

THE STRUCTURE OF ENGLISH BARE SINGULARS AND THE LICENSING OF COMPLEMENTS IN DP

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1.0 Introduction

Singular count nouns must be accompanied by some sort of determiner in English:

- (1) Larry placed **(the)* book on the table.
- (2) Sam is considered **(a)* genius by his friends.

This requirement holds both for nominal arguments (1), and predicates (2). There are, however, a number of exceptions to the generalization expressed above:

Objects of manner PPs

- (3) Frank usually commutes by *train*.
- (4) The papers were sent via *messenger*.

Profession-class predicates

- (5) Nader was appointed *campaign-reform czar*.
- (6) Who made him *king of the office*?

Vocatives and appositives

- (7) Ok, *genius*, tell us how to do it.
- (8) Few of us ever got to know Katherine Janeway, *gardener* and *pasta-lover*.

Synthetic Compounds

- (9) Sandy doesn't much like *potato* peeling.

While all of the constructions in (3–9) will be considered in this paper, only the prepositional objects in (3, 4) will be analyzed in detail. I will argue that the syntactic properties of such objects can be fully accounted for by combining two assumptions: first, that the head of these manner PPs c-selects NP, and second, that complements of nouns are licensed by raising to the specifier of #P for Case, i.e., these complements can be assigned structural case within the DP. The latter assumption not only explains some unexpected properties of (3, 4), but also some otherwise puzzling facts about casemarking and subject-to-subject raising out of derived nominals. From a theoretical perspective, this runs counter to previous analyses of “*of*-insertion” (Chomsky 1986a), claiming instead that case assignment in DP is analogous to clauses: structural and inherent case assigned in both domains.

2.0 Syntactic properties of bare singulars

We will begin by looking at the properties of just the bare singulars in synthetic compounds and *by*- and *via*-PPs, returning later to the cases in (5–8), which have somewhat different properties. The first thing to notice is that the bare singulars in these constructions cannot be modified:

- (10) He arrived by *plane* (**with four engines*).
- (11) The papers arrived via (**speedy*) *messenger*.
- (12) Each part was built by *machine* (**that no longer exists*).
- (13) Miles is a book (**about whales*)-*collector* (**about whales*).

It is possible to have a full DP after *via*, subject to certain semantic restrictions, e.g., (17).

- (14) We heard, *via rumor* (*about John), that his mother is having an affair.
- (15) ?We heard, *via a particularly nasty rumor* about John, that his mother is having an affair.
- (16) ?We heard, *via Sean's nasty rumor* about John, that...
- (17) Nigel usually commutes *via train/the morning train/*this train/??one of these trains*.

Crucially, the PP modifier *about John* is only acceptable if accompanied by a determiner or possessor, as in (15–16).¹

Next, note that it is impossible for any sort of bare noun to have an overt complement:

- (18) Clinton communicated with the African leaders *via eight interpreters* of different Bantu languages.
- (19) *Clinton communicated with the African leader *via interpreter* of Chichewa.
- (20) Geoff is a convention observer (*of linguists).
(*cf.* Geoff is an observer of conventions of linguists.).

The postnominal PP in (18) differs from that in (15) with respect to the 'one rule':

- (21) I heard a rumor about Bob and he heard *one* about me.
- (22) *I met an interpreter of English and she met *one* of Chinese.

This rule is known to apply to a constituent smaller than QP (consider, for example, *each one*, *every one*) but at least as big as NP (hence *one* replaces N and any true complement within N'). What this suggests is that the PPs in (18) and (22) are true complements, while those in (15) and (21) are actually modifiers.

The next fact about bare singulars concerns their referentiality: they cannot serve as the antecedent of a pronoun. (In the examples below, the symbol # below is meant to signify that an anaphoric relation between N and pronoun can only be established via accomodation.)

- (23) Max commuted by bus_i yesterday. #It_i was filthy.
- (24) The contract arrived via messenger_i. #His_i name was Ted.
- (25) Marty is potato_i-peeling at the moment. #It_i's a big one.

However, examples like (23) and (24) improve when the generic reading of the bare noun is emphasized:

- (26) Max always commutes by train, because they're cleaner than buses.
- (27) Many who claim to have flown by lear jet_i have never even seen one_i.

This suggests that bare singulars in manner PPs can denote a *kind* (and perhaps must in the case of *by*-PPs).

It is also true of bare singulars that they resist extraction:

- (28) *What_i does Fred commute by t_i?
- (29) *Fax_i, I like to send important papers via t_i.
- (30) *By what_i do you usually travel t_i?

We might conclude from (28) that the object of *by* cannot be moved via A'-movement, but (30) suggests that *what* may be incapable of substituting for the bare singular noun, though at this point it is unclear why.

¹ Note that none of the properties below hold of bare plurals and mass nouns. I assume this reflects the presence of an empty determiner, as argued by Longobardi (1994).

3.0 Potential analyses

In the next three sections, we will consider some potential analyses of the data in examples (10–30).

3.1 Evidence that *by*-PPs are not lexically derived

The properties discussed above would be expected if phrases like *by train* were composed in the lexicon. Indeed, similar-looking phrases, such as *by heart* and *off hand*, do seem to be frozen expressions.² There are some good reasons, though, to doubt this proposal.

First, these bare objects can be conjoined:

- (31) To be sure the news was received, we sent it by both e-mail and snail mail.
- (32) He always commutes by either [train or bus].
- (33) *Dole's frequent use of off [hand and color] remarks ended up hurting him.

If the *by*-PP in (31) were lexically derived, it would be predicted to be ungrammatical, under the standard assumption that conjunctions only operate on syntactic constituents. Just as important, (31) and (32) are evidence against generating *by train* via (overt) syntactic incorporation: this theory would require adjacency between *by* and the bare N object, which is clearly not what happens in (31, 32).

Secondly, these manner PP's are completely productive: any new form of transportation or communication can appear in this construction, which contrasts with some similar looking PP's which are definitely lexically-frozen expressions.

- (34) (a) sent by fax
- (b) travel by lear jet
- (c) transmitted via satellite
- (35) *play a song by artificial heart/pig heart

One last bit of evidence against the lexical approach comes from the contrast below:

- (36) Many who fly by lear jet_i today wouldn't have flown by one_i 20 years ago.
- (37) *Anyone who can play Mozart by heart_i can play Beethoven by one_i too.

The lexical approach leads us to expect an anaphoric island effect for both (36) and (37), but only the latter, which contains the frozen PP, bears this prediction out.

3.2 The c-selection analysis

A rather direct way of accounting for the data is to claim that *by* c-selects a bare NP, and *via*, either NP or a DP. This analysis succeeds in accounting for most of the observed properties of manner PP's. The impossibility of modifying bare singulars is predicted, if Longobardi (1994) and others are right in attaching attributive adjectives in the functional structure between D and NP; heavier modifiers such as PP's and relative clause are presumably right-adjoined to the same functional structure.

- (38) [DP D [_{#P} [Adj [_{#P} [_{#P} # [_{NP} N (complements)]] PP/RelClause]]]]

The analysis also predicts that bare singulars (= NPs) cannot serve as antecedents, assuming D to be the locus of reference (alternatively, we could assume that #P is the minimal amount of structure required for supplying a pronoun with an antecedent). The absence of a #P might also explain why **commute by trains* is ungrammatical,

² To avoid any uncertainty over lexical versus syntactic origin, I have been ignoring a large class of other PP's containing bare singulars (*over budget*, *up to code*, *on alert*, *on target*, *on demand*, etc.), which seem less productive than *by*-PP's, but certainly more transparent in meaning than *by rote*.

since #P is arguably required to morphologically express the plural. Further, the bare singular in *by train* is semantically unspecified for number—when one commutes by train, any number of trains might be involved. If number is an interpretable feature, and bare NPs lack this feature, then this semantic property of *by train* is expected under our analysis.

A c-selection analysis has been proposed by Longobardi (1996) for a similar set of facts in Italian. As in English, arguments in Italian generally require a determiner. Example (38) shows that this goes for objects of prepositions as well (Longobardi's examples):

(39) *Gianni é a giardino/ufficio/treno.
Gianni is at garden/office/train

(40) Gianni é in giardino/ufficio/treno.
Gianni is in garden/office/train

(40) represents an exception: the preposition *in*, like English *by* and *via*, allows a bare singular object. As seen in *nel* in (41), *in* also allows a DP (like *via*), and in this case, possessors and modifiers are licensed. Crucially, though, it is not possible to have a possessor or modifier in (41), where a bare NP is selected:

(41) Gianni é nel giardino pubblico/di Maria.
Gianni is in-the garden public/of Maria

(42) *Gianni é in giardino pubblico/di Maria.
Gianni is in garden public/of Maria

Given Longobardi's assumption that adjectives and possessors appear between D and NP, (42) is ungrammatical because there is no determiner position for N raise to (and, in fact, the functional structure for the adjective and possessor is also missing). Longobardi (1994) suggests that modifiers of all kinds require the presence of a determiner; an empty determiner is not an option here, since these, he assumes, are restricted to mass nouns and bare plurals.

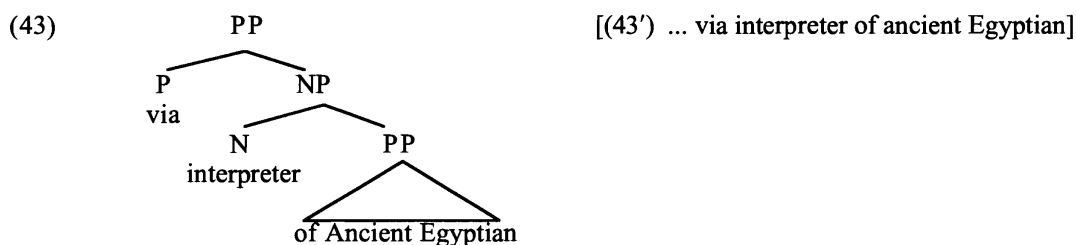
C-selection of NP leads to the prediction that the object of *in* should itself be able to take an overt complement. Longobardi does not give examples of this, and it turns out to be too difficult to construct plausible examples with *in*. However, the facts from English (examples (18–20) above) show that the prediction is incorrect:

(19) *Clinton communicated with the African leader via interpreter of Chichewa.

(19') Clinton communicated with the African leader via an interpreter of Chichewa.

In order to express what (19) is trying to say, an overt determiner is required, as in (19').

What we lack at this point is a real explanation of why complements and modifiers of N require the presence of a determiner; in other words, what rules out structures like (43) below? Ideally, this explanation should also account for the other unexplained properties of bare singulars observed in (10–20).



4.0 Licencing complements of N

The issue of how nominal complements of N are licensed is a particularly murky one. Chomsky (1995: Chapter 1) proposes that N and A assign inherent genitive Case to their complements. How this translates into checking theory is far from clear. I want to propose here that complements of N are not assigned *inherent Case*—but rather *structural Case*. Thus, in parallel with verbal arguments, they must raise to the specifier of some

functional projection, either by Spell-out or LF. Within the Minimalist framework, the entire issue of inherent Case has been left unresolved; indeed, the old conception of inherent Case cannot be easily integrated into a feature checking framework such as the MP.

Aside from the problems this raises within the Minimalist framework, we should question the validity of extending what is generally meant by *inherent Case* (i.e., Case associated with a specific theta role) to N complements. While just a small subset of verbs assign inherent case, all deverbal nouns are standardly assumed to only assign inherent case; yet the internal theta role assigned by *solution* and *solver*, for example, is presumably no different than the one assigned by *solve* (which assigns structural, not inherent case). Therefore there is no reason to suppose that inherent Case plays any part in licensing N complements in such instances. Parallelism among the lexical categories was the major insight behind X-bar theory in Chomsky's (1970) paper, "Remarks on nominalizations". Thus the standard account of casemarking complements of N represents an unjustified departure from Chomsky's earlier insight.

Assuming for the present that N complements do have to raise for feature checking, we would expect to find some languages that meet this requirement in overt syntax and others that do it in LF. The question then is, can we find examples of the complement raising above N to [Spec, FP]? There is evidence for this in languages such as Chinese, Korean and Turkish.³

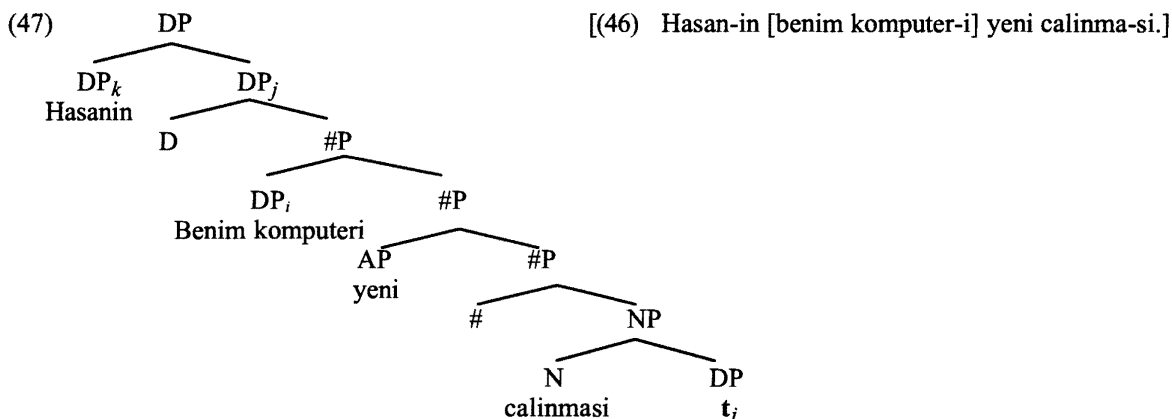
- (44) [NumP [Na-sho sh]_i huanmiou te [NP chieshi t_i]] pei tueihuai. (Chinese)
 that-CL poem ridiculous GEN interpretation PSV rejected
 'A ridiculous interpretation of that poem was rejected.'
- (45) Elton John-eyuyhan [nolay-uy]_i say [NP t_i chuyip-un] sengkonggecki-et-ta. (Korean)
 Elton John-by song-GEN new recording-TOP successful-PAST-IND
 'Elton John's new recording of the song was successful.'
- (46) Hasan-in [benim komputer-i] yeni calinma-si (Turkish)
 Hasan-GEN my computer-3SG recent theft-3SG
 'Hasan's recent theft of my computer'

As the word order in these examples suggests, the DP complement of the N raises to a position between N and D. The position of the adjective rules out the possibility that the complement is base-generated to the left of N. It is also notable that in Chinese and Korean, the complement cannot appear between the adjective and N. In Turkish, the order [Adj Comp N] is possible, but only if the adjective is understood as modifying the complement 'computer', not the selecting noun 'theft':

- (44') *Huanmiou te [NP chieshi na-sho sh] pei tueihuai. (Chinese)
 ridiculous GEN interpretation that-CL poem PSV rejected
 'A ridiculous interpretation of that poem was rejected.' [= the same meaning as (44)]
- (45') *Elton John-eyuyhan say [NP nolay-uy]_i chuyip-un] sengkonggecki-et-ta. (Korean)
 Elton John-by new song-GEN recording-TOP successful-PAST-IND
 'Elton John's new recording of the song was successful.'
- (46') Hasan-in [yeni komputer-i] calinma-si. (Turkish)
 Hasan-GEN recent computer-3SG theft-3SG
 #'Hasan's theft of the recent computer'

This suggests that the complement of N must overtly raise over the adjective to some specifier position. I propose, then, that the structure of the DP in (46) is the following:

³ I would like to thank my informants, Soowon Kim (Korean), Chia-hui Huang (Chinese), and Dilara Blake (Turkish).



Now let us consider what happens when, for whatever reason, there are no functional projections above N. As argued in Longobardi (1994), referential arguments have two ways of being licensed: either by incorporation into another lexical head, such as V or P, or by N raising to D. Since we are considering arguments with no functional structure, that means the only possibility for licensing would be N to V/P incorporation. The consequence of these assumptions is that if a noun appears in a structure lacking #P and DP, then any referential argument of that N cannot be licensed. The implication goes as follows:

- (48) (a) If N has a complement, #P is required above N.
 (b) If there is such a #P, there must also be a DP.

The claim that there cannot be a #P without DP is based on the assumption that # would block incorporation of N into a higher lexical head, leaving only one other option for licensing N, namely raising to D. The intuition here is that lexical heads can move through other heads within their own extended projection for feature checking, but incorporation is a more restricted process, in that nouns can only incorporate into other lexical heads. The intuition has been codified as the Proper Head Movement Generalization. (See Baker (1995:284) for discussion.)

(49) *Proper Head Movement Generalization*

A lexical category cannot move into a functional category and then back into a lexical one.

(50) The book weighs *five pounds*.

(51) He ran *five long miles*.

The implication in (48) requires some qualification. We have not yet discussed measure phrases, as in (50), which I assume to be bare #Ps. Since these are non-referential, there is arguably no DP present, and the noun apparently does not incorporate, given the possible presence of numerals. I will assume that it is a special property of #Ps that they can be interpreted as measure phrases, and that this method of interpretation is distinct from the method utilized for both referential arguments and bare NP predicates. It is then predicted under our analysis that measure phrases, as #Ps, may be modified. (The nouns are typically not complement takers, i.e., are not derived from verbs.) Although semantic situations involving modification of MPs are often implausible, there are limited examples of modification, as in (51).

To summarize this section, we have argued that complements of N are not assigned inherent case, but structural case, which is checked in the specifier of #P. We examined evidence from Turkish which suggested that a raising of the complement can occur in overt syntax, in contrast to English, where it takes place during the computation to LF. This theory of licensing in DP provides an answer to the puzzle concerning the complements of objects of *by* and *via* PPs, as in (18–19), and gives a more principled account of *of*-insertion, i.e., one that treats verbs and the nouns derived from them in a similar fashion.

5.0 Licensing arguments in derived nominals and gerunds

It has been a long-standing puzzle why raising in derived nominals is ungrammatical:

- (52) *This led to John's appearance to have won.
 (53) This led to the appearance that John had won.
 (54) *John_i's belief [_i to be intelligent]
 (55) the belief that John is intelligent
 (56) John_i is believed [_i to be intelligent].

There is nothing wrong with (52) semantically, as the paraphrase in (53) shows. Similarly, we might expect (54) to be as acceptable as (55), given the grammaticality of the sentential equivalent in (56).

One approach to (52), going back to Ross (1967), is that movement out of N complements leads to illformedness. In somewhat more formal terms, we can assume that the IP complement of N constitutes a barrier to movement, for reasons having to do with what is sometimes referred to in the literature as the "inherent defective nature of N". Chomsky (1986b:36) suggests that N is not a proper governor. Grimshaw (1990) and Cinque (1990) both propose that N is a defective theta marker; for Cinque, the notion 'barrier' is defined as an XP "that fails to be directly selected by a category nondistinct from [+V]" (1990:55), which has the consequence that complements of N are always barriers.

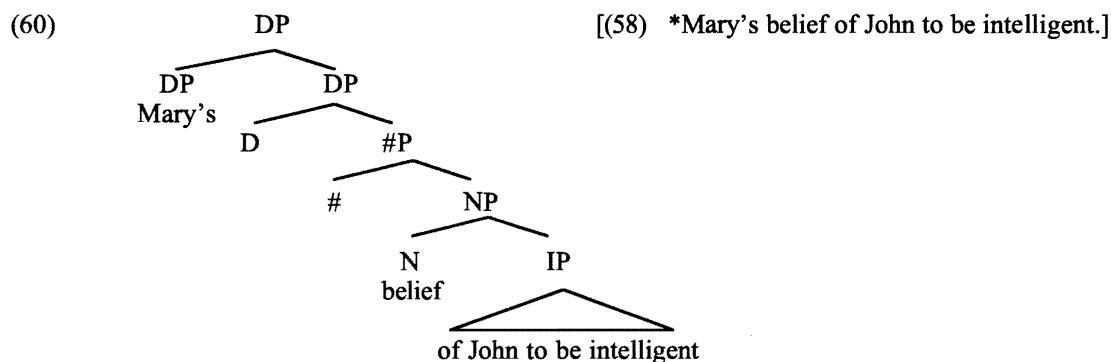
If the IP complement of N in (52) and (54) is a barrier, we expect A-movement across this IP to lead to strong ungrammaticality (an ECP violation), since A-movement is subject to stricter locality constraints than X-movement. Here, let us follow Rizzi's (1990) view that every link in an A-chain requires antecedent government, which depends on there being no barriers and no potential landing sites between the head and tail of the chain. A'-chains, on the other hand, only suffer subadjacency effects when an argument crosses a barrier.

Now consider another difficult puzzle about derived nominals:

- (57) *The appearance of John to win
 (58) *Mary's belief of John to be intelligent
 (59) *The belief of John to be intelligent

The impossibility of *of*-insertion in contexts like (58) is unexpected; this example would not seem to involve raising out of IP, and these nouns trigger *of*-insertion in other contexts.⁴ The standard account of (51–53) proposes that *of* realizes inherent Case, which is only assigned to an argument of N, not *John*, the subject of *win*. This certainly does not follow from anything outside the theory of *of*-insertion..

Under our current assumptions, we can explain the phenomena in (57–59) just as we explained (54); in (58), *John* must raise to [Spec, #P] for Case in LF. This means *John* must cross an IP barrier on its way to a Case position:



The landing sites for *John* in (54) and (58) differ slightly (having specifiers of DP and FP, respectively), but the result of crossing IP in each case leads to an ECP violation.

⁴ I am grateful to Kyle Johnson for pointing out the significance of these two puzzles to me.

In addition, we should expect a contrast among the gerund counterparts of the derived nominals above, specifically between the *of*-ing type and the POSS/ACC-ing type. In the former case, the infinitival clause is a complement of N, while in the latter case, this IP is a complement of V. Hence, it would not constitute a barrier to movement. This prediction is borne out:

- (61) *This led to the appearing of John to be intelligent.
- (62) *John_i's believing [_{t_i} to be intelligent] is unfounded.
- (63) *The considering of [John rude] is unfair.
- (64) *John_i's considering [_{t_i} (to be) rude] is unfair.
- (65) We remember John_i(’s) appearing [_{t_i} to be intelligent].
- (66) We remember them/their believing [John to be intelligent].
- (67) Our considering John (to be) rude is unfair.
- (68) John_i's being considered [_{t_i} (to be) rude] is unfair.

(61) is predicted to be bad for the same reason as (57): when *John* raises at LF for Case, it crosses an IP barrier (the structure is [_{NP} N_{ing} IP]). The same problem occurs in (62)—which is the counterpart of (54), **John's belief to be intelligent*. Here, the noun *believing* fails to L-mark its IP complement, making any raising out of IP illformed. (63) and (64) illustrate similar points for the small clause predicate *considering*.

When POSS/ACC-ing gerund counterparts are constructed, they are fully grammatical. This is presumably because *appearing* and *believing* in (65) and (66) are verbs; therefore each counts as an L-marker, whereas N does not. As the pair (67, 68) shows, POSS/ACC-ing gerunds license the infinitival or small clause subject via accusative case. When passivization removes this possibility, *John* must raise out of the lower IP for Case reasons. In both cases, IP is not a barrier, since V L-marks IP in the structure [_{DP} D [_{AgroP} AgrO [_{VP} V_{ing} IP]]].

Thus, we find indirect but strong evidence for the existence of a functional projection in which *of*-marked DPs are licensed. This analysis allows us to give a unified explanation for two puzzling phenomena—the impossibility of raising and *of*-marking in certain derived nominals—without resorting to unmotivated assumptions about Inherent Case.

6.0 Some potential counterexamples

Recall the early data of (5–8) in Section 1.0.

Profession-class predicates

- (69) Clinton appointed Nader *campaign-reform czar*. [Cf. (5).]
- (70) For their children's sake, Linda and Bob named Alex *guardian*.

Vocatives and appositives

- (7) Ok, *genius*, tell us how to do it.
- (8) Few of us ever got to know Katherine Janeway, *gardener* and *pasta-lover*.

Like the manner PP construction, these examples constitute exceptions to the general requirement that English count nouns have an overt determiner. It turns out they are also exceptions to the correlation that we have seen between overt D on the one hand, and modifiers and complements on the other:

- (71) Linda and Bob named Alex *guardian of their children*.
- (72) Sally was elected (*the*) *smartest student in the class*.
- (73) I consider John *(the) *smartest student in class*.
- (74) *I appoint John Max a person.

The italicized nominals in (71) and (72) are titles; the appearance of a determiner here is usually optional. This generalization only holds when the italicized string appears within the small clause complement of *appoint*, *elect*, *name*, and so forth (cf. (73)), so there is nothing inherent about the bare nouns in (71) and (72) that makes them immune to having a determiner.

Apparently, this verb class selects a nominal small clause that denotes a property, but the property generally only holds for one individual at a time. Furthermore, the property must be temporary (cf. (74)). These predicate nominals are also exceptional in other ways: unlike complements of the *consider*-class, they are resultatives and, as Stowell (1989) observed, they can be headed by *as*.

I cannot offer any explanation of these exceptional properties here, but I do want to suggest an answer to the problem presented in (71). We said before that the #P that licenses the complement of a noun can be present when this noun heads a referential argument, but not when N is non-referential, as in *by train* and *goat-herder*; in the latter case, #P would arguably block incorporation of N into V or P. However, for predicate nominals, there is no *a priori* reason to expect N to raise; and even if it did raise, the motivation for this would be distinct from the motivation for N-to-D raising. (One likely possibility is the raising of N to some other functional head, perhaps Pred, following Bowers 1993.) Therefore, we have no reason to claim that #P *could not* intervene between N and the verb that s-selects the whole predicate nominal.

- (75) (**A/this*) *dear friend*, can you spare some change?
- (76) Katherine Janeway, (*a*) *tireless defender of the homeless*, is nowhere to be found.
- (57) *The appearance of John to win

This explanation essentially carries over to the cases in (75) and (76) as well. Vocatives and appositives are adjuncts, hence they too escape the N-raising requirement argued for by Longobardi. In fact, there is no real evidence that they are DPs. However, nothing rules out the possibility that they contain a functional projection, assuming it serves some purpose, such as licensing a complement of N, as in (57). These data are therefore not counterexamples, but an additional source of support for the analysis we have proposed. We expect cases like these to allow complements and modifiers without an overt determiner.

It should be pointed out that my analysis predicts that any sort of modifier should be allowed in (69, 70, 7, 8) (e.g., AP, PP, and so on). This prediction holds true for appositives and vocatives, but not always for small clauses.

- (77) Linda and Bob named Alex (?new) guardian of their children.
- (78) *Nader was elected new president.
- (79) Roger was appointed temporary chair.

There seem to be some subtle semantic distinctions at play here, having to do with the question of what is an appropriate modifier for a nominal denoting a title. I will therefore assume that these facts can be handled outside the syntax.

Another question that arises from the discussion of (69, 70, 7, 8) is whether the object of *by* and *via* is simply a predicate. If this were the case, we could no longer distinguish it from the predicates in (69), and its syntactic properties would no longer be accounted for. There is a clear difference, though, between objects of manner PPs and nominal small clauses: the NPs in small clauses have additional functional structure above them (such as Pred or Voice) which allows the noun to get interpreted as a predicate without incorporating. This structure provides a position for the subject of the small clause as well. Bare NP objects, on the other hand, do not have any functional structure above them and never license subjects. Their only option is to incorporate into the P or V that selects them. We can assume that they lack this functional projection, be it PredP or VoiceP, precisely because NP is c-selected. Placing a Pred/VoiceP below *by* or in a synthetic compound would ultimately lead to uninterpretability, since PredP and VoiceP denote states/events, and what *by* is looking for is an entity (e.g., *plane*) that denotes some mode of transportation.

7.0 Conclusion

In this paper we have examined a number of exceptional constructions from a range of languages and found a striking similarity which binds them together. The exceptional aspect of the constructions derived from necessity: we needed to find special contexts which allowed a determiner to be omitted, and, crucially, that determiner had to normally be obligatory in the language in question. The property which all of these constructions shared was a correlation between the presence of DP, and the possibility of modifiers and complements of N.

We also found that a relatively simple assumption about how complements are licensed, in combination with Longobardi's assumption about the position of nominal modifiers, fully accounted for this correlation, even correctly predicting cases where complements should be possible *without* the presence of DP. This analysis also allowed a more elegant proposal to be forwarded for English bare singulars in manner PPs. The ungrammaticality of examples like *via interpreter of Chichewa* provided particularly strong evidence for the analysis. Finally, our analysis provided a new perspective on some old puzzles concerning raising out of derived nominals. An advantage of our theory was a more principled account of *of*-insertion in derived nominals in comparison with previous analyses.

There remain some areas for further exploration. Can we show that #P is the functional projection responsible for licensing noun complements? More also needs to be said about the variation that is found in predicate nominals. Why is the vacuous determiner required in most nominal small clauses, optional in the *vote*-class, and prohibited in vocatives? Is the presence of the determiner here semantically governed?

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