

On dissociating adjunct island and subject island effects

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Abstract. In this paper we defend *non-unified* approaches to subject and adjunct islands. We review syntactic and extrasyntactic approaches as well as unified and non-unified approaches to these two island effects. Since Huang (1982), these two islands have been treated as two strong island effects (i.e., extraction out of these domains are uniformly banned). This idea was inherited in some Minimalist literature (e.g. Nunes & Uriagereka 2000). However, following Stepanov (2007), much recent Minimalist literature pursues non-unified analyses wherein the two islands have distinct explanations. The opposite situation holds for recent extrasyntactic approaches, which seem to prefer a unified analysis. We argue that existing unified extrasyntactic approaches are inadequate, and that the data call for a non-unified approach involving both syntactic and extrasyntactic principles.

Keywords. adjunct islands; subject islands; unified approaches; non-unified approaches; syntactic approaches; extrasyntactic approaches

1. Introduction. In this paper, we focus on the Subject Island Effect (SIE), illustrated in (1), and on the Adjunct Island Effect (AIE), illustrated in (2).

- (1) * Who did [_{Subject} stories about ___] terrify John? (Chomsky 1973:249)
 (2) * Which celebrity₁ did Mary eat an ice-cream [_{Adjunct} before she saw ___₁]? (Huang 1982:503)

Both constructions involve extraction of a constituent (underlined) from a position (shown with underscores ‘___’) within an so-called island domain (bracketed).² These two island effects have played an important role in the development of syntactic theory, but they lack a consensus analysis in current terms.

In what follows, we organize the theoretical landscape surrounding these effects along two dimensions (section 2). The first dimension distinguishes *syntax-based* vs. *extrasyntactic* approaches. The second dimension distinguishes *unified* approaches to the two effects vs. *non-unified* approaches adopting distinct analyses for each effect. Section 3 organizes and summarizes the results of section 2. We then argue in sections 4-5 that adequate analyses of the SIE and the AIE must be *non-unified*; in doing so, we argue against one prominent unified approach (section 4) and propose to identify several distinct factors at play in each effect (section 5).

2. Two dimensions for the SIE/AIE. We identify two dimensions along which to classify previous approaches to the SIE and the AIE. First, analyses of the SIE and the AIE are sometimes built on syntactic principles, and sometimes on extrasyntactic mechanisms.

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² Note that we use the term “adjunct” in exposition to mean “domain conventionally referred to as an adjunct.”

Syntax-based approaches to the SIE/AIE assume that the degradation (in acceptability) characteristic of SIE and/or the AIE reflects violation of a syntactic principle or a set of syntactic principles. Sentences exemplifying the SIE/AIE are therefore *ungrammatical*. On the other hand, *extrasyntactic approaches* to the SIE/AIE hold that the degradation in the SIE and/or the AIE reflects principles whose application extends beyond syntax. Examples of the SIE/AIE are therefore *grammatical* sentences which are *unacceptable* for extrasyntactic reasons (where the relevant extrasyntactic principles are typically based in pragmatics or processing).

Additionally, the SIE and the AIE may be analyzed together (i.e. as following from the same principle or set of principles), or they may be analyzed independently (i.e. as following from distinct principles or sets of principles). For the *unified* approaches to the SIE/AIE, the SIE and the AIE derive from the *same* principle or set of principles. In contrast, *non-unified* approaches to the SIE/AIE reject this idea; they would hold instead that *distinct* principles underlie each effect. In this section, we classify several approaches to the SIE/AIE along these two dimensions.

2.1. UNIFIED SYNTACTIC APPROACHES. We first consider approaches which draw primarily on syntactic principles. Huang's (1982) Condition on Extraction Domain (3) is a classic example.

- (3) Condition on Extraction Domain (CED):
A phrase A may be extracted out of a domain B only if B is properly governed.
(Huang 1982:505)

The CED unifies the SIE and AIE under a single syntactic principle, and as such stands as the prototypical approach of the *unified* and *syntactic* type. More recent approaches also take a unified syntax-based stance. We provide two examples. First, take Nunes & Uriagereka's (2000) Multiple-Spell Out approach, summarized in (4).

- (4) a. Linear Correspondence Axiom (LCA): A lexical item α precedes a lexical item β iff α asymmetrically c-commands β .
b. Multiple Spell-out: A phrase must be spelled out – and thereafter function as a lexical item for the purposes of the LCA – when necessary for determination of a total order.

The idea is that two phrases (non-heads) can be merged only if one of them is first spelled out and consequently rendered opaque. Both subjects and adjuncts are claimed to fall victim to an early spell-out requirement, because they both involve merger of two phrases. Hence, adjuncts and subjects must be spelled out in order to yield a structure which can be linearized by the LCA.³

As a second example, Bošković (2016) offers another possibility (5) drawing on Labeling Theory and anti-locality. (See Zyman 2021 for another antilocality-based approach to the SIE.).

- (5) a. Labeling Theory: A structure {XP, YP} can be labeled if either XP is extracted or the heads X and Y agree.

³ Similar ideas are defended by Sheehan (2010, 2013) and Privoznov (2021).

- b. Antilocality: Movement of A targeting B must cross a projection distinct from B (where unlabeled projections are not distinct from labeled projections).

Subjects and adjuncts are assumed to be phases (subjects being DPs and adjuncts being DPs, CPs, or PPs). Movement from these domains must first target the edge of the domain. From the phase edge, the moved phrase must either (i) move to the edge of the next phase, violating antilocality, or (ii) remain in place, inducing a labeling failure. Both these approaches (Nunes & Uriagereka's and Bošković's) exemplify the unified syntax-based approach to the SIE/AIE.

2.2. NON-UNIFIED SYNTACTIC APPROACHES. There are also many syntax-based analyses of the SIE or the AIE independently. We classify any approach to the SIE which does not naturally extend to the AIE (and vice versa) as a non-unified approach. The most basic non-unified syntax-based approaches involve direct stipulation of separate *Subject* and *Adjunct Conditions* (6).

- (6) a. Subject Condition:
Extraction out of a subject is blocked.
- b. Adjunct Condition:
Extraction out of an adjunct is blocked.

More principled accounts attempt to derive these conditions from independently needed concepts. There are a wide range of approaches to the SIE in this vein. To give some examples, Chomsky (2008) argues that subjects are islands due to limitations on Search (7). Numerous authors hold that subjects are islands due to Freezing (8). Gallego & Uriagereka's (2007) Activity Condition analysis (9) takes inspiration from the Freezing approach. In addition, Haegeman et al. (2014) and Greco et al. (2017) propose that the SIE emerges from the interaction of many different syntactic principles including all those in (7)-(10).

- (7) Edge Condition:
The edge of a phase is opaque. (Chomsky 2008:147-148)
- (8) Freezing Principle:
Moved constituents are opaque. (Culicover & Wexler 1977, i.a.)
- (9) Activity Condition:
A-movement renders DPs frozen. (simplified from Gallego & Uriagereka 2007:45)
- (10) a. Extraction Constraint:
Extraction is only possible from the head of a chain. (Haegeman et al. 2014:90)
- b. Specificity Condition:
Specific nominals are opaque domains for extraction. (Haegeman et al. 2014:93)

These principles do not extend readily to the AIE (except under certain dubious assumptions), and as such these approaches to the SIE qualify as non-unified analyses in our classification.

There is less proliferation of SIE-independent approaches to the AIE. Instead, the predominant idea is that adjuncts are introduced by a special structure-building mechanism *Adjoin*, a defining property of which is opacity. Our use of the term *Adjoin* abstracts away from

its different implementations as either Pair Merge (Chomsky 2004, i.a.) or Late Merge (Lebeaux 2000, Stepanov 2007, i.a.).

- (11) a. A constituent X is an adjunct iff it is derived via $\text{Adjoin}(Y, X) \rightarrow \langle Y, X \rangle$
 b. In the output $\langle Y, X \rangle$ of Adjoin, X is opaque

2.3. UNIFIED EXTRASYNTACTIC APPROACHES. Extrasyntactic approaches too can be either unified or non-unified. On the unified side, one popular idea (often said to stem from Erteschik-Shir 1973) involves pragmatic principles. Here we consider Abeillé et al.'s (2020) Focus-Background Conflict constraint, which Liu et al. (2021) have suggested explains both the SIE and the AIE.

- (12) Focus-Background Conflict constraint (FBC):
 A focused element should not be part of a backgrounded constituent. (Abeillé et al. 2020)

The key idea is that subjects and adjuncts are both “backgrounded,” and that in some types of extraction constructions, the extractee is focused. In such constructions, if the extraction site occurs within a subject or an adjunct, the FBC is violated. Similar ideas are developed by Goldberg (2006, 2013), Chaves (2013), Chaves & Dery (2019), and Chaves & Putnam (2021).⁴

Some processing-based approaches also propose to unify the SIE and AIE. An example is Culicover & Winkler's (2022) “Uninvited Guest” approach, summarized by (13).

- (13) Uninvited Guest Effect:
 It is more difficult to resolve a gap contained within a dependent of a verb V if V has an overtly realized direct object than if it does not.

The idea is that the processing resources required to process the direct object of a verb interfere with those required to resolve a gap contained within another one of the verb's dependents (i.e. subjects or adjuncts). (14) and (15) illustrate the effect, with the “uninvited guest” in boldface.

- (14) a. The Joker is a fascinating character [who₁ [Subject spending time with ___₁] is a treat].
 b. *? The Joker is a fascinating character [who₁ [Subject spending time with ___₁] drives **Sandy** crazy].
 (Culicover & Winkler 2021:12)

- (15) a. Chris is a person [who₁ I always feel uncomfortable [Adjunct when I talk to ___₁]].
 b. ?? Chris is a person [who₁ I always feel uncomfortable around **Susan** [Adjunct when I talk to ___₁]].
 (adapted from Culicover & Winkler 2021:19)

Culicover & Winkler argue that their approach explains both the SIE and the AIE, as well as the amelioration conferred by parasitic gaps with both effects.

2.4. NON-UNIFIED EXTRASYNTACTIC APPROACHES. Despite the trend toward unification among extrasyntactic approaches, there are proposals which assume that distinct extrasyntactic

⁴ Chaves/Dery/Putnam in fact argue that unacceptability does not follow from the FBC *per se*, but rather from the fact that the pragmatic circumstances in which the FBC would be felicitously violated are simply *infrequent*.

mechanisms underlie the SIE and AIE. One prominent approach to the AIE which does *not* extend to the SIE comes from Truswell (2011). Similar ideas are also developed by Ernst (2022). Truswell argues that the AIE occurs most strongly when the adjunct clause and the main clause denote a single event, where two sub-events can comprise one larger event if the two events stand in a relation of contingency (i.e. if one is contingent on the other).

(16) Single Event Condition (SEC):

An instance of wh-movement is legitimate only if the minimal constituent containing the head and the foot of the chain can be construed as describing a single event.

(Truswell 2011:38)

(17) Which book₁ did John design his garden [_{Adjunct} after reading __₁]? (Truswell 2011:31)

Hence, (17) is acceptable only on a reading where the adjunct event (i.e. the reading) denotes the *cause* of the main event (i.e. of the designing).⁵ Importantly, the SEC does not account for the SIE. Extraction from within a subject, especially a nominal subject, naturally satisfies the SEC. The SEC thus fails to predict the degradation of examples like (18).

(18) *Which book₁ were [_{Subject} reviews of __₁] just published?

If the SEC underlies the AIE, then distinct mechanisms, be they extrasyntactic or syntax-based, must underlie the SIE. In principle, Truswell's analysis to the AIE would be compatible with both syntax-based approaches to the SIE and extrasyntactic approaches to the SIE, as long as these approaches do not also extend to the AIE.

Non-unified extrasyntactic analyses for the SIE are less prevalent. One relevant approach to the SIE arguably comes from Bianchi & Chesi (2014), who argue that the SIE derives from limitations in the workspace architecture involved in top-down syntactic computation. Their analysis is presented in syntactic terms, but one can imagine a reconstrual of the proposal as identifying key limitations on sentence processing. Kluender (2004) also suggests that subjects are inherently difficult to process, and that this contributes to the SIE, but he does not develop the mechanics of this idea in detail.

3. Interim summary. The analyses of the SIE/AIE discussed above are summarized in Table 1. A priori, unified analyses are preferable to non-unified ones. However, unified analyses can only be adopted if they are descriptively adequate. In fact, numerous authors have argued that unified syntactic approaches to the SIE and the AIE in fact make incorrect predictions (e.g. Stepanov 2007). As such, it is common among proponents of syntax-based analyses of the SIE and the AIE to entertain separate principles for each effect.

The remainder of this paper argues that the same should be true of extrasyntactic approaches. We approach this in two steps. First (in section 4), we seek to show that one popular unified extrasyntactic approach (i.e. Abeillé et al.'s FBC) makes inaccurate predictions about the data, and therefore must be rejected. Second (in section 5), we propose to identify a number of empirical distinctions between the SIE and the AIE, which seem to call for distinct analyses of these effects.

⁵ Truswell ultimately develops a more complex version of (16) called the Single Event *Grouping* Condition, but the details are not relevant to present discussion.

	Syntactic		Extrasyntactic
Unified	Condition on Extraction Domain (Huang 1982)		Focus-Background Conflict (Goldberg 2006, Abeillé et al. 2020, Liu et al. 2021)
	Multiple Spellout/Linear Correspondence Axiom (Nunes & Uriagereka 2000)		Frequency Effects (Chaves 2013, Chaves & Dery 2019)
	Labeling Theory/Anti-locality (Bošković 2016)		Uninvited Guest Effect (Culicover & Winkler 2022)
Non-unified	SIE: Edge Condition (Chomsky 2008)	AIE: Pair Merge (Chomsky 2004)	SIE: top-down (processing) workspace architecture (Bianchi & Chesi 2014)
	Freezing Principle (Culicover & Wexler 1977)	Late Merge (Stepanov 2007)	inherent processing- complexity of subjects (Kluender 2004)
	Activity Condition (Gallego & Uriagereka 2007)		AIE: Single Event Condition (Truswell 2011, Ernst 2022)
	...		

Table 1. Summary of existing approaches to the SIE and AIE.

4. Problems with the Focus-Background Conflict approach. Abeillé et al. (2020) claim that the SIE can be accounted for via the pragmatics-based Focus-Background Conflict constraint (19). According to Liu et al. (2021), this principle also extends to the AIE, thus explaining both of the island effects under consideration in this paper.

(19) Focus-Background Conflict constraint (FBC):

A focused element should not be part of a backgrounded constituent. (Abeillé et al. 2020)

Our goal in this section of the paper is to show that the FBC does not accurately predict the SIE data, and that it does not adequately extend to the AIE either. We will first offer a summary of Abeillé et al.’s proposal, then describe several problems for this as an explanation for the SIE, and also for the AIE. We are forced to the conclusion that the FBC does not play a role in explaining these island effects.

4.1. ABEILLÉ ET AL.’S (2020) ANALYSIS OF THE SIE. In order to be relevant to the SIE, the FBC must be accompanied by a number of auxiliary assumptions, including (20) and (21). First, given the Copy Theory of Movement (Chomsky 1995), if an extracted phrase is focused, then there is focus in its extraction site. Further, if subjects are backgrounded, then in situations where a phrase extracted from within a subject is focused, there is focus within a backgrounded constituent.

(20) *Wh-question focus assumption:*

In *wh*-questions, the filler is focused, but in relative clauses, the filler is not necessarily in focus.

(21) *Backgrounded subject assumption:*

The subject of a sentence is (normally) backgrounded.

In support of their analysis, Abeillé et al. provide (what they take to be) experimental evidence

that the SIE is operative in *wh*-questions (22a), where the extracted phrase is in fact focused, but not in relative clauses (22b), where the extracted phrase need not be focused.

- (22) a. *Of which sportscar₁ did [_{Subject} the color ___₁] delight the baseball player because of its luminance?
- b. The dealer sold a sportscar, [_{Rel} of which₁ [_{Subject} the color ___₁] delighted the baseball player because of its luminance]

4.2. PROBLEMS WITH THE FBC AND THE SIE. The FBC is both too strong and too weak to explain the SIE. First, the FBC predicts that focus within a backgrounded constituent should be disallowed in general. However, on a standard interpretation of the terms “backgrounded” and “focused” this cannot be the case. For example, the FBC predicts (23) to be unacceptable, contrary to fact. (Small caps indicate the focused domain, and italics, what’s backgrounded.)

- (23) a. Q: Which car did the football player describe the color of?
A: *The football player described the color of* THE CORVETTE.
- b. I commissioned a portrait of Abraham Lincoln,
but I’m not going to say [WHO ELSE *I commissioned [a portrait of ___]*].

The FBC prohibits focus within a backgrounded constituent. All of (23a-A) is backgrounded, except for *the corvette*, which is new information (focused). The focused constituent is contained within a backgrounded constituent. Similarly, in (23b), *who else* is focused, yet it is extracted from a constituent which is otherwise backgrounded. Since these sentences and many others like them are acceptable, the FBC is too strong; it incorrectly predicts such sentences to be unacceptable.⁶

Second, on a standard interpretation of the term “backgrounded” (see e.g. Büring 2016 on “givenness”), subjects are not always backgrounded. For example, the subject in (24a-B) is focused because the whole sentence contributes discourse-new information, and the subject in (24b-B) is focused due to the contrast with (24b-A).

- (24) a. A: Tell me something that happened yesterday.
B: A FOOTBALL PLAYER DESCRIBED THE COLOR OF A CORVETTE.
- b. A: I think someone robbed the store.
B: Yeah, THE SECURITY GUARD *robbed the store*.

In such cases, the FBC predicts no SIE. Hence, the FBC does not predict a degradation of acceptability in (25a-B) (all new) or (25b-B) (contrast).

- (25) a. A: Here’s a random quiz question for you.
B: *WHICH PRESIDENT₁ DOES [_{Subject} A PORTRAIT OF ___₁] HANG IN THE OVAL OFFICE?
- b. A: I wonder who impressed people the most.

⁶ Abeillé et al. might wish to claim that they mean something different by “backgrounded” and “focused” than is represented in (23). Cf. the discussion on their p21.

B: *I don't know, but I want to know [WHO_I [Subject A PICTURE OF ____I] *impressed people the most*].

As these examples show, this prediction is incorrect. There is still an SIE in these cases, just as with backgrounded subjects. Hence, the FBC is too weak, failing to predict the unacceptability of many examples. As a result, we are unable to accept the FBC as a factor contributing to the SIE.

4.3. AN ALTERNATIVE ANALYSIS OF ABEILLÉ ET AL.'S RESULTS. A major problem for the FBC's application to the SIE comes from the contrast between pied-piping and p-stranding. Abeillé et al. found experimentally that (apparent) pied-piping from subject is permitted in relativization, but they found this pattern *only* with (what they took to be) pied-piping, *not* with p-stranding. With p-stranding, the usual SIE obtains even in relative clauses (26).

(26) *The family, which the father of has just been arrested, ...

	relative clauses	<i>wh</i> -questions
p-stranding	object-gap > subject-gap	object-gap > subject-gap
pied-piping	subject-gap > object-gap	object-gap > subject-gap

Table 2. Judgment patterns from Abeillé et al. 2020

To explain the p-stranding data, Abeillé et al. speculate that pied-piping confers a processing advantage over p-stranding, which they say could boost acceptability of pied-piping.

We are aware of no independent empirical or conceptual motivation for this idea (and it in fact appears to be contradicted by the fact that there is a consistent preference for p-stranding over pied-piping in English). We instead propose a simpler alternative analysis: Abeillé et al.'s pied-piping examples contained only *apparent* pied-piping. In fact, those examples could be parsimoniously analyzed as containing base-generated topic PPs. In support of this alternative analysis, we note: (i) that such an analysis is required independently for sentences such as (27), which, as Akmajian & Lehrer (1976) show, must involve high base-generation of the *of*-phrases, and (ii) that the base-generation strategy can feed relativization but not *wh*-question formation, as (28)-(29) show, so we would expect the confound only in examples with relative clauses.⁷

- (27) a. Of the stories about Watergate, only yesterday's was truly surprising.
 b. Of the committee members, only the chairman wants to vote against the proposal.
 (Akmajian & Lehrer 1976:401)

- (28) a. The stories about Watergate, [of which only yesterday's was truly surprising], ...
 b. The committee members, [of whom only the chairman wants to vote against the proposal], ...

- (29) a. ?? Of which stories was only yesterday's truly surprising?
 b. ?? Of which committee members does only the chairman want to vote against the proposal?

4.4. PROBLEMS WITH THE FBC AND THE AIE. The data discussed above involving extraction from subjects suggest that the FBC does not play a major role in the SIE. Similar arguments hold for

⁷ For relevant discussion, see Broekhuis (2005), who develops arguments along similar lines based on Dutch.

the AIE. Though Liu et al. (2021) claim that the FBC may explain the AIE, the condition is in fact both too strong and too weak. The condition is too strong because of (23), as discussed. The condition is too weak because adjuncts are not always backgrounded (as in (30)), yet the AIE obtains in many cases even with non-backgrounded adjuncts, as (31) shows.

- (30) A: Tell me something that happened yesterday.
 B: THE GUESTS SCREAMED [Adjunct WHEN LEE INSULTED TERRY].
- (31) A: Here's a random quiz question for you:
 B: *WHICH RIVER₁ DID A WAR BEGIN [Adjunct WHEN CAESAR CROSSED ___₁]?

Liu et al. cite Kush et al. (2018, 2019) as finding that the AIE is weaker in topicalization than it is in *wh*-question formation. They suggest this supports the idea that the FBC is a factor in the AIE. An alternative interpretation takes these results to indicate the relative acceptability of topicalization vs. *wh*-question formation in general. Thus, the FBC does not appear to extend to the AIE.

5. Distinct factors for the SIE vs. the AIE. We now outline several distinct factors relevant to the SIE and the AIE. We focus on distinguishing relevant properties *internal* vs. *external* to the island domains. We take the quite distinct empirical profiles of the effects to indicate that they warrant independent explanations.

5.1. DOMAIN-EXTERNAL FACTORS RELEVANT TO THE SIE. The syntactic position of the subject affects the degradation observed in the SIE. Subjects in expletive constructions show essentially no SIE at all, as (32) shows.

- (32) a. *Which candidate₁ were [Subject posters of ___₁] all over town?
 b. Which candidate₁ were there [Subject posters of ___₁] all over town?
 (Merchant 2001, p. 187)

Additionally, Polinsky et al. (2013) find experimentally that extraction from the subject of a passive or unaccusative (33a) yields a less severe SIE than extraction from the subject of transitive or unergative, as in (33b).

- (33) a. Which car₁ were [Subject the hoods of ___₁] damaged by the explosion?
 b. > Which car₁ did [Subject the driver of ___₁] cause a scandal?
 (cf. Chomsky 2008, Polinsky et al. 2013)

As mentioned, certain domain-external extrasyntactic factors seem not to contribute to the SIE (e.g. the FBC, the Single Event Condition). Chaves & Dery (2019) and Chaves & Putnam (2021) suggest another relevant factor, the “relevantness” of the subject to the assertion of the sentence. Pragmatic coherence surely makes sentences easier to process across the board (not just in island contexts).

5.2. DOMAIN-INTERNAL FACTORS RELEVANT TO THE SIE. The syntactic category of the subject also impacts the acceptability of extraction. Extraction from an NP subject generally yields a less severe SIE than extraction from a CP subject, especially a tensed CP subject, as (34a) shows. It is

also relevant to note that this pattern is specific to the SIE. In non-SIE contexts (e.g. extraction from complements), the pattern reverses.

- (34) a. i. That's the car [which₁ [NP the driver of ___₁] got in trouble].
 ii. > That's the car [which₁ [CP that the teenager would total ___₁] was obvious].
- b. i. That's the car [which₁ the police arrested [NP the driver of ___₁]].
 ii. < That's the car [which₁ it was obvious [CP that the teenager would total ___₁]].

As (34b) shows, extraction from a CP complement is preferred over extraction from an NP complement. (Note that NPs uniformly have the profile of weak islands in English.)

5.3. DOMAIN-EXTERNAL FACTORS RELEVANT TO THE AIE. As discussed, event structure is an external factor impacting the severity of the AIE. To the extent that the event denoted by the adjunct is interpreted as contributing to a single event with the main clause, the AIE is reduced.

- (35) a. What₁ did John arrive [Adjunct whistling ___₁]? (Borgonovo and Neeleman 2000:200)
 b. * What₁ did John work [Adjunct whistling ___₁]? (Bode 2020:121)

One prominent domain-external syntactic factor thought to be relevant to the AIE is the argument/adjunct distinction (A/AD). (Argumenthood is an external property.) However, McInnerney (2021) finds that, controlling for the internal structure of the island domain, islandhood is unaffected by the A/AD (See McInnerney 2021 for further detail).

- (37) a. i. Which building₁ are you living [Argument in ___₁]?
 ii. * Who₁ did the party last [Argument until Lee insulted ___₁]?
- b. i. Which room₁ should we meet [Adjunct in ___₁]?
 ii. * Who₁ was everyone happy [Adjunct until Lee insulted ___₁]?

Attachment height is another external syntactic factor thought to be relevant to the AIE, such that high adjuncts are islands while low adjuncts are not. However, Boeckx (2012) raises questions about this idea. (38) shows that even certain low adjuncts (note the scope of negation in (38b)) show an AIE.

- (38) a. John didn't talk after any of our meetings.
 b. * What meetings₁ didn't John talk [Adjunct after any of ___₁]? (Boeckx 2012:146, fn14)

Of a number of potentially-relevant domain-external factors, the extrasyntactic Single Event Condition seems to contribute to the AIE, while the syntactic factors of argumenthood and attachment height arguably do not.

5.4. DOMAIN-INTERNAL FACTORS RELEVANT TO THE AIE. The syntactic category of the island domain affects the severity of the AIE. Following McInnerney (2021), we distinguish three types of PP adjuncts by their internal structure: (i) PPs with NP complements (simple PPs), (ii) PPs with tensed clausal complements (tensed clausal PPs), and (iii) PPs with gerundive complements (gerundive PPs). Each type shows consistent islandhood regardless of argumenthood. Specifically, simple PPs are not islands (with some exceptions that also cross-cut the A/AD),

tensed clausal PPs are strong islands, and gerundive PPs are weak islands. That these properties cross-cut the argument/adjunct distinction is illustrated in (39)-(41). (39a) shows acceptable extraction from a simple PP argument, and (39b) from a simple PP adjunct. (40a) shows acceptable unacceptable extraction from a tensed clausal PP argument, and (40b) from a tensed clausal PP adjunct. Finally, (41a) shows acceptable extraction of NP from gerundive PPs, while (41b) shows unacceptable extraction of PP from gerundive PPs.

- (39) a. That's a building [which_i I wouldn't want to live [Argument in ___i]].
 b. That's a building [which_i I wouldn't want to meet [Adjunct in ___i]].
- (40) a. *That's the guy [who_i the party lasted [Argument until Lee insulted ___i]].
 b. *That's the guy [who_i everyone was happy [Adjunct until Lee insulted ___i]].
- (41) a. i. ?He's someone [who_i they warned me [Argument against moving in with ___i]].
 ii. ?He's someone [who_i you should think twice [Adjunct before moving in with ___i]].
 b. i. *He's someone [with whom_i they warned me [Argument against moving in ___i]].
 ii. *He's someone [with whom_i you should think twice [Adjunct before moving in ___i]].

Further discussion and examples can be found in McInnerney (2021). What's relevant for this presentation is that the AIE appears to be related to the internal structure of PP: resistance to extraction is an internal property of clausal PPs.

We note that the pattern also holds relative to extraction from CPs.

- (41) a. ?Which book_i do you think that, [CP if John reads ___i], he'll abandon linguistics?
 (cf. Boeckx 2012:68)
 b. *Which book_i do you think that, [PP after John reads ___i], he'll abandon linguistics?

6. Discussion and conclusion. Distinct principles are relevant to the SIE and the AIE. The domain-internal structural properties affecting the SIE are distinct from those that affect the AIE: Extraction from an NP subject yields a weaker SIE than extraction from a CP subject does. Extraction from a simple PP yields a weaker AIE than extraction from a clausal PP does. The domain-external properties relevant to each effect are also different. Domain-external structural properties play a prominent role in the SIE, with the surface position and the base position of the subject both playing a role. Domain-external structural properties play a comparatively minor role in the AIE, with the effect crosscutting the A/AD. The domain-external extrasyntactic property of event structure contributes to the AIE (in the form of the Single Event Condition) but not to the SIE.

Domain	Internal factors	External factors
Subject	Syntactic category (NP > CP)	Surface position (raised vs. expletive) Base position (Comp vs. Spec)
Adjunct	Syntactic category (CP > PP) Complement type (simple > clausal)	Event structure

Table 3. Summary of domain-internal and -external factors relevant to the SIE and AIE

These differences suggest distinct principles are at work in each island effect. A complete account of each effect will likely involve contributions from both syntactic and extrasyntactic

principles. There are clear contributions of syntactic category in both effects, and structural position also affects the SIE. This suggests that syntactic principles play at least some role in each effect.

At the same time, numerous authors have noted that the severity of the effects can vary even across sentences with similar syntactic configurations (see e.g. Kluender 2004, Chaves 2013, Culicover & Winkler 2022 on the SIE; Truswell 2011, Kohrt et al. 2018, 2020, Namboodiripad et al. 2021 on the AIE). This suggests that extrasyntactic principles play at least some role in each effect.

Further work is needed to identify the extrasyntactic factors which play a role in the SIE in particular. An important question for future work is to what extent relevant factors degrade vs. boost acceptability. Haegeman et al. (2014) argue, for example, that D-linking of the extractee *boosts* acceptability, in contrast to the logically possible alternative where *non*-D-linking of the extractee *degrades* acceptability in extraction from subjects. Whether different extrasyntactic factors boost vs. degrade acceptability affects the conclusion as to whether extraction from subjects/adjuncts is grammatical or ungrammatical under different circumstances.

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