



11-18-2022

Against the Argument/Adjunct Distinction

Andrew McInnerney
University of Michigan

Follow this and additional works at: <https://repository.upenn.edu/pwpl>

Recommended Citation

McInnerney, Andrew (2022) "Against the Argument/Adjunct Distinction," *University of Pennsylvania Working Papers in Linguistics*: Vol. 28: Iss. 1, Article 13.
Available at: <https://repository.upenn.edu/pwpl/vol28/iss1/13>

This paper is posted at ScholarlyCommons. <https://repository.upenn.edu/pwpl/vol28/iss1/13>
For more information, please contact repository@pobox.upenn.edu.

Against the Argument/Adjunct Distinction

Abstract

This paper suggests that much of the empirical basis for the argument/adjunct distinction (A/AD) is weaker than traditionally believed. First, I argue that successful argumenthood diagnostics should both (i) identify a distinction among dependents which resembles the conventional A/AD, and (ii) draw a distinction which is not already predicted independently of the A/AD. Focusing on PPs within the VP in English, I argue that purported diagnostics for argumenthood, including omission, 'do so'-substitution, and iteration, do not meet these criteria, therefore do not provide empirical support for the A/AD. After briefly discussing the prospects for several further diagnostics, I conclude that it is plausible that the A/AD might be eliminable. Though this would raise technical questions in various areas, it would be desirable from a Minimalist perspective.

Against the Argument/Adjunct Distinction

Andrew McInnerney*

1 Introduction

The Argument/Adjunct Distinction (A/AD) has come to be a widely accepted component of syntactic theory. Though its detailed formal implementation varies across frameworks, the basic idea that the dependents of a given head can be divided into two classes, a class of *arguments*, which in some sense form the core of the projection, and a class of more peripheral *adjuncts*, is adopted near-universally. Despite this, the null hypothesis is always to reject distinctions like this. As such, the A/AD, or, more specifically, the syntactic apparatus postulated to implement it, is a hypothesis which must be supported by evidence.

Traditionally, the A/AD has been supported by *diagnostics for argumenthood*, syntactic phenomena whose application draws a distinction between dependents, where this distinction has been identified with the A/AD. For example, some dependents of a given head can be omitted, and others cannot be omitted. The *omissibility diagnostic* thus draws a distinction between elements that are omissible and those that are not. To the extent that this distinction is related to the A/AD, omissibility may provide evidence in favor of the A/AD. The same applies for other traditional diagnostics, such as *do so*-substitution, iteration, and islandhood.

The goal of this paper is to establish a framework for evaluating whether a given set of diagnostics successfully motivates the A/AD, and to apply this framework to several traditional diagnostics for argumenthood. Section 2 first describes two criteria which any diagnostic must meet to count as motivation for the A/AD. Sections 3-6 then evaluate traditional diagnostics by these criteria. Assuming that, if there is an A/AD, it will apply in the VP, this paper focuses on the application of A/AD diagnostics to dependents of V. As such, sections 3-5 focus on the phenomena of omission, *do so*-substitution, and iteration as they apply within VP. For reasons of space, some potential diagnostics cannot be discussed in detail here; abridged discussion of additional diagnostics is contained in section 6. Section 7 concludes it is plausible that the A/AD could be eliminated in favor of alternative, more accurate explanations for effects traditionally attributed to it.

2 Diagnostics for Argumenthood as Evidence for the A/AD

The A/AD is traditionally thought to be identified by a collection of diagnostics, including those listed in (1). See Schütze (1995), Huddleston & Pullum (2002), Needham & Toivonen (2011) and numerous other sources for similar lists.

- (1) a. *Omission*: The adjuncts to a verb can be omitted, but a verb's arguments (usually) cannot be omitted.
- b. *Do so-substitution*: The adjuncts in a VP can occur with *do so* taking that VP as its antecedent, but the arguments in a VP cannot occur with *do so*.
- c. *Iteration*: The adjuncts to a verb can be freely iterated, but the arguments cannot be iterated.
- d. *Islandhood*: The adjuncts to a verb are opaque for the purposes of extraction, but the arguments are (by default) transparent for extraction.
- e. *Extraction from weak islands*: The adjuncts to a verb cannot be extracted out of a weak island, but a verb's arguments can (at least marginally).
- f. *Reconstruction for Condition C*: The adjuncts to a verb do not reconstruct for Condition C under extraction, but a verb's arguments do reconstruct under extraction.
- g. *Permutation*: The adjuncts to a verb can be freely permuted, but permutation of a verb's arguments degrades acceptability.

* This work has benefitted from helpful discussions with Acrisio Pires, Ezra Keshet, Lisa Levinson, Daniel Seely, and Richard Lewis. I thank Natasha Abner, Marlyse Baptista, Alan Ke, Yushi Sugimoto, Lucy Chiang, Peter Culicover, Rafaela Miliorini, Omer Preminger, and audiences at PLC45 for helpful comments.

Before evaluating these diagnostics, this section seeks to establish what a successful diagnostic for the A/AD would look like. I propose two criteria. The first is a heuristic. The A/AD has a long history, and it is associated with certain canonical categorizations. For example, NP dependents of the verb, including grammatical subjects and direct objects, are almost always considered arguments. Some PPs are canonically considered arguments, and some are canonically considered adjuncts, with lines typically drawn thematically; e.g. recipient PPs, addressee PPs, subject-matter PPs, and goal PPs are typically considered arguments, while PPs denoting manner, temporal, locative, benefactive, and instrumental information are typically considered adjuncts (Schütze 1995, Huddleston & Pullum 2002, Koenig et al. 2003, Dowty 2003). Additionally, dependents which are non-omissible are conventionally considered arguments, virtually as a matter of definition (Huddleston & Pullum 2002:221-222, Boeckx 2003:96, Patejuk & Przepiórkowski 2021:4-5).

This *conventional A/AD* draws distinctions among dependents independently of the particular implementation one adopts for this distinction. Therefore, to say that some diagnostic supports the A/AD means that it provides linguistic evidence for a distinction resembling the conventional notion presupposed by prior literature. A heuristic criterion naturally emerges: a successful defense of the A/AD would have the results of each diagnostic align with the predictions which come from the *conventional A/AD*. That is, a diagnostic should treat most of the conventional arguments one way, and most of the conventional adjuncts another way.

As for the second criterion of evaluation, a diagnostic must make a distinction among PPs *which is not motivated independently* of the A/AD. For example, suppose that a potential diagnostic is shown to draw a distinction between prosodically heavy phrases prosodically light phrases. Because prosodic heaviness has nothing to do with argumenthood, this diagnostic could not be taken as evidence for a syntactic A/AD. More concretely, below I argue that the *iterability* diagnostic distinguishes locative/temporal PPs (regardless of their argumenthood) from other PPs. Since locatives and temporals form a natural class independently of the A/AD, *iterability* can be attributed to that distinction, with no need to invoke the A/AD. Thus, diagnostics motivating the A/AD should be sensitive to properties specific to the A/AD, not attributable to other phenomena.

A corollary of this second criterion is the following: for a diagnostic to be relevant to the syntactic A/AD, it must be sensitive to properties which cross-cut categorial distinctions. If a diagnostic draws a distinction only *across* categories (e.g. between NPs and PPs), but does not draw distinctions *within* categories (e.g. treating all NPs equally and all PPs equally), then there is no need to appeal to an A/AD to explain these facts; the differences can simply be attributed to the already-needed category distinction. For this reason, my focus will primarily be on prepositional phrases here – by sticking to a single category, it will be possible in principle to identify differences in empirical behavior which would need to be explained by something like the A/AD. Thus, for the purposes of this paper, a given diagnostic can be relevant for the A/AD only if it detects a difference of some sort *among PPs*.

In order to provide motivation for the syntactic A/AD, a diagnostic must meet both criteria. Imagine, for instance, that a given diagnostic meets criterion (ii), the no-independent-motivation criterion, but not criterion (i), the heuristic criterion. In this case, we would be looking at a diagnostic which motivates *some* novel theoretical concept, but it would be an error to identify this concept with the A/AD. The conventional A/AD exists independently of any particular theory of the distinction. Thus, even if a diagnostic were to identify a syntactic distinction between verbal dependents, if the distinction does not resemble the conventional A/AD in some way, then it makes more sense to call the new distinction by a new name; there would be no reason to relate it to the A/AD if it did not bear some resemblance to the conventional, off-the-shelf concept.

What if a given diagnostic satisfies the heuristic criterion, but fails to do so with respect to the no-independent-motivation criterion? In this case, the appropriate conclusion depends on the behavior of other diagnostics. If a number of other diagnostics pattern the same way, all reducible to the same, independently motivated property, while at the same time passing the heuristic criterion, then we would conclude that the A/AD could be *reduced* to this independent property. On the other hand, if it is not the case that multiple diagnostics reduce to the same principles – even if they partition dependents into *similar* but crucially *not identical* classes – then we must conclude that the A/AD is not supported. That is, multiple diagnostics passing the heuristic criterion while failing the no-independent-motivation criterion *for different reasons* would not motivate the A/AD. In this case, several independent properties would happen to pattern somewhat closely, but there

would be no reason to unify those properties under the larger umbrella of the A/AD (as this would violate principles of parsimony).

The following sections demonstrate that, by these criteria, certain traditional diagnostics do not provide evidence for a syntactic A/AD. I conclude that, with the traditional set of diagnostics, it is plausible that the syntactic A/AD might be eliminable.

3 Omission

Perhaps the most prototypical diagnostic for argumenthood is the diagnostic from omission. Omissibility was one of the earliest formal diagnostics for argumenthood (see e.g. Harris's 1970:275fn1 application of the diagnostic in Structuralism), and it has continued to be a primary test for argumenthood. Huddleston & Pullum's (2002:222(c)) grammar of English, which places great emphasis on empirically justifying grammatical postulates, assigns omissibility an important role in identifying adjuncts. Indeed, Boeckx (2003:96) refers to omissibility as "adjuncts' core property."

Despite this, it is also well-known that the *omissibility* diagnostic has major problems, with some authors already noting that it does not provide good motivation for the A/AD (e.g. Culicover 2009:69, Needham & Toivonen 2011:9). I argue in support of this idea here. First, I discuss the independent motivations for omission, concluding that some mechanism like subcategorization is required to capture patterns of (non-)omissibility. Then, I argue that the omission diagnostic does not provide evidence for the A/AD because it does not identify a distinction aligning with the conventional understanding of argumenthood.

3.1 Factors Conditioning Omissibility

The omission diagnostic for argumenthood is thought to apply in contrasts such as (2).

- (2) Lee devoured *(something) (yesterday).

The direct object of *devour* is non-omissible, while a temporal like *yesterday* is omissible. According to the omission diagnostic, this is explained by the A/AD: direct objects are arguments, while temporals are adjuncts.

However, in many cases, patterns of omission arguably arise for reasons unrelated to the A/AD. Since such data are explained independently of the A/AD, they do not provide *motivation* for the A/AD. I will briefly discuss two A/AD-independent factors which condition omissibility in this subsection. First is *idiomaticity*. Certain verb + preposition combinations, like *result in*, *depend on*, or *deal with*, are idiomatic. I take such examples, in which the preposition is invariable and semantically bleached, to be idiomatic following Pesetsky (1995:135), who writes "... when a predicate takes an 'idiosyncratic' preposition, such as *on* in *depend on* ..." this represents "... a special case of idiomaticity."

If a particular verb + preposition combination were idiomatic, then we would expect the presence of the preposition (and hence the PP) to be obligatory to complete the idiom. For data like (4), then, and other data like these, we expect the PP to be non-omissible due to its participation in an idiom (independently of its alleged argumenthood).

Another factor conditioning omission is pragmatics. Some have suggested that some canonical adjuncts are syntactically non-omissible for pragmatic reasons. For example, Goldberg & Ackerman (2001), building on ideas of McConnell-Ginet (1994) and Ernst (1984), suggest that some PPs are non-omissible because without them, the Gricean maxim of quantity is violated.

Take the PP that occurs with *dress*, which has traditionally been characterized as an "obligatory adverb" (Jackendoff 1972).

- (6) Lee dressed *(like a clown).

Goldberg & Ackerman suggest the reason the PP is non-omissible here is that, without it, the pragmatic contribution of the sentence is insufficient, at least out of the blue. The assertion that someone "dressed," in the sense that they simply wore clothing of some unspecified style, is not sufficient to satisfy the maxim of quantity. Verbs like *dress* "give the *appearance* of needing an

adverb only because in most contexts they do not provide sufficient information by themselves,” (Ernst 2001:273, emphasis mine). Thus, pragmatics arguably offers a further independent motivation for non-omission, independent of the A/AD.

Still, some data are left unexplained by these two independent factors (idiomaticity and pragmatics). Take verbs like *slog*, *lumber*, *trudge*, *tramp*, and *traipse* (all meaning roughly “walk effortfully”). These all take a non-omissible PP denoting a path or goal, as shown in (8) with *trudge*.

(8) Lee trudged *(through the field).

Non-omissibility does not follow from idiomaticity with these verbs, since a variety of prepositions can be used. Consider *into*, *around*, *out of*, and so on in place of *through* in (8). Further, it is clear that non-omissibility does not come from pragmatics either, both because altering the context does not facilitate omission, and because paraphrases (with *walk*) do *not* require a goal PP.

While relatively rare, it is possible to identify other examples of PPs (like those with the verbs *put*, *reside*, and *hand*) whose non-omissibility is not attributable to idiomaticity or pragmatic felicity. The existence of these cases implies that something like syntactic *subcategorization* is at work, as a lexical property of verbs. That is, it is not possible to deduce, from one verb to the next, which dependents will be syntactically omissible and which will not. As mentioned above, the verbs *slog*, *trudge*, etc. have a non-omissible goal PP, while related verbs like *walk* and *travel* do not.

3.2 Heuristic Problems for the Omission Diagnostic

While omissibility can be partially explained by independently-motivated principles, it cannot be *entirely* explained by them. Some notion of subcategorization is needed to directly capture certain examples of non-omissible dependents. Here, I show that the diagnostic fails to meet the heuristic criterion described in section 2, and as such does not qualify as supportive of the A/AD.

Before demonstrating the heuristic problems with the diagnostic, it is important to flag the fact that omissibility comes in two flavors. One version, which I will call the *strong* omissibility diagnostic, assumes a two-way relationship between omissibility and argumenthood, as in (9).

- (9) *Strong omissibility diagnostic:*
- a. Arguments are always non-omissible.
 - b. Adjuncts are always omissible.

In other words, the inability to be omitted is a necessary and sufficient condition to identify a given dependent as an argument. (And the converse, the ability to be omitted is a necessary and sufficient condition to identify a dependent as an adjunct.) There is also a *weak* version of omissibility.

- (10) *Weak omissibility diagnostic:*
Adjuncts are always omissible.

The weak omissibility diagnostic states only that omissibility is a necessary condition for adjuncthood. Thus, *weak* omissibility is only a *one-way* diagnostic; it is capable of identifying *non-omissible* dependents as arguments, but it cannot identify *omissible* dependents either way.

As I mentioned at the beginning of this section, previous authors have already recognized the heuristic problems faced by the omission diagnostic (see e.g. Culicover 2009:69, Needham & Toivonen 2011:9, Sailor & Schütze 2013). These criticisms primarily apply to the strong version. Although strong omissibility states that arguments are non-omissible, the more general case seems to be that PPs are omissible, even PPs that are canonically considered arguments. This applies to even the most canonical of argument PPs, as with *look at*, *talk to*, *run to*, and *think about*. I conclude, along with prior literature, that the strong version of the omission diagnostic is untenable. As such, the diagnostic in its strong form cannot be taken as evidence motivating the A/AD.

The standard reaction to the strong omission diagnostic’s failure is to adopt the weak version instead. However, while the weak version of the omission diagnostic might be *consistent* with the existence of the A/AD, it does not provide *support* for it. To see why, consider how weak omissibility could be implemented. Let’s begin by accepting that omissibility directly identifies the phe-

nomenon of *subcategorization*; i.e., if an element is non-omissible (for reasons other than idiomacity/pragmatics), then it is subcategorized. From here, there are two basic approaches to implement weak omissibility. On one hand, we could identify subcategorization with argumenthood (i.e., subcategorized \leftrightarrow argument), but stipulate the existence of some other feature (or set of features) *F on top of* subcategorization which makes a subcategorized element omissible. In other words, this first approach states that omissible arguments both (i) are subcategorized and (ii) bear some additional feature *F*, while non-omissible arguments are subcategorized elements lacking *F*.

On the other hand, a second approach could reject the identification of subcategorization with argumenthood, and instead assume merely that argumenthood is *necessary* for subcategorization. There must then be some additional feature (or set of features) *F* which is both identifiable with argumenthood (i.e., $+F \leftrightarrow$ argument) and necessary for subcategorization, but which is not sufficient for non-omissibility. In other words, this second approach states that omissible arguments are *F*-bearing elements that are not subcategorized, while non-omissible arguments are *F*-bearing elements that *are* subcategorized.

In both cases, we must stipulate an additional relationship between subcategorization and argumenthood which omissibility by itself does not justify. In approach 1, we must stipulate that, in conjunction with some additional feature *F*, subcategorized elements become omissible. Note that if we didn't stipulate some *F* in approach 1, we would predict all subcategorized elements (hence all arguments) to be non-omissible. In order to make omissibility only a *one-way* reflection of argumenthood, we need *F*. Similarly, in approach 2, we must stipulate that subcategorization requires the presence of some additional feature *F*. Again, some *F* is required above and beyond the direct implication of subcategorization.

Therefore, although omissibility may directly identify subcategorization (i.e. non-omissible \rightarrow subcategorized in both approaches), by implementing omissibility as a one-way diagnostic for argumenthood we are forced to say that subcategorization is related to argumenthood in a way that omissibility *alone* is not capable of diagnosing. In other words, we must assume both (i) that there is a three-way distinction between *non-omissible arguments*, *omissible arguments*, and *adjuncts*, and (ii) that omissibility itself identifies only non-omissible arguments, leaving the additional necessary distinction between omissible arguments and adjuncts unmotivated.

Therefore, omissibility must be paired with some independent diagnostic identifying a distinction between *omissible arguments* and *adjuncts*. In the absence of that additional evidence, omissibility does not motivate the A/AD. Either way, omissibility does not motivate the A/AD by itself. It may motivate subcategorization, but the connection from subcategorization to argumenthood is not motivated by omissibility alone; that connection requires additional evidence. The remainder of this paper makes the case that existing argumentation in this direction is not compelling.

4 *Do so*-Substitution

Another common diagnostic for argumenthood involves *do so*-substitution. This diagnostic holds that *do so* can have dependents which correspond to adjuncts in its antecedent, but cannot have dependents corresponding to arguments in its antecedent. For example, in (11a), since *tomorrow* can occur with *do so*, the *do so*-substitution diagnostic concludes that the corresponding dependent in the antecedent clause is an adjunct (i.e. *last Tuesday* is an adjunct in the VP *take a trip last Tuesday*). In (11b), *onto the wagon* cannot co-occur with *do so*; therefore, the corresponding dependent in the antecedent clause (i.e. *onto the truck*) is considered an argument.

- (11) a. John [_{VP} took a trip last Tuesday], and I'm going to do so tomorrow.
 b. *John [_{VP} loaded a sack onto the truck], and I did so onto the wagon.

In order to meet the no-independent-motivation criterion described in section 2, the *do so*-substitution must identify a distinction among PPs which lacks an A/AD-independent explanation. Since Lakoff & Ross (1976), it has been widely held that the A/AD is indeed needed to explain which PPs can occur with *do so* and which cannot. The idea is that the A/AD entails distinct syntactic position-types for arguments vs. adjuncts in the VP; arguments attach to a lower projection in the VP than adjuncts do. Following Harley (2007, 2014), I will use the label \sqrt{P} for the lower projection to which arguments are thought to attach, and vP for the higher projection to which ad-

juncts are thought to attach. If *do so* is analyzed as a pro-form taking the lower projection as its antecedent (Hankamer & Sag 1976, Jackendoff 1977), it follows that adjuncts but not arguments can occur with *do so*.

This analysis of *do so* provides support for the A/AD, because it depends crucially on a syntactic property of the A/AD, namely the difference in attachment height between arguments and adjuncts. Unfortunately, this analysis must be rejected; alternatives which do not depend upon the A/AD appear to be superior. First, it is known that the antecedent for *do so* cannot be a syntactic constituent. For example, Culicover & Jackendoff (2005:125) find that *do so* can refer to discontinuous material for which a constituent-source is difficult to identify (without recourse to unmotivated vacuous movements). This is illustrated in (12). Additionally, Kehler & Ward (1999:13) find that *do so* can refer to material split across clauses, such that it is not possible to identify the antecedent with a single constituent, as shown in (13).

- (12) a. Robin slept in the bunkbed for twelve hours, and Leslie did so on the futon.
 b. Robin slept for twelve hours in the bunkbed, and Leslie did so for eight hours.
- (13) a. What I am suggesting is that when we delay, or when we fail to act, we do so intentionally...
 b. Fortunately, the first person to die in 1990 and the first couple to file for divorce in 1990 were allowed to do so anonymously.

These data require a semantic account of *do so*-anaphora resolution. For more detailed discussion, see the cited sources of these data (see also Miller 1992, Przepiórkowski 1999, Houser 2010).

One might suppose that, even if *do so* seeks a semantically-defined antecedent, its potential antecedents might still be constrained by the A/AD. For example, perhaps a given sub-event *e* is a potential antecedent for *do so* only if *e* specifies all its arguments. This alternative approach is contradicted by attested data (from the Corpus of Contemporary American English, Davies 2008) such as (14).

- (14) a. In any case he had decided to, because an eruption of hardcore, coke-and-speed-headed paranoia could destroy them all. It had done so to many others.
 b. It is so much more tragic when we control others through physical harm than by more passive means, and it is worst when we do so to our children.
 c. It is no more unkind or inaccurate to typify teachers as losers than it is to do so to introverts.
 d. No country has officially been named a currency manipulator by the US since Bill Clinton's administration did so to China in 1994.
 e. It's ok to make you both look like idiots, not so much to do so to your spouse alone.

Take (14a). The antecedent for *do so* must be simply *destroy*, not *destroy them all*. Otherwise, the resulting interpretation of the *do so*-clause would be "destroy them all to many others," which is not what we observe. This shows that the antecedent to *do so* can exclude semantic arguments, since, if there is an A/AD, the direct object *them all* certainly qualifies as an argument of the verb *destroy*. Therefore, it is not the case that the semantic predicate serving as *do so*'s antecedent must include all its arguments.

What then determines which PPs are acceptable with *do so* and which are not? By the reasoning just described, we should expect that, in (11b), a potential antecedent for *do so* should be *load a sack*, omitting the "argument" PP *onto the truck*. Why then is (11b) unacceptable? I follow Miller (1990, 1992) in taking the answer to involve the selectional properties of the verb *do*. Just like any other verb, *do* is compatible with some types of PPs but not others. It can occur with a *to*-phrase, as in *do something to someone*, but not with a goal PP, as in *do something into something*. Miller points out that a PP's compatibility with *do so* mirrors exactly the PP's compatibility with the lexical verb *do*. This is what explains which PPs can occur with *do so*; *do so* is headed by lexical *do*, and thus has the selectional properties of lexical *do*. Thus, any PP which is compatible with lexical *do* can occur with *do so*, and any PP which cannot occur with lexical *do* cannot occur with *do so*.

I conclude that the A/AD-free analysis of *do so*-substitution is superior to the traditional

A/AD-based analysis. Therefore, the *do so*-substitution diagnostic does not provide evidence for the A/AD, as it fails the no-independent-motivation criterion described in section 2; its effects are expected entirely independently of the A/AD. The *do so*-substitution diagnostic, as well as the related diagnostics from *do what*-pseudoclefting and VP-fronting, are discussed in more detail in McInnerney (2021a), including data demonstrating critical heuristic problems for these diagnostics.

5 Iteration

This section discusses the diagnostic from iteration, which states that adjuncts of the same type can be repeatedly iterated, while arguments of the same type cannot (Hornstein & Nunes 2008:59-60, Schütze 2012:4-5, Zyman 2020:1). Example (15) gives a typical contrast which might be used to illustrate the diagnostic.

- (15) a. Lee sang in the city (at the big theater) (on the main stage).
 b. Lee sang to a big crowd (*to all their friends) (*to Terry and Casey).

Iterability says that the locative PPs in (15a) can be iterated because they are adjuncts, while the PPs in (15b) cannot be iterated because they are arguments.

I argue that this diagnostic does not offer support for the A/AD because the distinction it identifies does not resemble the conventional A/AD, and because this distinction appears to follow from properties unrelated to argumenthood. To demonstrate this, observe first that most conventional adjuncts cannot be freely iterated. (16) illustrates non-iterability of several typical adjuncts.

- (16) a. *I built it [PP with my tools] [PP with a hammer].
 d. *I went to the Halloween party [PP as a pirate] [PP as a zombie].
 e. *The house was built [PP by amateurs] [PP by my cousins].

There are some conventional adjuncts, specifically benefactives and comitatives, which can occur twice in the same verb phrase (Ernst 2001:134). However, benefactives and comitatives are limited such that no more than two can occur in the same sentence. (17) illustrates with benefactives.

- (17) a. ?I baked it [for you] [for your parents].
 b. ?*I baked it [for you] [for your parents] [for a friend].

In this respect, benefactives and comitatives differ from true iteration, occurring with locatives and temporals, where iteration is unbounded.

- (18) I left it [in Ohio] [near Columbus] [at the library] [in the back room] [under the desk] ...

The acceptability of (17a) and unacceptability of (17b) shows that the term “benefactive” is too coarse. Instead, there are at least two distinct types of thematic relations. It supports this conclusion that numerous authors have independently argued for distinguishing “benefactives” into two types. See e.g. Van Valin & La Polla (1997:383-384), Kittilä (2005), and Bosse (2015:121-122) for a distinction between “plain” benefactives and “recipient” benefactives. Thus, (17a) is acceptable because it contains two distinct types of benefactives. In contrast, true iteration as in (18) involves repetition of thematically uniform phrases. A similar argument can be made for sentences with up to two comitatives.

While most conventional adjuncts, as demonstrated above, cannot be iterated, locatives and temporals can be iterated, as example (19) demonstrates.

- (19) a. Terry laughed [last week] [on Monday] [at noon] ...
 b. Terry cried [at home] [in their bedroom] [in the closet] ...
 c. Terry boiled the eggs [on the stove] [in a big pot] [in salty water] ...

I therefore conclude, in agreement with Ernst (2001:134ff), that, in comparison to other conventional adjuncts, locatives and temporals display distinct behavior with respect to iterability.

Among the conventional adjuncts, only locatives and temporals clearly allow unbounded iteration.

Critically, the same generalization applies for PPs which are conventionally considered *arguments*. Among conventional arguments, locatives and temporals can be iterated, and other types of PPs cannot be iterated. That most conventional arguments cannot be iterated, as the iteration diagnostic predicts, is illustrated in (20). In contrast, that locatives (including both spatial and directional locatives) *can* be iterated, even when they would conventionally be considered arguments, is illustrated in (21).

- (20) a. Terry laughed at Lee (*at Lee's hair).
 b. Terry talked to the students (*to Lee's friends).
 c. Terry wrote about the war (*about the treaty).
- (21) a. Terry kept the book [in the library] [on the shelf] [next to *Aspects*] ...
 b. Terry lives [in France] [near a large city] [in a small cottage] ...
 c. The ball rolled [under the tree] [next to the trunk] [in front of the hollow] ...

The possibility of iteration therefore depends not upon *argumenthood*, but on the semantics of the iterated expression. Locatives and temporals permit iteration, and other thematic elements do not. Ernst's (2001:135) explanation for iteration of locative and temporal *adjuncts* can be extended to iteration of locative and temporal *arguments*. He suggests that iterability of locatives and temporals follows from their being conceived of as "spaces" which can be geometrically nested within each other. Non-iterable PPs, like recipients and benefactors, are not readily conceived of in geometrical terms, and therefore lack the property of nestability.

I conclude that iterability meets neither the heuristic criterion nor the no-independent-motivation criterion as discussed in section 2, and as such this diagnostic does not provide motivation for the syntactic A/AD.

6 Further Diagnostics

For reasons of space, I cannot discuss the remaining diagnostics of islandhood, extraction from weak islands, reconstruction for Condition C, and permutation in detail in this paper. However, this section briefly discusses each of these remaining diagnostics. The goal is to demonstrate plausibility for alternative analyses which do not depend upon the A/AD.

First, consider islandhood. It is widely believed that islandhood of the bracketed constituents in (22) derives from their status as adjuncts. However, notice that the island properties of these constituents remains constant when they are recast as conventional arguments. The *via*-phrase in (22a) would be considered an argument in (23a), and the *after*-phrase in (22b) would be considered an argument in (23b).

- (22) a. *This is the path that we proceeded [via ___].
 b. *Who did Terry cry [until Lee hit ___]?
- (23) a. *This is the path that we walked [via ___].
 b. *Who did the party last [until John hit ___]?

Given these and further data, McInnerney (2021b) concludes that the A/AD is not a plausible factor leading to islandhood in (22). Instead, the same, internal-structural properties are more likely to be responsible for islandhood in both (22) and (23).

Extraction from weak islands has sometimes been characterized in terms of the A/AD, such that arguments but not adjuncts can escape a weak island. However, much subsequent work has reframed the data, such that the A/AD is no longer considered an accurate way of characterizing patterns of extractability. Instead, syntactic category (NP vs. PP, Cinque 1990) or referentiality (Kroch 1998) may be relevant. See Szabolcsi (2006) and Miliorini (2019) for overviews of approaches to weak islands which reject a role for the A/AD.

Condition C reconstruction is also sometimes analyzed in terms of the A/AD (Lebeaux 1988), but the judgments on which the generalization is based have never been considered robust (cf. Reinhart 1986, Speas 1990), and experimental work (Adger et al. 2017, Bruening & Al Khalaf 2019) has discovered that the data are better characterized in terms of a categorial distinction: de-

pendents of N do not reconstruct for Condition C, while dependents of P and A do.

Finally, previous authors have questioned the role of the A/AD in controlling permutation of PPs in the VP. Hawkins (2000) and Wasow (2002) report a great deal of flexibility among post-verbal constituents, with prosodic weight playing the most pivotal role. While slight weight-independent ordering preferences among PPs can be detected (Wiechmann & Lohmann 2013, Neeleman & Payne 2020), these apply to argument and adjunct PPs alike (Schweikert 2005, Cinque 2006), meaning permutability arguably does not reflect the A/AD.

7 Conclusion

The A/AD is a hypothesis which must be justified by evidence. This paper considered several purported diagnostics for argumenthood, specifically omission, *do so*-substitution, and iteration, and asked whether those diagnostics can provide support for the A/AD. I concluded that omission provides evidence for a mechanism of subcategorization, but that this can only be connected to the A/AD in conjunction with independent evidence for a distinction between *omissible arguments* and *adjuncts*. *Do so*-substitution and iteration do not provide such evidence; both these diagnostics are better analyzed on grounds entirely independent of the A/AD.

For reasons of space, I did not discuss further potential diagnostics in detail. However, section 6 suggested that each additional diagnostic may be better analyzed along independent lines, not relying upon the A/AD. If that's the case, it would mean that much of the traditional evidence thought to motivate the A/AD does not in fact do so. Instead, other sources of evidence would be needed to support the distinction. I conclude it is plausible, depending on whether relevant evidence can be provided, that the A/AD might be eliminable. Though elimination of the A/AD would raise many analytical questions (since the A/AD plays a role in the analysis of a variety of syntactic phenomena), it would be desirable from a Minimalist point of view, as it would reduce the number of principles and operations postulated to comprise the computational system of human language.

References

- Adger, David, Alex Drummond, David Hall, and Coppe van Urk. (2017). Is there Condition C reconstruction? In *Proceedings of the 47th Annual Meeting of NELS*, eds. A. Lamont & K. Tetzloff, Amherst: GLSA, 21-30.
- Boeckx, Cedric. 2003. Review to 'The Syntax of Adjuncts.' *Studies in the Linguistic Sciences* 32: 95-101.
- Bosse, Solveig. 2015. *Applicative Arguments: A Syntactic and Semantic Investigation of German and English*. New York: Peter Lang Publishing.
- Bruening, Benjamin, and Eman Al Khalaf. 2019. No argument-adjunct asymmetry in reconstruction for Binding Condition C. *Journal of Linguistics* 55: 247-276.
- Cinque, Guglielmo. 1990. *Types of \bar{A} -dependencies*. Cambridge, MA: MIT Press.
- Cinque, Guglielmo. 2006. Complement and adjunct PPs: Implications for clause structure. In *Restructuring and Functional Heads*, ed. G. Cinque, 145-166. Oxford: Oxford University Press.
- Culicover, Peter W. 2009. *Natural Language Syntax*. Oxford: Oxford University Press.
- Culicover, Peter W., and Ray Jackendoff. (2005). *Simpler Syntax*. Oxford: Oxford University Press.
- Davies, Mark. 2008-. The Corpus of Contemporary American English (COCA). Available online at <https://www.english-corpora.org/coca/>.
- Dowty, David. 2000. The Dual Analysis of Adjuncts/Complements in Categorical Grammar. *ZAS Papers in Linguistics* 17:53 - 78
- Ernst, Thomas. 1984. *Towards an Integrated Theory of Adverb Position in English*. Bloomington, Indiana: Indiana University Linguistics Club.
- Ernst, Thomas. 2001. *The Syntax of Adjuncts*. Cambridge: Cambridge University Press.
- Goldberg, Adele E., and Farrell Ackerman. 2001. The pragmatics of obligatory adjuncts. *Language* 77:798-814.
- Hankamer, Jorge, and Ivan Sag. 1976. *Linguistic Inquiry* 7:391-428.
- Harley, Heidi. 2007. One-replacement, unaccusativity, acategorical roots and Bare Phrase Structure. Ms., University of Arizona.
- Harley, Heidi. 2014. On the identity of roots. *Theoretical Linguistics* 40:225-276.

- Harris, Zellig S. 1970. *Papers in Structural and Transformational Linguistics*. Dordrecht: Springer Science+Business Media
- Hornstein, Norbert, and Jairo Nunes. (2008). Adjunction and labeling in Bare Phrase Structure. *BiLinguistics* 2:57-86.
- Houser, Michael. 2010. The syntax and semantics of do so anaphora. Doctoral dissertation, UC Berkeley.
- Huddleston, Rodney. & Geoffrey K. Pullum. (2002). *The Cambridge Grammar of English*. Cambridge: Cambridge University Press.
- Jackendoff, Ray S. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge, MA: MIT Press.
- Jackendoff, Ray S. 1977. *X-bar Syntax: A Study of Phrase Structure*. Cambridge, MA: MIT Press.
- Kehler, Andrew and Gregory Ward. 1999. On the semantics and pragmatics of 'Identifier So'. In *The Semantics/Pragmatics Interface from Different Points of View*, ed. K. Turner, 233–256. Amsterdam: Elsevier.
- Kittilä, Seppo. 2005. Recipient-prominence vs. beneficiary-prominence. *Linguistic Typology* 9:269–297.
- Kroch, Anthony. 1998. Amount quantification, referentiality, and long wh-movement. *University of Pennsylvania Working Papers in Linguistics* 5:21-36.
- Koenig, Jean-Pierre, Gail Mauner, and Breton Bienvenue. 2003. Arguments for adjuncts. *Cognition*, 89:67-103.
- Lakoff, George & John R. Ross. 1976. Why you can't do so into the sink. In *Syntax and Semantics, Volume 7: Notes from the Linguistic Underground*, ed. J. D. McCawley, 101-111. New York: Academic Press.
- Lebeaux, David. 1988. Language acquisition and the form of the grammar. Doctoral dissertation, University of Massachusetts, Amherst.
- McConnell-Ginet, Sally. 1994. On the non-optionality of certain modifiers. In *Proceedings of the 4th Semantics and Linguistic Theory Conference*, ed. M. Harvey & L. Santelmann, Linguistic Society of America. 230-250.
- McInerney, Andrew. 2021a. Separability of dependents from VP in English: beyond the argument/adjunct distinction. Ms., University of Michigan.
- McInerney, Andrew. 2021b. The argument/adjunct distinction does not condition islandhood of PPs in English. Ms., University of Michigan.
- Miliorini, Rafaela. 2019. Extraction from weak islands: alternatives to the argument/adjunct distinction. *Revista Virtual de Estudos da Linguagem, edição especial* 17:37-58.
- Miller, Philip. 1990. Pseudogapping and do so substitution. In *Papers from the 26th Regional Meeting of the Chicago Linguistic Society*, 293-305.
- Miller, Philip. 1992. *Clitics and Constituents in Phrase Structure Grammar*. New York: Garland.
- Needham, Stephanie and Ida Toivonen. (2011). Derived arguments. In *Proceedings of LFG11*, ed. M. Butt & T. H. King, CSLI Publications, 401-421.
- Neeleman, Ad & Amanda Payne. 2020. PP-Extrapolation and the Order of Adverbials in English. *Linguistic Inquiry* 51:471–520
- Patejuk, Agnieszka, and Adam Przepiórkowski. (2021). Category mismatches in coordination vindicated. Ms., University of Oxford.
- Pesetsky, David. 1995. *Zero Syntax: Experiences and cascades*. Cambridge, MA: MIT Press.
- Przepiórkowski, Adam. 1999. Case Assignment and the Complement/Adjunct Dichotomy: A Non-Configurational Constraint-Based Approach. Doctoral dissertation, Universität Tübingen.
- Reinhart, Tanya. 1986. The Syntactic Domain of Anaphora. Doctoral dissertation, MIT.
- Sailor, Craig and Carson T. Schütze. 2013. What is an adjunct? Ms., UCLA.
- Schütze, Carson T. 1995. PP attachment and argumenthood. *MIT Working Papers in Linguistics* 26:95-151.
- Schütze, Carson T. 2012. Implementing argumenthood diagnostics for prepositional phrases: comments on Merlo and Esteve Ferrer. Ms., UCLA.
- Schweikert, Walter. 2005. *The Order of Prepositional Phrases in the Structure of the Clause*. Amsterdam: John Benjamins.
- Speas, Margaret. 1990. *Phrase Structure in Natural Language*. Dordrecht: Kluwer Academic Publishers.
- Szabolcsi, Ana. 2006. Strong vs. Weak Islands. In *The Blackwell Companion to Syntax, Vol. 4*, ed. M. Everaert and H. van Riemsdijk, 479-531. Oxford: Blackwell.
- Van Valin, Robert D. and Randy J. LaPolla. 1997. *Syntax: Structure, meaning, and function*. Cambridge: Cambridge University Press.
- Wiechmann, Daniel and Arne Lohmann. 2013. Domain minimization and beyond: Modeling prepositional phrase ordering. *Language Variation and Change* 25:65–88.
- Zyman, Erik. 2020. In situ mixed wh-coordination and the argument/adjunct distinction. *Glossa: A Journal of General Linguistics* 5:30.

Department of Linguistics
 University of Michigan
 Ann Arbor, MI 48109-1220
 amcin@umich.edu