

Structural Parallelism between Clausal and Verbal Domains in Terms of A/A'P*

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Abstract

The purpose of this paper is to explore a structural parallelism between the domain immediately below CP and that immediately below vP. In the generative tradition, both CP and vP are standardly assumed to constitute phases (Chomsky (2000, 2001, 2008)). Building on Bošković's (2024) proposal that an A/A'-phrase occupies the position immediately below CP, this paper extends his analysis to the verbal domain and argues that a comparable A/A'-phrase exists immediately below vP. This claim is supported by three types of alternation patterns—*spray/load*, creation/transformation, and dative alternations—originally discussed in Basilico (1998). This paper also argues that the current proposal can capture syntactic properties of verb-particle construction.

Keywords: A-position, A'-position, verbal structure, *spray/load* alternation, creation/transformation alternation, dative alternation, verb-particle construction

1. Introduction

The investigation of subject positions remains a central issue in the study of generative grammar (see Svenonius (2002) among others). The domain in which subjects surface is traditionally referred to as the IP domain, where information related to agreement and tense is also encoded.

Examining the IP domain, Bošković (2024) argues that the domain should be further articulated, proposing the existence of an A/A'-phrase just below the phase head C. The structure he proposes is illustrated in (1):

$$(1) \quad C [_{A/A'P} XP [_{AgrsP} YP [_{TP} ZP \dots]]]$$

[Spec, AgrP], occupied by YP, indicates the position in which regular subjects appear in English. Above this position, Bošković (2024) assumes the presence of A/A'P and that syntactic items located in [Spec, A/A'P] show both A-properties and A'-properties. A subject phrase thus has a possibility to appear at one of these projections.

Turning to verbal domains, it is widely assumed that verbal structure consists of some functional and lexical projections. A commonly held view is that it is composed of a two-layered structure, as shown in (2) (see Chomsky (1995, 2000, 2015); Hale and Keyser (1993); Kratzer (1996), among others):

$$(2) \quad [_{VP} v [_{RP} R]]$$

In this paper, I extend Bošković's analysis to the verbal domain, arguing that an A/A'-phrase is also present immediately below the phase head *v*. This claim is supported by three types of alternation patterns discussed in Basilico (1998): the *spray/load* alternation, the creation/transformation alternation, and the dative alternation. The *spray/load* alternation, for instance, shows two realizations of the argument structure of the same verb, as illustrated in (3):

(3) *Spray/Load* Alternation

- a. The farmer loaded a bale of hay onto the truck.
- b. The farmer loaded the truck with a bale of hay. (Basilico (1998: 543))

The verb *load* has two options: one is to appear with the preposition *onto*, and the other is with the preposition *with*.

While Basilico (1998) accounts for these alternations by appealing to the thematic and categorial distinction, I argue that the alternation patterns can be captured more precisely by positing the A/A'-phrase, without losing his insight concerning thematic-categorial distinction.

The organization of this paper is as follows. Section 2 examines Bošković (2024), who presents cross-constructional evidence for the existence of an A/A'-phrase just below the phase head C. Among the constructions he discusses, I focus on subject *wh*-phrases and locative inversion. Section 3 presents the main proposal of this paper: that the parallelism between CP and vP motivates the presence of an A/A'-phrase immediately below v. Section 4 reviews Basilico (1998), who explores the distinction between thematic and categorial objects in the verbal domain and argues that this distinction underlies the syntactic and semantic properties of the three alternation patterns. Section 5 shows that the proposal of this paper successfully accounts for the empirical data originally discussed by Basilico (1998). Section 6 explores implications of the proposal for verb-particle constructions. Section 7 addresses some remaining issues, and Section 8 concludes the paper.

2. Bošković (2024)

2.1. Mixed Properties

Bošković (2024) argues that so-called subjects occupy various structural positions, and that some subjects—such as quirky subjects—appear lower than canonical (or regular) subjects in English, while others, such as *wh*-subjects and non-agreeing subjects, occupy a higher position. The hierarchy of these subjects is summarized in (4):

- (4) *wh*-moved / non-agreeing subjects > regular subjects > quirky subjects
(Bošković (2024: 52))

To capture this structural hierarchy, Bošković proposes an articulated IP domain with multiple subject positions, as schematized in (5):

- (5) C [A/A'P XP [_{AgreeP} YP [_{TP} ZP ...
XP = *who*-subjects, V2-subjects, *only*-subjects, overt imperative
subjects, locative inversion (LI) subjects, CP-subjects, expletive
there, Singlish non-agreeing subjects, Defaka focus subjects,
Chinese and Japanese subjects
YP = regular subjects
ZP = quirky subjects (cf. Bošković (2024: 52))

While it is not new to propose multiple subject positions, what is particularly innovative in Bošković's proposal is the claim that the highest subject position (XP) exhibits both A- and A'-properties. These "mixed" properties are characteristic of subjects staying at the A/A'P position.

In what follows, I review Bošković's discussion of subject *wh*-phrases and locative inversion construction, which utilize the A/A' phrase in the clausal domain.

2.2. *Wh*-Subjects

Bošković (2024) argues that subject *wh*-phrases occupy a different structural position from non-subject *wh*-phrases with the former located in the Spec position of A/A'P. The movement of subject *wh*-phrases has long been controversial due to the string-vacuous nature of the movement, making it difficult to determine whether movement actually takes place. The first evidence that Bošković offers for the movement comes from their compatibility with certain adverbial modifiers, such as

the hell. Consider the following contrast:

- (6) a. *Who bought what the hell?
 b. What the hell did John buy?
 c. Who the hell bought that house? (Bošković (2024: 9))

The contrast between (6a) and (6b) suggests that the modifier *the hell* can only appear with a moved *wh*-phrase. Given that (6c) is grammatical, we conclude that subject *wh*-phrases also undergo movement, even if the movement is string-vacuous.

Additional evidence comes from an ellipsis construction. Consider (7):

- (7) Someone bought a car. Who? (Bošković (2024: 9))

Here, the remnant *who* survives the ellipsis operation. Assuming AgrsP is the target of ellipsis, Bošković suggests that *who* is located outside of AgrsP, again supporting the idea of a higher position than a regular subject position.¹

Bošković further argues that subject *wh*-phrases move to a lower structural position than object *wh*-phrases. Consider the following contrast:

- (8) a. ? Mary wonders which book, for Kim, Peter should buy.
 b. *Mary wonders which student, for Kim, should buy that book.
 (Bošković (2024: 13))

The object *wh*-phrases move to a position higher than the phrase *for Kim*, whereas the subject *wh*-phrases cannot move to a position above it. This contrast indicates that the two types of *wh*-phrases target distinct landing sites; more specifically, subject *wh*-phrases move to a structurally lower position than object *wh*-phrases.

Bošković nevertheless argues that subject *wh*-phrases are in an A'-position.

Compare the following examples:

- (9) a. Who loves everyone? (who > everyone /*everyone > who)
 b. Someone loves everyone.
 (someone > everyone / everyone > someone)
 (Bošković (2024: 9))

In (9a), the subject *wh*-phrase obligatorily takes wide scope over the object, indicating no scope interaction with the A-positioned object. In contrast, (9b) allows both scope interpretations. The (un)availability of scope interaction differentiates A-position from A'-position.

2.3. Locative Inversion

Bošković (2024) discusses a range of constructions to motivate the presence of an A/A'-position between CP and AgrP—the latter being the projection where regular subjects are typically located. One such construction, which is particularly relevant to later discussion, is the locative inversion construction.²

Locative inversion constructions are characterized by a fronted locative phrase and a postverbal logical subject. Crucially, the fronted locative phrase exhibits both A-properties and A'-properties. Consider the following examples from Bošković (2024):

- (10) a. On the wall_i seemed [t_i to be hanging a picture of John].
 b. Into every dog_i's cage peered its_i owner.
 c. cf. *Into every dog_i's cage its_i owner peered. (Bošković (2024: 36))

In (10a), the locative phrase *on the wall* undergoes raising, which is an instance of the A-properties. In (10b), the universal quantifier *every dog* within the locative

phrase successfully binds the pronoun *its* in the logical subject, a hallmark of A-binding. By contrast, (10c) shows that this binding is unavailable when the locative phrase is topicalized—a standard A'-movement. This contrast supports the conclusion that fronted locative phrases in LI constructions possess A-properties.

At the same time, the locative phrase also displays A'-properties, as shown in the following examples:

- (11) a. ?* Which horse do you think that out of the barn ran?
 b. ?* Who_i do you think that on this wall hung [a picture of t_i]?
 (Bošković (2024: 36))

In (11a), extraction of *which horse* is blocked by the fronted locative phrase, suggesting that it occupies an A'-position that intervenes in the *wh*-movement of *which horse*. Similarly, in (11b), subextraction from the logical subject is blocked by the fronted locative. (The term “block” is used here in a somewhat loose sense. The issue of how the blocking of movement observed is to be accounted for within the present proposal will be taken up in section 5.)

Further evidence for A'-status comes from scope interpretation. Consider the following:

- (12) On some stage stood every actress. (some > every / *every > some)
 (Bošković (2024: 36))

The lack of inverse scope in (12) indicates that the fronted locative phrase is not in a position where it can interact scopally with the logical subject, and this shows that the locative phrase is in an A'-position.

This section has reviewed Bošković's (2024) argument that the traditional IP domain should be decomposed into multiple functional projections. Among them,

the highest projection—A/A'P—is argued to host syntactic items that exhibit both A- and A'-properties. Subject *wh*-phrases and locative phrases in locative inversion constructions provide compelling empirical support for this claim.

3. Proposal

This section presents the main proposal concerning the structure of the verbal domain. Traditionally, verbal structure has been assumed to have a two-tiered configuration, consisting of a vP and an RP (or VP), as shown in (13):

- (13) [_{vP} Subj v [_{RP} Obj R]]

A two-story structure has also been assumed for clausal domain, typically represented as CP-TP. However, as we have seen in the previous section, Bošković (2024) argues for the presence for an A/A'P projection immediately below the phase head C. Given that CP and vP are both considered phase domains and are structurally parallel, I propose the following:

- (14) An A/A' projection is structurally available in the verbal domain.

If the proposal in (14) is on the right track, a problem to arise is how A/A'P is incorporated into the verbal structure. To consider the exact implementation of the current proposal, in the next section, I discuss Basilico (1998), who examines argument alternation patterns of certain verbs and offers an articulated verbal structure.

4. Basilico (1998)

Basilico (1998) argues for a syntactic realization of the traditional philosophical distinction between *thetic* and *categorical* judgments within the verbal

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domain. This distinction originates in the domain of philosophy (e.g., Brentano (1966/1972), Marty (1940/1965)) and has been incorporated into linguistic analyses of sentence types (see Kuroda (1972) among others; see also Ladusaw (1994)). Basilico extends this dichotomy to the realm of argument structure and verbal diathesis alternations, discussing three types of alternation patterns that reflect the thetic-categorical distinction (where I attach underlines to relevant objects):

(15) *Spray/Load* Alternation

- a. The farmer loaded a bale of hay onto the truck. (thetic)
- b. The farmer loaded the truck with a bale of hay. (categorical) (=3))

(16) *Creation/Transformation* Alternation

- a. The cook baked three dozen cookies from one pound of dough. (thetic)
- b. The cook baked one pound of dough into three dozen cookies.

(categorical)

(Basilico (1998: 543))

(17) *Dative* Alternation

- a. The instructor gave a book to the student. (thetic)
- b. The instructor gave the student a book. (categorical)

(Basilico (1998: 543))

According to Basilico, the (a)-examples contain thetic objects in the post-verbal position, whereas the (b)-examples involve categorical objects in that same position.

To account for the syntactic and interpretive differences between these two types of objects, he proposes the following distinct structural configurations:

(18) Structure with **Thetic** Object

[_{VP} Subj V [_{TransP} Obj_i Trans [_{VP} t_i V Comp]]]

(19) Structure with **Categorical** Object[_{VP} Subj V [_{TransP} Obj Trans [_{VP} V Comp]]] (cf. Basilico (1998: 544))

In (18), the thetic object is base-generated in [Spec, VP] and undergoes movement to the Spec of Transitive phrase or [Spec, TransP]. In contrast, in (19), the categorical object is base-generated in [Spec, TransP] and does not undergo movement. These structural differences are claimed to yield a number of interpretive and syntactic consequences, which we will see just below. In this section, however, I restrict the discussion to the *spray/load* alternation in order to introduce Basilico's (1998) analysis.

The first piece of evidence for the structural differences comes from scope interpretations. Consider the following examples:

(20) Scope Ambiguity in the *Spray/Load* Alternation

a. The farmer loaded a bale of hay onto every truck.

(a > every / every > a)

b. The seamstress stuffed a bunch of feathers into every pillow.

(a > every / every > a)

c. The farmer loaded a truck with every bale of hay.

(a > every / *every > a)

d. The seamstress stuffed a pillow with each bunch of feathers.

(a > every / *every > a)

(Basilico (1998: 551))

In (20a) and (20b), the verbs appear with *onto/into*. In these sentences, Basilico assumes objects to be thetic in interpretation and shows it is possible for the thetic objects to have scope interaction with the quantified NP within the PP. In contrast, in (20c) and (20d) with the *with* variants, where categorical objects occupy the post-

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verbal position, no such interaction is observed. Basilico attributes these scope differences to the semantic properties associated with the two object types: *thetic* objects are allowed to take either wide or narrow scope, whereas *categorical* objects, base-generated at the higher position and not subject to lowering for scope interpretation, yields only a rigid scope reading.

The second piece of evidence concerns the interaction between object NPs and adverbs:

- (21) a. During the holdup, the robbers stuffed a wad of cash frequently into a bag. (ambiguous)
 b. While we watched, the cook sprinkled a bit of cheese frequently on the pizza. (ambiguous)
 c. During the holdup, the robbers stuffed a bag frequently with a wad of cash. (same bag reading)
 d. While we watched, the cook sprinkled a pizza frequently with a bit of cheese. (same pizza reading)
 (Basilico (1998: 560))

When *thetic* objects appear in clauses, as in (21a) and (21b), they exhibit ambiguous interpretations with respect to the following adverbs. Specifically, in (21a), *a wad of cash* can be interpreted either as multiple distinct wads or as the same wad repeated. Similarly, in (21b), *a bit of cheese* may refer to different portions or to a single, recurring portion. In contrast, in (21c) and (21d), with the post-verbal *categorical* objects followed by *with*, we only get a wide scope interpretation of *categorical* objects with respect to the corresponding adverbs. Basilico (1998) attributes these interpretive differences to the (un)availability of reconstruction. It is possible for *thetic* objects only to be reconstructed to the base-generated position since they have raised by the movement operation.

The third phenomenon concerns locative inversion structures:

(22) Inversion and the *Spray/Load* Alternation

- a. On the farmer's truck was loaded a bale of hay.
- b. On my desk was piled a stack of ungraded papers.
- c. In the freezer was crammed a year's worth of bread.
- d. In the pillow was stuffed the leftover goose down.
- e. *? With a bale of hay was loaded the farmer's truck.
- f. *With a stack of ungraded papers was piled my desk.
- g. *With a year's worth of bread was crammed the freezer.
- h. *With the leftover goose down was stuffed the pillow.

(Basilico (1998: 569))

The passive sentences in (22a-d), the PP successfully undergoes movement to the subject position across the objects which are interpreted as *thetic*. Basilico suggests that *thetic* objects introduce new information and are therefore allowed to occur in the post-verbal position, which is typically associated with the presentation of new information in the clause. In contrast, in (22e-h), where the objects are *categorical*, they resist appearing in the post-verbal position due to an information-structure mismatch.

Fourth and finally, Basilico (1998) discusses extraction operations involving *there*-constructions. As shown in (23), both *thetic* and *categorical* objects can appear as associate NPs in *there*-constructions. However, he argues that the syntactic status of the phrase following the copula differs depending on the type of associate NP. Consider (23).

- (23) a. There was [_{VP} hay loaded onto the truck].
- b. There was [_{NP} a truck loaded with hay]. (Basilico (1998: 562))

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As in (23a), when the associate NP is a thematic object, the post-verbal phrase constitutes a VP. In contrast, in (23b) where a categorical object functions as the associate NP, the post-verbal element is analyzed as an NP rather than VP. He shows evidence for the structural differences with respect to extraction:

- (24) a. How quickly_i can there be [paint sprayed onto that wall t_i]?
 b. *How quickly_i can there be [a wall sprayed with paint t_i]?
 (Basilico (1998: 563))

Only (24a), involving a VP, allows extraction of an adverbial phrase like *how quickly* whereas (24b) violates the Complex NP Constraint because *how quickly* is extracted from within an NP.^{3,4}

5. Analysis with A/A'P in Verbal Domain

I have reviewed Basilico (1998), who presents an insightful analysis of several verbal alternation patterns. Empirically, he provides a wide range of data in an attempt to capture the underlying structural generalizations across these constructions. While I concur with him that the two-layered structure is insufficient to account for the range of argument alternation patterns observed, my analysis builds instead on the proposal in (14), which pursues a structural parallelism between the clausal and verbal domains. Given this, the difference Basilico seeks to capture from the thematic-categorical perspectives can be explained in terms of the optional projection of A/A'P in the verbal domain, as illustrated below.

- (25) a. [_{VP} Subj v [_{RP} Obj R]]
 b. [_{VP} Subj v [_{A/A'P} Obj F_{A/A'} [_{RP} t_{Obj} R]]]

The object NP in (25a) is base-generated and remain in [Spec, RP] throughout

the derivation; this position corresponds to the canonical object position in Basilico (1998). The verbal domain, however, can optionally project an additional layer. Specifically, as illustrated in (25b), A/A'P is projected, and when this projection is present, the object moves to [Spec, A/A'P]. Structures containing A/A'P yield what Basilico (1998) classifies as categorical objects.

Before proceeding, I note that this paper assumes that alternation pairs are not derivationally related. Rather, each member of an alternation is generated independently in the base. This idea is supported by several empirical considerations. Two representative types of evidence are presented.

First, consider nominalization. It is standardly assumed that nominalized structures reflect the underlying base. The fact that both patterns of the *load*-alternation can be nominalized suggests distinct base structures:

- (26) a. The loading of the hay onto the wagon
 b. The loading of the wagon with hay (Wilson (2021: 269))

Second, anaphoric relations reveal similar asymmetries:

- (27) a. John sprayed the water_i onto itself_i.
 b. *John sprayed itself_i onto the water_i.
 c. John sprayed the water_i with itself_i.
 d. *John sprayed itself_i with the water_i. (Wilson (2021: 248))

Only structures where the antecedent precedes the reflexive are grammatical, indicating that the alternants are not derivationally related but are instead base-generated.⁵

In what follows, I demonstrate that the structures in (25) successfully accounts for the empirical data presented in Basilico (1998) without appealing to semantic

vP]. In principle, then, the trace of *who* could participate in the scope relation with the raised *everyone*, yielding a scope ambiguity, contrary to fact. Here, following Fox (1999) I assume that that A'-moved items do not obligatorily show reconstruction effect. Therefore, the *wh*-phrase *who* does not take scope at the base-generated position, [Spec, vP].⁶ The same assumption is applicable to (31), where the base position of the PP *on some stage* is lower than the surface position of *every actress*, yet reconstruction does not take place for scope purposes. As a result, only the wide-scope interpretation of the locative PP is available. Consequently, the absence of reconstruction in A'-movement is as crucial as relative structural height in determining the observed scope interpretations.

With this in mind, let us turn to (29). The postverbal NP *a truck* is moved to the A/A' position. This raised NP shows A'-property: its reconstructed position is not taken to participate in the scope relation with other elements. I also make two additional assumptions concerning scope interpretation. First, I assume that when NP in a verbal domain undergoes QR, the QR-ed item moves to the edge of $\sqrt{P}$. Second, I assume that vP constitutes a computational domain when elements within vP, excluding the external argument, enter into scope relations.

Given these assumptions, in (29), the preverbal object moves to [Spec, A/A'P] while the other NP in the same verbal domain, *every bale of hay*, undergoes QR to land in a position as high as the edge of $\sqrt{P}$, producing the wide scope of indefinite over the universal quantifier. By contrast, in (28), the application of QR establishes the ambiguous scope relation between the indefinite and the universal quantifier.

Similarly, we can account for cases in which adverbial elements follow the object (see (21)). When an adverb appears after the object, the following structures are constructed.

- (32) a. [_{VP} Subj [_{A/A'P} Obj_i F_{A/A'} [_{RP} frequently [_{RP} t_i R PP]]]]
 b. [_{VP} Subj [_{RP} Obj [_{RP} frequently [_{RP} R PP]]]]

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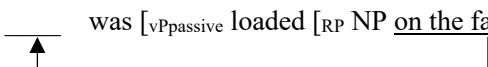
In (32a), the object NP in [Spec, A/A'P] exhibits no reconstruction effect, similar to those discussed above, and is structurally higher than the adverb on the surface position. By contrast, in (32b), both the object and the adverb are in the same projection, resulting in scope interaction between them.

The account developed here yields an interesting prediction. Specifically, the items in the A/A' position should be able to enter into scope interactions with elements merged in positions higher than the A/A' position. This is because when an element that has moved to the A/A' position subsequently undergoes QR and raises higher, the copy left in the A/A' position functions as the reconstruction site for semantic interpretation. This prediction is borne out, as shown below.⁷

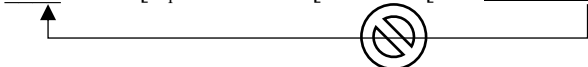
- (33) a. During the holdup, the robbers frequently stuffed a bag with a wad of cash.
 b. While we watched, the cook frequently sprinkled a pizza with a bit a cheese. (Basilico (1998: 560))

In both sentences in (33), the adverb *frequently* is merged in a position higher than the A/A' position. These sentences are ambiguous with respect to scope. Under one interpretation, the object NP takes wide scope over the adverb. In this case, QR applies to the NP, raising it to a position above the adverb, thereby yielding wide scope. Under the alternative interpretation, the NP is interpreted within the scope of the adverb. In this case, the trace left behind in the A/A' position is interpreted for scope purposes.

Next, the current analysis also accounts for the asymmetry in PP-subject in locative inversion involving *onto*- and *with*-phrases. Consider the following:⁸

- (34) a. On the farmer's truck was loaded a bale of hay. (= (22a))
 b.  was [_vP_{passive} loaded [_{RP} NP on the farmer's truck]

(35) a. ?* With a bale of hay was loaded the farmer's truck. (= (22e))

b. 

In (35), the post-verbal NP stays in the A/A' position, and it serves as a blocker of the movement of the locative phrase to the locative subject position, which is the A/A' position below CP, according to Bošković (2024). By contrast, in (34), the locative phrase successfully moves to the A/A' position across the post-verbal NP in the A-position.

One might argue that under the current analysis, the following data are problematic because the *wh*-phrases move across NPs in the A/A' position:

- (36) a. What_{t₁} did the farmer load the truck with t₁?
 b. With what_{t₁} did the farmer load the truck t₁?
 c. What_{t₁} did the farmer load a bale of hay onto t₁?
 d. Onto what did the farmer load a bale of hay t₁?

The grammaticality of these sentences is not itself problematic; rather, they provide a window into the nature of the A/A' position. A crucial difference between (35) and (36) lies in the type of moved phrases involved. Let us first consider (36), where *wh*-phrases move across the NP in the A/A' position. In this configuration, what crosses the A/A' position consists of A'-moved items; accordingly, A'-movement is able to cross the A/A' position.⁹

Let us now turn to (35), where the final landing site of the locative PP is the A/A' position below CP, as is assumed in Bošković (2024) for locative inversion constructions. In addition, the verbal A/A' position is occupied by the postverbal NP, *the farmer's truck*, which functions as a blocker to further movement of the locative PP. Adopting the term A/A'-moved item, by analogy with conventional A- and A'-

moved item, we can state that in (35), A/A'-moved items cannot cross the higher A/A' position, just as A-moved item cannot cross a higher A-position and A'-moved item cannot skip over a higher A'-position (Rizzi (1990)). Thus, (35) and (36) differ in the type of moved NPs, and hence, the sentences in (36) do not pose a problem for the present analysis.

Bošković (2024) also attributes the ungrammaticality of the sentences in (11a, b) (repeated here as (37)) to the “blocking” effect of the locative phrase.

- (37) a. *Which horse do you think that out of the barn ran? (= (11a))
 b. *Who_i do you think that on this wall hung [a picture of t_i]? (= (11b))

According to Bošković (2024), the locative phrases in (37) “block the extraction of lower elements” (p. 36). Let us examine more closely how the locative PP “blocks” the movement of *wh*-phrase in sentences like (37). On Bošković’s analysis, the locative NP occupies the A/A' position below CP; he also assumes that this A/A' position is also occupied by subject *wh*-phrase. In (37a), what is moved is subject *wh*-phrase. I then assume that the *wh*-subject passes in the course of successive-cyclic movement through the A/A' position as an intermediate landing site because A/A'-moved item cannot cross a potential higher landing site, just discussed above. Under this view, in the embedded clause in (37a), the locative phrase and the *wh*-subject compete for the same A/A' position below the embedded CP, and it is in this sense that the former “blocks” the movement of the latter. As for (37b) as well, the *wh*-phrase extracted out of the subject phrase is assumed to utilize the this same position ([Spec, A/A'P]). Consequently, the ungrammaticality of the sentences in (37) provides independent evidence for the presence and intervention effects of the A/A' position.

A further piece of empirical evidence for the presence of A/A' position within the verbal domain comes from *there*-constructions involving adverbial *wh*-extraction

(38) a. How quickly_i can there be [v_Ppassive paint sprayed onto that wall t_i]
b. ... [TP there T_{can} be [v_Ppassive NP_{paint} sprayed
[RP t_{paint} R_{sprayed} PP_{onto the wall} t_{how quickly}]]]

(39) a. *How quickly_i can there be a wall_j [Rel sprayed with paint t_i]
b. ... [TP there T_{can} be NP_{the wall} [Rel Rel [v_Ppassive sprayed
[A/A' P F_{A/A'} [RP R_{sprayed} PP_{with paint} t_{how quickly}]]]]]

Thus, the contrast between (38) and (39) follows from the interaction between the A/A' position and independently motivated locality constraints on movement.¹⁰

6. Verb-Particle Constructions

This section shows the proposed structure with the optional A/A'P within the verbal domain can be extended to verb-particle constructions. We have so far discussed two different positions for objects, as shown below:

- (40) a. [_{VP} V [_{RP} YP R]]
 b. [_{VP} V [_{A/A'P} XP F_{A/A'} [_{RP} YP R]]]

As argued in the previous section, what Basilico (1998) characterizes as “categorical objects” correspond to NPs located in [Spec, A/A'P] while “thetic” is in [Spec, RP].

Turning to verb-particle construction, it is well-known that this construction allows two surface positions for the object NP. Taking *make out* as an example, this construction offers two object positions:¹¹

- (41) make XP out [_{RP} YP R [_{IP} to be smart]]

In this structure, XP precedes the particle *out*, while YP follows it. The object NP can thus appear in either of these syntactic positions.¹² When we carry over the analysis of (40) to verb-particle construction, it follows that, in (41), XP is in the A/A' position and YP is in the A position.

To confirm the validity of this structural configuration, consider first the scope interaction between the object NP and negation. The relevant examples are given in (42)-(43):

- (42) a. The mathematician made out every even number not to be the sum
 of two primes.
 b. The mathematician made every even number out not to be the sum
 of two primes. (Lasnik (1999: 201))

- In (42a), the object NP *every even number* following the particle can be interpreted to take narrow scope, indicating a position where scope interaction is possible, that is [Spec, RP]. In contrast, in (42b), where the object precedes the particle, the quantifier necessarily takes wide scope, indicating the presence of [Spec, A/A'P]. The same scope asymmetry is observed in (43), where the contrast concerns the scope of the negative quantifier *no students* relative to the matrix predicate *make out*. In (43a), *no students* takes narrow scope with respect to *make out*. That is, the negation is interpreted within the embedded predication domain. By contrast, in (43b) and (43c), *no students* takes wide scope over the matrix predicate. In these cases, negation scopes over the entire making-out event, yielding matrix-wide negation.

This pattern parallels thethetic-categorical contrast discussed by Basilico (1998) in (20a/c), repeated here in (44):

- (44) a. The farmer loaded a bale of hay onto every truck.
(a > every / every > a) (=20a))
b. The farmer loaded a truck with every bale of hay.
(a > every / *every > a) (=20c))

These observations suggest that when NPs precede particles, they occupy [Spec, A/A']. The NPs in this position do not allow scope interaction with other quantified nouns in the verbal domain while NPs in [Spec, RP] do (see Section 5). Furthermore, the discussion so far suggests that the particle occupies the head of A/A' phrase. This is schematically represented in (45):

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- (45) $[_{VP} V [_{A/A'P} XP F_{A/A'} [_{RP} YP R]]]$
 $\uparrow$ particle position

Basilico (2008) presents an interesting set of data involving verbs of creation and transformation (see (16)). Under the present analysis, the object NPs in the *into*-variants stay in [Spec, RP]. Consequently, when the *into*-variants combine with verb-particle constructions, the objects surface in the post-particle position, as illustrated in (46).

- (46) a. The president built up the small liberal arts college into a major research university.
 b. ? The homemaker sewed up the pieces of cloth into a dress.
 c. The kindergartener cut up the paper into tiny pieces.
 d. * The actor made up an old sheet into a costume.
 e. The whittler carved up the wood into a toy. (Basilico (2008: 743))

This pattern supports the proposal that when following particles, the NP object remains in the lower [Spec, RP] position.¹³

By contrast, in the *out-of* variants, object NPs do not show scope interaction and must appear in [Spec, A/A'P]. Crucially, these objects are incompatible with verb-particle constructions in the particle-NP order, as shown in the ungrammatical examples in (47):

- (47) a. ?? The president built up a major research university out of a small liberal arts college.
 b. *The homemaker sewed up a dress out of the cloth.
 c. *The kindergartener cut up a heart out of the paper.
 d. *The actor made up a costume out of an old sheet.

- e. *The whittler carved up the toy out of the wood.

(Basilico (2008: 743))

Under the current analysis, these facts follow naturally: objects in the *out-of* variants must occupy [Spec, A/A'P], which is structurally higher than the position of the particle ($F_{A/A'}$), leading to a conflict between the required particle-NP word order pattern and the NP position of [Spec, A/A'].¹⁴

7. Remaining Issues

This section discusses two issues concerning the current analysis. As argued, certain English alternation patterns and verb-particle construction are both captured by positing the optional presence of an A/A' phrase within the verbal domain.

However, the question remains as to under what syntactic and semantic conditions A/A'P is projected. In this connection, it is worth noting Harley's (1995, 2002) observation that verbal heads like *give* and *load* encode the meaning of POSSESSION. One might then assume that the availability of A/A'P correlates with the meaning of possession encoded by the verbal head.

- (48) a. [_{VP} V [_{A/A'P} $F_{A/A'}$ [_{RP} R]]]
 b. $F_{A/A'} = \text{POSSESS} \rightarrow \text{give IO DO}$
 $\rightarrow \text{load NP with NP}$ (Harley (1995, 2002))

However, in addition to *give* and *load*, we have also discussed the creation/transformation alternation, which is considered to contain the meaning of CHANGE, as in *bake one pound of dough into three dozens cookies*. These observations suggest that the head of A/A'P might contribute semantically interpretable features, but the exact relationship between semantic feature of the presence of A/A'P is left for further investigation.

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Let me turn to the second problem. Thus far, the discussion has followed Basilico (1998) in treating the dative alternation as structurally parallel to the *spray/load* and creation/transformation alternations. However, evidence from A'-movement phenomena challenges this classification.

Compare the behavior of indirect objects in dative alternation with that of the object NPs with the *with* variants (categorical objects in Basilico's terms) in *spray/load* constructions:

(49) *Wh*-movement

- a. ?Who did John give a book?
- b. What did John load with the books? (Wilson (2021: 274))

(50) Tough-movement

- a. *Eager students are easy to lend books.
- b. Empty trucks are easy to load with boxes. (Wilson (2021: 274))

(51) Relativization

- a. ?? The student that John gave a book was at the library.
- b. The boxes that John loaded with the books were large.
(Wilson (2021: 275))

The categorical object in the *spray/load* construction readily undergoes A'-movement, while the indirect object in double object constructions resists such movement. Even though both types of object are classified as categorical in Basilico, indirect objects in double object construction obey a stricter restriction on movement.

Word order patterns further illustrate this asymmetry. As we have seen in (47), the object of the *out-of* variants cannot follow the particle. However, in dative patterns, some speakers consider the particle-NP order to be grammatical.¹⁵

- (52) a. %I printed out my advisor a copy of the first chapter.

- b. %The mother picked out her daughter a nice dress.
- c. %I fixed up my mom a nice basket. (Basilico (2008: 761))

The data in (49)-(52) suggest that the asymmetries observed in A'-movement and extraction behavior raise questions about whether double object constructions should be categorized together with *spray/load* and creation/transformation alternations.

8. Conclusion

This paper has pursued the structural parallelism between the clausal and verbal domains. Based on Bošković's (2024) proposal that an A/A'P projection is located between AgrP (hosting regular subjects) and CP (as a phase head) in the clausal domain, I have argued that a similar structural configuration can be found in the verbal domain. In particular, I have shown that the optional presence of A/A'P in the verbal domain provides a principled account of the three types of alternation phenomena examined by Basilico (1998), originally analyzed in terms of the thematic-categorical distinction. Furthermore, the proposed structure has been shown to extend naturally to verb-particle constructions. Finally, I have outlined several remaining issues, including the interpretation of the functional head of A/A'P and the behavior of the double object construction. These are left for future research.

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Notes

- 1) Bošković also argues that subject *wh*-phrase does not use AgrP as an intermediate landing site. I refer an interested reader to his paper.
- 2) See Koike (2013) and Kitada (2011) for minimalist approach to locative inversion construction.
- 3) Basilico bases this asymmetry on Lasnik's (1995) observation:
 - (i) a. How₁ is there likely to be a building demolished t₁?
 - b. ?* How₁ is there a building likely to be demolished t₁?

(Lasnik (1995: 631))
- 4) See Basilico (2001, 2017) for further arguments concerning the defense for the distinction within the verbal domain.
- 5) See Wilson (2021) for other tests for hierarchical structure.
- 6) Recall subject *wh*-phrase moves from [Spec, vP] to [Spec, A/A'] without stopping by any intermediate landing site between them.
- 7) Bruening (2001) also argues, on the basis of data from the double-object construction, that datives can enter into scope interactions with subjects. I thank an anonymous reviewer for drawing my attention to this point.
- 8) I assume that a passive vP corresponding to the active vP is projected, and that the passive participle moves to its head position.

9) I thank an anonymous reviewer for bringing (36) to my attention.

10) An anonymous reviewer raises the question whether the verbal A/A' position host *wh-the hell* expression just like the A/A' position below CP. The answer to the question is negative, as illustrated by the following data:

- (i) a. *Who loaded what the hell onto the truck?
- b. *Who loaded what the hell with a bale of hay?

I assume that *wh-the hell* expressions must occupy the A/A' position at the clausal level and are not licensed in the verbal A/A' position.

11) I assume that the verb *make out* is base-generated in R and subsequently pronounced in a higher position. Under this analysis, θ -roles are discharged from R. I thank an anonymous reviewer for pointing out this issue.

12) An anonymous reviewer raised the question of why movement from YP to XP is possible. Here, we assume that such movement is permitted under the properties of free Merge. For related discussion, see Chomsky (2004).

13) (46d) is ungrammatical for an unknown reason.

14) An anonymous reviewer raises the question of the grammaticality of sentences with NP-particle-*out of* word order. The sentences in (i) remain ungrammatical even under this word order, for reasons that remain unclear, whereas those in (ii) are judged to be acceptable.:

- (i) a. * The kindergartener cut a heart up out of the paper.

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- b. * The kindergartener cut it up out of the paper.
- (ii) a. The president built a major research university up out of a small liberal arts college.
- b. The president built it up out of a small liberal arts college.

Moreover, a search of COCA reveals a number of relevant examples, some of which are given in (iii):

- (iii) a. ... but somehow these mini cyclones pick things up out of ponds and everything ...
- b. Wright has built it up out of earlier scholarly studies of Second Temple Judaism
- c. when you pull it up out of your pile (available from garden-supply companies). (underlines mine)

15) In this case, the particle-NP order is more natural.

- (i) a. The scientist wrote the committee up a report of his findings.
- b. The mother fixed the children up a nutritious lunch.
- c. I cooked her up something special. (Basilico (2008: 761))

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