On the inner structure of manner-adverbial expressions: from a mono-lingual perspective to a comparative-linguistic perspective.

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Abstract. This chapter discusses the inner structure of superficially different manner-adverbial patterns in Dutch, with a special focus on the surface pattern A+P, as in *hardop* (loud.up; 'aloud'). In the spirit of the generative-linguistic quest for cross-constructional symmetry, it is proposed that these adverbial patterns are all manifestations of one and the same abstract, underlying syntactic configuration, namely the Extended Adpositional Phrase (XPP). After this in-depth, single-language study of manner adverbials, the chapter continues with a more global, cross-linguistic perspective on the inner structure of manner-adverbials, starting from the hypothesis that, at a more abstract level, the adverbial patterns attested cross-linguistically all have an adpositional design. Finally, the chapter briefly discusses the relationship between inner structure and outer behavior (i.e., distribution) of manner-adverbial expressions. Specifically, the question is addressed to what extent 'being prepositional' or 'being postpositional' matters for the distributional behavior of manner-adverbials. More in general, this chapter aims to provide another illustration of the fruitful interaction between in-depth investigation of individual languages, and the comparative-linguistic study of a larger sample of languages.

Keywords. manner adverbials; adpositional phrase; symmetry; displacement, Dutch, comparative syntax

1. Introduction. The creative aspect of language (use) is manifest in all expressions of language, including adverbial expressions. This "adverbial creativity" is exemplified by the Dutch examples in (1) for the class of constructions traditionally called 'manner adverbials.'

(1) ..dat Jan de woorden …. uitsprak.
　　　that   Jan the words　　　pronounced
　　　'..that Jan pronounced the words in way X.'

a.	op een rare manier	in a strange way	'in a strange way'
b.	op z'n Eminem's	at *z'n* Eminem's	'in an Eminem-like way'
c.	hardop	loud-up	'aloud'
d.	vreemd	strange	'strangely'
e.	zachtjes	soft-DIM-s	'softly'
f.	(precies) zo	(exactly) so	'(exactly) in that way'

As shown by these examples, different types of manner-adverbial constructions can be placed in place of the dots in sentence (1). Notice that some of these expressions feature an overt preposition, namely *op* in (1a-c), while others, namely (1d-f), do not. It should further be noted that

some of these manner-adverbial patterns contain nominal material (e.g., *manier* in (1a)) or material hinting at the presence of a nominal expression, such as the possessor-like phrase *Eminem's* in (1b) and the diminutive morpheme *-je* in (1e). Clearly, the superficially barest forms are *vreemd* in (1d) and *zo* in (1f). In traditional grammar, these bare forms, but also the ones in (1c,e), are often treated as lexical categories (parts of speech) belonging to the class of adverbs. In line with much generative-linguistic research, however, I hypothesize that 'adverbs' do not constitute a separate lexical category; that is, they can be reduced to other categories such as N. A, and P; see Chomsky (1970), Emonds (1976), Alexiadou (2013), Corver (2022a).[1]

Even though the manner-adverbial patterns in (1) are superficially quite diverse, I propose in this chapter that they are manifestations of one and the same abstract, underlying syntactic configuration, namely the *Extended Adpositional Phrase* (XPP).[2] This quest for *cross-constructional symmetry* underlying superficially different constructions can be found throughout the history of generative grammar; see, for example, Chomsky's (1977) study of *wh*-movement in different kinds of English clausal constructions, including *wh*-interrogatives, relatives, and comparatives. Another quest for symmetry in generative grammar regards the *cross-linguistic* dimension of human language. Even though languages are often superficially very different, they turn out to be highly similar at a more abstract structural level. This cross-linguistic symmetry is explicitly stated in Chomsky's (2001:2) Uniformity Principle: "In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances."

The goal of this chapter is threefold. Firstly, in sections 2-8, I aim to give evidence in support of an adpositional analysis of manner-adverbials by giving an in-depth analysis of Dutch manner-adverbial expressions, with a special focus on manner adverbial patterns of the type in (1c). After this single-language study of the inner structure of manner-adverbials, I will take a cross-linguistic perspective on the inner structure of manner-adverbials in section 9. Finally, in section 10, I will briefly address the question as to why different adverbial forms sometimes display different distributional behavior within the clause. Section 11 concludes this chapter.

2. The adverbial A+P pattern in Dutch. At first sight, it seems implausible to analyze bare manner adverbials such as *vreemd* in (1d) and *hard* in (2) as hidden adpositional phrases. After all, there is no adpositional or nominal material to be seen.

(2) ..dat Jan hard lachte.
      that   Jan loudly laughed
      '..that Jan laughed loudly.'

Interestingly, there turn out to be manner-adverbial patterns in Dutch that are "not so bare" and that look a bit like "in between" cases. Specifically, they feature an overt adposition that superficially occurs right after the adjective; thus: A+P. Some illustrations of this adverbial pattern are given in (3):[3]

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[1] In Chomsky (1970), the major syntactic categories are defined in terms of the categorial features [+/-N] and [+/-V]. Specifically: [+N, -V] = noun, [-N, +V] = verb, [+N, +V] = adjective, and [-N, -V] = adposition. According to this classification, adverbs do not constitute a separate lexical category.

[2] For the idea that adverbial expressions have an adpositional design, see also among others Katz & Postal (1964), Emonds (1976), Alexeyenko (2015), and Corver (2023).

[3] In line with Dutch orthographic conventions, I write *hardop* as a single unit. I will do the same for expressions such as *daarachter* (there-behind, 'behind it'); see example (15).

(3) a. ..dat zij de zin   *hardop* voorlas.
         that she the sentence loud-up read
         '..that she read the sentence out loud.'
     b. ..dat zij *breeduit* vertelde wat er   gebeurd was.
         that she broad-out told   what there happened was
         '..that she explained in detail what had happened.'

It should be noted that the A+P pattern is quite common in Dutch. Other examples of this pattern, including ones with a non-manner-adverbial reading, are the following: *kortaf antwoorden* (curt-off answer, 'to answer curtly'), *rechtop lopen* (straight-up walk, 'to walk upright'), *volop genieten* (full-up enjoy, 'to enjoy thoroughly'), *iets voluit schrijven*, something full-out write, 'to write something in full'), *vrijuit spreken* (free-out speak, 'to speak freely'), *iets andersom zetten* (something other-s-around put, 'to put sth. the other way around'), *blijtoe* (happy-to, 'luckily'), *hooguit* (high-out, 'at most'), *veruit het langst* (far-out the tallest, 'the tallest by far').

There are good reasons to assume that the sequence A+P forms a syntactic unit, i.e., a constituent. The constituency tests in (4) show this:

(4) a. *Hardop* las   Jan de zin   voor.
         loud-up read Jan the sentence PRT
         'Jan read the sentence aloud.'
     b. Jan las de zin   *hardop* voor en Kees las de zin   (precies) *zo* voor.
         J. read the sentence loud-up PRT and K.   read the sentence exactly so PRT
         'J. read the sentence out loud and K. read the sentence in exactly the same way.'
     c. Jan las   de zin   [[*hardop*] en [*theatraal*]] voor.
         Jan read the sentence loud-up and theatrically PRT.
         'Jan read the sentence out loud and in a theatrical way.'

(4a) shows that *hardop* can be placed in the first position of the main clause, that is, the position preceding the finite verb (*las*) occupying the second position (the so-called Verb Second phenomenon). (4b) illustrates the so-called substitution test: the sequence *hardop* can be replaced by the pro-form *zo* 'so/this way'. (4c), finally, demonstrates the constituency of *hardop* by means of the coordination test: *hardop* can occur as a conjunct, and therefore as a syntactic unit, in a coordinate structure.

Now that we know that the sequence *hardop* forms a constituent, the following follow-up question can be asked: what is the categorial nature of the constituent *hardop*? Given the two components of *hardop*, namely the adjective *hard* and the adposition *op*, two possible analyses come to mind: firstly, *hardop* is an adjectival structure, or, secondly, it is an adpositional structure. The grammatical behavior of *hardop* suggests that the former analysis should be rejected, and that the latter analysis is the correct one.

The non-adjectival character of *hardop* is evident from the fact that it cannot occur as an inflected attributive adjective. Before showing that, I would first like to draw your attention to the examples in (5) and (6):

(5) a. Dat *luid-e*   *roepen* van hem (moet nu   maar eens afgelopen zijn).
         that loud-AGR shouting of   him   must now but   once finished   be
         'That loud shouting of his (should just stop now).'
     b. Dat *vrij-e*   *denken* van hem (hangt me de keel   uit).
         that free-AGR thinking of   him   hangs me the throat out.
         'That free thinking of his (bores my throat).'

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(6) a. Dat *luid roepen* van hem (moet nu maar eens afgelopen zijn).
   b. Dat *vrij denken* van hem (hangt me de keel uit).

In (5) and (6) we are dealing with nominalizations. In (5) we are dealing with an infinitival form that is used as a noun. The nominal character of *roepen* and *denken* in (5) is evident from the fact that they can be modified by an (inflected) attributive adjective, namely *luid-e/vrij-e*. Example (5a) therefore has the following internal structure: *[Noun Phrase dat [NP luide [NP roepen]]]*.[4] Considering next the examples in (6), we notice that the adjective is morphologically bare. In this nominalization pattern, the adjectives *luid* and *vrij* behave like adverbial expressions modifying a verbal infinitive: *[VP luid [VP roepen]]*. This verbal infinitive is part of a larger nominal phrase: *[Noun Phrase dat [VP luid [VP roepen]]]*. When we now look at the behavior of adverbial expressions of the type A+P (e.g., *hardop*), we observe that they cannot be used as inflected attributive adjectival phrases:

(7) a. Dat hardop/*hardop-e   dromen   van hem (irriteerde haar mateloos).
       that loud-up/loud-up-AGR dreaming of   him irritated   her   immensely.
   b. Dat languit/*languit-e   liggen op de bank van hem (irriteert me).
       that stretched-out/*stretched-out-AGR lying on the couch of him   irritates me.

Based on these examples, I conclude that constituents of the type *hardop* are not adjectival but rather adpositional. So, we are dealing with the following structure, in which only the categorial value and not the hierarchical value —i.e., head (X) or phrase (XP)—of the constituents is shown: *[P hardA + opP]*.

   Positive support for this adpositional analysis comes from an example like (8), where the A+P-pattern *andersom* (other-s-around, 'the other way around') occurs in postnominal position, which is a place where modifying PPs typically occur:

(8) Zorg   dat u   de thermostaatkraan   juist   aansluit. [Plaatsing *andersom*]
    make.sure that you the thermostatic-valve correctly connect   placement other-s-around
    leidt tot   problemen.
    leads to   problems
    'Make sure you connect the thermostatic valve correctly. Installation the other way around leads to problems.'

If a pattern like *hardop* forms an adpositional constituent, the next question that arises is the following: what does the internal structure of *hardop* look like?

3. *Hardop*: a complex word or a complex phrase? I begin my investigation of the inner structure of *hardop* with the following question: is it a complex word (i.e., a compound) or a complex phrase? As the examples in (9) show, compound words starting with *hard* or ending with *op* can be found in Dutch. So, one might think that *hardop* is also a compound word.

(9) **hard**hout, **hard**voer, schrok**op**,   klim**op**
    hard-wood, hard-fodder, gobble-up,   climb-up
    'hardwood, cattle fodder, trencherman, ivy'

However, there seem to be good reasons to believe that *hardop* is not a complex word but a complex phrase. Evidence for this comes from the modifiability of the adjective by a degree word.

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[4] I will not consider here the placement of the phrase *van hem*.

Before the relevant examples are given, it should be noted that adjectives that are part of a compound cannot be modified by a degree word. The following minimal pair shows this:

(10) a. Jan kocht [$_N$ (*erg) hard$_A$+hout$_N$].
          Jan bought   very hard-wood
      b. Jan kocht [$_{NP}$ [$_{AP}$ (erg) hard] [$_{NP}$ hout]].
          'Jan bought very hard wood.'

(10a) shows that the degree word *erg* cannot function as a modifier of *hard*, the first element of the compound *hardhout*. As (10b) shows, this modifying role is possible if *hard* is an attributive phrase modifying the noun phrase *hout*.

When we now consider the modifiability of the pattern *hardop*, we observe that the gradable adjective *hard*, as well as the other gradable adjectives in the A+P pattern, can be modified by a degree word, such as the free comparative morpheme *minder* (11) or the question word *hoe* (12). Notice furthermore that the pattern can be made even more complex by adding a measure phrase like *iets*:

(11) Jan zat deze keer **iets   minder   rechtop**
      Jan sat this   time a.bit less   straight-up
      'Jan sat a little less upright this time.'
(12) **Hoe vrijuit** kun je in jouw organisatie   daarover   spreken?
      how free-out can you in your organization there-about speak
      'How freely can you talk about these things in your organization?'

It should again be noted that the bold string forms a constituent. In (12) we see this clearly, because the string *hoe vrijuit* has been moved to the initial position of the clause, that is, [Spec,CP], which is the position preceding the finite verb of the main clause. Interestingly, we also find patterns in which we have a synthetic comparative form instead of a periphrastic one:[5]

(13) Ze liep   **een stuk rechter op** na   de behandeling door de   fysiotherapeut.
      she walked a   lot   straight-er up after the treatment   by   the fysiotherapist
      'She walked a lot straighter after the treatment by the physiotherapist.'

With these synthetic comparative forms, it is quite clear that the measure phrase (*een stuk*) is licensed by the left-hand component of the A+P-pattern; thus: *[[een stuk rechter] op]*. Notice also that the adposition *op*, even though modifiable (e.g., *pal* 'right'), typically does not combine with a measure phrase like *een stuk*, as shown by the following example: *De boom viel [[pal/*een stuk] op zijn hoofd]* (the tree fell right/*a lot on his head).

Based on the data in (11)-(13), I conclude that the structure in (8) can be more precisely represented as in (14):

(14) [$_{PP}$ [$_{AP}$ minder/hoe hard] + [$_P$ op]]

This structure raises the question of how the adjectival part, which has the properties of a phrasal constituent, namely XAP (i.e., Extended Adjectival Projection), is connected to the adposition that follows the XAP and can therefore be characterized as being 'postpositional'. To gain more insight into the nature of this syntactic connection, it is worth looking at other postpositional patterns in Dutch.

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[5] There are speakers who prefer to have the periphrastic form in (13), that is: *(een stuk) meer rechtop* (a lot more straight-up).

2. Postpositional patterns in Dutch. As the examples in (15) and (16) show, postpositional phrase do indeed exist in Dutch (Van Riemsdijk 1978):

(15) ..dat Jan [daarachter] stond.
     that Jan there-behind stood
     '..that Jan stood behind it.'

(16) ..dat Jan [de boom in] was geklommen.
     that Jan the tree into was climbed
     '..that Jan had climbed the tree.'

In (15), where we have a locative PP, the postposition *achter* is preceded by a so-called R-pronoun.[6] In (16), where a full-fledged noun phrase combines with the postposition *in*, we have a directional interpretation of PP.

The question now arises whether we can gain insight into the structure of *hardop* by taking structural symmetry seriously. Specifically, the question arises as to whether the internal structure of *hardop* is like the structure of the postpositional patterns in (15) and (16). An important insight into the syntactic analysis of those patterns is that they are structures derived by movement (I-merge). Specifically, the pronoun (15) and the noun phrase (16) have been moved within the XPP (Extended Adpostional Projection) from the complement position of P to a specifier position within XPP (Van Riemsdijk 1978; Koopman 2000; Den Dikken 2010). Schematically, where *FP* stands for some functional projection:

(17)   a. [$_{FP}$ **daar** [$_{F'}$ F [$_{PP}$ achter ~~dat~~]]]   (see (15))[7]
      b. [$_{FP}$ **de boom** [$_{F'}$ F [$_{PP}$ in ~~de boom~~]]]   (see (16))

Extending this displacement analysis to the pattern *hardop*, we get the derived pattern in (18):

(18) [$_{FP}$ **hard** [$_{F'}$ F [$_{PP}$ op ~~hard~~]]]

The element *hard* has been moved from the complement position of P to the specifier position of a functional projection that is part of XPP. As with all displacement processes, the displaced constituent c-commands its original position.

Although this movement analysis gives us the postpositional placement of *op*, the analysis raises the question of how an adjective (*hard*) can start as a complement of P and be moved to a specifier position. Normally only (pro)nominal constituents (e.g., *dat*, *de boom*) can move from a complement position to a PP-internal specifier position. The following question therefore arises: is the surface form *hard* in *hardop* really an A(P)? Could it possibly be a hidden nominal expression? And if it is, how could its "nouniness" be derived?

A first hypothesis one could formulate is that *hard* is a noun as a result of the attachment of a nominal zero morpheme (so-called 'zero-conversion'): *[$_N$ [$_A$ hard] Ø] + op*. However, this morphological solution seems less plausible since, as was shown in (11)-(12), elements such as *recht*, *vrij* and *hard* in A+P patterns can be modified by degree elements. As shown in (19), nouns —even those that can be intensified, as in *wat een eikels!* (what a jerks, 'such jerks!')— cannot be modified by a degree-indicating adverbial expression:

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[6] The term R-pronoun is used to refer to Dutch pronouns that have the sound /r/ in them, such as *er* 'there', *daar* 'there', *hier* 'here', *waar* 'where', *ergens* 'somewhere', *nergens* 'nowhere', and *overal* 'everywhere'. These pronouns typically occur within PPs and are used to replace third person, neuter pronouns like *het* 'it', *dat* 'that' etc. Thus, *naar het* 'to it' is an impossible pattern in Dutch and must be replaced by *ernaar* (there-to, 'to it').

[7] In Van Riemsdijk (1978), the pronoun *daar* starts out as the demonstrative *dat* 'that' in the complement position of P and is morphologically converted into *daar* in [Spec,PP].

(19) *[Erg eikels] vind   ik hen.
      very   jerks consider I   them
      'I think they are big jerks.'

A second hypothesis would be that *hard* in *hardop* is an elliptical NP, that is, an NP whose head (N) is phonetically empty and within which *hard* functions as an attributive AP: *[NP [AP hard] [NP Ø]]*. Starting from this NP-ellipsis analysis, the derived structure in (18) can be more precisely represented as in (20):

(20) [FP [NP [AP **hard**] [NP **Ø**]] [F' F [PP op ~~[NP [AP hard] [NP Ø]]~~]]]

This NP-ellipsis analysis would be compatible with the facts in (11)-(12), where the adjective is modified by a degree word such as *minder* 'less' or *hoe* 'how'. The structure of *minder hard op* in (11a) would then look as follows:

(21) [FP [NP [AP **minder hard**] [NP **Ø**]] [F' F [PP op ~~[NP [AP minder hard] [NP Ø]]~~]]]

Even though it is tempting to analyze patterns such as *minder hardop* as structures involving NP-ellipsis, as in (21), there is a serious problem with this analysis. As shown in (22), the attributive AP in "regular" NP-ellipsis patterns typically shows the grammatical marker -*e* on the residual adjective. This marker can't be present, however, on the adjective in patterns such as *hardop*.[8] Thus: *hard(*-e) op*.[9]

(22) Wat een hard matras! Ik slaap liever op [NP een [AP iets minder $^{??/*}$hard / ^{OK}hard-e]].
      what a   hard mattress I sleep preferably on   a   slightly less   hard / hard-*e*
      'What a hard mattress! I prefer to sleep on one which is slightly less hard.'

The morphological bareness of *hard* in *hardop* seems to hint at a different status of the gap following *hard* in (20). I propose that this gap is not a base-generated silent pro-form but rather a gap that results from noun-phrase-internal displacement of a low nominal expressions (i.e., NP/nP) to a left-peripheral Spec-position, say [Spec,DP]. Schematically:

(23) [DP *NP* [D' D [NP AP$_{bare}$ [~~NP~~]]]]

I propose that the absence of morphological inflection on the attributive AP in (23) is due to the fact that, in Dutch, an attributive AP cannot agree with a nominal copy (i.e., trace) in its search (i.e., c-command) domain.[10] The question obviously arises as to whether there is any independent evidence in support of this analysis that relates the absence of inflection on the attributive

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[8] See Corver and Van Koppen (2011) for discussion of the grammatical nature of the bound morpheme -*e* that follows the attributive adjective in NP-ellipsis contexts.

[9] The ill-formedness of the sequence *harde-op* is not due to some phonological constraint, for example, a constraint excluding sequences of -*e*, pronounced as /ə/ (i.e., schwa), and another vowel. The vowel sound 'schwa' can easily precede other vowels, as, for example, in: *een harde optater* (a hard-INFL blow/stroke). Notice furthermore that -*e* is also excluded when a consonant follows: *blij(*-e) toe* (happy-INFL to, 'fortunately').

[10] In Romance languages like Italian, a postnominal attributive AP shows agreement (concord) with the modified nominal expression, as in *una bicicletta costosa*, a.FEM bike.FEM expensive.FEM. 'an expensive bike'. It has been proposed that the postnominal placement of the attributive AP results from leftward displacement of the noun across the attributive AP (Cinque 1994). The question arises why displacement has no effect on the concord relationship in Italian but does have an effect in Dutch. This contrast possibly relates to the grammatical nature of the agreement marker. In Italian, this agreement marker (e.g. -*a* in *costosa*) is present on both attributive and predicative APs. In Dutch, however, the agreement marker -*e* occurs only on attributive APs. According to Baker (2008:64, note 26), Dutch -*e* is not really an agreement marker but more of a linking morpheme.

adjective to noun-phrase-internal displacement of the modified NP. This issue will be addressed in section 5. Before moving on to this issue, however, let me finish this section with a brief discussion of the semantic nature and non-pronunciation of the small nominal expression (NP) in (23).

When we look at the meaning of linguistic expressions like *hardop*, the presence of an abstract (i.e., silent) noun does not seem implausible. The adverbial expression *hardop* can be paraphrased by Dutch *op hard-e wijze* (in loud-INFL way, 'out loud/aloud'). The paraphrase *P+AP+*WIJZE (P+AP+WAY) can be applied as well to other manner adverbials having the (surface) form *A+P*. For example, *rechtop (zitten)* '(to sit) straight up' can be paraphrased as *op recht-e wijze (zitten)* (in straight-INFL way (sit), '(to sit) straight up'). In the spirit of Kayne (2003), the structure in (23) could then be more precisely represented as in (24a), where WIJZE 'way/manner' is a so-called silent noun. In turn, the derived structure in (20), in which the nominal expression has been moved to a Spec-position in XPP, receives the more precise structure in (24b):

(24) a. [DP **WIJZE** [D' D [NP [AP hard] [NP WIJZE]]]]
      b. [FP **[DP WIJZE [D' D [NP [AP hard] [NP WIJZE]]]]** [F' F [PP op [DP]]]]

What is interesting is that the symmetry between (17a) and (18) increases if, in the spirit of Katz & Postal's (1964:98) and Kayne's (2005a: chapter 4) analysis of English locative *there* as THAT *there* PLACE, we assume that the surface element *daar* in (17a) has the abstract underlying structure DAT *daar* ENTITY (that there entity, 'that thing over there'), where *daar* functions as a modifier of the silent noun ENTITY. This gives us the representation in (25):

(25) [FP **[DP DAT daar ENTITY]** [F' F [PP achter [DP DAT daar ENTITY]]]]

Support for the structure in (25) may come from patterns in which the R-pronoun *daar* is accompanied by an emphatic demonstrative pronoun, as in (26):

(26) [PP Achter [DP dát (daar)]]] kun je   je   goed verstoppen!
      behind   that there   can you REFL well hide
      'You can hide yourself well behind that.'

Interestingly, as shown in (27), the "bare" demonstrative *dat* and the complex pattern *dat daar* cannot directly precede the adposition. Only the surface form *daar* can occur in that position:

(27) a. *[Dat daar achter] kun je je goed verstoppen.
      b. *[Dat achter] kun je je goed verstoppen.
      c. [Daar achter] kun je je goed verstoppen.

Based on the data in (27), and assuming the abstract analysis of *daar* in (25), we can formulate the generalization that the silence of the nominal part —that is, ENTITY in (25)— correlates with the displacement of the surface form *daar* to a Spec-position in XPP. Possibly, this silence of the nominal part plays a role as well in the derivation of the pattern *hardop*. The ill-formedness (*) of the postpositional pattern *harde wijze op* (loud-INFL way, 'aloud') and the well-formedness of the prepositional pattern *op harde wijze* suggests that silence of the noun (NP) somehow correlates with being in a Spec-position of XNP.[11] The question, obviously, arises as to why this is so.

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[11] The ill-formedness of the adpositional pattern *harde wijze op* raises the question as to why the directional XPP *de boom in* in (16) is well-formed. In the latter example, we seem to have a phonologically overt noun phrase in the specifier position of XPP. However, if we follow Koopman's (2000) analysis of the postpositional phrases like *de*

Following Kayne (2005b: 295), I assume that spell-out has a blind spot for material in the Spec-position of a *phase*-head. In Kayne's words: "At a given phase level, no material within (or adjoined to) a lower phase can be spelled out." If material in a specifier position is pronounced, it must of necessity be the specifier (or adjunct) of a *non-phase*. Consider now the structure in (28), where the silent N(P) *WIJZE* occupies the Spec-position of the phasal head D, and DP is the complement of P. The latter heads the extended projection XPP, which contains the next highest phasal head, namely F. At phase-level F in (28), the material in the Spec-position of the lower phase-head (D) is invisible for spell-out. Importantly, the DP-complement of P remains accessible for displacement to [Spec,FP], that is, the next phase. If the entire DP occupies [Spec,FP] after movement has taken place, as in (24b), *WIJZE* remains invisible for spell-out. The Spec-position of a phase (here: DP) remains invisible for spell-out if that phase occupies the Spec-position of another, larger phase (here: FP).

(28) [FP F$_{phase-head}$ [PP P [DP **WIJZE** [D' D$_{phase-head}$ [NP [AP **hard**] [~~NP WIJZE~~]]]]]]]

In summary: starting from the idea of cross-constructional symmetry, I provided an analysis of the adverbial pattern *hardop*. The derivation of adpositional patterns like *daarop* (there-on, 'on that'), in which the R-pronoun *daar* precedes the adposition *op*, served as an important point of reference for my analysis. I further proposed that the morphological bareness of the attributive AP *hard* in *hardop* should be interpreted as a side effect of XNP-internal movement of the low NP/nP *WIJZE* to a position preceding the attributive AP. In section 5, I will discuss a few XNP-internal displacement phenomena that corroborate this analysis according to which agreement with a displaced nominal constituent is not possible in Dutch.

3. Bare APs and XNP-internal movement. I start my discussion with the minimal pair in (29):

(29) a. Liev-e   hemel-tje!   b.   Hemeltje   lief!
          dear-AGR   heaven-DIM   heaven-DIM dear
          'Heavens!'   'Heavens!'

(29a) and (29b) are variants of an exclamative expression. In (29a), the attributive adjective precedes the modified noun and carries the attributive adjectival inflection -*e*. In (29b), on the contrary, the attributive adjective follows the noun and does not carry the inflectional marker -*e*. Since attributive adjectives typically precede modified nouns in Dutch, the word order in (29a) arguably is the base order, while the inverted pattern in (29b) represents the derived word order. I propose that the N+A word order pattern results from XNP-internal movement of the phrase *hemeltje* to [Spec,DP], as in (30).[12]

(30) [DP **hemeltje** [D' D^o [NP lief [NP ~~hemeltje~~]]]]

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boom in, it is not a noun phrase that occupies the specifier of a functional projection (specifically, PathP) but rather an "adpositional projection" (specifically PlaceP), whose head is empty. Schematically, where (i) is an "intermediate" structure derived by head-movement of P, and (ii) is the final structure derived by movement of PlaceP (containing the trace of the moved adposition) to [Spec,PathP].

(i)   [PathP Spec [Path' in$_j$ [PlaceP Spec [Place' t'$_j$ [PP Spec [P' t$_j$ de boom]]]]]]]]]]]
(ii)   [PathP [PlaceP t'$_j$ de boom]$_k$ [Path' in$_j$ t$_k$]]

[12] I assume that, even though *hemeltje* occupies the Spec-position of the phasal projection DP, it can be pronounced. Notice that there is no higher phasal projection in which this expressive "root" DP is embedded. Given the absence of this higher phasal projection, the element in [Spec,DP] can be pronounced by default.

Another example suggesting that adjectival inflection is absent on the attributive adjective when it modifies an XNP-internally displaced noun is the temporal expression in (31):

(31) ['s Ochtends   vroeg] / ['s Avonds   laat] vertrekken we.
      -s morning-s early / -s evening-s late   leave   we
      'We will leave early in the morning / late in the evening.'

This temporal expression contains three elements: the initial element *'s*, the possessor-like element *ochtends*, which features the possessive element *-s* at the end (thus: *ochtend-s*), and, finally, the adjectival element *vroeg/laat*. In Corver (2022a), it is proposed that these temporal expressions are Construct State noun phrases. These nominal constructions are familiar from the literature on Semitic languages —e.g., Modern Hebrew *beyt ha-mora ha-gadol* (house the-teacher the-big, 'the teacher's big house'); see Ritter (1988)— and have been analyzed as patterns involving DP-internal movement of the nominal possessum (*beyt*) across the attributive AP (*ha-gadol*) and the possessor (*ha-mora*) to a DP-internal left-peripheral position immediately preceding the possessor. Schematically: *beyt ha-mora ha-gadol* ~~beyt~~. With this movement analysis in mind, and taking the temporal expressions in (31) to have the meaning 'the early time of the morning/the late time of the evening', we can derive them as follows (see Corver 2022a for a more detailed discussion): First of all, *'s* is a "small" nominal expression (nP) consisting of a silent noun *TIME* and a categorial head *n* which surfaces as *'s* after the root has raised to *n*: *[nP [√TIME+n (= -s)] [√TIME]]*. This small nP raises across the attributive *vroeg/laat* and the temporal possessor *ochtends*, ending up in [Spec,DP], as depicted in (32).

(32) [DP [nP [n √TIME+n (= -s)] ~~√TIME~~]k [PosP ochtends [Pos' Pos [nP vroeg [nP tk]]]]]

Importantly, the attributive AP *vroeg* in (32) can't carry any attributive-adjectival inflection: *'s ochtends vroeg(*-e)*. In this respect, it differs from attributive adjectives that are followed by an overt *in situ* noun, as in *op die vroeg-e tijd* (at that early-INFL time, 'at that early moment').

4. Further support for XNP-internal displacement. So far, we have seen that certain nominal constructions display XNP-internal movement of a "low" nominal expression (NP/nP). In this section, I discuss another interesting nominal pattern illustrating XNP-internal displacement of a "low" nominal expression to a left-peripheral position. The pertinent construction is exemplified in (1b), which is repeated here as (33):

(33) ..dat ik de woorden [**op z'n Eminem's**] uitsprak.
      that I the words   at z'n Eminem-s   pronounced
      '..that I pronounced the words in an Eminem-like way.'

The sequence *op z'n Eminem's* is an adpositional construction consisting of the preposition *op* 'at' and the nominal expression *z'n Eminem's*. As is clear from the translation, the construction has a manner-like interpretation: 'in an Eminem-like manner/way'. The nominal expression *z'n Eminem's* is quite puzzling because it appears to display two possessor-elements in a row: *z'n*, which looks like a weak possessive pronoun —compare: *z'n fiets* (his_weak bike)— and the proper name *Eminem*, which carries the possessor-marking *-s*.[13] It is not so clear how to accommodate these two possessors in XNP Normally, there is only room for one possessor to the left of the possessum-noun:[14]

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[13] The strong form of the masculine, singular possessive pronoun is *zijn*, which is pronounced as /zɛin/.

[14] The sequence *Eminem z'n* is found in doubling possessive noun phrases such as *Eminem z'n teksten* (Eminem his lyrics, 'Eminem's lyrics'). Importantly, *Eminem* does not carry the possessive marker *-s* at the end. These possessive

(34) z'n teksten / Eminem's teksten / *Eminem's z'n teksten / *z'n Eminem's teksten
      his lyrics   / Eminem's lyrics   / Eminem's his lyrics / his   Eminem's lyrics

As these examples show, the noun *teksten* 'lyrics' can be preceded by the possessive pronoun *z'n* 'his' or the possessor *Eminem's*, which is accompanied by the possessive marker *'s*, but not by the two elements simultaneously. This non-cooccurrence of *z'n* and *Eminem's* suggests that *z'n* in (33) is not a possessive pronoun.

     Another phenomenon that suggests that *z'n* is not a possessive pronoun comes from the example in (35), where *z'n* is followed by the coordinate structure *Bill en Hillary's* 'Bill and Hillary's'. If there were some sort of construal relationship between *Bill en Hillary* on the one hand, and the possessive pronoun on the other hand, one would expect the plural possessive pronoun *hun* 'their' or its weak counterpart *d'r* 'their' to be present instead of *z'n*. These forms are impossible, however, in the adverbial pattern in (35): **op hun/d'r Bill en Hillary's*. In short, the example in (35) also suggests that *z'n* is not a (weak) possessive pronoun.

(35) Zij houden [**op z'n Bill en   Hillary*'s***] van elkaar.
      they love   at *z'n* Bill and Hillary's   of each.other
      'They love each other in a Bill-and-Hillary-like way.'

But if *z'n* is not a weak possessive pronoun, what could it be? As indicated in (33), the pattern *op z'n Eminem's* has a manner interpretation: 'in an Eminem-like way'. Suppose now that *z'n* represents the manner part of this nominal construction. Specifically, I assume that *z'n* (pronounced as /zən/) is the weak counterpart of the indefinite demonstrative pronoun *zo'n* (so + a/one, 'such a one'). I propose this pronoun can be decomposed into two elements: *ze* (/zə/), which I take to be a phonologically weak variant of the indefinite demonstrative pro-form *zo* 'so', and *'n* (/ən/), which I analyze as an indefinite pro-form occupying the root position.[15] Furthermore, for the sake of the argument, I assume that the indefinite demonstrative occupies the specifier position of nP. This gives us the following structure for the indefinite demonstrative manner-like pronoun *z'n*: $[_{nP}\ zə\ [_{n'}\ n^o\ [\sqrt{ən}]]]$.[16]

     The adverbial pattern *op z'n Eminem's* can now be derived as follows:

(36) $[_{PP}\ op\ [_{DP}\ D^o\ [_{FP}\ \textbf{z'n}\ [_{F'}\ F^o\ [_{PosP}\ Eminem\ [_{Pos'}\ \text{-s}\ [_{nP}\ \text{z'n}]]]]]]]$

As shown in (36), the weak nP *z'n* moves from its base position to a Spec-position of some functional projection within the nominal left periphery, crossing the possessor *Eminem's*.[17]

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noun phrases have been analyzed in terms of Spec-head-agreement, where the weak possessive pronoun *z'n* is the functional head and *Eminem* is the possessor that agrees (in person and number) with the possessive pronominal head. Schematically: $[_{PosP}\ Eminem\ [_{Pos'}\ z'n\ [_{NP}\ teksten]]]$.

[15] This weak manner-adverbial pro-form *ze* (i.e., /zə/) is arguably also found in so-called Success-imperatives like *Slaap ze!* (sleep *ze*, 'sleep well') and *Werk ze!* (work *ze*, 'Have fun at work!'); see Corver (1995). This imperative is used in contexts where the addressee has the intention to perform a certain action (e.g., sleeping/working), and the speaker expresses his wish that this action will be performed in such a way that the addressee will be satisfied. Interestingly, the weak pro-form *ze* is in complementary distribution with manner-adverbial expressions like *lekker* 'nicely/well'. Thus: *Slaap (*ze) lekker!* ('Sleep well!'). Their complementary distribution follows automatically if they compete for the same syntactic position, namely the verb-phrase-internal position where manner-adverbials are base-generated.

[16] I assume that the sequence of schwas in *zə+ən* is pronounced as a single schwa. Thus: /zən/.

[17] This Spec-position is not [Spec,DP], given the hypothesis that [Spec,DP] is invisible for spell-out; see the discussion at the end of section 2.

I propose that the same element *z'n* is attested in adverbial constructions of the following type:[18]

(37) [Op z'n vroegst] komt hij om 11 uur thuis.
    at z'n earliest comes he at 11 o'clock home
    'He'll be at home at 11 o'clock at the earliest.'

The bracketed adverbial construction in (37), which has a temporal interpretation, consists of the preposition *op*, the element *z'n*, and the superlative adjective *vroegst*, which features the superlative morpheme *-st*. I propose that in the spirit of the analysis of *op z'n Eminem's* in (33), the adverbial construction in (37) is derived by moving the nP *z'n* from its base position to a left-peripheral position within the extended nominal projection. Schematically:

(38) [$_{PP}$ op [$_{DP}$ D [$_{FP}$ **z'n** [$_{F'}$ F [$_{nP}$ vroegst [$_{nP}$ ~~z'n~~]]]]]]

Notice by the way that the superlative adjective in (37) cannot bear the adjectival inflection *-e*. Thus, the pattern *op z'n vroegst-e* is ungrammatical. This fact is in line with the idea that, in Dutch, an attributive AP cannot agree with a nominal copy (trace) in its search domain, *in casu* the copy of the displaced pronominal nP *z'n*.

Summarizing, I have shown so far that there are various phenomena that hint at the existence of XNP-internal displacement of a low nominal expression (NP/nP) to a Spec-position in the left periphery of the noun phrase. Furthermore, it was shown that in those patterns in which the displaced NP/nP crosses an attributive AP, the AP cannot be inflected. This brings us back to the adverbial A+P-pattern *hardop* 'aloud', which was given the preliminary analysis in (24). If the gap in (24) results from XNP-internal displacement, as represented in (23), the complete derivation of *hardop* looks as follows:

(39) a.　[$_{DP}$ F [$_{NP}$ [$_{AP}$ hard] [$_{NP}$ WIJZE]]]　　　　　　'Base structure'
    b.　[$_{DP}$ **WIJZE** [$_{NP}$ [$_{AP}$ hard] ~~[$_{NP}$ WIJZE]~~]]　　　　DP-internal displacement of nP
    c.　[$_{FP}$ F [$_{PP}$ op [$_{DP}$ **WIJZE** [$_{NP}$ [$_{AP}$ hard] [~~WIJZE~~]]]]]　Merger of XPP (i.e., P, F)
    d.　[$_{FP}$ **[$_{DP}$ WIJZE [$_{NP}$ [$_{AP}$ hard] [~~WIJZE~~]]]** [$_{F'}$ F [$_{PP}$ op ~~DP~~]]]
    　　　　　　　　　　　　　　　　　　　　Mvt. of DP to [Spec,FP]

Starting from the idea of cross-constructional symmetry, I have so far provided an analysis of the adverbial pattern *hardop*. The derivation of adpositional patterns like *daarop* (there-on, 'on that'), in which the R-pronoun *daar* precedes the adposition *op*, served as a point of reference for my analysis. In section 7, I will fine-tune my analysis by comparing the syntactic behavior of *daarop* and *hardop* a bit more closely, especially from the perspective of extraction from XPP.

5. Displacement (from) within XPP. If *hardop*, like *daarop*, is a derived structure —that is, a word order pattern that is the result of a displacement operation—then one might expect them to also behave the same with regard to displacement from XPP. As the following examples show, movement of the R-pronoun *daar/waar* from XPP is possible; see Van Riemsdijk (1978):

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[18] Other illustrations of this pattern are *op z'n minst* (at *z'n* least, 'at least') and *op z'n hoogst* (at *z'n* highest, 'at most'), as in *Er komen [op z'n minst 30 personen] op zijn feest* (there come at *z'n* least 30 persons at his party, 'There will be at least 30 people at his party). These adverbial patterns define the lower (*minst*) or upper limit (*hoogst*) of a quantity. For the sake of completeness, it should be noted here that Dutch also permits manner-adverbial expressions of the type *op m'n/ z'n boost* (on my/his angriest, 'in my/his angriest way'), as in *Ik/Hij keek toen op m'n/z'n boost* ('Then, I/he looked in the angriest possible way'). Note that the possessive pronoun agrees with the subject of the clause: *ik…m'n*; *hij …z'n*. For reasons of space, I won't discuss this manner-adverbial pattern here.

(40) a. ***Daar*** heeft hij [PP ~~daar~~ op] gezeten!
        there has he   on sat
        'Thát he was sitting on!'

    b. ***Waar*** heeft hij [PP ~~waar~~ op] gezeten?
        where has he   on sat
        'What was he sitting on?'

Based on the extraction behavior of *daar/waar*, one would expect extraction of the AP *hard* from *hardop* to be possible as well. However, as shown in (41), this is not the case, even if *hard* is combined with a degree word:

(41) a. ****Hard*** droomde Jan [~~hard~~ op].
        hard   dreamed Jan   up
        'Jan was dreaming aloud.'

    b. ****Zo hard*** droomde Jan [~~zo hard~~ op] dat iedereen er   wakker van werd.
        so hard dreamed Jan   up that everyone there awake of   got
        'Jan dreamed so loudly that it woke up everyone.'

The contrast between (40) and (41) suggests that there is a difference in locality of movement: an R-pronoun such as *daar/waar* can be removed from XPP, but an XAP such as *(zo) hard* cannot. One could try to relate this contrast to the syntactic position of the XPP. In (40) the R-pronoun is removed from an XPP that functions as a complement of the verb *zitten* 'to sit'. In (41), on the contrary, the phrase *(zo) hard* is removed from an adjunct PP. Based on this contrast, one might try to account for the contrast between (40) and (41) in terms of the so-called Adjunct condition, the island condition that blocks extraction from adverbial phrases (Cattell 1976; Huang 1982). It should be noted, however, that although extraction of an R-pronoun from an adjunct-PP gener-ally produces a less good result than extraction from a complement-PP, it is not the case that extraction of an R-pronoun is completely excluded. As shown in (42), for example, extraction of an R-pronoun from an adjunct-PP yields a quite acceptable sentence.

(42) ***Waar*** slaap je   beter [PP ~~waar~~ op], op een hard matras of op een zacht matras?
     where sleep you better   on on a   hard mattress or on a   soft   mattress
     'What do you sleep better on? On a hard mattress or on a soft one?'

Based on the contrast between (41) and (42), one may wonder whether this contrast in extraction behavior should be accounted for in terms of something like the Adjunct condition. Fortunately, there is an alternative route that I think is more interesting to explore. This alternative route is re-lated to Van Riemsdijk's (1978) proposal that extraction from PP is only possible via an escape hatch—a specifier position—in the left periphery of the adpositional phrase. Importantly, as Van Riemsdijk already noted, there is a "high" specifier position within the adpositional phrase but also a "low" one (see especially Koopman (2000) for discussion of this). Support for the exist-ence of two specifier positions comes from the example in (43):[19]

(43) [PP <Daar$_2$> vlak <daar$_1$> achter] reed   de F1-wagen van Max Verstappen.
        there   right   behind drove the F1-car   of Max Verstappen
     'Right behind it drove Max Verstappen's F1-car.'

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[19] '<α2> ... <α1>' designates that α occupies either syntactic position α1 or syntactic position α2. In the gloss I will only give the translation of the first occurrence of α in the sentence.

As (43) shows, the R-pronoun can occupy two positions to the left of the adposition *achter*: (i) a low position (*daar₁*) located between the adposition and the modifier (*vlak*), and (ii) a high position (*daar₂*) preceding the modifier. The idea now is that extraction from PP is possible only via the highest (i.e., leftmost) specifier position, which can be reached only via an intermediate stop in the lower specifier position (for reasons of locality). This is schematically represented in (44), where (44a) represents movement to the low PP-internal specifier position, (44b) movement to the high PP-internal position, and (44c) movement to a PP-external position.[20]

(44) a.   [F2P Spec2 [F2′ F2 [F1P vlak [F1P ***daar*** [F1′ F1 [PP achter ~~daar~~]]]]]]   (= *daar₁*)
      b.   [F2P ***daar*** [F2′ F2 [F1P vlak [F1P ~~daar~~ [F′ F1 [PP achter ~~daar~~]]]]]]   (= *daar₂*)
      c.   ***Daar*** ... [F2P ~~daar~~ [F2′ F2 [F1P vlak [F1P ~~daar~~ [F′ F1 [PP achter ~~daar~~]]]]]]

Suppose now that *(zo) hard* in (41) can move PP-internally to the low PP-internal specifier position (F1P) but not to the high one (FP2). In that case, this constituent —a nominal expression according to the analysis in (39)—is "locked up" in the XPP. The escape hatch (i.e., Spec2) is inaccessible. This analysis obviously raises the question as to why it is possible for the R-pronoun *daar* to move to the high PP-internal specifier position (see (44b)), but not for *(zo) hard*? It does not seem implausible to relate this to the syntactic and semantic nature of the two nominal expressions, that is *daar* versus *[hard+WAY]*. The former has a referential/discourse-related status and consequently can be identified as a DP, the latter does not seem to refer to any specific, identifiable manner and can, for that reason, be analyzed as a "lower" nominal expression (say, NP/nP); see also Corver (2022b). Arguably, only DPs (and not NPs) can reach the far edge of XPP. Notice at this point that this contrast (DP versus NP) possibly also plays a role in the following minimal pair:

(45) a.   ..dat ze   langzaam [PP *deze berg*   op] zijn   gereden.
            that   they   slowly   this mountain up   are   driven
            '..that they slowly drove up this mountain.'
      b.   ..dat ze langzaam [PP *berg*op] zijn gereden.
            '..that they slowly drove uphill.'

Interestingly, the definite DP *deze berg* displays a more versatile XPP-internal distributional behavior than does the bare nominal *berg*. Just like *daar* in (43), the phrase *deze berg* can occur in a position interspersed between the modifier and the postposition —e.g., *[XNP De route [XPP helemaal **deze berg** op]] duurt vijf uur* (the route entirely this mountain up lasts five hours; 'The route all the way up this mountain lasts five hours.')— or in a position to the left of the modifier —e.g., *[XNP De route [XPP **deze berg** helemaal op]] duurt vijf uur*—. This free distribution is not found with the bare nominal form *berg* in *bergop*. The nominal expression *berg* can only occur in the low position: *[XNP De route [XPP <*berg> helemaal <berg> op]]*.

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[20] Notice that *daar* in (44) can be pronounced in [Spec,F1P] or [Spec,F2P]. The fact that pronunciation of these Spec-positions is possible, suggests that F1 and F2 are non-phasal heads; recall here the discussion at the end of section 2. Arguably, extraction of *daar* from within XPP requires an intermediate touchdown in the Spec-position of a *phasal* projection at the top of XPP (say, the adpositional equivalent of clausal [Spec,CP]); see Koopman (2000). It is this Spec-position that is invisible for spell-out; that is, the copy *daar*, left behind after subextraction from XPP has taken place, must remain unpronounced.

Notice now that *deze berg* can be removed from PP, but *berg* cannot. Arguably, this contrast in sub-extraction from XPP relates again to the fact that *deze berg* can reach the high specifier position of XPP but the bare nominal *berg* cannot.[21]

(46) a. **Deze berg**   zul je   vermoedelijk niet [PP ~~deze berg~~ op] willen rijden.
      this mountain will you probably   not   up   want.to drive
      'You probably don't want to drive up this mountain.'

   b. ****Berg** zul je vermoedelijk niet [PP ~~berg~~ op] willen rijden.

Summarizing, I showed in this section that the (hidden) nominal expression *(zo) hard* in the adverbial XPP *hardop* occupies a "low" specifier position. This low position underlies the non-extractability of *(zo) hard*.

6. Bare adjectival "adverbials". In this section, I will take the analysis developed so far one step further by proposing that superficially bare adverbial APs are in fact also hidden nominal expressions that are embedded in a larger PP. Schematically, this would give us the derived structure in (47) for the adverbial AP *zacht* 'softly' in a sentence like *Hij huilde zacht,* 'He cried softly' (see also (1d) and (2)). For the sake of simplicity, I have left out the DP-internal movement step that moves the low (silent) nP *WIJZE* to a position to the left of the attributive AP. As indicated by P$_\emptyset$, the adposition is a silent P.

(47) [FP **[NP [AP zacht] [NP WIJZE]]** [F' F [PP P$_\emptyset$ ~~[NP [AP zacht] [NP WIJZE]]~~]]]

Also here, a parallel can be drawn with Dutch PPs consisting of an R-pronoun and a (locative) adposition (e.g., *waarop*, *daarop*, *hierop*; 'on what/that/this'). As the examples in (48) show, Dutch also permits "bare" R-pronouns, that is, R-pronouns that are not accompanied by an audible adposition.

(48) a. **Waar** stonden Jan en Els?   b.   Els stond **hier** and Jan stond **daar**.
      where stood   Jan and Els   Els stood here and Jan stood there
      'Where did Jan and Els stand?'   'Els stood here and Jan stood there.'

One could link the locative meaning of these bare R-pronouns to the presence of a silent (i.e., phonetically absent) locative adposition (see Collins 2007 for English *where/there/here*). Under such an analysis, the syntactic structure of the surface forms *waar/daar/hier* is no different from that of the locative PPs *waarop/daarop/hierop*. They differ only in the exponence of P. In the case of the bare R-pronouns in (48), the locative P is silent, which is represented in (49) by P$_\emptyset$. Recall from Section 4, example (25), that I take the surface form *daar* to have the more abstract structure depicted in (49). In this structure, *daar* functions as a modifier of the silent noun ENTITY.

(49) [FP **[DP DAT daar ENTITY]** [F' F [PP achter ~~[DP DAT daar ENTITY]~~]]]

The question obviously arises as to whether there is any further support for the idea that bare adverbials (e.g., *zacht* in (47)) —thus, those adverbials which (can) lack exponence of

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[21] A similar contrast is found with scrambling of the complement of P to a position in the so-called Middle Field. The definite DP *de berg* (the mountain) can be moved to a position in the Middle Field, the "bare" NP *berg* cannot. The stranded P carries phonological stress.

   (i)   Hij zal *(de) berg vermoedelijk niet [PP --- óp] durven rijden.
        he will the mountain presumably not   up dare drive
        'Presumably he will not dare to drive up this mountain.'

P— occupy a specifier position in XPP. For reasons of space, I won't be able to discuss this issue in any depth, so I will restrict myself to giving a few examples of a type of bare-adverbial (i.e., P-less) pattern that also hints at the specifier status of superficially P-less adverbials. The (non-manner) adverbial pattern I have in mind is exemplified in (50a,b). The examples in (51a,b) illustrate the adpositional counterparts of the superficially P-less patterns in (50a,b).[22]

(50) a. hoog-st-en-s   (51) a. ten hoogste (zie ook minstens/ten minste)
         high-SUP-*en*-*s*   at high-SUP-*e*
         'at most'   'at most'
    b. overig-en-s   b. voor het overige
         other-*en*-*s*   for   the other-*e*
         'besides / for rest'   'besides / for the rest'

As indicated by the translations of each pair, the "bare" pattern (i.e., without exponence of P) and the adpositional pattern (i.e., with exponence of P) have the same meaning. The adpositional pattern features an adposition (*ten, voor*) and a nominal complement of which the noun is elided and the inflected adjective (*hoogste*/*overige*) constitutes an adjectival remnant. The (superficially) P-less patterns in (50a,b) have three distinguishing properties: firstly, the adposition must be absent; for example, *(*voor) overigens*; *overigens (*voor)*. Secondly, the bare element has the bound morpheme -*s* at the end. Traditionally, this -*s* was characterized as so-called 'adverbial -*s*'. In Corver (2022a), this bound morpheme is analyzed as a (last resort) affixal realization of the categorial node *n*, which implies that the adverbial forms in (50a,b) are actually small nominal expressions, that is, nPs. A third property of the patterns in (50a,b) regards the element -*en* (pronounced as /ən/). In older stages of Dutch, this was a dative case-marking, which, under the assumption that Dative case is assigned by P in Dutch (Den Dikken and Mulder 1991), hints at the presence of adpositional structure.[23] Let's assume that, in present-day Dutch, this adpositional structure is still present but without exponence of P. I further assume that, in present-day Dutch, this bound morpheme -*en* has been reinterpreted as a phonologically weak indefinite pronoun. I assume it is equivalent to English *one*, as, for example, in *the other one*. According to this decompositional analysis, the "adverb" *overigens* has the internal structure in (52), where -*en* is the weak pro-noun, -*s* the Spell-Out of the categorial node n, and *overig* an attributive AP modifying the pro-form -*en*-*s* 'one'.

(52)   [$_{nP}$ [$_{XAP}$ overig] [$_{nP}$ n (= -*s*) [√-en]]]

The surface form *overigens* is derived by moving -*en* to n°, yielding the complex head [$_n$ [√-en]-s], and subsequently adjoining the attributive XAP *overig* to the pronominal nP -*en*-*s*, yielding the pattern *overig-en-s*.

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[22] Adverbial patterns such as *hoogstens* (50a) and *ten hoogste* (50a') have an interpretative relationship with the pattern *op z'n hoogst* (at z'n highest, 'at most'), which was mentioned in footnote 18. Interestingly, Dutch also has the pattern *hooguit* (high-out, 'at most'), which instantiates the A+P pattern. I assume that these are all "surface realizations" of one and the same abstract, underlying adpositional structure.

[23] See, for example, Middle Dutch *entrouwen* (in-troth-DAT, 'as a matter of fact/indeed'), which can be decomposed into three elements: *en-trouw-en*. Present-day Dutch *trouwens* 'by the way' has its origin in this construction. I assume that *trouwens* has the same derivation as *overigens*; see (51).

So far, I have argued that nominal forms ending in *-en-s* typically occupy the specifier position of XPP. Interestingly, there is also an R-pronoun ending in *-ens*, namely *ergens* 'somewhere, and its negative counterpart *nergens* 'nowhere'. As exemplified in (53) for *ergens*, this R-pronoun can occur "on its own" (i.e., without P-exponence) or in combination with an overt adposition (*onder*). I assume that in both cases P is present, but that they differ from each other as regards P-exponence.

(53) Hij had de sleutel [$_{XPP}$ **ergens (onder)**] gelegd.
     he had the key   somewhere under   put
     'He put the key somewhere (= *ergens*)/ underneath of something (= *ergens onder*).'

So far, we have seen several small nominal expressions (*overigens*, *ergens*) that end with the so-called 'adverbial *-s*', which, in Corver (2022a), was analyzed as a morphological realization of the categorial node *n*. All these nominal expressions (nPs) were taken to occupy a specifier position within XPP as a result of an XPP-internal displacement operation. It is tempting to formulate the descriptive generalization that all small nominal expressions featuring "adverbial *-s*" occupy a specifier position within XPP. If we follow this generalization, the manner-adverbial expression *zachtjes* (soft-DIM-s, 'softly') in (1e), repeated here as (54), would also occupy an XPP-internal specifier position.

(54) ..dat Jan de woorden *zachtjes* uitsprak. (= (1e))
     that Jan the words   soft-DIM-s pronounced
     '..that Jan pronounced the words softly.'

Following Corver (2022a), I take the nominal structure of *zachtjes* to be as in (55a), where *WIJZE* 'way' is the silent root that moves to the categorial head *n*, which spells out as *-s*. The bound morpheme *-je* is the diminutive morpheme, which typically shows up in nominal environments, and the adjective *zacht* is an attributive AP that functions as a modifier of the (movement-derived) small nominal expression *WIJZE-je-s*.[24] If we follow the generalization that small nominal expressions featuring adverbial *-s* occupy a specifier position of XPP, we end up with the derived structure in (55b):

(55) a.   [$_{XP}$ zacht [$_{XP}$ -je [$_{nP}$ [$_n$ √WIJZE+n (= -s)] [√W̶I̶J̶Z̶E̶]]]]
     b.   [$_{FP}$ **zachtjes** [$_{F'}$ F [$_{PP}$ P$_Ø$ z̶a̶c̶h̶t̶j̶e̶s̶]]]

The question obviously arises as to whether we ever find structures in which P surfaces in structures featuring nominal expressions of the type *zachtjes*. As shown in (56), such adverbial PPs can indeed be found. It should be noted that PPs of the type in (56) have an aspectual flavor. Specifically, they have a durative meaning; they expresses time but do not imply a temporal end-point.

(56) a.   [$_{XPP}$ Rustig-je-s aan] kwam onze hond aanwandelen.
         slow-DIM-s   on came our dog PRT-walk
         'Our dog slowly walked over.'
     b.   [$_{XPP}$ Langzaampjes aan] ging het steeds beter met hem.
         slow-DIM   on went it ever better with him
         'Slowly he got better and better.'

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[24] For discussion of Dutch manner-adverbials featuring diminutive morphology, see also also Cloin-Tavenier (2023).

In summary: I tried to show in this section that superficially bare (i.e. P-less) adverbials such as *zacht* (soft, 'softly') have a hidden adpositional structure. More specifically, the AP *zacht* is part of a nominal expression which occupies a low specifier position within XPP.

7. From a mono-linguistic perspective to a cross-linguistic perspective. So far, my discussion of the inner structure of adverbial expressions has focused entirely on one language: Dutch. From the perspective of Chomsky's (2001:2) Uniformity Principle (see section 1), one would expect to find adverbial patterns like those in Dutch (see (1)) also in other languages of the world. The following data drawn from Loeb-Diehl's (2005) typological study on manner-adverbial expressions suggest that this is indeed the case:[25]

(57) a.   bä-fətnät   with speed   'quickly'   Amharic (Afro-Asiatic, Semitic)
      b.   me vermendje   with attention   'attentively'   Albanian (Indo-European)
(58) a.   dôi-ro   quick-to/ALL   'quickly'   Kanuri (Nilo-Saharan, Saharan)
      b.   atr-I   quick-LOC   'quickly'   Latvian (Indo-European, Baltic)
(59) a.   âhaste   slow   'slowly'   Persian (Indo-European, Iranian)
      b.   hocikon   beautiful   'beautifully'   Manchu (Altaic, Tungusic)
(60) a.   vacker-t   beautiful.SG.NEUT   'beautifully'   Swedish (Germanic, Indo.Europ.)
      b.   rapide-*ment*   quick-*ment*   'quickly'   French (Romance, Indo.Europ)

(57) represents the P+N pattern, (58) the A+P pattern, (59) the 'bare A' pattern, and (60) the 'A+bound-morpheme' pattern'. As noted in Loeb-Diehl's study, languages often display more than one adverbial surface pattern to express manner modification. It goes without saying that for a thorough understanding of each of the patterns in (57)-(60), an in-depth investigation of the properties of each of them is required. Based on the analyses of their Dutch equivalents, and starting from the hypothesis that adverbial expressions have a universal adpositional design, one might hypothesize that the patterns in (57)-(60) have the following derived structures:

(61) a.   [PP bä [NP fətnät]]   (see (1a))
      b.   [FP [nP [AP dôi] [WAY]] [F' F [PP ro nP]]]   (see (39))
      c.   [FP [nP [AP âhaste] [WAY]] [F' F [PP PØ [NP [AP âhaste] [NP WAY]]]]]   (see (47))
      d.   [XP vacker [XP -t [nP [n WAY+n] [WAY]]]]   (see (55))
           [FP vackert [F' F [PP PØ vackert]]]

In (61a), we have a *pre*positional structure: the complement of P is in its base position. In (61b), we have a derived structure comparable to the structure assigned to Dutch *hardop* 'aloud'. The adjective *dôi* is taken to be an attributive AP modifying the silent NP *WAY*. As indicated, the NP *dôi+WAY* undergoes movement to a specifier position in XPP. In (61c), we have the same derivation as in (61b), the only difference being that P does not surface overtly. As a result of both P's silence and N's silence (i.e., WAY), we have a bare AP as a surface form. Example (61d), finally, shows the same movement steps as in (61b,c). This example is characterized, however, by the appearance of a bound-morphemic nominal "marker", namely the neuter, singular marking -*t*. I tentatively propose that this gender-marker is a functional head (possibly, a classifier) in XNP

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[25] Loeb-Diehl's typological study (2005) does not discuss the Dutch adverbial pattern *op z'n Eminems* 'in an Eminem-like way' (see section 6). An adverbial pattern that comes close to this Dutch expression is the French phrase *à la camerounaise* (at theFEM.SG CameroonianFEM.SG , 'in a Cameroonian way'), as in: *Elle s'habillait á la camerounaise* (she REFL-dressed in the Cameroonian, 'She was dressed in a Cameroonian way / Cameroonian style.').

and that it fulfills a grammatical role which is comparable to the diminutive morpheme in Dutch *zachtjes* (see (55)).[26]

Besides the surface forms in (57)-(60), Loeb-Diehl's typological study also notes the adverbial patterns in (62)-(63):

(62) a.   xuši.ɛ ka   pleasure with   'joyfully'   Burushaski (Isolate)
     b.   maja-la   secret-INSTR   'secretly'   Abkhaz (Caucasian, North-West)

(63) a.   leigh sé go   cúramach I.   Modern Irish (Indo-European, Celtic)
        read he to/ALL   careful   it
        'He read it carefully.'
     b.   sêŋ   gôŋ a-jam.   Yabem (Austronesian, Melanesian)
        3.PL sit INSTR-good
        'They are sitting well.'

The N+P surface pattern in (62) is the linear counterpart of the P+N surface pattern in (57). One way of analyzing this N+P pattern would be in terms of movement of the complement of P to a specifier position of XPP, analogously to the derivation of *de boom in* (the tree into, 'into the tree') in (17b). Thus, *[FP xuši.ɛ [F' F [PP ka x̶u̶š̶i̶.̶ɛ̶]]]* for the adverbial pattern *xuši.ɛ ka* in (62a). Let's next turn to the P+A surface pattern in (63), which is the linear counterpart of the A+P pattern in (58). One might argue that this pattern is the equivalent of (61b), except for the fact that the modified NP headed by the silent noun WAY remains *in situ*, that is, in the complement position to P.

As pointed out earlier, the analyses given above for the patterns in (57)-(60) and (62)-(63) are very tentative. More confidence in those analyses can be obtained only on the basis of in-depth, language-particular investigation of each of these adverbial patterns. Also at a more theoretical level, alternative analyses to those sketched above should be explored systematically. Specifically, postpositional patterns such as those in (58) and (62) could also receive an alternative analysis, namely one in terms of Emonds's (1987) concept of *alternative (i.e., affixal) realization* of P. Under such an analysis, *dôi-ro* in (58a) would have the structure in (64a) and *xuši.ɛ ka* in (62a), the one in (64b), where P is a silent *pre*position (here represented as P∅), and *-ro* and *ka* are affixal Ps realized on the nominal complement of silent P:

(64) a.   [PP P∅ [[nP [AP dôi] [WAY]]+Paff (= ro)]   *dôi-ro*
     b.   [PP P∅ [[nP xuši.ɛ]+Paff (= ka)]   *xuši.ɛ ka*

In sum, systematic description and analysis of a given phenomenon in a single language may serve as a good starting point for exploring the same phenomenon (in our case: manner-adverbial expressions) in other languages. Conversely, a broader comparative-linguistic perspective will "sharpen" language-specific syntactic analyses and give us a better view of the nature of the human language potential.

10. Linearization of adverbial expressions. I finish this chapter with a few remarks about the linearization of adverbial expressions, and, specifically, about the interaction between the inner structure of an adverbial expression and its outer behavior (i.e., distribution). If manner-adverbial expressions have an adpositional design (i.e., XPP), one would expect them to linearize like PPs. Importantly, not all PPs linearize in the same way. In Dutch, for example, *pre*positional phrases

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[26] An alternative analysis would be one in which the marking *-t* is a (last resort) spell-out of the categorial node *n*, analogously to the adverbial *-s* in Dutch.

can occur in extraposed (i.e., postverbal) position; see (65a). Postverbal placement of *post*positional phrases, on the contrary, yields a much worse result, as exemplified in (65b). Based on these examples, one might conclude that the preverbal position is the base position for PPs. It is the position that allows for the largest class of adpositional surface forms. In postverbal position —arguably, the "non-canonical" position for XPPs—, the head (*op*) of XPP must be contiguous with the verbal head. Thus: V (*gespeeld*) > P (*op*). The question obviously arises as to what underlies this head-adjacency requirement between V and P in an SOV-language like Dutch.[27]

(65) a. <Op een cello> gespeeld <op een cello> klinkt deze sonate nog mooier.
            on a   cello   played   sounds this   sonata even better
            'When play on a cello, this sonata sounds even better.'
       b. <Hierop> gespeeld <$^{??/*}$hierop> klinkt deze sonate nog   mooier.
            here-on   played   sounds this   sonata even better
            'When played on this (instrument), this sonata sounds even better.'

As shown in (66), we find the same distributional pattern for manner-adverbial PPs. Both prepositional (66a) and postpositional patterns (66b) can occur preverbally. The postverbal position, however, can be occupied only by a *pre*positional phrase.

(66) a. <Op z'n Eminem's> uitgesproken <op z'n Eminem's> klinkt de zin nog leuker.
            at *z'n* Eminem's   pronounced   sounds this sentence even nicer
            'When pronounced in an Eminem-like way, the sentence sounds even nicer.'
       b. <Hardop> uitgesproken <*hardop> klinkt deze Japanse zin   als volgt: ...
            loud-up   pronounced   sounds this Japanse sentence as follows
            'When pronounced aloud, this Japanese sentence sounds as follows: …'

If the bare pattern *zacht* 'softly' and the 'A+bound morpheme' pattern *zachtjes* 'softly' are hidden postpositional phrases —see (47) and (55), respectively— one would expect to find them preverbally but not postverbally. This is indeed the case:

(67) <Zacht(-je-s) uitgesproken <*zacht(jes)> klinkt   deze zin   nog grappiger.
         soft-DIM-s pronounced   sounds this sentence even funnier
         'When pronounced softly, this sentence sounds even funnier.'

Arguably, the inner structure of manner-adverbial expressions —that is, being (hidden) *pre*positional or *post*positional phrases— also plays a role in the grammar of other languages; for example, in an SVO-language like English. Consider for this the examples in (68).

(68) a. She will <$^{*/??}$with care> take off the wallpaper <with care>.
       b. She will <*out loud/*aloud> read the letter <out loud/aloud> to the rest of the family.
       c. She will <*fast> finish the assignment <fast>.
       d. She will <quickly> leave the room <quickly>.

Full-fledged PPs such as *with care* in (68a) typically occur in postverbal position. They can't occur preverbally unless they are pronounced with comma intonation. Interestingly, the pattern *out loud/aloud*, the English equivalent of Dutch *hardop*, is also impossible in preverbal position. It is permitted only in postverbal position. This distributional restriction would be in line with an analysis according to which *out loud/aloud* is a *pre*positional structure headed by *out* or the

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[27] For head-adjacency effects in linearization, see among others Frazier (1980) and Philip (2013).

affixal P *a-* (see Jespersen 1933/1964:53). Notice that this P+A pattern is comparable to the patterns in (63). Consider next the bare manner-adverbial *fast*. Given the similar distributional behavior of *fast* and *out loud/aloud*, one might hypothesize that *fast* (in its adverbial use) is a hidden *pre*positional phrase headed by a silent P. Thus: *[PP Pø [nP [AP fast] [nP WAY]]]*. Notice at this point that a bare (non-manner) adverbial like *far*, which can be used to designate a distance (*She had not travelled far*) can be accompanied by an overt prepositional element in some of its uses: *She saw him from afar*, and *He is too tall by far*. These 'a/by+bare adverb' patterns possibly hint at the presence of a silent P in bare adverbial forms such as *far* and *fast*, but more in-depth study is definitely needed before drawing conclusions. Consider, finally, *quickly* in (68d).[28] In the spirit of my analysis of Dutch adverbials ending in *-(en)s* or *-jes* (see section 8), I tentatively propose that *-ly*-adverbials are licensed in a specifier position of XPP. Schematically: *[FP quickly [F' F [PP Pø quickly]]]*. Importantly, as a result of XPP-internal movement, we no longer have a *pre*positional structure headed by a silent P but a *post*positional one. Possibly, it is the (derived) *post*positional structure of the surface form *quickly* which makes it possible for *quickly* to appear preverbally. If P is postpositional, we have a linearization pattern in which P is contiguous with V, the head of the modified VP. Also in this case, the question arises as to what underlies the head-adjacency requirement between (silent) P and V in an SVO-language like English.

That *-ly*-adverbials do not occupy the complement position of P but rather a specifier position within XPP obviously needs further investigation. Some initial support for the idea that *-ly*-adverbials are associated with the specifier position of XPP (and not the complement position) comes from the observation that adverbial patterns of the type *out loud/aloud* and *afar* (i.e., P+A) never combine with *-ly*: **out loudly*, **aloudly*; **from afarly*.[29]

It goes without saying that a more in-depth study of the linearization behavior of the Dutch adverbial patterns in (66)-(67) and the English ones in (68) is needed before we can draw any firm conclusions about the linearization of adverbial expressions in those languages. Nevertheless, I hope to have shown that an adpositional perspective on adverbial expressions may give us new insights on certain linearization issues.

11. Conclusion. Thoughts representing 'manner' can be expressed in a variety of surface patterns. In this chapter, this "manner-adverbial creativity" was examined on the basis of an in-depth study of Dutch manner-adverbial patterns, with a special focus on the A+P pattern, as in *hardop*. In the spirit of the quest for *cross-constructional symmetry*, which is characteristic of generative grammar, it was proposed that these surface patterns are manifestations of one and the same abstract, underlying syntactic configuration, namely the *Extended Adpositional Phrase* (XPP). Another quest for symmetry in formal-linguistic theorizing regards the *cross-linguistic* dimension of human language. Even though languages are often superficially very different, they turn out to be highly similar at a more abstract, structural level. Cross-linguistic data on manner-adverbial patterns, as collected in Loeb-Diehl's (2005) functional typological study, hint at

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[28] In Déchaine and Tremblay (1996) English *-ly*-adverbials (e.g., *quickly*) are analyzed as nominal expressions headed by the noun *-ly*. The element *quick* is an attributive AP that modifies *-ly*. See also Baker (2003).

[29] The (temporal) adpositional pattern *until recently* suggests that *-ly*-adverbials can appear as complements of P. It should be noted, however, that this adverbial pattern arguably has a more complex adpositional design. Specifically, in line with Koopman (2000), one might propose that is has the layered structure in (i). Interestingly, the Dutch equivalent of *until recently* is the adverbial expression *tot voor kort* (till before short), where both the Path-adposition (*tot*) and the temporal-locative adposition (*voor*) are realized.

(i) [PathP [Path until] [LocP recently [Loc' Loc recently]]]

similarities in the build of Dutch manner-adverbial expressions and their equivalents in other natural languages. In-depth study of the grammar of manner-adverbials in each of those languages is needed before any firm conclusions regarding cross-linguistic uniformity can be drawn. Importantly, the study of manner-adverbial expressions provides another example of the fruitful interaction between in-depth investigation of individual languages and the comparative-linguistic study of a larger sample of languages (Baker & McCloskey 2015, Pleshak & Polinsky 2025).

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