Little words don't lie: X' have initial X^0 *

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Abstract: Four properties of short 'pre-head modifiers' in English demand attention. First, they violate the head-initial parameter setting for English phrases. Second, they cannot select complements nor undergo phrasal movement. Third, complements rather than heads receive the main stress in phrases (Nespor and Vogel 1982). But non-emphatic standard stresses in *very expensive glasses, fondly described, proudly defiant* and *directly behind* are all *on the X^0 heads.* Fourth, most English "*A-ly* adverbs" in post-head or other positions alternate with non-parenthetical PP phrases such as *in an A way* or *to an A degree.* But many–*ly* adverbs do not alternate with such PPs.
This paper argues that these 'pre-head modifiers' are in fact themselves heads which are grammatical heads (v, a, p, and n) whose complements are the traditionally termed VP, AP, PP and NP they have previously been thought to modify. The four (or five) problems above disappear. This solution leads to interesting consequences, which the paper briefly addresses, i.e. *–ly* is then a late inserted inflectional head of these 'adverbs', which are in fact adjuncts of category A located in head positions.

Key words: initial adjuncts, *-ly* adverbs, complement stress, pre-modifiers, Economy of Representation, suffixal head, null inflection

1 Seeming initial adjuncts in English phrases

The head-initial property of English phrases sometimes seems violated. The following patterns in intermediate phrasal projections X' conflict with head-initial placement. Certain "short modifiers" β, in italics in (1), can or must *precede the X^0 heads of phrases* (in bold):

* It is with great pleasure that I contribute to a volume honoring Jan Koster. His penetrating syntactic analyses and his essays on the nature of its mental reality (e.g. Koster 2007) never hesitate when evidence and logic seem to lead away from well-trodden paths. This study is rooted in this shared methodological conviction. Jan's early syntactic research (Koster 1978a and 1978b) convinced me that representations enhanced with (only) empty categories are more often than not better suited for capturing generalizations than derivations with movements. This squib finds that that a rather transparent representational approach to some enigmatic English paradigms (using a previously unsuspected empty category) makes sense of several seemingly contradictory paradigms.

(1) a. X' = N': He broke some [$_{NP}$ *very expensive* (*for us) **glasses**] in the kitchen.

b. X' = V': Bill rather [$_{VP}$ *fondly* (*of his family) **described** his hometown].

c. X' = A': She looked [$_{AP}$ *proudly* (*of her actions) **defiant**] afterwards.

d. X' = P': She put the chair [$_{PP}$ *directly* **behind** her friend].

The modifiers β in (1) are "short" in that *they cannot contain complements* (Emonds 1976: Ch. I). A third exceptional property of the modifiers in (1) that *phrasal movement of these pre-head β is impossible* (Ross 1967). The conclusion that these modifiers can't move is inescapable as there is often no alternative post-head source for β, as in (2).

(2) *How expensive did he break some glasses? *He broke some glasses very expensive.

*How proudly did she look defiant afterwards? *She looked defiant so proudly.

Two more properties of these short modifiers demand attention. It is widely understood that complements rather than heads receive the main stress in phrases (Nespor and Vogel 1982). But non-emphatic standard stresses in *very expensive glasses, fondly described, proudly defiant* and *directly behind* are all *on the X^0 heads.* Finally, most English "*A-ly* adverbs" in post-head or other positions alternate with non-parenthetical PP phrases such as *in an A way* or *to an A degree.* But *the β in (1) do not alternate with such PPs* (PPs in this position must be set off as parentheticals). These patterns are summarized in (3).

(3) Initial short *A(-ly)* modifiers in English intermediate phrasal projections X':

a. violate the head-initial parameter setting for English phrases;

b. cannot undergo phrasal movement;

c. like heads, don't receive (non-contrastive) stress in the X' domain;

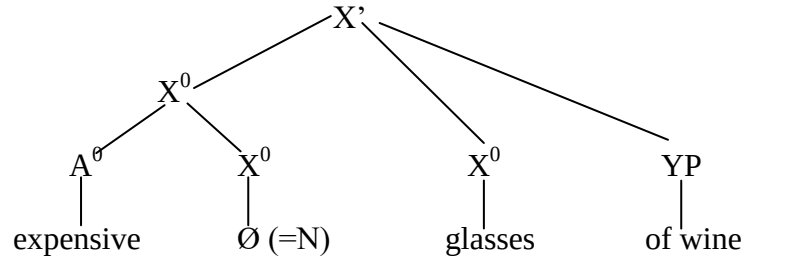
d. unlike other *A-ly*, don't alternate with (non-parenthetical) PP phrases;

e. unlike A heads of APs, cannot select their own complements.

2 A simple solution—with surprising consequences

If we treat initial "modifiers" A(-*ly*) in (1) as *heads X^0 of the various XP* as in (4), the reader can verify that the four problems in (3a-d) instantly disappear, i.e. all the relevant paradigms are *predictable consequences of the hypothesized structures (4).* We return to (3e).

(4)



fond	ly (=V)	described	his hometown
proud	ly (=A)	defiant	Ø
direct	ly (=P)	behind	her friend

But a practiced reader will doubtless be suspicious of the null N suffix proposed for English pre-nominal adjectives, as well as of the multi-categorial membership of the innocent looking "adverbial" suffix *-ly*. The purpose of this squib is to allay these suspicions and thus support the structures in (4). In order to defend these structures, I first observe that, while the category assigned the suffixes in (4) are surprising, *the categorial combinations in the structures are in themselves not problematic.*

(i) In the light of analyses of right hand heads in English morphology dating from 1980, the internal structures of the X^0 constituents β in (4) are fully akin to those in (5).

(5) $[_N\ [_A$ divin] $[_N$ ity]] $[_V\ [_A$ modern] $[_V$ ize]] $[_A\ [_A$ yellow] $[_A$ ish]]

(ii) The phrasal structures in (4) are also based on an attested model, the flat XP structures with multiple X^0 heads justified in Emonds (2001).[1] These are in bold:

[1] Under current assumptions, many readers will reconceptualize the flat structures in (6)-(9) with binary branching. Nonetheless, essentially all syntactic diagnostics show that combinations of any head but the leftmost with following phrases *uniformly fail to act as constituents* (Emonds 2001).

(6) Multiple N^0 daughters of N':

They sent out two [{**dozen/ hundred thousand} doses** of flu vaccine].

A big [**bunch** of **kids** from the local school] came to the party.

(7) Multiple V^0 daughters of V'(more amply exemplified in Romance):[2]

French: Marie veut [**y faire travailler** ses enfants].

'Mary wants to there-make work her kids.'

Italian: **Dovrai loro parlare** al più presto di questa storia.

'I should talk to them as soon as possible about this story.'

(8) Multiple A^0 daughters of A':

My son is [**{ very/ so } very conscientious** about work], or at least he seems so.

(9) Multiple P^0 daughters of P':

The cat ran [**out into** the garden]. Why go [**down back outside**] right away?

All but the rightmost heads in these flat structures *must be closed class grammatical items,* a property shared by *-ly*. Emonds (2000, 2001) derives this restriction from a theory of tri-level lexical insertion. The merger of an open class lexical head sets up a new extended projection YP, and during the resulting transformational "phase," only items in the closed class lexicon can be inserted in YP. But these include possible closed class heads Y^0. If such a Y^0 contributes to LF, the item is inserted before Spell Out, but if not, it is inserted in PF.

This scenario requires a careful understanding of "head-initial domain." Complement phrases are taken as assembled prior to insertion of heads, so in a given projection, heads are always inserted leftmost in a language like English. Hence the earliest inserted open class

[2] VP structures with multiple V heads nonetheless exist in English, though they are rarely discussed:

Mary will **come help find** the answer

They should **go run buy** some medicine right away.

head will be to the left of any phrases but to the right of any heads inserted later in the same domain. Thus no phrases can intervene between any heads, which accounts for property (3e).

In light of these well-motivated structures, I am left with the following two tasks:

(10) a. To justify [$_N$ A - [$_N$ Ø]] as the internal structure of English pre-nominal adjectives.[3]

b. To justify the status of *-ly as a grammatical head* X^0 of X', for all values of $X \neq N$.

3 Realizing Adjuncts with Economy of Representation

This section addresses the task in (10b), justifying an analysis of *-ly* as an item in the lexical head categories X^0, where $X \neq N$. Thus when X = V, *-ly* is an empty predicate whose function is to provide an adjunction site for adverbial As; for this idea I am indebted to Corver (2005).[4] To see how the suffix *–ly* enters a tree, we can observe that, although heads and complement enter well-formed trees by virtue of selection, selection does not extend to every morpheme. Two additional ways to enter trees are available.

(11) **Late insertion of grammatical morphemes.** Many grammatical morphemes are inserted in PF, not via selection, but as the most economical ways of permitting various instances of head-complement and head-adjunct co-occurrence.

For example, the Ps *of, to* and *by* are inserted to provide case-licensing for a range of DP arguments of verbal heads, namely direct objects, indirect objects and subjects

[3] Readers of classic generative literature will notice the structural similarity between this claim and Abney's (1987, Ch. 4) proposal that English pre-nominal adjectives are heads of English NPs. But here, the heads of such NPs are not As but empty grammatical N, a proposal quite distinct from his.

[4] Corver embeds his analysis of adverbial pre-head As in a framework of small clauses and head-to-head raising, employing (to my mind unwarranted) derivational complexity. My approach tries instead to explain properties of the construction with representations that more directly reflect well-formedness principles, even though their nature is at first not obvious.

respectively. Infinitival *to* is a means for licensing VP complements in contexts that demand full IP structures. In another example closer to our concern here, the suffixal head [$_{+N}$ *-ing*] of present participles and verbal gerunds neither selects nor is selected in sequences of (bold) lexical heads such as *Mary will* ***begin water****ing* *the* ***garden*** and *John may* ***prevent*** *his* ***friend*** *from* ***visit****ing* *New York* (Emonds 2000: Ch. 7). Rather, these structures headed by *-ing*, an AP and an NP respectively, turn out to be the most economic phrasal representations for realizing the actual lexical selection sequences *begin-water-garden* and *prevent-friend-visit.*

(12) **Selection-free insertion of adjuncts.** Although syntactic and pragmatic conditions restrict their distributions, *adjuncts need not satisfy lexical selection* to enter trees.

Previous discussions of the "pre-head" modifiers β in (1) have invariably considered at least important subsets of them to be adjuncts. Or to be more precise, inside these β *the As are adjuncts rather than complements of the main V*. While certain such A can occasionally satisfy selection restrictions (e.g. *sloppily word the letter),* many others cannot and thus behave as adjuncts: **scarcely word the response, *simply phrase the letter*.[5] By (12) then, these As can enter trees freely, provided they occupy neither head nor complement positions, where they would be subject to selection. And exactly as desired, *in the hypothesized structures (4) these As are neither.* The head positions are occupied rather by [$_{X}$ *-ly*].

But yet, why don't these A enter trees like other adjuncts, namely as post-head phrases? The answer here is Economy of Representation, which can be formulated as (13):

(13) **Economy of Representation.** Satisfy syntactic and lexical conditions with as little phrasal structure as possible.

[5] For more detail see Emonds (1976: Ch. V). The analysis there is that manner adverb complements, e.g. of Vs such as *word, phrase* and *behave,* can become pre-verbal by virtue of structure-preserving movement. Thus, non-complement A adjuncts are the structural source of all pre-verbal adverbials.

The hypothesized flat structures (4), in which adverbs precede main verbs, are preferred because they clearly contain *less phrasal structure* than those with post-head phrases in (14):

(14) $[_{VP}\ [_{VP}$ rewrite the paper] $[_{AP}$ {*mainly/ *virtually/ quickly/ completely}]] [6]

These considerations explain why "meaningless" grammatical suffixal heads [-*ly*] can be in intermediate X^0 positions in (4). In typical extended projections, the only selection is between higher functional heads like I and interpreted lexical categories like V. The role of any intermediate X^0 heads like -*ly* between say I and a lexical V can be simply to *facilitate more economical realization* of optional items such as adjuncts inside head Vs rather than as full phrase sisters to VP. Consequently, these heads are late-inserted in PF, according to (11), and like other PF-inserted inflections are inaccessible to LF interpretation. Thus, their extremely simple lexical entry contains no interpretable feature:

(15) -*ly*, { V, A, P }, <A___> [7]

The foregoing discussion should have dissipated theory-based suspicion of (10b), namely about how an Adjectival adjunct with a purely grammatical suffix can appear in head positions of V', A' and P'.

This section concludes by addressing two further possible doubts about the structures in (4). Perhaps the most salient fact about -*ly* that makes it seem "unheadlike" is its absolute

[6] This analysis in terms of Economy of Representation raises the question of why many post-head -*ly* adverbials in (14) are acceptable. However, E of R is often overridden when "less economically positioned" constituents receive stress; e.g. the English stressed auxiliary *do* cancels the more economic tense suffixes on V. Since post-verbal -*ly* adverbials can receive main stress in a VP, this factor is doubtless in play. I don't try here to fully account for the contrasting acceptability in (14).

[7] This entry must eventually be combined with the other use in (3d) of -*ly* as a suffix on A, namely as an alternative to various PPs of manner and degree. Formulation of this more complex lexical entry is outside the scope of this study. I also leave aside the question of whether the categories in (20) should be listed, or formalized rather as default values for all lexical X^0 when $X \neq N$.

incompatibility with any verbal or adjectival inflection (**scarcelies, *scarcelied, *scarcelying/ *scarclier/ *scarceliest*).[8] Grammatical V, including uninterpreted ones that I elsewhere claim are inserted in PF, can in contrast be inflected: *has, having, had, being, been, does, did, done.* But this observation is too primitive, given familiar facts about the *bound morpheme* heads [$_N$ *-ing*] of verbal gerunds and [$_A$ *-ing*] of present participles. These suffixal heads have properties in common with *–ly*: they don't enter trees by virtue of lexical selection and importantly, *they tolerate no further inflection* (Emonds 2000: Ch. 7).

(16) *Our visitings Paris in the winter can be tiring.

*The lecturer told the high school students about not yet smoking's advantages.

Many studies note that English never permits sequences of inflections as in (16). Almost certainly this restriction should be derived from how PF insertion works. Insertion of inflectional suffixes apparently requires that their hosts already be in place, so perhaps PF insertion of bound morphemes in a given domain X^0 only has a single chance to apply. In any case, whatever the exact formal mechanism, the lack of further verbal or adjectival inflections on PF-inserted heads [$_{V/A}$ *-ly*] is no more remarkable than their absence on other English inflections. Although this pattern seems at first to undermine the structures (4), it in fact confirms their correctness, since any inflections on *-ly* would signal that *-ly* in (1), *contrary to the prediction of the analysis here*, would be derivational rather than inflectional.

Finally, is it in some way odd that a head verb should have an *adjunct as its left sister* under V^0? The answer has two components. First, Emonds (2000: Ch. 3) concludes that compounding and suffixation differ only in whether a right hand head is an open class item with purely semantic features or a closed class grammatical bound morpheme (e.g. *-ly*). Hence, expected open class counterparts to the V^0 = [adjunct - [$_V$ *-ly*]] in (4) are verbal

[8] In contrast to inflectional *-ly*, the derivational suffix *-ly* accepts inflection: *friendlier, friendliest*. Derivational *-ing* can also be inflected: *rhythmic breathing's introduction, daylight shootings*, etc.

compounds of the form [adjunct - lexical V]. Lieber (1983) long ago noticed that the English lexicon has many such compounds, while complements on the left branch are unacceptable.

(17) Mary[chain-smoked] Camels while [blow-drying] her hair.

The evil company will soon [clear-cut] this priceless virgin timber.

Our family [Christmas shopped] with our relatives in November.

He has already [steam-cleaned] and [wet-sanded] his old furniture.

The quartet [sight-read] the score with no problem.

The apparently unorthodox structures (4) proposed here for (1b-d) are thus consistent with the demands of current syntactic theory. The initial "non-head adjuncts" in English intermediate X' phrases are actually their (morphologically complex) X^0 heads.

4 The N^0 suffixal head on pre-nominal adjectives

This section turns to the goal set in (10a), namely justifying [A - [$_N$ Ø]] as the internal structure of English pre-nominal adjectives. The goal would be elusive (unless the reader were willing to grant a plea from parallelism across lexical heads), except that Dutch and German syntax come to the rescue. Adjectives in these languages inflect for agreement only if in the same NP *they precede the noun that they modify***.** German and Dutch adjectives that follow a modified noun or appear in predicative positions simply lack inflection. Their strictly pre-nominal agreement is an overt counterpart of the English null inflection in (10a).

(10) a. [$_N$ A - [$_N$ Ø]] is the internal structure of English pre-nominal adjectives.

I first show that agreeing Dutch and German pre-nominal adjectives have this same structure, namely [$_N$ A - [$_N$ "agreement"]]. Dutch adjectival inflection is simpler to describe since it involves only one overt allomorph *–e* and no overt marking of case. Using an example from van Riemsdijk (1998), the labeled brackets indicate my proposed structure.

(18) a. de op zijn zoon [$_N$ [$_A$ trots] [$_N$ **e**]] [$_N$ vader] (the inflection *–e* is obligatory)

'the of his son proud father'

b. een vader [$_{AP}$ zo [$_{A}$ trots(*<u>**e**</u>)] op zijn zoon] dat …

'a father so proud of his son that…

There is also a null allomorph that alternates with this pre-nominal *–e*, which then has exactly the structure proposed for English in (10a).

The arguments for labeling this agreement alternation *–e/Ø* as N in Dutch and German concern the features it spells out. In Dutch, as van Riemsdijk (1998) discusses, the alternation *depends on Gender* (of the modified noun) and on *Definiteness* (of the containing noun phrase). These are precisely features of N-projections, not of A-projections, particularly in Dutch, where they are never realized in APs except in the pre-nominal positions under discussion. Hence the realization of these features on the morpheme *–e/Ø* can only indicate its status as an N, as was to be shown.[9]

Pre-nominal adjectival agreement in German is a more complex matter, since its "strong" and "weak" agreements interact with spelling out Case features as well as those of Gender. However, these complexities only confirm the agreement's nominal (rather than adjectival) character, since again, categories like V and P do not directly assign Case to German adjectives and adjective phrases. Rather, their surface case is always an "agreement" mediated by that of the noun they modify, as stated in grammatical tradition. In other words, case in German is a *property of nouns and noun phrases,* so its appearance in suffix on As simply indicates that the "agreeing" suffixes are themselves of the category N.

I thus conclude that the pre-nominal agreeing adjectives of Dutch and German overtly and robustly realize the English structure (10a) that I propose explains all the patterns in (3).

[9] The Dutch A-N structures, like their English counterparts, allow no phrases between the two flat structure heads, as observed in section 2. Complement phrases of Dutch verbs and adjectives, however, precede the heads, as seen in (18b); that is, they are not subject to the head-initial parameter.

5 Null inflectional heads in English: not really exceptional?

It is simply good sense to doubt that English pre-nominal adjectives have an agreement morpheme that is everywhere zero. Yet its overt Dutch and German counterparts appear to express only grammatical gender and case inflections on nouns, and since these have long disappeared in English, the language has no features for its agreement to express.

The fact is, a child learner of English is more or less still forced to postulate this null adjectival agreement. As positive evidence, it constantly hears pre-nominal adjectives, yet knows that English phrases are head-initial, so that its noun phrases must begin with a noun. It additionally hears that these adjectives are not stressed, so that they must somehow occupy this head N position (referring again to Nespor and Vogel 1982). More generally, the system it is learning (English syntax) independently exhibits *widespread null inflection.*

(19) a. All marked forms English present tense agreement inflections are null.[10]

b. English infinitives have no affix, in contrast to infinitives in neighboring Romance and West Germanic languages. (Dutch *te* and German *zu* are prefixal.)

c. An analysis of English double object constructions that generalizes to constructions in other languages with similar properties requires that di-transitive verbs have a null "applicative" affix (Pesetsky 1995; Emonds and Ostler 2003).

A null inflectional affix on English pre-nominal adjectives is thus not surprising; on the contrary, its null phonology is shared with several of the language's (few) bound inflections.

When a language has a lexical characteristic not shared with numerous other languages, or not widely recognized, one naturally looks for diachronic or sociolinguistic

[10] English finite verbs indisputably have number agreement. Yet third singular forms are cross-linguistically least marked (Benveniste 1966). So a child acquiring English must expect marked forms for verb agreement (besides *were*, *are* and *am*), and is perhaps relieved to learn that they are all null.

causes.[11] In the case at hand, such studies do account for why English has "impoverished" inflection, or in my terms, why so much of its inflection is covert.

English as we know it arose as a language called "Middle English" under very particular linguistic and sociolinguistic circumstances in the East Midlands and North of England in a period of roughly 150 years, about 1080 to 1230. As we will see, this language, both its lexicon *and its syntax*, was not as much a descendent of Old English (the language of mainly West Saxon texts) as it was *a new "amalgamation" of Old English and Old Norse* (Baugh and Cable 2005: 95-105).[12] One Middle English characteristic due to the conditions of its birth was a concentration of null inflections (not the absence of inflection), for reasons that will follow a sketch of the amalgamation itself.

In the first two centuries of co-inhabiting eastern and northern Britain (850-1066), the Danes/ Norwegians and English had been in a largely adversarial situation. They vied for political supremacy, with the Danes predominant before 878 and after 1000. English texts of this period, by scholarly agreement called "Old English," mostly originate in areas west of London with little Danish settlement. Overall, the relations between the Scandinavians "and the English were too hostile to lead to much natural intercourse…. The number of Scandinavian words that appear in Old English is consequently small, amounting to only

[11] Generative analyses of English have not recognized its several null inflections for two reasons. The first is that pre-generative studies were extremely reticent about postulating null categories *anywhere*, so they pretty much equated inflection with overt inflection. Second, traditional and structuralist commonplaces have been adopted fairly uncritically in generative accounts unless Chomsky happens to challenge them, and after *Syntactic Structures* Chomsky has never really focused on inflection.

[12] Scandinavian culture was strongest in the East Midlands area. "…the Five Boroughs--Lincoln, Stamford, Leicester, Derby, and Nottingham--became important foci of Scandinavian influence" (B and C 2005: 96). Less than two centuries later, Modern English began to develop from the language of this (demographic) southern half of the Middle English area.

about two score,…associated with …sea-roving and …the social and administrative system of the Danelaw." (B and C: 99). Besides a multitude of place names, *only two* (!) of the authors' other OE examples (*law* and a *hold* of land) survive in Modern English.

Understandably, the languages of two populations competing for hegemony remained separate. English political power, culture and literature centered in Wessex, which uninterruptedly produced Old English texts. Simultaneously: "Up until the time of the Norman Conquest the Scandinavian language in England was constantly being renewed by the steady stream of trade and conquest….many of the newcomers…continued to speak their own language at least as late as 1100…" (B and C: 96).

However, just as the English were again regaining the military upper hand around 1060, both communities were laid low by the thorough and merciless Norman Conquest in 1066 and the decades following. The political and economic influence of both linguistic communities was wiped out. What apparently followed, in the wake of common misfortune, was intermingling of the disenfranchised masses of English and Norse speakers where "the two languages existed for a time side by side [in] the northern and eastern half of England" (B and C: 101), i.e. the area in which East Midlands speech would later develop into Modern English. The resulting common tongue was much more an amalgam of the two languages (to some extent already mutually comprehensible) than is widely appreciated. North Germanic daily life vocabulary and syntax permeates "Middle English" in a way that simply doesn't happen unless separate linguistic populations thoroughly mix, intermarry *and converse*, as shown by the horde of today's common English words from the Scandinavian vocabulary.

The Scandinavia basis of much of the new language's vocabulary is recognized in historical scholarship. "…many of the more common words of the two languages were identical, and if we had no Old English literature…, we should be unable to say that many words were not of Scandinavian origin." (B & C: 97) And of words *not shared* in the parent

tongues, by virtue of either "fully convincing" or "probable" evidence, some *1800 more Middle English words* "designating common everyday things and fundamental concepts" come not from Old English but from Scandinavian (B and C: 105).[13]

Middle English daily vocabulary that can be considered *shared or solely Norse* in origin would thus seem to approach perhaps a third of the language's resources. As Baugh and Cable observe, the Anglian dialect (with large Scandinavian settlement) "resembled the language of the Northmen in a number of particulars in which West Saxon showed divergence" (2005: 96). Moreover, "…the new words could have supplied no real need in the English vocabulary…. The Scandinavian and the English words were being used side by side, and the survival of one or the other must often have been a matter of chance" (B and C: 100). That is to say, Middle English of the East Midlands and the North didn't "borrow" Old Norse words; children brought it into existence in the twelfth and early thirteenth century by appropriating Old Norse and Old English vocabulary on a nearly equal basis.[14]

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[13] It is instructive to repeat B and C's examples, selecting and alphabetizing *only every third form* in their wide-ranging discussion: *bait, band, birth, bloom, brink, call, cow, crook, die, dike, dregs, flat, flit, freckle, egg, get, girth, hale, keel, kindle, link, low, nag, odd, race, ransack, root, sack, scant, scare, score, scrape, screech, sister, skirt, sky, snare, take, tattered, thrift, want* and *whisk.* These represent about 5% of Middle English "borrowings" either probably or certainly from Scandinavian.

[14] The study of Baugh and Cable (2005) makes all the points needed for this conclusion about Middle English vocabulary, though, following the traditions of "Histories of English," the period of "Scandinavian influence" is neatly separated from and *precedes* the Norman Conquest. As argued here, this is a major chronological error. The Norman Conquest rather *brought about this influence*, which would have otherwise been much less. After pre-dating the influence by two centuries, the authors conclude with some puzzlement: "The occurrence of many of the borrowed words in written records is generally somewhat later…at the beginning of the thirteenth century." (B and C: 105)

Perhaps even more striking is that Middle English emerged in the late 13th century, after two centuries of being infrequently written, with *large doses of Scandinavian syntax and grammatical items*: new third person plural pronouns, the quantifiers *both* and *some,* the grammatical verbs *are, get, give* and *take,* head-initial verb phrases, and preposition stranding (fully developed in the world's languages only in North Germanic--and English). [15]

The details of these borrowings are less important than the testimony they provide for how thoroughly the Norse and English languages fused into a new system in families with Middle English speaking offspring. Scholars of the language of this period remark that the conflicting overt (but unstressed) inflections of the parent tongues were a source of imperfect learning and grammatical confusion.[16] Consequently, it is felt, the new generations opted for a simple solution: don't pronounce the inflections; rather, "drop them." But in my view, they didn't always "drop them"; they often replaced them with null allomorphs. ("OFTEN" ➔ 0)

Precisely because the two amalgamating syntactic systems were highly similar, young speakers had no motivation to change the overall grammatical design or "typology" of the newer Middle English; i.e. they didn't need to resort to the "bio-program" of a true creole. Rather, since null inflectional allomorphs are undeniably an option provided by Universal

[15] A thorough study of Middle English syntactic change fully documents "…the base change from OV to VO (c. 1200) that is related to the loss of morphological case "(van Kemenade 1987: summary). The date 1200 is in the period of full Scandinavian and English integration, so that van Kemenade's findings support this section's two claims: Middle English grammar developed as much from Old Norse as from Old English, and the mixture was marked by loss of overt inflection.

[16] Baugh and Cable (2005: 104) phrase it thus: "In many words the English and Scandinavian languages differed chiefly in their inflectional elements. The body of the word was so nearly the same in the two languages that only the endings would put obstacles in the way of mutual understanding. In the mixed populations that existed in the Danelaw [where Middle English developed, JE] these endings must have led to much confusion, tending gradually to become obscured and finally lost."

Grammar, acquirers of Middle English, no doubt with the assent of largely impoverished, unschooled and hence practical parents, developed a grammatical lexicon that made ample use of null inflections, e.g. as in (19).[17] Moreover, Middle English utilized other null allomorphs from Scandinavian for relative pronouns and the complementizer *that* (Jespersen 1905), to this day not generally allowed in West Germanic languages. A final confirmation of Scandinavian origin of Modern English syntax is that *its sole surviving number agreement inflection,* the third singular *-(e)s* on verbs, is agreed to have this source. In contrast, the adjectival agreement of Old English has no survivor, except the ghost of agreement represented in this paper's hypothesis (10a).

6 Null grammatical N in current English

If the structure of pre-nominal English adjectives is $[_N$ A - $[_N$ Ø]], the keystone is of course the null head N. We can ask if its development really meant adding an ad hoc zero morpheme in the Middle English grammatical lexicon. In fact, other patterns of English grammar support a much wider role for this null N.

First, the pre-nominal As under discussion are followed by an overt lexical head N in the same NP. But when no such lexical N follows, are the $[_{NP}$ $[_N$ A - $[_N$ Ø]]] structures independently justified?

(i) The first possibility is that the N in $[_{NP}$ $[_N$ A - $[_N$ Ø]]] is co-indexed (co-referential) with a discourse antecedent. In this situation, if the antecedent is a count noun, the N is spelled out as *one(s).* And as is well known, an N that remains null in this same position in English cannot be interpreted as anaphoric for any type of noun:

[17] If the Old Norse and Old English speakers had been or felt separate under the Conquest, community identities might have served to conserve each group's grammatical speech patterns. But these differences were leveled by the harsh realities meted out to any non-Normans after the Conquest.

(20) Bill is collecting some {songs$_i$/ evidence$_j$}. We'll use the recent one(s)$_{i/*j}$ in our book.

Bill is collecting some { songs/ evidence}. *We'll use the recent [$_N$ Ø] in our book.

Thus, the [$_N$ Ø] hypothesized in this study has a closely related overt counterpart *one(s)*. Their structural affinity is confirmed by the fact that *one(s)* as in **(20**a) must have *less stress than the preceding A,* which indicates that unlike overt lexical nouns following an A, *one(s)* is in fact the *grammatical head* of its NP. Contrast this stress pattern with the typical complement stress on a lexical N seen in e.g. (1a).

Even though the N in [$_{NP}$ [$_N$ A - [$_N$ Ø]]] that remains null in PF cannot be anaphoric in English, it can be *interpreted as generic* if modified by the definite article, especially with the features +ANIMATE and +PLURAL.

(21) The [$_{NP}$ [$_N$ [$_A$ beautiful] - [$_N$ Ø]]] are often unfairly advantaged.

Conversations with the [$_{NP}$ [$_N$ [$_A$ clever] - [$_N$ Ø]]] can improve your IQ.

That professor tended to hold the [$_{NP}$ [$_N$ [$_A$ old] - [$_N$ Ø]]] in high esteem.

Like other phrase-initial As exemplifying flat structures in (1), the lexical As in (21) cannot select phrasal complements. This parallel also confirms their similarity in structure.

(22) In that prison, the warden tolerated the depressed but not the angry.

In some prisons, wardens pay little attention to the depressed (*about their diet).

In today's prisons, wardens rarely tolerate the angry (*at the guards).

The English structure [$_{NP}$ [$_N$ A - [$_N$ Ø]]] containing empty N heads is thus motivated by two other closely related constructions, A + *one(s)* and the generic expressions *the*+ A + [$_N$ Ø].[18] English has moreover *a fully anaphoric use of [$_{NP}$ [$_N$ Ø]]* with no pre-nominal A**,** subject to a condition that some functional category structure between NP and DP be overt.

(23) We're looking for manuscripts, but we can't find {some/ many/ even one/ *Ø}.

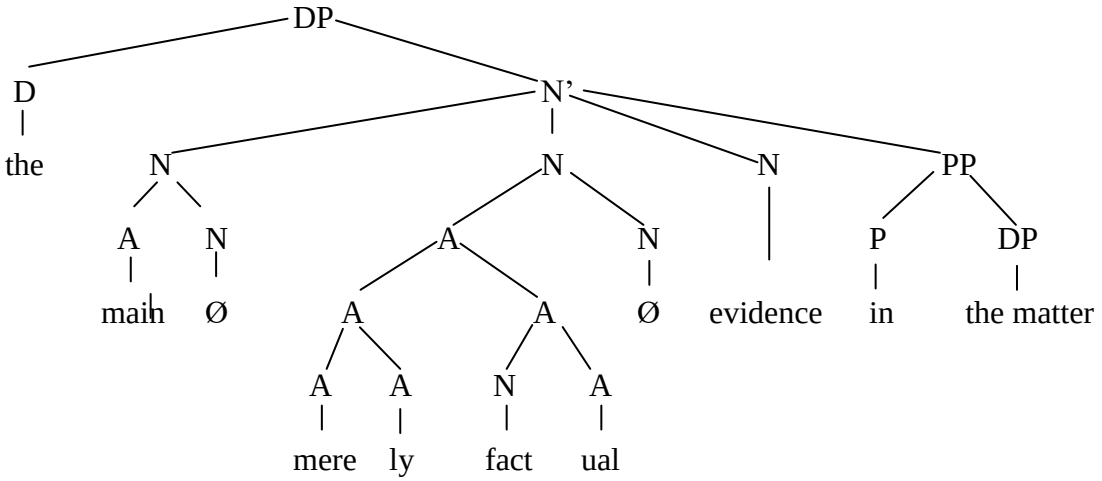
[18] Furthermore, NPs headed by [$_N$ *one(s)*] don't require a pre-nominal A, but only some overt modifier within NP: *We'll use ones(= songs) {with good lyrics/ taken from folklore} in our book.*

We're looking for house keys, but {all/ three/ those two/ all but one/ *Ø} are missing.

I conclude that there is nothing sui generis or isolated about the null grammatical head N in English that licenses pre-nominal adjectives. Its only peculiarity is that it is not interpreted in LF. But this property is shared with several other late inserted grammatical items motivated by Economy of Representation, such as the *-ing* of verbal participles and gerunds, the pre-head *–ly* discussed in section 3, and the null verbal inflections (19a) and (19c). This null head thus seems justified, which was the task (10a) set at the end of section 2.

I terminate with a complex "pre-head" (but in fact zero-headed) modifier structure, to illustrate the full possibilities of the fully head-initial phrases proposed in this essay.

(24) the main merely factual evidence in the matter



The phrase *merely factual* in (24) has the structure of a compound A, which I believe is typical for word-internal structure: cf. *a new two-mile (*big) bridge*. The stress is on the right hand head A, but English *compound adjectives* are often stressed on the right (Bates 1988).

References

Abney, Steven (1987) *The English Noun Phrase in its Sentential Aspect*, MIT doctoral dissertation.

Bates, Dawn (1988) *Prominence relations and structure in English compound morphology*, University of Washington doctoral dissertation.

Baugh, Albert and Thomas Cable (2005) *A Hisotry of English,* fifth edition, London : Routledge and Kegan Paul.

Benveniste, Emile (1966) *Problèmes de Linguistique Générale,* Paris: Gallimard.

Corver, Norbert (2005) *Copular -ly*. Unpublished manuscript, UiL-OTS, Utrecht University.

Emonds, Joseph (1976) *A Transformational Approach to English Syntax: Root, Structure-Preserving and Local Transformations,* New York: Academic Press.

---- (2000) *Lexicon and Grammar: the English Syntacticon,* Berlin: Mouton de Gruyter.

---- (2001) The Flat Structure Economy of Semi-lexical Heads, *Semi-Lexical Categories: the Content of Function Words and the Function of Content Words,* N. Corver and H. van Riemsdijk (eds.), Berlin: Mouton de Gruyter.

Emonds, Joseph and Rosemarie Ostler (2006) Thirty Years of Double Object Debates, *The Blackwell Companion to Syntax*, M. Everaert and H. van Riemsdijk (eds.), Oxford: Blackwell Publishers.

Jespersen, Otto (1905) *Growth and Structure of the English Language.* Garden City: Doubleday and Co.

Kemenade, Ans van (1987) *Syntactic Case and Morphological Case in the History of English,* Dordrecht: Foris Publications.

Koster, Jan (1978a) *Locality Principles in Syntax*, Dordrecht: Foris Publications.

---- (1978b) Conditions, Empty Nodes, and Markedness, *Linguistic Inquiry* 9, 551-593.

---- (2007) Structure preservingness, internal Merge, and the strict locality of triads, *Phrasal and Clausal Architecture,* S. Karimi, V. Samiian and W. Wilkins (eds.), Amsterdam: John Benjamins.

Lieber, Rochelle (1983) Argument Linking and Compounds in English, *Linguistic Inquiry* 14, 251–286.

Nespor, Marina and Irene Vogel (1982) Prosodic domains of external sandhi rules, *The structure of phonological representations,* H. van der Hulst and N. Smith (eds.), Dordrecht: Foris Publications.

Pesetsky, David (1995) *Zero Syntax: Experiencers and Cascades,* Cambridge: MIT Press.

Riemsdijk, Henk van (1998) Head Movement and Adjacency, *Natural Language and Lnguistic Theory* 16: 633-678.

Ross, John (1967) *Constraints on Variables in Syntax,* MIT doctoral dissertation.