

Adjectival inflection as diagnostic for structural position

Inside and outside the Icelandic definiteness domain

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Abstract This article attempts to account for the distribution of Icelandic adjectival inflection in a manner that also captures a problematic case that has not been satisfactorily analyzed in the literature. It is argued that weak inflection is triggered if the adjective is c-commanded by a feature [DEFINITE]. Strong inflection occurs precisely if weak inflection is not triggered. This implementation accounts for the occurrence of strong inflection on predicative adjectives and adnominal adjectives in indefinite noun phrases, but moreover allows to account for an unexpected pattern in Icelandic where a strongly inflected adjective occurs in a definite noun phrase. It is argued that, in this case, the adjective is not c-commanded by the definite article, but, in fact, merged outside DP.

This rather unorthodox assumption motivated on morpho-syntactic grounds makes a number of syntactic and semantic predictions. In particular, adjectives that are merged outside DP are expected to modify not simply an NP (of type $\langle e, t \rangle$), but actually a referential expression/an individual of type e . The discussion of four instances of that strongly inflected pattern—appositives, expressives, positional predicates and little partitives—provides various kinds of evidence and shows that these expectations are indeed borne out.

Keywords Adjectival Inflection · Icelandic · Definiteness · Appositives · Conventional Implicatures · Part-Whole Modifiers · Agreement Domain

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1 Introduction

Consider the following well-known ‘minimal pair’ from Icelandic:^{1, 2}

- | | | | | | | |
|-----|----|-------------------|-----------------|----|---------------------------------------|-----------------|
| (1) | a. | gul-i | bíll-inn | b. | gul-ur | bíll-inn |
| | | <i>yellow</i> -WK | <i>car</i> -DEF | | <i>yellow</i> -STR | <i>car</i> -DEF |
| | | ‘the yellow car’ | | | ‘the car, which by the way is yellow’ | |

Both (1a) and (1b) are instances of a definite noun phrase as indicated by the suffixed article; the difference lies with the inflection on the respective adjective: weak inflection in the a-example and strong inflection in the b-example. It has been noted that this morpho-syntactic difference has semantic concomitants:

- (2) If a noun phrase of the type [“the yellow car”] is not meant to identify ‘the yellow car’, but only to identify a car, which happens to be yellow, Icelandic marks this with the strong form of the adjective. Compare the restrictive adjective in [(1a)] to the non-restrictive one in [(1b)].
Delsing (1993:132, fn. 25)

Although this contrast has often been mentioned or quoted (for instance Árnason 1980; Rögnvaldsson 1984; Delsing 1993; Thráinsson 2005, 2007; Roehrs 2006, 2009; Lohrmann 2008, 2010; Cinque 2010; Roehrs and Julien 2014), there are not many analyses explicitly addressing this issue in any detail, and to my knowledge, no explanation or serious analysis of (the strong inflection in) cases like (1b) has been offered so far.

This article is an attempt at remedying this situation. At the core of the argumentation is a claim about the distribution of adjectival inflection: the occurrence of weak inflection is dependent upon some definiteness morpheme *c*-commanding the respective modifier, whereas strong inflection is the default that occurs precisely if weak inflection is not licensed. The discussion itself will focus on modifiers in definite noun phrases. Here the claim, resulting from the generalization just stated, is that the modifier is strongly inflected in (1b) because it is merged outside DP and is thus not *c*-commanded by the definiteness morpheme in D. I will assume that on top of DP there is a KP; therefore, despite being merged outside DP, the strongly inflected modifier is still part of the same extended nominal projection. Weakly inflected adjectives in definite DPs, on the other hand, are merged inside the DP (and are thus *c*-commanded by the definiteness morpheme). The strong pattern will play the lead and receive a thorough discussion, whereas weak patterns will mostly serve as a contrast foil. After establishing the central generalizations and ideas, the article is largely dedicated to exploring the ramifications of the proposal. Notably, semantic properties of the strong pattern and semantic differences between strong and weak patterns in definite noun phrases will be shown to automatically follow from the structural difference (inside vs. outside DP).

¹ The example is originally due to Árnason (1980, 44) and was further discussed in Rögnvaldsson (1984). In a footnote—see (2)—Delsing (1993) mentions this example and makes the contrast known to the non-Icelandic-speaking linguistic community.

² Glosses used in this article: STR: strong adjectival inflection; WK: weak adjectival inflection; DEF: suffixed definite article; ART: freestanding definite article. Definite noun phrases that are of secondary interest in a given example will simply be glossed as ‘N.the’, rather than ‘N-DEF’.

The article is organized as follows: In the next section, a characterization of strong and weak inflection in modern Icelandic is given. It will also emerge that there are actually three weak patterns. Furthermore, I will compare the exponents of adjectival inflection in Icelandic and Mainland Scandinavian. In Sect. 3, I will flesh out the proposal and argue that weak inflection occurs if the respective adjective is c-commanded by a definiteness feature in D (= is merged inside the definiteness domain). The morphological contrast in cases like (1a) vs. (1b) will provide us with a litmus test leading to the conclusion that strongly inflected modifiers in definite noun phrases are merged outside the definiteness domain (DP), but still inside the same extended nominal projection (KP). The morphological contrast (1a) vs. (1b) will thus turn out to be merely a reflex of a structural difference. This analysis raises a number of expectations and makes some semantic predictions based on the reasoning that modifiers that are merged inside the definiteness domain modify NP denotations of type $\langle e, t \rangle$, whereas modifiers that are merged outside the definiteness domain combine with DPs (of type e). Sections 4–6 address those predictions, and examine four different instantiations of the strong pattern: appositives, expressives, positional predicates and little partitives. Section 4 discusses adjectival appositives in some detail and points out a number of semantic properties. In Sect. 5, I sketch a semantic analysis of adjectival appositives and expressive modifiers as conventional implicatures in the sense of Potts (2005, 2007b). In Sect. 6, I discuss modifiers that express part-whole relations – positional predicates and little partitives. These three sections provide various different kinds of independent evidence in favor of the present proposal. In Sect. 7, I address some technical issues regarding the implementation of concord. Section 8 summarizes the results of the discussion.

2 Basic Data

The distinction between *strong* and *weak* adjectival inflection is common Germanic heritage.³ Typically, these two inflections are associated with (in)definiteness. However, although reference to definiteness will play a crucial role in the discussion to come, a categorical correlation *weak* \leftrightarrow *definite* and *strong* \leftrightarrow *indefinite* is too simplistic. Moreover, the generalizations regarding the distribution of adjectival inflection across the modern Germanic languages are not uniform.

In the (standard varieties of the) modern Scandinavian languages, weakly inflected adjectives occur with definite determiners or in vocative contexts, while strongly inflected adjectives occur in indefinite noun phrases and in predicative contexts. Thus there is indeed a sense in which definiteness and weak inflection correlate. Nonetheless, while weak inflection may be construed as some kind of definiteness marking on the adjectives, it is far less plausible to construe strong adjectives as indefinite in any obvious sense. This is particularly clear in the case of predicative adjectives that are not specified for either definiteness or indefiniteness; notably, they are strongly inflected regardless of whether their subject is definite or indefinite.

A rather different picture is presented by modern German. First of all, only adnominal adjectives – but not predicative adjectives – are inflected (the same is true

³ This distinction has been lost in some modern Germanic languages, notably, in English.

for Dutch). Moreover, in adnominal position, the strong-weak distinction in German follows different regularities, for it is not definiteness, but the overt morphological properties of a determiner that determine the inflection of a following adjective. Thus there are substantial differences between German and Scandinavian regarding the distribution of adjectival inflection.⁴

In the remainder of this article, I will disregard German and focus on Icelandic with a brief glimpse at Mainland Scandinavian in Sect. 2.3.

2.1 Distribution of Adjectival Inflection in Modern Icelandic

The strong inflection may be regarded as the default in the sense that it has a wider distribution than the weak inflection. More specifically, strongly inflected adjectives occur in all kinds of predicative contexts, and adnominally in indefinite noun phrases:

- (3) a. PRIMARY (COPULAR) PREDICATION
- i. **Menn eru dauðleg-ir.**
men/humans.NOM are mortal-STR.NOM.PL.MASC
 ‘Humans are mortal.’
- ii. **Strákurinn er ung-ur.**
boy.the.NOM is young-STR.NOM.SG.MASC
 ‘The boy is young.’
- b. SECONDARY (DEPICTIVE/RESULTATIVE) PREDICATION
- i. **Strákurinn kom blindfull-ur heim.** (Rögnavaldsson 1984, 61)
boy.the.NOM came blind-drunk-STR.NOM home
 ‘The boy came home blind drunk.’
- ii. **Sveinn hellti strákin blindfull-an.** (Rögnavaldsson 1984, 75)
Sveinn made boy.the.ACC blind-drunk-STR.ACC
 ‘Sveinn made the boy blind drunk.’
- c. INDEFINITE NOUN PHRASES
- i. **gul-ur bíll**
yellow-STR car
 ‘(a) yellow car’⁵
- ii. (nokkrir/fimm) **gul-ir** bílar
some/five yellow-STR cars

The weak inflection, on the other hand, has a very restricted distribution: weakly inflected adjectives only occur *adnominally* in *definite noun phrases*, notably, when following a definite determiner or possessor:

- (4) a. Þessir **gul-u** bílar
these yellow-WK cars
- b. hinn **fræg-i** leikari
ART famous-WK actor
- c. sá **stór-i** maður
that big-WK man
- d. mín **gaml-i** vinnufélagi
my old-WK workmate

⁴ For further discussion and analysis of the German data, the reader is referred to Gallmann (1998); Sternefeld (2006:705-712); Roehrs (2009). Roehrs and Julien (2014) also come to the conclusion that adjectival inflection in German and Scandinavian work differently. See Leu (2008); Schoorlemmer (2009) for attempts at providing a unified analysis.

⁵ NB: Icelandic has no (overt) indefinite article.

Given these distributional properties, we expect the weak inflection to be banned from predicate positions and indefinite contexts, and the strong inflection from definite contexts, which is essentially what we find:⁶

- (5) a. *strákurinn er **ung-i**
boy.the is young-WK
 b. ***gul-i** bíll
yellow-WK car
 c. *þessir **gul-ir** bílar
these yellow-STR cars
 d. *minn **gamal-I** vinnufélagi
my old-STR workmate

As mentioned above, this description broadly captures the distribution of adjectival inflection in Scandinavian at large. However, Mainland Scandinavian does not have a pattern comparable to (1b) with a strongly inflected adjective preceding a definite noun. More critically, the characterization given above does not, as it stands, capture the contrast in (1). In order to properly assess this issue, I will first address the varieties of adjectival modification in definite noun phrases.

2.2 The Four Patterns

In definite Icelandic noun phrases involving the elements {ARTICLE, ADJECTIVE, NOUN}, we find four different surface patterns (cf. Pfaff 2014, 2015):

- (6) a. **A-WK N-DEF** (I)
 gul-i bíll-inn
yellow-WK car-DEF
 ‘the yellow car’
 b. **ART A-WK N** (II)
 hinn fræg-i leikari
ART famous-WK actor
 ‘the famous actor’
 c. **N-DEF A-WK** (III)
 heimspekingur-inn mikl-i
philosopher-DEF great-WK
 ‘the great philosopher’
 d. **A-STR N-DEF** (IV)
 full-ur strákur-inn
drunk-STR boy-DEF
 ‘the drunk boy’

⁶ As for (5b), note that A-WK N is not ungrammatical per se, for there are two contexts where we find this constellation, in vocatives and in the context of names:

- (i) a. **kær-i** vinur
dear-WK friend
 b. **Gaml-i** garður
old-WK garden
 ~ a students’ dormitory in Reykjavík

One way or another, however, such contexts are more properly characterized as definite rather than indefinite despite their lacking an overt determiner. I will not discuss examples of this kind here.

Based on the existence of the rarely noticed and largely ignored pattern (III),⁷ Pfaff (2007, 2009, 2014, 2015) develops a novel argument in favor of a one-article analysis (as first proposed by Magnússon 1984, and recast in accordance with the DP-analysis by Sigurðsson 1993), which maintains that the suffixed article DEF and the freestanding article ART are two surface manifestations of one and the same underlying element. The gist of this analysis is this (simplified): ‘the’ article element is merged in a high position above adjectives (D^0). If no movement takes place, the noun phrase surfaces as pattern (II) and the article as ART. Alternatively, movement takes place with the moved constituent ending up in the specifier position of the article projection as a result of which the article cliticizes to the noun and surfaces as DEF. Two cases can be distinguished: either movement targets a constituent containing the noun, but not the adjective, or the moved constituent contains both adjective and noun.⁸ In the former case, the adjective gets stranded in postnominal position and the noun phrase surfaces as pattern (III); in the latter case, the noun phrase surfaces as pattern (I):

- (7) a. $[DP \text{ article } [AP [NP]]] \rightarrow [DP \text{ ART } [AP [NP]]]$ (II)
 b. $[DP \text{ article } [AP [NP]]] \rightarrow [DP \text{ NP-DEF } [AP [+NP]]]$ (III)
 c. $[DP \text{ article } [AP [NP]]] \rightarrow [DP [AP [NP]]-DEF [+AP [+NP]]]$ (I)

I will adopt this analysis without further justification (for a more thorough discussion see the above references). We observe that what patterns (I)-(III) have in common is the weak inflection on the adjective. Note that, given (7), the adjective involved in these weak patterns is c-commanded by the article upon first Merge, i.e., prior to movement.⁹ In this light, we can formulate the generalization for the distribution of weakly inflected adjectives more precisely along the following lines:

- (8) An adjective is weakly inflected iff
 its base position is c-commanded by a definiteness morpheme (\sim a definite determiner) in D^0 .

However, given (7) and (8), we only have solved half of the problem posed by the contrast in (1), repeated below:

- (9) a. gul-i bíll-inn (I)
 yellow-WK car-DEF
 b. gul-ur bíll-inn (IV)
 yellow-STR car-DEF

In particular, the analysis in (7) leaves the well-formed occurrence of the strong inflection on the adjective in the b-example unaccounted for. For if pattern (IV) had the same derivational history as pattern (I), the generalization in (8) would be directly

⁷ Henceforth, I will follow the convention established in Pfaff (2014, 2015) and refer to these various patterns by the Roman numbers given in (6). The contrast in (1) thus becomes a contrast between patterns (I) and (IV).

⁸ In the absence of an adjective, *article* N simply results in N-DEF.

⁹ See Harðarson (2016); Ingason (2016) for two recent proposals where article suffixation is not the result of phrasal movement, but of head movement (or rather, postsyntactic head lowering). While these analyses do provide an interesting alternative to the derivation of the weak patterns, they are compatible with the larger point to be made in this article, viz. that the respective adjectives are c-commanded by the article in their first-Merge position and that DP constitutes a definiteness domain inside of which adjectives must be weakly inflected.

contradicted. I will nonetheless show in the next section that the approach sketched above can be defended. But before concluding this section, we shall have a closer look at the exponents of adjectival inflection.

2.3 Adjectival Inflections and the Elsewhere Principle

Strong and weak inflection, respectively, are sets of concord markers for the values *Case*, *Number*, and *Gender*, where the weak inflection makes fewer overt distinctions than the strong one. A schematic overview of the paradigms is given in table 1.¹⁰

Table 1 *Strong and weak adjectival inflection in Icelandic*

	STRONG			WEAK		
	MASC	FEM	NEUT	MASC	FEM	NEUT
NOM.SG	-(u)r	-Ø (")	-t	-i	-a	-a
ACC.SG	-an	-a	-t	-a	-u (")	-a
DAT.SG	-um (")	-ri	-u (")	-a	-u (")	-a
GEN.SG	-s	-rar	-s	-a	-u (")	-a
NOM.PL	-ir	-ar	-Ø (")	-u (")	-u (")	-u (")
ACC.PL	-a	-ar	-Ø (")	-u (")	-u (")	-u (")
DAT.PL	-um (")	-um (")	-um (")	-u (")	-u (")	-u (")
GEN.PL	-ra	-ra	-ra	-u (")	-u (")	-u (")

The weak endings are phonologically simple: they only comprise a simple V, whereas strong endings are more varied in that respect: we find V, C, VC, CV, CVC, and Ø. Moreover, the weak inflection employs only three endings to express 24 case/ ϕ values; it does not, for instance, make any distinction in the plural at all. The strong inflection, on the other hand, even though it also displays some systematic syncretisms,¹¹ has 13 distinct exponents.

Nonetheless, it can be argued that even that the weak inflection marks a number of broad case, number, or gender contrasts:

- (10) a. NOM.SG.MASC vs. -NOM.SG.MASC: -i vs. -a
 b. NOM.SG.FEM vs. -NOM.SG.FEM: -a vs. -u
 c. NOM.SG.MASC vs. NOM.PL.MASC: -i vs. -u

¹⁰ '(')' indicates that, in this environment, u-umlaut occurs. U-umlaut refers to the phenomenon of an underlying /a/ turning into [œ], spelled <ö>, if it occurs in an initial, stressed syllable, and into [Y], written <u>, if it occurs in a non-initial, unstressed syllable. The label is due to the fact that this process is triggered by an /Y/ (<u>) in the following syllable, see the endings -u and -um. There are also environments where u-umlaut takes place although the original trigger is no longer visible synchronically, and the adjective appears to have a zero ending, see STR.NOM.SG.FEM and STR.NOM./ACC.PL.NEUT. Note that the strong NOM.SG.MASC ending does not trigger u-umlaut. It is usually assumed that the [Y] in the ending -ur is merely epenthetic and not present underlyingly, see for instance Anderson (1969); Orešnik (1972). Hence in the following, I will take -r to be the relevant exponent.

¹¹ Genitive and dative plural make no gender distinction; neuter does not distinguish nominative and accusative; feminine does not distinguish nominative and accusative in the plural. Moreover, NOM.SG.FEM and NOM./ACC.PL.NEUT are always identical, and so are ACC.PL.MASC and ACC.SG.FEM, and GEN.SG.MASC./NEUT. Apart from that, six forms are unambiguous: -r, -an, -ir, -ri, -rar, -u.

d. -NOM.SG.MASC vs. -NOM.PL.MASC:	-a vs. -u
e. NOM.SG.FEM vs. NOM.PL.FEM:	-a vs. -u
f. SG.NEUT vs. PL.NEUT:	-a vs. -u
g. NOM.SG.MASC vs. NOM.SG.-MASC:	-i vs. -a
h. -NOM.SG.FEM vs. -NOM.SG.-FEM:	-u vs. -a

Although two of the weak endings, *-a* and *-u*, also occur in the strong paradigm, it is never the case that an ending for a given case/ ϕ -value is ambiguous between strong and weak.¹² The weak ending *-i* unambiguously marks nominative singular masculine, and is thus more specified than many a strong ending.

This is rather different from adjectival agreement in Mainland Scandinavian, as Table 2 shows.¹³

Table 2 *Strong and weak adjectival inflection in Mainland Scandinavian*

	STRONG		WEAK	
	SG	PL	SG	PL
COMMON	-Ø	-e/-a	-e/-a	-e/-a
NEUTER	-t	-e/-a	-e/-a	-e/-a

Here, the traditional labels *strong* and *weak* fail to capture the generalization that the ending *-e* (or *-a* in Swedish) represents some kind of default concord marker subsuming the weak paradigm plus 50% of the strong paradigm. This can be neatly captured by a *Distributed Morphology* (Halle and Marantz 1993) approach to lexical insertion that makes use of underspecified Vocabulary Items (VIs). VIs need not be fully specified; according to the *Subset Principle* (Halle 1997), they can instead be inserted into a terminal node if they are specified for a subset of the features that are bundled on that node. More than one VI can be compatible with a given feature bundle on a terminal node; by the *Elsewhere Principle* (Kiparsky 1973), the more specific VI wins the competition for insertion over the less specified VI, which is inserted in those environments for which there is no more specified VI available.

Indeed, several analyses employ this approach to capture the distribution of *-e* (*-a*) as the least specified VI in Mainland Scandinavian (e.g., Julien 2005; Norris et al. 2013). However, this does not work in Icelandic. Firstly, due to higher number of exponents, we need more lexical entries that compete for insertion to begin with. While it may be conceivable to construe *-u* as some kind of default concord marker, that exponent has a far more narrow distribution than the Scandinavian *-e/-a*, namely only within the weak paradigm (see Tables 1 and 2). So the strong-weak distinction in Icelandic cannot be as easily eliminated as in Mainland Scandinavian. Secondly, upon closer inspection, it turns out that, even though the exponents in the weak paradigm

¹² This is different from both Mainland Scandinavian (see below) and German where we do find syncretism across the strong/weak divide.

¹³ Note that Danish and Swedish no longer distinguish masculine and feminine gender, but instead have a common gender. Note further that, even though most Norwegian dialects distinguish between masculine and feminine as such, this distinction is never marked on the adjective (with one exception: *liten* vs. *lita* ‘little’). Thus for the sake of exposition, I collapsed masculine and feminine to common gender in Table 2.

are morpho-phonologically impoverished, the weak inflection as a whole cannot be said to be underspecified. To see this, consider the two VIs *-r* and *-i*:

- (11) a. [NOM.SG.MASC] ↔ *-r/* b. [NOM.SG.MASC] ↔ *-i/*

Since both endings uniquely and unambiguously determine a cell in the paradigm, they must be maximally specified with respect to case/ ϕ -values. However, since both have identical values, they are equally suited for insertion in the same environment. In order to ensure that they are inserted appropriately, at least one of them must be specified for yet another value, and by the subset principle, the respective environment must also be specified for the corresponding feature. There are two obvious candidates, [STRONG] or [WEAK]:

- (12) a. [STR.NOM.SG.MASC] ↔ *-r/* OR: b. [WK.NOM.SG.MASC] ↔ *-i/*

As for (12a), a feature like [STRONG] faces the problem that it should express a commonality of those contexts in which adjectives occur strongly inflected: (i) adnominally in indefinite noun phrases, (ii) in pattern (IV) noun phrases, and (iii) predicatively. In the absence of such a commonality, it is not clear how that feature could be licensed, or what purpose it would fulfill. Thus it seems best to dispense with it.

(12b), on the other hand, does not have those problems. The more specific context for insertion, resulting from the added feature [WEAK], correlates with the more restricted syntactic distribution of weak adjectives, viz. adnominally in definite contexts. Moreover, it is clear how this feature is licensed, namely by definiteness, which is contributed by a definiteness morpheme (article, demonstrative etc.).¹⁴

In other words, there are strong arguments both against a feature like [STRONG] and in favor of a feature like [WEAK]. It is worthwhile considering the consequences of this claim. We now see that the (environment for) weak inflection is more marked, and hence it is strongly misleading to regard weak inflection as a default concord marker.¹⁵ On the contrary, if we shift focus from exponents to syntactic distribution of adjectival inflection, we see that, actually, the weak inflection represents the special case, while the strong inflection is the default or Elsewhere case.

3 The Proposal

Recall that weak inflection only occurs in a specific environment: in adnominal position **AND** in the context of definiteness. This is captured by the analysis sketched in (7) in conjunction with generalization (8). Regardless of whether the definite determiner surfaces preminally or as a suffix, it c-commands the adjective in its (adnominal) base position, which is responsible for the latter inflecting weakly. Since the

¹⁴ A representation like (12b) might give the mistaken impression that [WEAK] is simply another concord feature on a par with case/ ϕ . In Sect. 7, however, I will show that the two must be treated differently.

¹⁵ This claim is specifically based on the Icelandic data, cf. (11)/(12). One reviewer points out that, by explicitly encoding [WEAK], we lose the possibility to account for the generalization that weak endings express fewer case, number and gender distinctions in *all* Germanic languages. Indeed, on the present account, this cross-Germanic aspect remains an open issue.

c-command domain of a determiner is noun phrase internal, we do not expect weak inflection to occur in predicative contexts.

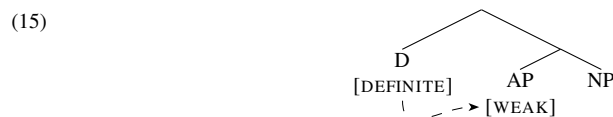
Strong inflection, on the other hand, does not occur in a uniformly definable context. Its distribution can be stated as follows:

- (13) **EITHER**
- a. in adnominal position
 - i. in indefinite noun phrases **OR**
 - ii. in certain definite noun phrases (= pattern (IV))
 - OR**
 - b. in predicative contexts.

Obviously, disjunctive conditions of this sort fail to state a useful generalization insofar as they do not convey a common denominator, i.e., a common property of all those various occurrences of strong inflection. Instead of trying to give a positive characterization of the strong inflection, I propose we characterize it in the negative, namely as indicating the absence of a restriction. This coincides with the conclusion from Sect. 2.3 that there is no feature [STRONG], but only [WEAK]. Assuming that definiteness is also featurally present in D^0 as the contribution of a definite determiner, we can re-formulate the distribution of adjectival inflection as follows:

- (14) a. An adjective occurs weakly inflected iff its base position is c-commanded by a definiteness morpheme
 → [WEAK] is triggered by c-commanding [DEFINITE]
- b. Strong inflection occurs iff weak inflection is not triggered (*Elsewhere Principle*)
 → strong inflection is the default inflection
 → there is no feature [STRONG]

With this in place, we can represent (14a) schematically as follows:¹⁶



The basic idea conveyed by (15) is that weak inflection—rather than expressing definiteness by itself—is a semantically vacuous reflection of definiteness marked elsewhere. In other words, weak inflection may be conceived of as indicating agreement with a definiteness feature (Kester 1993; Vangsnes 1999b; Julien 2005).

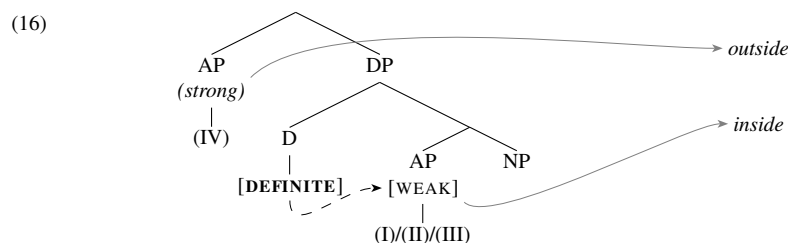
At first glance, (14) does not seem to convey anything beyond what is already captured by traditional descriptions. The two statements are sufficient to account for the relevant examples in Sect. 2.1, (3)–(5) and (6a–c): If the adjective is c-commanded by [DEFINITE], it is weakly inflected. Vice versa, if [DEFINITE] is not present to begin with, which is trivially the case in indefinite noun phrases, or its presence/absence is irrelevant, as in predicative contexts, the adjective shows up strongly inflected.

Where (14) makes a rather strong prediction not covered by traditional approaches is when it comes to pattern (IV) noun phrases. Since pattern (IV) does involve a definite DP as indicated by the suffixed definite article, [DEFINITE] must be assumed

¹⁶ The dashed arrow indicates the dependency of the weak inflection's occurrence on the presence of c-commanding [DEFINITE]. I will address some technicalities of this dependency in Sect. 7.

to be present in D^0 . Moreover, the adjective in pattern (IV) is strongly inflected. Therefore—if (14) is on the right track—the adjective cannot be c-commanded by [DEFINITE]. The only conclusion compatible with (14) is that it is *not* merged *inside* the c-command domain of [DEFINITE] to begin with, but *outside* of it, which means outside DP. On this assumption, the adjective is never c-commanded by [DEFINITE] at any stage of the derivation, thus the weak inflection is never triggered and the default strong inflection occurs.

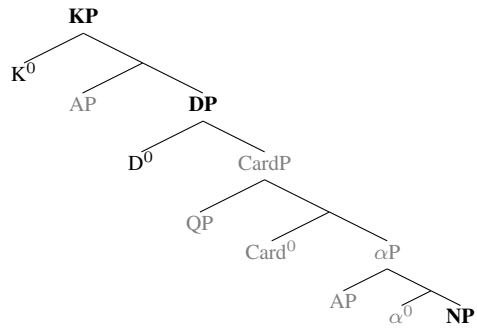
In other words, strong inflection occurs iff the respective modifier is not c-commanded by [DEFINITE]. Not being c-commanded by [DEFINITE] can mean two things: (i) [DEFINITE] is absent altogether, or (ii) the modifier is merged above/outside the c-command domain of [DEFINITE]. With definite noun phrases, adjectival inflection can thus be taken to reflect the structural location of the modifier, inside or outside the DP/definiteness domain. Schematically, this can be represented as follows:¹⁷



Note that I am not suggesting that pattern (IV) modifiers are outside the extended nominal projection altogether, but rather merged in the nominal left periphery. I assume, in particular, that there is a KP projection on top of DP (see, amongst others, Travis and Lamontagne 1992; Vangsnes 1999a,b, 2004; Svenonius 2006, 2010; Norris 2012; Adger 2013). For, while pattern (IV) modifiers are merged outside the definiteness domain, they are still in the same Case/agreement domain (see Sections 6.2 and 7). Likewise, this assumption captures the fact that pattern (IV) itself has the distribution of noun phrases. Other than that, for the purpose of this article, I will assume a relatively simple extended noun phrase structure ignoring aspects that are not pertinent to the present discussion. On top of NP, there is a (possibly recursive) functional projection α P hosting adjectives in its specifier, and on top of that a CardP hosting numerals or cardinal quantifiers in its specifier position (for both α P and CardP see Julien 2002, 2005). In short, I will assume the following noun phrase structure:

¹⁷ In Sect. 2.3 and in (14), I argue that there is no feature [STRONG] in a technical sense. Thus I will use the label “(strong)” merely to indicate occurrence of strong inflection.

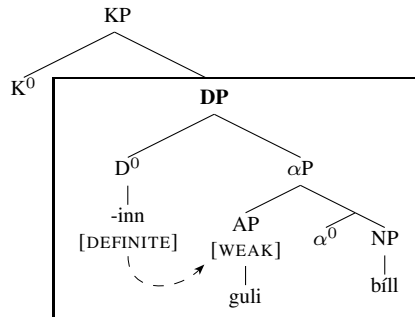
(17)



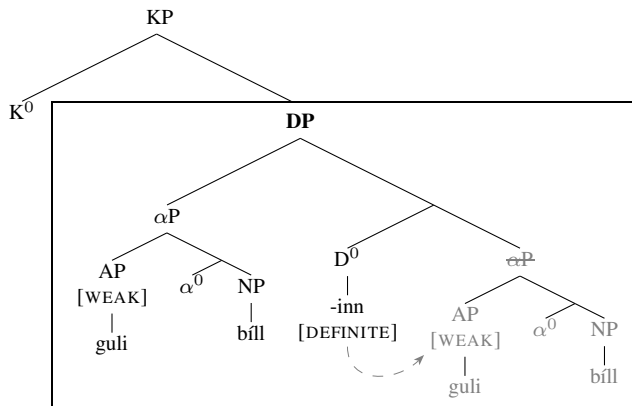
With all this in place, we see that the superficially similar patterns (I) and (IV) in (9) actually have rather different structural representations. In order to highlight the contrast, the definiteness domain (= DP) is represented as a boxed constituent:

(18) a. Pattern (I): adjective is merged *inside* the definiteness domain

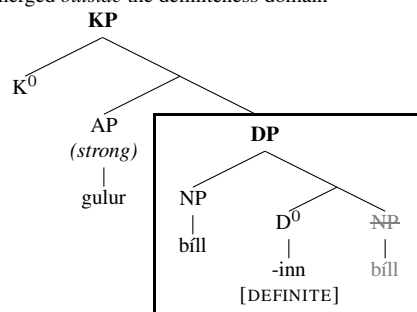
i.



ii.



- b. Pattern (IV): adjective is merged *outside* the definiteness domain



(18a-i) shows the input constellation for pattern (I): the adjective is merged *inside* DP such that [DEFINITE] c-commands the adjective and triggers the weak inflection. Next, α P moves to Spec-DP yielding the surface constellation of pattern (I) (18a-ii). (18b) shows a pattern (IV) noun phrase; differently from (18a-i), the adjective is merged *outside* DP, i.e., outside the c-command domain of [DEFINITE], and weak inflection is never triggered. On this account, the morphological contrast *weak* vs. *strong* inflection is not the primary difference between patterns (I) and (IV). The actual difference is the respective adjective's merge position, and its inflection is a consequence of that structural difference.

This analysis is motivated by morpho-syntactic considerations, but it has further ramifications and raises certain expectations. First of all, note that the distinction *outside* vs. *inside* allows us to distinguish between *DP-external* modifiers as in (18b) and *DP-internal* modifiers as in (18a). Given standard assumptions, NP is a set-denoting expression of type $\langle e, t \rangle$, while DP being the locus of reference denotes referential expressions of type e . This means that DP-internal modifiers combine with expressions of type $\langle e, t \rangle$, while DP-external modifiers combine with expressions of type e . Thus we predict, amongst other things, (i-a) that DP-internal modifiers contribute descriptive content that is referentially relevant, while (i-b) DP-external modifiers only provide additional information about an already established referent. Moreover, if DP-external modifiers truly are DP-external, we expect the possibility (ii) to find cases where a DP-external modifier visibly precedes a pronominal determiner.

In the following three sections, I will produce more data and show that these expectations are borne out. Taking pattern (IV) as a point of departure, it will emerge that DP-external modifiers do not constitute a homogenous group, yet they all corroborate what has been established in this section in their own way.

4 Appositive Adjectives

As was mentioned in the introduction, noun phrases of the type I refer to as pattern (IV) have been discussed in the literature, and it is frequently maintained that the adjective involved has a non-restrictive reading. In the Icelandic linguistic literature, on the other hand, this type of adjective is traditionally classified as adjectival appositive (*lýsingarorðsviðurlag*; see especially Rögnvaldsson 1984), and I will henceforth refer to the respective strongly inflected adjective as *pattern (IV) appositive*.

In this section, I will provide some novel data and discuss a number of properties of pattern (IV) appositives. It will emerge that, terminology aside, they have more to offer than a failure to be restrictive.

4.1 Predicativity

Pattern (IV) appositives necessarily have a predicative reading and may be paraphrased by some clause where the adjective occurs as the syntactic predicate:

- (19) a. Ég horfði upp í **blá-an himin-inn**. (Thráinsson 2007: 3)
I looked up in blue-STR sky-DEF
 ‘I looked up into the sky, which happened to be blue (at that moment).’
- b. **Blindfull-ur strákur-inn** kom heim. (Rögnvaldsson 1984: 61)
blind-drunk-STR boy-DEF came home
 ‘The boy came home and he was blind-drunk (when he came home).’
- c. **Æst-ur skríll-inn** ruddist inn í húsið.
enraged-STR mob-DEF jostled in into house.the
 ‘The mob, who were in a rage, stormed the house.’
- d. Hann kastaði bókinni út um **opin-n glugga-nn**.
He threw book.the out about open-STR window-DEF
 ‘He threw the book out through the window, which happened to be open.’
- e. Hann rann á **hál-u gólfu-nu**.
he skidded on slippery-STR floor-DEF
 ‘He skidded (and fell) on the floor, which, by the way, was slippery.’

Inherently non-predicative and non-subjective adjectives including thematic nationality adjectives, on the other hand, are bad, and some weak pattern is used instead:

- (20) a. *fransk-ur forseti-nn
French-STR president-DEF
- b. *meint-ur þjófur-inn
alleged-STR thief-DEF
- c. *svokölluð afstæðiskenning-in
so-called-STR theory.of.relativity-DEF
- (21) a. fransk-i forseti-nn (I)
French-WK president-DEF
 ~ ‘the president of France’
- b. hinn meint-i þjófur (II)
 ART *alleged-WK thief*
- c. afstæðiskenning-in svokallað-a (III)
theory.of.relativity-DEF so-called-WK

Thus predicativity is a constitutive property of pattern (IV) appositives. Presumably for this reason, they cannot have an idiomatic, non-predictable meaning, they cannot be part of a name-like expression, and they cannot be part of a complex (A + N) abstract concept – again, in those cases, some weak pattern is used:

- | | | | |
|------|--|------|---|
| (22) | a. #svart beltí-ð
<i>black.STR belt-DEF</i>
b. #kalt stríð-ið
<i>cold.STR war-DEF</i>
c. #græn eyja-n
<i>green.STR island-DEF</i>
d. #fullkomin-n glæpur-inn
<i>perfect-STR crime-DEF</i> | (23) | a. svart-a beltí-ð
<i>black-WK belt-DEF</i>
b. kald-a stríð-ið
<i>cold-WK war-DEF</i>
c. eyja-n græn-a
<i>island-DEF green-WK (~ Ireland)</i>
d. hinn fullkomin-i glæpur
<i>ART perfect-WK crime</i> |
|------|--|------|---|

So for instance (22a) as opposed to (23a) cannot make reference to a degree in martial arts. More generally, examples like (22) can, in principle (i.e., pragmatics permitting), make reference to certain known objects that happen to be black (cold, green, perfect), but the adjective always has a transparently compositional meaning and denotes a property that is predicated of the respective object.

4.2 Adverbiality and Freedom from Attitude

When taking a closer look at pattern (IV) appositives, we discern a certain adverbial connotation, for they appear to describe *circumstantial aspects* of a referent. That is, they highlight a property of a referent in a certain situation (irrespective of whether it also holds at other moments or not). Evidence for this characterization can be drawn from the fact that they can often be paraphrased by various kinds of adverbial clauses:^{18,19}

- (24) a. **Ósýnileg-ar stjörnur-nar** vörpuðu svolitlu ljósi aftan á skýin.
invisible-STR stars-DEF cast some light from-behind on clouds.the
 ‘The stars – *even though* they were invisible at that moment / *even though* we couldn’t see them – cast some light on the clouds from behind.’
- b. Setja skal smokkinn á **stíf-an lim-inn**.
put shall condom.the on stiff-STR penis-DEF
 ‘Put the condom on the penis *while/when* it is hard.’
- c. **Rauð-ur bíll-inn** sást vel á **dökk-u slitlagi-nu**.
red-STR car-DEF was-seen well on dark-STR paving-DEF
 ‘*Because* it was red, the car could be seen well on the paving, which was dark.’
- d. Hann rann á **hál-u gólfi-nu** / á **hál-um ís-num**.
he skidded on slippery-STR floor-DEF / on slippery-STR ice-DEF
 ‘He skidded (and fell) on the floor/ice *because* it was slippery.’

This is not to say that adverbiality is directly encoded in pattern (IV) appositives; the additional piece of information they supply really is the speaker’s comment about the referent. (24a), for instance, could just as well be paraphrased like this:

- (25) Assertion: The stars cast some light on the clouds from behind
 Comment: by the way, they were not visible

¹⁸ More generally, then, pattern (IV) appositives can always be paraphrased by some clause, either by an appositive relative clause or a conjunct clause as in (19), or by an adverbial clause as in (24).

¹⁹ Thanks to Höskuldur Thráinsson (p.c.) for (24a); (24b) is taken from a somewhat redundant instruction leaflet; (24c) is taken from Thráinsson (2001). To my knowledge, this adverbial connotation has not been noticed before.

Note the “by the way” phrase, which is a standard diagnostic for appositives and which signals that the information associated with it is a comment. Speaker dependence can be further illustrated in cases where the relevant noun phrase is embedded under an attitude operator such as the verb ‘believe’:

- (26) Jón hélt að hann gæti dansað á **hál-u** **gólfi-nu**
Jón believed that he could dance on slippery-STR floor-DEF
 ‘Jón believed that he could dance on the floor, which happened to be slippery.’

Example (26) is fine in a range of contexts where Jón may have known/believed certain things or not. In particular, even if he did not even know (and hence not believe) that the floor was slippery, (26) is felicitous precisely because the information conveyed by the adjective here is not part of the reported belief. It is a comment by the speaker. In other words, pattern (IV) appositives may convey information about facts unbeknownst to the attitude holder.²⁰

4.3 Discourse Anaphoricity

Next, consider the different behaviour of patterns (I) and (IV) in three slightly differing scenarios. Suppose the speaker is describing the events at a party:

- (27) [CONTEXT A: ... one of the guests, some **boy** I didn’t know, was really annoying ... I was talking to a friend when ...]
- a. ... **#full-i** **strákur-inn** réðst á mig (I)
 ... *drunk-WK boy-DEF attacked me*
- b. ... **full-ur** **strákur-inn** réðst á mig (IV)
 ... *drunk-STR boy-DEF attacked me*
- (28) [CONTEXT B: ... one of the guests, some **drunk boy** I didn’t know, was really annoying ... I was talking to a friend when ...]
- a. ... **full-i** **strákur-inn** réðst á mig (I)
 ... *drunk-WK boy-DEF attacked me*
- b. ... **full-ur** **strákur-inn** réðst á mig (IV)
 ... *drunk-STR boy-DEF attacked me*

²⁰ Conversely, if we look at the behavior of a weakly inflected adjective in the corresponding pattern (I) noun phrase in the same context, the picture is less clear:

- (i) Jón hélt að hann gæti dansað á **hál-a** **gólfi-nu**
Jón believed that he could dance on slippery-WK floor-DEF

According to at least five native speakers, with whom I have carefully discussed these examples, (i) is infelicitous (or at least deviant) if Jón did not even know that the floor was slippery; it is fine only if his explicit belief is “I can dance on the *slippery* floor”. The conclusion seems to be that the information conveyed by the embedded weakly inflected adjective must be a part of the reported attitude. It must be noted, however, that some speakers, including one of the reviewers, do not (fully) agree with this assessment.

Nonetheless, most speakers agree that there is some subtle difference between patterns (I) and (IV) in this context to the extent that the weakly inflected adjective somehow contributes a more objective piece of information. Clearly, a more thorough investigation is called for in order to determine how to precisely state the regularities.

The pattern (I) version in (27a) is infelicitous, or, at least, deviant because it tries to identify a *drunk boy*, but the discourse domain only contains a *boy*. The pattern (IV) version in (27b), on the other hand, is basically fine. It does not identify a referent as *drunk boy*, but makes reference to a certain *boy*: “the boy attacked me”, and comments on a circumstantial aspect: “by the way, he was drunk (when he attacked me)”. If the discourse domain does contain a salient referent that has been introduced as *drunk boy*, as in (28), both patterns (I) and (IV) are fine, but they still display the subtle difference *identification of a referent vs. comment on circumstances*.

In both scenarios, the eventualities BE-DRUNK and ATTACK-THE-SPEAKER temporally overlap or coincide. But now see what happens when the boy’s being drunk and his attacking the speaker are presented as occurring at distinct times:

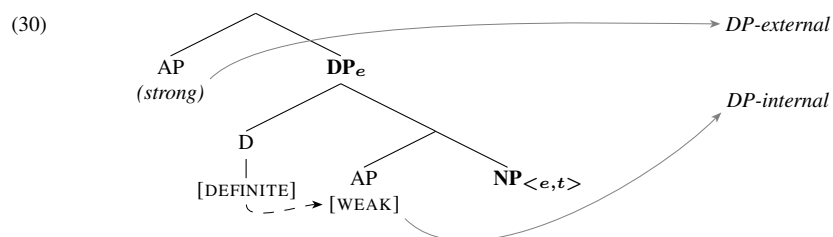
- (29) [continuation of CONTEXT B: ... two days later I went back there. I had hardly entered the house when ...]
- a. ... **full-i** **strákur-inn** réðst aftur á mig (I)
 ... *drunk-WK boy-DEF* *attacked again me*
- b. ... **#full-ur** **strákur-inn** réðst aftur á mig (IV)
 ... *drunk-STR boy-DEF* *attacked again me*
- (... þótt hann væri allsgáður *núna*)
 (... although he was sober *now*)

In this scenario, the boy is not (i.e., no longer) drunk when he attacks the speaker. The pattern (I) noun phrase is felicitous here, so its felicity is not affected by the fact that the situation reported does not contain a drunk boy. This is so because the larger discourse domain does contain an individual introduced as *drunk boy*. Since the pattern (I) version can be used to refer to an individual in the discourse domain that is identifiable by the interlocutors through the descriptive content of the noun phrase, the weakly inflected adjective must be assumed to contribute to identifying the unique (salient) referent that fits the description *drunk boy*. In other words, the weak adjective adds descriptive content to the noun phrase that is referentially relevant and can be used discourse anaphorically.

Pattern (IV), on the other hand, is bad in this context because it suggests simultaneity with the matrix event/the sentence topic time (the boy attacks the speaker while he is drunk). This presumably results from the adjective’s expressing a speaker’s comment on a circumstantial aspect of the referent in the reported situation. Crucially, the adjective does not contribute referentially relevant information that may contribute to identifying the referent. Reference is established independently of the contribution of the adjective. In other words, pattern (IV) appositives cannot be used discourse anaphorically.

4.4 Intermediate Summary

Below, I repeat a schematic structure of the analysis developed in Sect. 3 (with added semantic types for NP and DP):



Recall from that section that this analysis predicts that (i-a) DP-internal modifiers contribute descriptive content that is referentially relevant, while (i-b) DP-external modifiers only provide additional information about an already established referent. More explicitly, (i-a) means that weakly inflected adjectives modify the *noun phrase denotation* proper (via intersection or Functional Application), the output of which is yet another expression of type $\langle e,t \rangle$. This way they make a contentful contribution to the denotation of the nominal projection prior to referential closure at DP. Conversely, (i-b) means that information is added after referential closure, which is therefore not referentially relevant. Rather than modifying the noun phrase denotation, the strongly inflected DP-external modifier operates on a referential expression of type e .

The discussion so far overwhelmingly supports both parts of that prediction. For instance, weakly inflected adjectives contribute referentially relevant information in that they can be part of idiomatic or name-like expressions, or that they can be discourse anaphoric since they contribute to identifying the referent. Pattern (IV) appositives, on the other hand, do not contribute referentially relevant information: they cannot be part of a name-like expression; they provide a comment, that is, additional information, about a referent; and they cannot be discourse anaphoric. In short, the semantic aspects of DP-external and DP-internal modifiers examined here follow from (30) insofar as they combine with different entities, DP and NP, respectively.

4.5 Appositivity

The conclusion arrived at in the previous subsection already entails that this analysis automatically derives the often observed lack of a restrictive reading with pattern (IV) appositives, cf. (2), without any additional assumptions. For *not contributing referentially relevant information* and *not combining with a set-denoting expression* is tantamount to *not restricting the reference set*. As we have seen, combining with an expression of type e ($=$ DP), pattern (IV) appositives can only provide additional information about an independently established referent.

It is noteworthy that an analysis of adjectival modifiers along the lines of (30) strikingly resembles the analysis of relative clauses that has been standard for at least 40 years: Partee (1975:231) argues that restrictive relative clauses modify common nouns (\sim NP), whereas appositive relative clauses modify terms (\sim DP). The rationale behind this idea is essentially the same as here (see also Wiltschko 2011, 2012). To my knowledge, such an analysis has never been worked out in any detail for appositive adjectives; but the general idea has been suggested.

For instance, Sproat and Shih (1991:574/5) show that indirect modifiers²¹ in Mandarin Chinese may “occur either inside or outside specifiers”, where ‘specifier’, in current terminology, means ‘determiner/DP’. This *inside* vs. *outside* distinction is overtly marked: in the former case, the modifier follows the determiner, in the latter case, it precedes it. In addition, there is a semantic correlation: those modifiers occurring inside are restrictive, but the ones occurring outside are appositive (their examples (26a/a’) and (27a/a’)):

- | | | | |
|------|----|--|--|
| (31) | a. | zhèiběn [hóng -de] shū zài zhuōzi shàng
<i>this [red -DE] book at table on</i>
[this x book’(x) & red’(x)] is on the table | Mandarin Chinese

(<i>restrictive</i>) |
| | b. | [hóng -de] zhèiběn shū zài zhuōzi shàng
<i>[red -DE] this book at table on</i>
[this x book’(x)] _{j} is on the table & it _{j} is red |
(<i>appositive</i>) |

So *inside* vs. *outside* “specifiers” directly translates to *inside* vs. *outside* DP, and the same semantic contrast can be reproduced with patterns (I) vs. (IV):

- | | | | |
|------|----|--|-----------------------------------|
| (32) | a. | full-i strákur-inn
<i>drunk-WK boy-DEF</i>
[THE x boy’(x) & drunk’(x)] | (I)

(<i>restrictive</i>) |
| | b. | full-ur strákur-inn
<i>drunk-STR boy-DEF</i>
[THE x boy’(x)] _{k} & drunk’(he _{k}) | (IV)

(<i>appositive</i>) |

The parallelism between (31) and (32) can be regarded as independent evidence for the structures in (18) in that the former transparently display the *inside* vs. *outside* contrast, which is not visible on the surface for patterns (I) vs. (IV).²²

4.6 Absence of Restrictivity: *Appositive* \neq *Non-Restrictive*

At this juncture, I would like to draw attention to the fact that many authors characterize pattern (IV) appositives as ‘non-restrictive’, cf. (2). While pattern (IV) appositives most certainly are not restrictive under any useful definition, we should be careful not to equate *not restrictive* (the absence of restrictiveness for whatever reason) and *non-restrictive* (a specific property). The difference becomes clear if we have a look at a formal definition of the notions *restrictive* and *non-restrictive* modification (inspired by Piñón 2005; Alexiadou 2012):

- | | | | |
|------|----|--|--|
| (33) | a. | an adjective A restrictively modifies N in c iff
$[[\mathbf{A} \mathbf{N}]]^c \subset [[\mathbf{N}]]^c$ | (i.e., $\exists x: x \in [[\mathbf{N}]]^c$ & $x \notin [[\mathbf{A} \mathbf{N}]]^c$) |
| | b. | an adjective A nonrestrictively modifies N in c iff
$[[\mathbf{A} \mathbf{N}]]^c = [[\mathbf{N}]]^c$ | (i.e., $\forall x: x \in [[\mathbf{N}]]^c \leftrightarrow x \in [[\mathbf{A} \mathbf{N}]]^c$) |

²¹ ‘Indirect’ refers to the fact that these modifiers are not bare, but carry the suffix -DE.

²² This evidence is, however, somewhat relativized by the fact that appositive adjectives cannot precede demonstratives in Icelandic, see Sect. 6.3.

Even though we take these definitions merely as an approximation, they are sufficient for the present purpose. According to (33), both restrictive and non-restrictive modifiers are defined as operating on set-denoting nominal expressions, i.e., entities of type $\langle e, t \rangle$. Restrictive modifiers target a proper subset in the noun denotation, whereas if the modifier is non-restrictive, the set denoted by the A + N constituent is co-extensive with the set denoted by the noun alone.

According to the analysis developed here, the pre-conditions for (33) to apply either way are fulfilled by DP-internal weakly inflected adjectives, as illustrated in (30), for they do combine with a set-denoting expression. However, by the same token, pattern (IV) appositives can neither be classified as restrictive nor as non-restrictive in the sense of (33) because their ‘modifiee’ is not a set-denoting expression, but an individual. Therefore, I will reserve the term *non-restrictive* exclusively for cases that are captured by (33b). That is, *non-restrictive* modifiers are DP-internal modifiers that modify a set-denoting expression (= NP). *Appositive modifiers*, on the other hand, are DP-external modifiers combining with a referential expression (= DP).

In order to see that *appositive* and *non-restrictive* modifiers need to be kept apart, consider the following two contrastive scenarios:

- (34) a. The *big* elephant chased the *small* elephant.
 b. The *big* elephant chased the *small* mouse.

In (34a), the adjectives ‘big’ and ‘small’ are restrictive in the sense of (33):²³ the set of big elephants and the set of small elephants are both (presented as) proper subsets of the set of elephants. Moreover, the adjectives play an essential part in identifying the respective referents. On the most salient reading of (34b), on the other hand, the adjectives seem to merely provide additional information. Since I have used the characterization “provide additional information” for pattern (IV) appositives, it is now crucial to show that the modifiers ‘big’ and ‘small’ here really are *non-restrictive* in the sense of (33), but not *appositive*.

Recall that I characterized pattern (IV) appositives as providing additional information about a specific already identified referent. This is reflected in the way they can be paraphrased, as was shown in Sections 4.1 and 4.2, cf. (19), (24) and (25): appositive relative clauses or comment clauses introduced with “by the way”; adverbial clauses, indicating a circumstantial aspect; but also “happen to be”, which emphasizes that the appositive expresses an accidental or contextual property. If we were to paraphrase (34b) in this manner, we would get the following:

- (35) a. The elephant chased the mouse; *by the way*, the elephant was *big* and the mouse was *small*.
 b. The elephant, which *happened to be big*, chased the mouse, which *happened to be small*.
 c. *because/even though* the elephant was big ...

On the intended, most salient reading, none of these paraphrases are felicitous because the adjectives in (34b) do not express an accidental property of a specific elephant/mouse. Rather, they express a property that is presented as characteristic of

²³ Note that this is largely orthogonal to the question of whether these adjectives should be interpreted intersectively or subsectively, see Heim and Kratzer (1998:68-73). Nonetheless, we discern an interesting correlation: subsective \leftrightarrow restrictive in (34a), and intersective \leftrightarrow non-restrictive in (34b).

the class of elephants/mice: given some default size standard, elephants are generally big (animals) and mice are generally small (animals). In other words, (34b) implies that all elephants are big and all mice are small – or that the set of elephants is co-extensive with the set of big elephants, and the set of mice with the set of small mice. This is exactly what we expect on the definition of non-restrictiveness in (33b):

- (36) a. $\llbracket \text{big elephant} \rrbracket^c = \llbracket \text{elephant} \rrbracket^c \quad \forall x: x \in \llbracket \text{elephant} \rrbracket^c \leftrightarrow x \in \llbracket \text{big elephant} \rrbracket^c$
 b. $\llbracket \text{small mouse} \rrbracket^c = \llbracket \text{mouse} \rrbracket^c \quad \forall x: x \in \llbracket \text{mouse} \rrbracket^c \leftrightarrow x \in \llbracket \text{small mouse} \rrbracket^c$

Pattern (IV) is bad in cases like (34b) where the adjective expresses a characteristic property, precisely because pattern (IV) appositives present the property denoted by the adjective not as characteristic, but as a circumstantial comment. Instead some weak pattern must be used.²⁴

This brief excursus has shown that there is more than one way to fail to be restrictive, and that the notions *appositive* and *non-restrictive* should be kept apart. An actual analysis of non-restrictive modification is not attempted here; for a recent, rather insightful, critical review of the literature and discussion on the topic, I refer the reader to Leffel (2014:64-125). It is, however, worthwhile contemplating some aspects of appositive modification in more detail, which will be the topic of the next section.

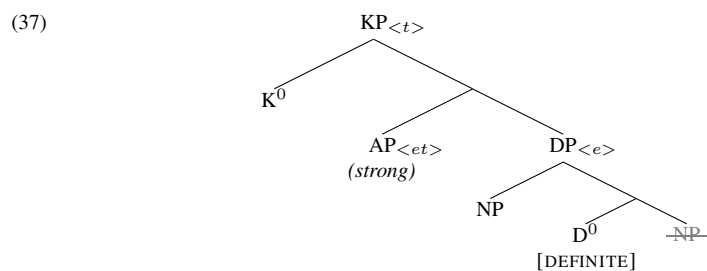
5 Conventional Implicatures and *Non-At-Issue Meaning*

We have established that pattern (IV) appositives are strictly predicative, see Sect. 4.1, suggesting they are simple predicates of type $\langle e,t \rangle$. However, since I have also argued that they modify DPs, i.e., expressions of type e , by the principles of Functional Application, we predict the overall extended nominal projection (= KP) to denote a truth value:

²⁴ Pattern (II) has often been noted in the literature to involve an adjective with a non-restrictive reading (e.g., Árnason 1983:92; Vangsnes 1999b:130, fn. 24; Thráinsson 2005:98, 2007:4/89; Roehrs 2006, 2009; Pfaff 2007, 2009, 2014).

Roehrs (2006, 2009) actually tries to establish a semantic similarity between patterns (II) and (IV) at LF, and argues that pattern (II) instantiates a syntactic construal of non-restrictiveness, hence the weak inflection, while pattern (IV) involves an extra-syntactic construal, which is meant to explain the strong inflection. Technical issues aside, it should be emphasized that the two patterns are semantically rather different. A pattern (II) adjective tends to express a characteristic or known property, while pattern (IV) appositives express a circumstantial aspect. Moreover, pattern (II) allows non-predicative modifiers, which are banned from pattern (IV), cf. (20b) vs. (21b) and (22d) vs. (23d).

A semantic characterization of the weak patterns is beyond the scope of this article. Suffice it to say that we do find among them instances of both restrictive and non-restrictive modification in the sense of (33), which is in accordance with the analysis developed here: weak patterns involve (DP-internal) NP modifiers. In this, they differ from DP-external pattern (IV) appositives; see Pfaff (2015) for a more detailed discussion.



This is clearly wrong and an undesirable consequence. In the following, I will explore an approach that avoids this problem.

5.1 Potts' Analysis of Conventional Implicatures

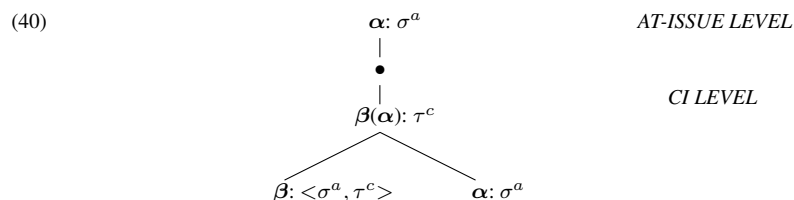
Potts (2005, 2007b) takes “a fresh look at an old definition”, and shows that *Conventional Implicatures* (CIs) instantiate a ubiquitous aspect of natural language. Their most central features are the following (cf. Potts 2005:11):

- (38)
- CIs are part of the conventional (lexical) meaning of words.
 - CIs are commitments, and thus give rise to entailments.
 - These commitments are made by *the speaker of the utterance* “by virtue of the meaning of” the words he chooses.
 - CIs are logically and compositionally independent of what is “said (in the favored sense)”, i.e., independent of the at-issue entailments.

Potts crucially distinguishes two dimensions of meaning: what is asserted (*at-issue-content*) and what is conventionally implicated. The former is the semantic content of an expression in the truth-conditional sense. The latter is the semantic contribution of an expression that is processed in parallel to the at-issue content, but does not interact with it. This distinction is formally implemented in the semantic type of the respective expressions and the rules for functional application (FA):

- (39)
- e^a , t^a and s^a are basic at-issue types
 - e^c , t^c , and s^c are basic CI types
 - if σ and τ are at-issue types, then $\langle \sigma, \tau \rangle$ is an at-issue type
 - if σ is an at-issue type and τ is a CI type, then $\langle \sigma, \tau \rangle$ is a CI type

A CI type applied to an at-issue type yields a two-layered representation:



The ‘mother node’ is actually a two-layered construct, separated by a bullet • point, comprising the two dimensions of meaning. On the one hand, expression α is passed up to the top node unaltered as if FA had not happened. The output $\alpha: \sigma^a$ (just as the input $\alpha: \sigma^a$) contributes at-issue content and is visible by the semantic component. That is, it may be input to further computation. On the other hand and simultaneously, FA does happen, such that the output $\beta(\alpha): \tau^c$ contributes CI content which is “logically and compositionally independent” of the at-issue content.

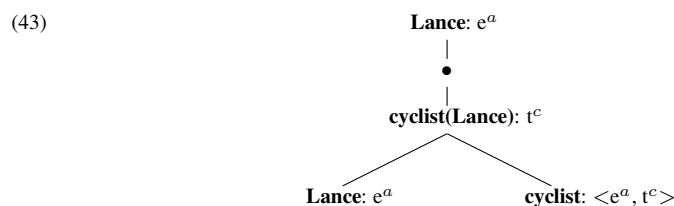
Potts dedicates a great deal of discussion to appositive phrases (parentheticals) of the following kind:

- (41) a. Lance, *a cyclist*, is from Texas. (Potts 2007b:489)

(41) makes the following distinct semantic contributions:

- (42) a. **at-issue content** (referent): *Lance*
 b. **CI content** (comment): *Lance is a cyclist*
 c. **at-issue content** (assertion): *Lance is from Texas*

Given the technical assumptions above, the noun phrase ‘Lance, a cyclist’ is straightforwardly analysed as follows:



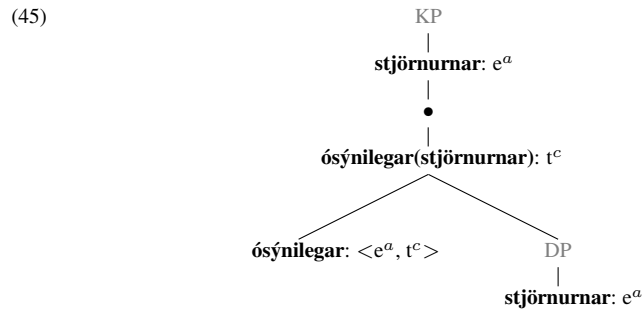
The referent ‘Lance’ to which FA applies has the same at-issue denotation in both nodes of its occurrence. The information provided by the appositive, on the other hand, is represented at a separate level as a non-at-issue proposition.

5.2 Analysis of Appositive Modification

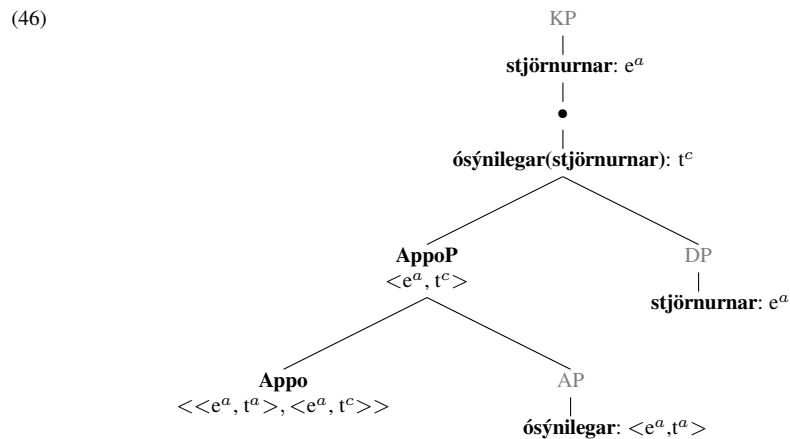
Returning to Icelandic and pattern (IV) appositives, consider once more example (24a), repeated below:

- (44) **Ósýnileg-ar stjörnur-nar** vörpuðu svolitlu ljósi aftan á skýin.
invisible-STR stars-DEF cast some light from-behind on clouds.the
 ‘The stars – even though they were invisible at that moment / even though we couldn’t see them – cast some light on the clouds from behind.’

Potts’ characterization of CIs given in the previous subsection rather obviously carries over to pattern (IV) appositives as characterized in Sect. 4. Therefore it seems well motivated to treat the latter on a par with the way Potts treats examples like (41). In (25), we have already seen that the noun phrase *ósýnilegar stjörnur* makes two semantic contributions, which we can now identify as at-issue content and CI content, respectively. Applying the technicalities of Potts’ analysis to the analysis developed here, we can analyze this example as follows:



Above it was pointed out that treating appositives as simple predicates of type $\langle e, t \rangle$ has the undesirable consequence that KP is predicted to denote a proposition. As (45) shows, however, in a framework that distinguishes between at-issue types and CI types, an analysis that treats appositives as predicates can actually be made to work. One crucial detail is missing, though: adjectives are not lexically specified as CIs. Potts' own analysis of examples like (41)/(43) actually involves a type-shifting operator ("COMMA") whose purpose it is to transform the at-issue expression 'a cyclist' into a CI expression. I will adopt this idea and propose that there is an 'appositivizer' that turns an at-issue predicate ($\langle e^a, t^a \rangle$) into a CI predicate ($\langle e^a, t^c \rangle$):



(46) elegantly captures the semantic insights on pattern (IV) appositives discussed in the previous section by treating them as CIs, concords with the idea that they are DP-external modifiers that combine with a referential expression, and avoids the undesirable consequence of KP denoting a proposition rather than an individual. One further point in favor of this analysis might be that it could open a way to approach the distinction between *appositive* modifiers and *non-restrictive* modifiers discussed in Sect. 4.6 by treating the former as CIs at the DP-level and the latter as CIs at the NP-level. I leave this to further research (see for instance Morzycki 2008; Leffel 2014 for some thoughts).

From a syntactic perspective, an analysis like (46) opens a different avenue: the more complex structure AppoP can be construed as a clausal constituent. Recall that pattern (IV) appositives can always be paraphrased by some—adverbial, conjunct, or

appositive relative—clause. Such a construal is in line with the widespread idea that certain adjectival constituents be construed as reduced relative clauses (for instance Kayne 1994; Alexiadou and Wilder 1998; Alexiadou 2001; Cinque 2010).²⁵ I will leave an exploration of this idea to further research.

5.3 Expressives

Expressives are modifiers like ‘bloody’, ‘damn’ etc. They do not denote properties at all, but rather express the speaker’s attitude towards a referent:

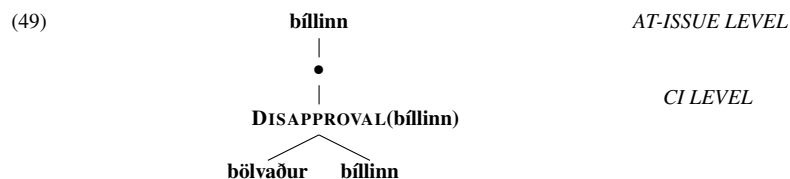
(47) The bloody car is broken again!!

They thereby constitute another prototypical group of elements that convey CI content, and they play a significant role in Potts’ argumentation. It is interesting to note that, in Icelandic, they also occur as pattern (IV) modifiers:

(48) *Pattern (IV) expressives*

- a. **Bölvæð-ur bíll-inn** situr fastur!
cursed-STR car-DEF sits tight
 ‘The bloody car got stuck!’
- b. Ég fann ekki **blessað-an lykil-inn**!
I found not blessed-STR key-DEF
 ‘I didn’t find the damn key!’

Like the noun phrase *ósýnilegar stjörnurnar* in (44) above, *bölvæður bíllinn* in (48a) can be seen as conveying two pieces of semantic information, and be given an analysis akin to (49):



On my analysis, expressives—as pattern (IV) modifiers—are independently predicted to occur outside DP. In this connection, it is worth mentioning that Potts (2007a:267) states that his “theory still predicts that **damn the dog* should surface instead of *the damn dog*”. On my account, this is precisely the (underlying) order of its Icelandic counterpart:

(50) [**bölvæður** [_{DP} hundur **-inn** ~~hundur~~]]
 damn the dog

²⁵ However, there are significant differences. Cinque (2010), for instance, argues that adnominal adjectives have two sources: they can be merged as *direct modifiers* in the specifier position of dedicated functional projections, or as *reduced relative clauses*. The former are merged close to the noun, the latter further away, but crucially, both occur below D^0 , i.e., DP-internally. Moreover, he argues that each source is associated with a specific set of semantic properties. For instance, reduced relative clauses are assumed to be (necessarily) restrictive. Since pattern (IV) appositives are merged DP-externally and cannot be restrictive, AppoP cannot be identical to a reduced relative clauses in Cinque’s sense.

He further states: “I also have no account of [the] observation that expressives tend to sit at the outer edge of the modifier domain, and that they in turn take on literal meanings if they are placed closer to the noun than unambiguously descriptive modifiers” (ibid.). Here I would like to add the observation that expressive meaning is *only* available in pattern (IV), not in the weak patterns (I)-(III), where the adjective can only have a literal meaning:

- (51) “the blessed ring”
- | | |
|---|--------------|
| a. blessað-i hringur-inn | (I) |
| b. hinn blessað-i hringur | (II) |
| c. hringur-inn blessað-i | (III) |
| literally blessed (for instance by some priest) | → literal |
| d. blessað-ur hringur-inn | (IV) |
| ‘the damn ring! (I can’t get it off my finger)’ | → expressive |

To sum up, in Potts’ analysis, appositives and expressives receive the same semantic analysis, viz. as CIs that convey non-at-issue content; thus we can jointly refer to them as CI-modifiers. Since both occur as pattern (IV) modifiers in Icelandic, the preceding sections show that they can also be given a syntactically similar analysis, namely as DP-external modifiers.

6 Part-Whole Relations

The discussion of appositives and expressives has shown that there is ample semantic evidence to substantiate the expectation that pattern (IV) modifiers combine with a referential expression of type *e* – but it has not exhausted the use of pattern (IV). There are more instantiations, two of which I will briefly mention here.

6.1 Positional Predicates

There is a small group of adjectives that I will call *Positional Predicates*. These denote temporal and spatial part-whole relations, and in a sense, they behave more like extended prepositional phrases. Like ordinary adjectives,²⁶ however, they agree with the noun in case, number and gender, and what is more, they are exclusively used in the strong inflection. Also, they typically combine with N-DEF. Thus they formally fit the profile of pattern (IV):

- (52) a. í mið-ri borg-inni
 in middle-STR city-DEF
 ‘in the middle part of the city / in the city center; downtown’

²⁶ In languages like Swedish, an adjective like *miður* ‘middle’ in a case like (52a) has to be rendered as N (+ P): *i mitten av* ~ ‘in the middle of’, which entails that the overall noun phrase ‘the middle of the city’ comprises two extended nominal projections. Based on this comparison, an anonymous reviewer suggests that positional predicates should also head their own extended (as I understand it: nominal) projection, on a par with ‘the middle (of)’. But such paraphrases or glosses like ‘beginning’ in (52c) may be misleading. It is absolutely essential to emphasize that positional predicates really are adjectival elements, not nouns.

- b. um þver-an heim-inn
about transverse-STR world-DEF
 ‘around the world’
- c. á öndverð-ri öld-inni
on beginning-STR century-DEF
 ‘in the early part of the century’

Like CI-modifiers, positional predicates do not modify the reference of the noun phrase, but rather operate on an already established and identifiable referent.^{27, 28} In Pattern (IV), the referent is simply the denotation of N-DEF. But positional predicates can also combine with a DP involving a visibly pronominal determiner:

- (53) a. frá **miðj-um** þessum mánuði
from middle-STR this month
 ‘from the middle of this month (on)’
- b. í **mið-ri** hinni alþjóðleg-u fjármálakreppu
in middle-STR ART international-WK financial.crisis
 ‘halfway through the international financial crisis’
- c. í **mið-ri** þeirri umræðu sem fram fór 15. mars
in middle-STR that debate which on went 15. March
 ‘in the middle of the debate that took place on March 15’

Recall from the end of Sect. 3 that this is expected on the present analysis. Thus, positional predicates provide strong evidence for the central claim of this article, viz. that strongly inflected elements occurring ‘in’ definite noun phrases really are outside the DP in a proper sense.

6.2 Little Partitives

A further construction that illustrates the point to be made here extraordinarily well is instantiated by what I will call ‘*little*’ *partitives*. Those will be contrasted with ‘*big*’ *partitives*. The distinctive formal feature between the two is case agreement vs. the lack thereof (see below). Little partitives can occur in pattern (IV), and the noun phrase receives something that can be – and has been – described as a partitive reading (Sigurðsson 1993, 2006; Delsing 1993:187-91):

²⁷ Note that positional predicates can even combine with proper names:

- | | |
|--|--|
| (i) a. á sunnanverð-ri Ítalíu
<i>on southern-STR Italy</i>
‘in the southern part of Italy’ | b. í mið-ri Reykjavík
<i>in middle-STR Reykjavík</i>
‘in downtown Reykjavík’ |
|--|--|

²⁸ One reviewer notes that positional predicates can refer to only part of the original referent and thus express some restriction – contrary to the expectation raised in Sect. 4. Nonetheless, positional predicates are not restrictive in the sense of (33a). They do not express simple *subset* relations, but target a proper *subpart* of an individual established by DP (and hence require a more complex mereological analysis). In other words, they express a restriction at the DP-level, not at the NP-level.

- (54) a. *marg-ar bækur-nar*
many-STR books-DEF
 ‘many of the books’
- b. *sum-ar bækur-nar*
some-STR books-DEF
 ‘some of the books’

An observation going back to Jackendoff (1977) and Selkirk (1977) is that partitive quantifiers must combine with a definite noun phrase. Formally, this definiteness criterion is obviously fulfilled by the presence of DEF in pattern (IV) noun phrases. In addition, with little partitives, definiteness can also be marked by another definite determiner, and, as we have already seen with positional predicates, the strongly inflected element, in this case the quantifier, precedes the determiner:

- (55) a. *ýms-ar þessar bækur*
various-STR these books
 ‘several of these books’
- b. *sum-ar þær bækur sem ...*
some-STR those books that ...
 ‘some of those books that ...’
- c. *flest-ar mínar hugmyndir*
most-STR my ideas
 ‘most of my ideas’
- d. *marg-ir hinir vitrust-u menn*
many-STR ART wisest-WK men
 ‘many of the wisest men’

So (54) and (55) provide further corroboration for the claim that strongly inflected elements ‘in’ definite noun phrases are actually outside the DP. But there is more to it. A small number of the quantifiers that can occur in little partitive constructions can also occur DP-internally with morphological and semantic concomitants:

- (56) a. *marg-ar þessar bækur*
many-STR these books
 ‘many of these books’ PARTITIVE
- b. *þessar mörg-u bækur*
these many-WK books
 ‘these many books’ CARDINAL

This contrast illustrates the syntactic, morphological and semantic components of the present proposal very effectively. In (56a), the quantifier

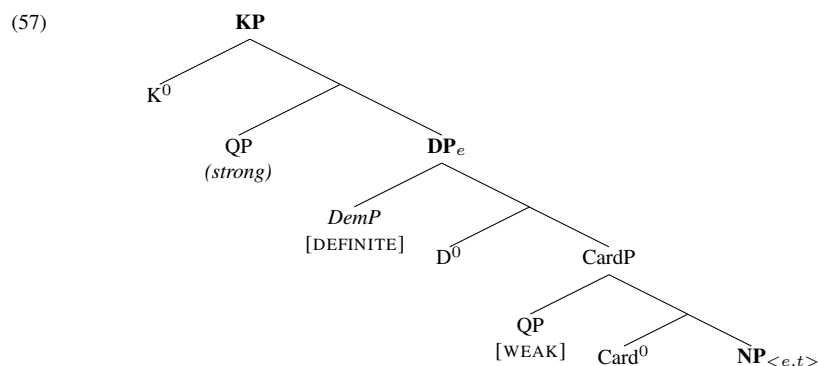
- (i) **precedes the definite determiner**, which I take to be visible evidence for its being outside DP,
- (ii) is **strongly inflected**, which is expected on the account proposed here because of the quantifier being outside the c-command domain of the [DEFINITE] feature, and
- (iii) we obtain a **partitive reading**, which is compatible with the quantifier combining with a definite noun phrase, which is, in turn, a given on the present proposal.

In (56b), on the other hand, the quantifier

- (i) **follows the definite determiner**, which I take to be visible evidence for its being inside DP,
- (ii) is **weakly inflected**, which is expected on the account proposed here because the quantifier is in the c-command domain of the [DEFINITE] feature, and
- (iii) we obtain a **cardinal reading**, which is compatible with the quantifier combining with a set-denoting expression of type $\langle e,t \rangle$ (\sim NP).²⁹

The position of little partitives and DP-internal quantifiers with a cardinal reading relative to the definiteness morpheme can be represented as follows:

²⁹ NB: cardinality is a property of sets.



A note on the contrast *little* vs. *big* partitives. In the former, the quantifier fully agrees with determiner and noun in ϕ -features, but also – and especially – in case:

(58) ‘little’ partitives:

- a. i. marg-ar bækur-nar
[many-STR books-DEF]-NOM/ACC.PL.FEM
ii. mörg-um bóku-num
[many-STR books-DEF]-DAT.PL.FEM
iii. marg-ra bóka-nna
[many-STR books-DEF]-GEN.PL.FEM
- b. i. marg-ar þessar bækur
[many-STR these books]-NOM/ACC.PL.FEM
ii. mörg-um þessum bókum
[many-STR these books]-DAT.PL.FEM
iii. marg-ra þessara bóka
[many-STR these books]-GEN.PL.FEM
- ‘many of the(se) books’

Big partitives differ in that the quantifier does not agree in case with the rest of the noun phrase. There are two instances: the quantifier combines either with a genitival noun phrase or with a PP (headed by the dative-assigning preposition *af* ‘of’). In both cases, the quantifier itself may be assigned any case depending on the position/function of the noun phrase as a whole within the sentence while the rest of the noun phrase invariably has a dependent case (genitive or dative):

(59) ‘big’ partitives A:

(Q + genitival noun phrase)

- a. i. marg-ar bóka-nna
many-NOM/ACC.PL.FEM [books-DEF]-GEN.PL.FEM
ii. mörg-um bóka-nna
many-DAT.PL.FEM [books-DEF]-GEN.PL.FEM
iii. marg-ra bóka-nna
many-GEN.PL.FEM [books-DEF]-GEN.PL.FEM
- b. i. marg-ar þessara bóka
many-NOM/ACC.PL.FEM [these books]-GEN.PL.FEM
ii. mörg-um þessara bóka
many-DAT.PL.FEM [these books]-GEN.PL.FEM

- | | | | |
|------|-----------------------------------|--|--------------------------|
| iii. | marg-ra
many-GEN.PL.FEM | þessara bóka
[these books]-GEN.PL.FEM | |
| | | | 'many of the(se) books' |
| | | | |
| (60) | 'big' partitives B: | | (Q + PP _{dat}) |
| a. | i. marg-ar
many-NOM/ACC.PL.FEM | af bóku-num
of [books-DEF]-DAT.PL.FEM | |
| | ii. mörg-um
many-DAT.PL.FEM | af bóku-num
of [books-DEF]-DAT.PL.FEM | |
| | iii. marg-ra
many-GEN.PL.FEM | af bóku-num
of [books-DEF]-DAT.PL.FEM | |
| b. | i. marg-ar
many-NOM/ACC.PL.FEM | af þessum bókum
of [these books]-DAT.PL.FEM | |
| | ii. mörg-um
many-DAT.PL.FEM | af þessum bókum
of [these books]-DAT.PL.FEM | |
| | iii. marg-ra
many-GEN.PL.FEM | af þessum bókum
of [these books]-DAT.PL.FEM | |
| | | | 'many of the(se) books' |

It has been pointed out (for instance Delsing 1993:187, fn.2; Sigurðsson 1993:184, 2006:207) that partitivity is normally expressed by big partitives, whereas little partitives, i.e., agreement/concord constructions, are a (stylistically) marked option. In addition, there are semantic differences and felicity conditions that are not easily described, but it seems to be possible to single out one subtle aspect. Consider the following example (inspired by Núria 2003:46):

- | | | | |
|------|----|--|-------------------------|
| (61) | a. | margir krakkarnir, sem voru að leika sér, fóru að rífast
many children.the who were playing started fighting
[many of [the children] _k] _j who _{j/*k} were playing ... | <i>little partitive</i> |
| | b. | margir krakkanna, sem voru að leika sér, fóru að rífast
many children.the.GEN who were playing started fighting
[many of [the children] _k] _j who _{j/k} were playing ... | <i>big partitive A</i> |
| | c. | margir af krökkunum, sem voru að leika sér, fóru að rífast
many of children.the.DAT who were playing started fighting
[many of [the children] _k] _j who _{j/k} were playing ... | <i>big partitive B</i> |

Judgments are a bit delicate, but what we can say is this: big partitives as in (61b/c) can establish two possible antecedents for anaphoric elements, whereas little partitives as in (61a) can only establish one antecedent. So the relative pronoun in (61b/c) can, in principle, make reference to the totality of salient children in the given context or to the subset of children, delimited by the partitive quantifier 'many'. In (61a), it can only refer to the subset of children.³⁰

In other words, little partitives denote exactly one referent. This semantic aspect has a syntactic correlate: the quantifier and the rest of the noun phrase are in the same *case domain* in that they agree in case, cf. (58). This is easily accounted for on the

³⁰ Of course, the concrete examples in (61) could be interpreted to the effect that little partitives do not allow restrictive relative clauses, but it seems that the pattern observed in (61) also applies to pronominal reference in a template like [many of [the children]_k]_j ... they_{j/k}. Both aspects need to be examined in more detail. Regardless of the precise outcome, the fact that there is a difference between little and big partitives along the lines of (61) remains.

assumption that I have tacitly applied to pattern (IV) constructions all along, viz. that both are constituents of the same KP. Conversely, the only coherent conclusion for big partitives then is that they comprise two case domains:

(62) \Rightarrow little partitive: $[_{KP} QP DP]$

(63) \Rightarrow big partitive: $[_{KP_2} QP [_{KP_1} DP]]$

So while the bulk of the argumentation in this article has been an approach from below by showing that pattern (IV) modifiers are outside DP, the contrast between little and big partitives can be seen as an argument from above in suggesting that pattern (IV) modifiers are inside the same KP as the rest of the noun phrase.

A similar conclusion is reached by Norris (2012). He argues that concord features (case, number, gender) are collected in K whence they are copied on the AGR nodes in its c-command domain. Even though he does not discuss little partitives, he argues that those noun phrases I label big partitives involve two KPs precisely because of the case-mismatch we observe in (59)/(60). I will return to this analysis in Sect. 7.

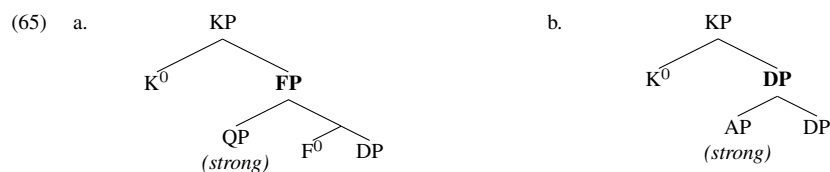
6.3 Different Classes of Pattern (IV) Modifiers

The common denominator of positional predicates and little partitives is that both express some kind of *part-whole relationship*. The common denominator of CI-modifiers, on the other hand, is that they convey *non-at-issue content*. We have seen that both these classes of modifiers provide independent evidence for the claim that pattern (IV) modifiers are DP-external and operate on an entity of type e.

However, they do not bear out the expectations raised at the end of Sect. 3. For one thing, part-whole modifiers do not simply provide additional information (see also fn. 28). For ease of exposition, I have remained agnostic on the status of the constituent comprising the pattern (IV) modifier and DP:



In order to approach the different status of part-whole modifiers, I suggest the following distinction: part-whole modifiers are merged as *specifiers* of a functional projection above DP, while CI modifiers are DP *adjuncts*:



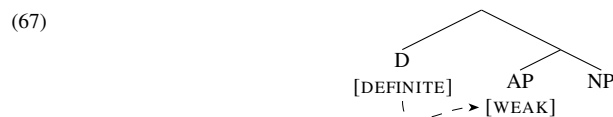
On the other hand, CI modifiers cannot precede visibly prenominal determiners:

- (66) a. *full-ur þessi strákur b. *bölvað-ur þessi bíll
 drunk-STR this boy bloody-STR this car

A phrase-structural distinction as in (65) alone does not account for these facts. Also recall that Mandarin Chinese does allow surface patterns like (66a), cf. (31b). As it stands, I cannot provide a satisfying answer, and leave the issue to further research.

7 Agree and Concord

In Sect. 3, I proposed that weak inflection on a modifier is ‘triggered’ if that modifier is inside the definiteness domain (= DP), more precisely, if its first-Merge position is c-commanded by a definiteness feature in D, schematically represented below:



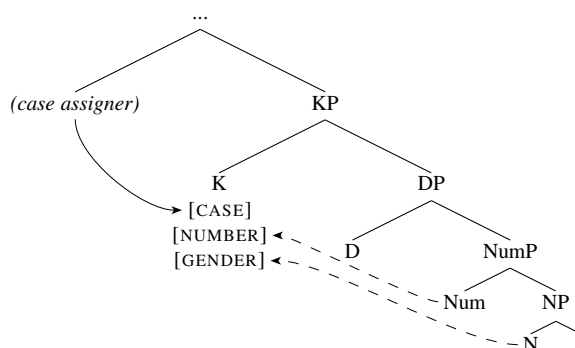
Informally, I characterized this relationship as agreement, which suggests that [WEAK] should simply be considered an uninterpretable definiteness feature (*udef*) probing for an *idef* feature. Technically speaking, however, (67) cannot be seen as an instance of traditional *Agree* in the sense of Chomsky (2000). *Agree* operates via *downward* probing: the probe, which carries an uninterpretable feature, must c-command the goal, which carries a matching interpretable feature.³¹

On the other hand, (67) is compatible with accounts that endorse *upward Agree* (Wurmbrand 2011, 2014; Zeijlstra 2012; Bjorkman and Zeijlstra 2014). Zeijlstra (2012), for instance, redefines *Agree* in a manner that reverses the c-command relation between probe and goal. On this revised definition, (67) can straightforwardly be construed as *Agree* with the goal [DEFINITE] c-commanding the probe [WEAK].

Addressing ϕ /case concord in the noun phrase, Norris (2012) explores an alternative that only indirectly relies on (traditional) *Agree*. He assumes that the maximal extended nominal projection is KP, and K^0 bears unvalued gender and number features (i.e., is a probe). Those features are valued via *Agree* with N^0 and Num^0 , respectively. Case, on the other hand, is assigned by some external case assigner:

³¹ Schoorlemmer (2009, 2012) proposes an analysis where the adjectival probe c-commands D at first Merge, which is consistent with downward probing. For reasons of space, I cannot give a proper assessment/comparison. Relevantly, he manages to provide a unified analysis of weak inflection across Germanic, but especially Schoorlemmer (2009), who explicitly addresses the licensing of weak and strong inflection, fails to account for pattern (IV). In fact, this pattern is predicted to not exist since the adjective in the relevant constellation is expected to always inflect weakly.

(68)

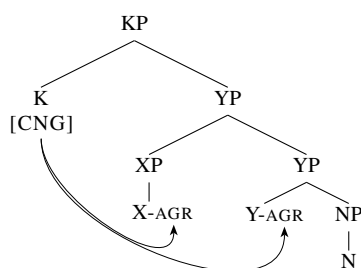


Thus concord features are ‘collected’ in K in the narrow syntax. In a next step, at PF, elements that show concord trigger a rule that inserts an AGR node:

(69) $X \rightarrow [X \text{ AGR}]$

Those elements include heads (determiners) and phrasal constituents (numerals and adjectives). Next, the feature bundle on the closest c-commanding K is copied on any AGR node, schematically represented as follows:

(70)



What this analysis has in common with the present proposal is that KP is construed as an agreement/concord domain for case, number and gender (see Sect. 6.2). Furthermore, in both analyses, inflectional features of adnominal modifiers are determined by a c-commanding head—D and K, respectively.

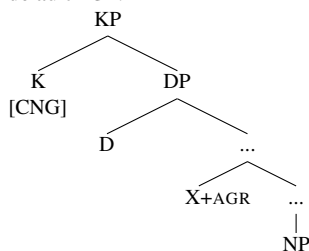
However, Norris does not address the issue of definiteness/weak inflection, and it is not clear that concord and weak inflection can actually be captured by the same mechanism. If the definiteness feature were collected in K alongside ϕ /case features, we would expect pattern (IV) not to exist. DP-external modifiers are still KP-internal, and if K were to carry the feature [DEFINITE], *all* modifiers, both DP-internal *and* DP-external, should be weakly inflected. Moreover, since feature copying applies to all adnominal elements with an AGR node, including determiners, we should expect them to potentially occur weakly inflected as well. But determiners only have one set of inflectional endings, which are essentially according to the strong paradigm.

Summarizing the central aspects of Norris (2012) and the present proposal: (i) ϕ /case features are collected in K and KP is an agreement domain, (ii) [DEFINITE] is located in D and DP constitutes a definiteness domain. One appealing aspect of Norris’ analysis is the idea that the features of concord pattern together because they

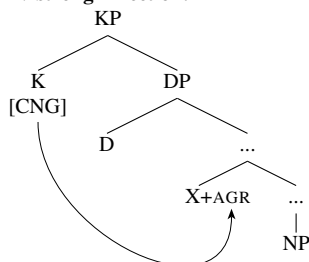
are copied from the same source (= K). But since we have to concede that [DEFINITE] is located in a different source (= D), weak inflection is not captured by concord because it would involve feature copying from two sources. Therefore, ϕ /case features and [WEAK] are not on a par, that is they are not part of the same source feature bundle. In order to find an intersection of the two proposals, consider this: assume that there are two kinds of AGR, the one that is employed by Norris himself, which results in (the default) strong inflection, and one which is inserted if the respective host element is c-commanded by [DEFINITE] giving rise to the weak inflection:

- (71) a. X → [X AGR]
 b. [[DEFINITE] - - > [[X]]] → [X AGR_{DEF}]

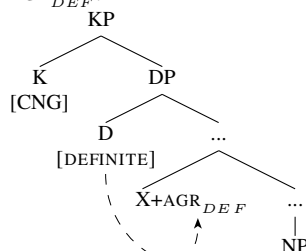
(72) a. **default AGR:**



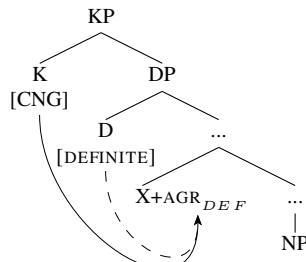
b. → **strong inflection:**



(73) a. **AGR_{DEF}:**



b. → **weak inflection:**



On this view, AGR and AGR_{DEF} specify two different meta-frames for feature copying, and vocabulary insertion will draw on items from two ‘paradigms’, the strong one and the weak one, respectively. In other words, licensing AGR_{DEF} is tantamount to adding [WEAK] to the feature bundle on AGR. This is in line with the observation made in Sect. 2.3 that, at least in Icelandic, a feature like [WEAK] is required because the strong/weak divide is irreducible (an unambiguous weak ending, no default AGR morphemes as in Mainland Scandinavian, no strong/weak syncretism). The idea sketched in (71) and (72) also works for pattern (IV)/DP-external modifiers: those have an AGR node inserted as any other modifier, but since they are never c-commanded by [DEFINITE], it cannot be AGR_{DEF}, hence they are always strongly inflected. This way of reconciling the present proposal with Norris (2012) is promising and should be pursued further.

A final comment: as shown above, [DEFINITE] cannot simply be assumed to be collected alongside ‘normal’ concord features (ϕ /case). But there is another aspect, as pointed out by an anonymous reviewer: for instance gender, which originates low

inside the noun phrase, is visible for concord outside the noun phrase, viz. on predicative adjectives, whereas definiteness, which originates higher, never displays noun phrase external concord. There is obviously a correlation: only those features that are collected in K are available for noun phrase external concord. This still leaves one open question: what is the crucial difference between [WEAK] and ϕ /case features, i.e., why can [DEFINITE] not be collected?

8 Conclusion

This article set out to make a claim about the distribution of adjectival inflection in Icelandic and the structural position of certain strongly inflected modifiers:

- (74) a. Weak inflection is triggered by a c-commanding [DEFINITE] feature in D.
 b. Strong inflection occurs iff weak inflection is not triggered.
- (75) Pattern (IV) modifiers are merged outside the c-command domain of [DEFINITE] / DP

In conjunction, (74) and (75) account for all occurrences of weak and strong inflection, and entail that the crucial difference between pattern (I) and (IV) noun phrases is not morphological in nature, but structural, with the adjective in the former being merged DP-internally and the one in the latter DP-externally.

Moreover, (75) has semantic repercussions: DP-external modifiers are expected to combine with referential expressions. Taking occurrence in pattern (IV) as the smallest common denominator and as a point of departure, I have shown that various modifiers provide independent syntactic and semantic evidence bearing out this expectation. Given that DP is the locus of reference, DP-external modifiers cannot make any referentially relevant contribution, but only provide additional information on an independently identifiable referent. This expectation is maximally borne out with pattern (IV) appositives and expressives. Other instances of pattern (IV) modifiers such as positional predicates and little partitives, which express some part-whole relation, can also be shown to combine with a referential expression. Moreover, they directly corroborate the claim in (75) particularly well in that they can visibly precede pronominal definite determiners.

The discussion has also shown that the strong/weak distinction in Icelandic cannot simply be eliminated via underspecification (as has been argued for Mainland Scandinavian), and that a feature like [WEAK] is required. In spite of co-specifying the feature content of an AGR node, however, [WEAK] cannot be treated as a concord feature on a par with ϕ /case. I proposed that concord features originate in K (following Norris 2012), whereas [WEAK] has its source in D.

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