A_{qual} for qualitative adjectives and A_{quant} for quantitative ones.⁶

The f-structure has two levels with an abstract 'GROUP' predicate at the matrix level, similar to a partitive or pseudopartitive construction. Recall that verb agreement patterns do not change if we remove the determiner and modifier, i.e. *an astonishing three books/weeks* has the same agreement pattern as *three books/weeks* (Section 5). In LFG, verb agreement is governed by the INDEX feature (Wechsler & Zlatić 2000; King & Dalrymple 2004). In the AANN construction we account for the agreement facts by requiring the INDEX of the whole

⁶ As pointed out by an anonymous reviewer, it is possible that the ordering requirements are more general, similar to those governing the order of adjectives in non-AANN environments, e.g. *the big red book*, *?the red big book*. Given the strictness of the ordering of the qualitative and quantitative adjectives, we have posited distinct c-structure positions.

phrase to be inherited from the OBJ complement, as indicated by the line connecting the INDEX of the outermost structure with the INDEX value of the OBJ nominal in the f-structure in (36).

7 Conclusion

We have explored the syntax of the AANN construction, building on insights from the literature and generalizations based on our corpus searches. We contributed several new generalizations about the AANN, and advocated a constructional analysis which captures generalizations regarding phrasal constituency, verbal agreement, and modifier order, formalizing the syntactic aspects of our constructional analysis in LFG.

We leave several issues for future research. First, we believe that it may be fruitful to explore parallels between this construction and other related constructions: (1) the pseudopartitive, (2) other modification constructions requiring the presence of a determiner, in line with discussion by Ionin and Matushansky (2018) (*an/the/*∅ angry Donald Trump, a/that/*∅ cheerful “How are you doing?”*) and (3) constructions with measure nouns and singular or plural demonstrative determiners, in which modification is not obligatory (*the/that/those (beautiful) five days in Canberra*). This may lead to insights as to why measure nouns allow either adjectival or relative clause modification in this construction (*an enjoyable three weeks/a three weeks that we enjoyed*), while this is not possible with non-measure nouns (*a happy three students/*a three students that were happy*). Second, a deeper exploration of the semantic effects of the construction in terms of collectivization or group formation, as discussed by Solt (2007), Keenan (2013), Bylinina et al. (2016), and Ionin & Matushansky (2018), may provide further insight into the syntactic properties of the construction.

Acknowledgements

We chose this topic to commemorate Tibor Laczkó’s long-standing interest in the syntax of nominal phrases, and we dedicate the paper to him on the occasion of his 60th birthday.

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References

- Asudeh, Ash, Dalrymple, Mary & Toivonen, Ida (2013): Constructions with Lexical Integrity. *Journal of Language Modelling* 1(1), 77–130.
<http://jlm.ipipan.waw.pl/index.php/JLM/article/view/56>.
- Bresnan, Joan, Asudeh, Ash, Toivonen, Ida & Wechsler, Stephen (2016): *Lexical-Functional Syntax*. Oxford: Wiley Blackwell.
- Bylinina, Lisa, Dotlačil, Jakub & Klockmann, Heidi (2016): Adjectival Modification of Numerals. <https://rose.wp.hum.uu.nl/wp-content/uploads/sites/116/2016/07/Bylinina-et-al-logicon-abstract.pdf>. Abstract from the workshop *Logic in Language and in Conversation*, Utrecht University, 19 September 2016.

- Dalrymple, Mary (2001): *Lexical Functional Grammar*, volume 34 of *Syntax and Semantics*. New York: Academic Press.
- Dalrymple, Mary, Lowe, John J. & Mycock, Louise (2019): *The Oxford Reference Guide to Lexical Functional Grammar*. Oxford: Oxford University Press. In press.
- Davies, Mark (2008-): The Corpus of Contemporary American English (COCA): 560 Million Words, 1990-Present. <http://corpus.byu.edu/coca/>.
- Davies, Mark (2013): Corpus of News on the Web (NOW): 3+ Billion Words From 20 Countries, Updated Every Day. <http://corpus.byu.edu/now/>.
- Davies, Mark (2018-): The 14 Billion Word iWeb Corpus. <http://corpus.byu.edu/iWeb/>.
- Ellsworth, Michael, Lee-Goldman, Russell & Rhodes, Russell (2008): A Paradox of English Determination: The Construction of Complex Number Expressions. In: *WECOL 38: Proceedings of the Western Conference on Linguistics*, 24–33.
- Gawron, Jean Mark (2002): *Two Kinds of Quantizers in DP*. Presented at the 2002 Annual Meeting of the Linguistic Society of America.
- Honda, Masaru (1984): On the Syntax and Semantics of Numerals in English. *Journal of Osaka Jogakuin 2-Year College* 14, 97–115.
- Hristov, Bozhil (2012): *Agreement, Case Assignment, and Nominal Coordination*. D.Phil. thesis, University of Oxford. <https://ora.ox.ac.uk/objects/uuid:36b5e5b9-884e-445a-b0cd-f7dfde9cebbe>.
- Hristov, Bozhil (2013): Defacing Agreement. In: Butt, Miriam & Holloway King, Tracy (eds.): *On-Line Proceedings of the LFG2013 Conference*. Stanford: CSLI Publications. <http://csli-publications.stanford.edu/LFG/18/lfg13.html>.
- Huddleston, Rodney & Pullum, Geoffrey K. (2002): *The Cambridge Grammar of the English Language*. Cambridge, UK: Cambridge University Press.
- Ionin, Tania & Matushansky, Ora (2004): A Singular Plural. In: Schmeiser, Benjamin, Chand, Vineeta, Kelleher, Ann & Rodriguez, Angelo (eds.): *WCCFL 23: Proceedings of the 23rd West Coast Conference on Formal Linguistics*. Somerville, MA: Cascadilla Press, 101–114.
- Ionin, Tania & Matushansky, Ora (2018): *Cardinals: The Syntax and Semantics of Cardinal-Containing Expressions*. Cambridge, MA: The MIT Press. Forthcoming.
- Jackendoff, Ray (1977): *X' Syntax: A Study of Phrase Structure*. Cambridge, MA: The MIT Press.
- Jespersen, Otto (1954): *A Modern English Grammar on Historical Principles*. London: Allen and Unwin.
- Kayne, Richard (2005): A Note on the Syntax of Quantity in English. In: *Movement and Silence*. Oxford: Oxford University Press, 176–214.
- Keenan, Caitlin (2013): ‘A Pleasant Three Days in Philadelphia’: Arguments for a Pseudopartitive Analysis. *University of Pennsylvania Working Papers in Linguistics* 19(1).
- King, Tracy Holloway & Dalrymple, Mary (2004): Determiner Agreement and Noun Conjunction. *Journal of Linguistics* 40(1), 69–104.
- Maekawa, Takafumi (2013): An HPSG Analysis of ‘A Beautiful Two Weeks’. *Linguistic Research* 30(3), 407–433.
- Marušič, Franc Lanko & Zaucer, Rok (2016): *On the Nature of Prenumeral Adjectives*. <https://ling.auf.net/lingbuzz/004337>.
- Schwarzschild, Roger (2011): Stubborn Distributivity, Multiparticipant Nouns and the Count/Mass Distinction. In: Lima, Suzi, Mullin, Kevin & Smith, Brian (eds.): *Proceedings*

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An amazing four doctoral dissertations
Argumentum 15 (2019), 490-503
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- of NELS 39*. University of Massachusetts, Amherst: Graduate Linguistic Student Association, University of Massachusetts, Amherst, 661–678.
- Solt, Stephanie (2007): Two Types of Modified Cardinals. <http://www.zas.gwz-berlin.de/fileadmin/mitarbeiter/solt/lille.pdf>. Handout, International Conference on Adjectives.
- Wechsler, Stephen & Zlatić, Larisa (2000): A Theory of Agreement and its Application to Serbo-Croatian. *Language* 76(4), 759–798.

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