On the Syntactic Status of Certain Fronted Adverbials in English

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0. Introduction
In recent years, there has been a great deal of interest in the syntactic, semantic, and discourse properties of the sentence’s left periphery. Despite this interest, many questions about this domain remain open. Among them is a question to be addressed in this paper, specifically as it pertains to English. This is whether fronted adjuncts—those displaced to the left periphery from their canonical positions in the sentence—are better analysed as base-generated there or extracted from some lower base position. As it happens, evidence has been accumulating that wh- and other left-peripheral (LP) adjuncts across languages are indeed extracted. Hukari and Levine (1995), for example, assemble an array of data supporting the view that wh-adjuncts are extracted rather than generated ‘in situ’. Most relevant here are their data showing crossover effects among English wh-adjuncts, as illustrated below, where such effects can be understood to involve the illicit extraction of the adjunct over a coindexed element that either is or is not embedded in a larger constituent, corresponding to weak and strong crossover, respectively:

(1) a. * [In whose bedroom]j did Mary claim hisi mother asked Sarah to have lunch ei? (= weak crossover)
   b. * [In whose bedroom]j did Mary claim hei asked Sarah to have lunch ei? (= strong crossover)

Sentences like these give us good reason to believe that the preposing of wh-adjuncts in English is subject to syntactic constraints, and thus that these cases

* This paper represents a development of work reported in Shaer (2003a: §4.3) and shares some content with papers presented at the meetings of the West Coast Conference on Formal Linguistics in San Diego, the Linguistics Association of Great Britain in Sheffield, and the North American Syntax Conference in Montreal. I wish to thank the audiences of BLS 29 and these other conferences and Werner Frey, Nikolas Gisborne, and Claudia Maienborn for helpful discussion.
should be treated on a par with argument extraction (see Hukari and Levine 1995: 222).

In frameworks that take the extraction of an element to involve movement from a base to a target position, these and other preposing data are naturally treated in terms of the claim that movement is not a free option in the grammar, but must instead ‘be triggered by the satisfaction of certain quasi-morphological requirements of heads’, which are related to particular features of these heads (Rizzi 1997: 282). Since such ‘forced’ movement requires ‘the presence of a head entering into a Spec-head configuration with the preposed phrase’, it accordingly requires an ‘articulated structure to host the different kinds of phrases moved to the left periphery’ (Rizzi 1997: 282)—hence the ‘articulated C’ approach to this domain advocated by Rizzi and others. On such an approach, topicalized and focalized constituents as well as wh-phrases move to the specifiers of a cascade of LP functional projections, the heads of these projections encoding information related to the discourse function of these moved constituents and the sentence’s illocutionary force or clause type. This approach can thus claim among its advantages its ability not only to extend a single movement mechanism to a range of A’-movement structures, but also to capture observed ordering patterns among preposed arguments and adjuncts and to articulate the widely held view that certain left-peripheral positions are closely tied to certain discourse functions and to the encoding of a sentence’s clause type.

Yet doubts about this approach have been raised by many researchers. These doubts have centred on the difficulties that face functional structure accounts of ordering effects and the problematic nature of feature-driven topic and focus movement and of the purported connection between syntactic position and discourse function.

A rather different sort of argument against such uniform treatments of adjunct preposing comes from consideration of the work of Espinal (1991) and others, who have claimed that English LP discourse adverbials such as frankly are base-generated as ‘orphans’, elements that are ‘not syntactically integrated [into the sentence] at any level of representation’ (Haegeman 1991). It is this sort of argument that I shall be pursuing in what follows. What I shall show is that English LP adverbials exhibiting the properties of orphans constitute a class considerably larger than that recognized in the literature, and one that includes LP manner and instrumental adverbials as well as discourse adverbials. Moreover, evidence that these adverbials are orphans rather than moved constituents suggests that languages may structure their left periphery in significantly different ways, creating a picture of cross-linguistic variation that goes beyond the outlines sketched by the ‘articulated C’ approach. Taken together with other doubts, such considerations point away from this approach and toward a ‘modular’ approach to the left periphery, in which the discourse properties of constituents and the force of sentences are not determined directly on the basis of syntactic properties, but rather through the interaction of the gross structural properties of sentences with
lexical, phonological, and other linguistic properties of expressions, giving rise to the complex patterns that we observe.

The rest of this paper is organized as follows. First, I shall briefly review the 'articulated C' approach (section 1). Next, I shall describe some LP adverbials that, despite first appearances, are not plausibly analysed as moved (section 2), and then show that these might not even be in a c-command relation to the rest of the sentence—the heart of the 'orphan' claim (section 3). Then I shall address some open questions about orphans and their compatibility with an 'articulated C' approach (section 4). Finally, I shall offer some concluding remarks (section 5).

1. The 'articulated C' analysis of the left periphery

A common claim in the literature is that the sentence's left periphery is organized into a syntactic 'topic' domain into which elements are moved, certain key discourse properties of these elements thus being encoded in their syntactic positions. As noted above, a recent family of analyses has cashed out this claim in terms of a 'C domain' composed of various functional projections into which topicalized and focalized elements move to satisfy specifier-head requirements. According to the best-known version of this analysis, that of Rizzi (1997), the C domain has the following structure. The highest projection in the domain is Force Phrase, which encodes the illocutionary force or clause type of the sentence, the head of which may be occupied by subordinating conjunctions. Below this projection are iterating Topic Phrases that appear above and below Focus Phrase, the specifiers of these projections hosting topicalized and focalized constituents, respectively. Below the lower Topic projection is Finite Phrase, which specifies the finiteness of the selected IP (Haegeman 2002: 16). This structure is schematized in 2, and the kind of sentences taken to motivate it exemplified in 3:

\[
\begin{align*}
(2) & \quad \text{Force} > \text{Top}^* > \text{Foc} > \text{Top}^* > \text{Fin} \\
(3) & \quad \text{Credo che a Gianni, QUESTO, domani, gli dovremmo dire} \\
& \quad \quad \quad \text{C} \quad \text{Top} \quad \text{Foc} \quad \text{Top} \quad \text{IP} \\
& \quad \quad \quad \text{'}I \text{ believe that to Gianni, THIS, tomorrow we should say.}.' \\
\end{align*}
\]

(Rizzi 1997: 288, (8))

(Rizzi 1997: 295, (37a))

More recent work on the C domain has proposed various modifications to this structure, involving further functional distinctions and loci of variation both between languages and between clause types within a language. For example, Rizzi (2002) and Haegeman (2002) add the lower projection Mod(ifier) to host adjuncts, in order to account for the inability of fronted adjuncts to occur to the left of elements in Focus; and Haegeman (2002) adds a Sub(ordinator) position, to distinguish between 'the head that encodes "force" (clause type) and the head that serves simply to subordinate the clause'. In addition, Haegeman (2002) argues for two kinds of variation in 'articulated C' structure: the absence of a lower Topic position in English and the existence of 'truncated' structures for certain kinds of
adverbial clauses, from which Force, Top, and Focus are absent. These revised C structures are given in 4:

(4) a. \( \text{Sub} > \text{Force} > \text{Top*} > \text{Focus} > \text{Mod*} > \text{Fin} > \text{IP} \)
    b. \( \text{Sub} > \text{Mod} > \text{Fin} > \text{IP} \)  
      (Haegeman 2002: §7.1, (69))

Now, while this view of the ‘C domain’ has gained many adherents, it remains a controversial one, about which many authors have already expressed scepticism. Newmeyer (2002), for example, has argued that certain ordering patterns taken to follow from an articulated C domain have an independent explanation. Among these is the pattern given in 5, which indicates that a relative pronoun may with a topicalized argument only when the former is higher than the latter:

(5) a. He’s a man to whom liberty we could never grant.
     (Baltin 1982: 17, (69))
    b. *He’s a man, liberty, to whom we could never grant.

This pattern is readily captured on an articulated C analysis in terms of the fixed positions of the two constituents in question, which occupy the specifiers of ForceP and TopP, respectively. Yet according to Newmeyer, this pattern can be accounted for in terms of an independently required Nested Dependency Constraint, whereby ‘multiple filler-gap dependencies may be disjoint or nested, but not intersecting’ (Newmeyer 2002). If Newmeyer is correct, then the account of such patterns provided by an articulated C analysis may be dispensed with on the grounds of parsimony. Moreover, the appeal to a specifier of ForceP position for relative pronouns, though necessary to account for the fact that these elements occupy a position higher than the topicalized NP, is nevertheless an implausible one given its implications for the encoding of illocutionary force. This is simply because relative pronouns have no obvious relation to a sentence’s illocutionary force, and are thus not naturally treated as hosted by this projection.

Newmeyer points out similar difficulties for the claim that focus is associated with a particular syntactic position. These include the fact that focus may be associated with formally discontinuous elements or even bound morphemes, as the sentences in 6 show:

(6) a. A: Did Mary wash the car? B: No, TOM washed the WINDOWS.
     b. John is more concerned with AFFirmation than with CONfirmation.

In addition to these doubts about the relation between syntactic position and discourse function claimed by articulated C analyses are those associated with their claims about the syntactic encoding of illocutionary force. The brief remarks that we find on this matter—for instance, Rizzi’s (1997: 283) claim that complementizers, as the heads of ForceP, ‘express the fact that a sentence is a question, a declarative, an exclamative, a relative, a comparative, an adverbial of
a certain kind, etc.—suggest a conception of illocutionary force that bears only a passing resemblance to this notion as it is generally understood. In particular, such a description overlooks the fact that illocutionary force irreducibly involves speaker intention. As Zanuttini and Portner (to appear: §1) note, a sentence has, for example, ‘the illocutionary force of ordering if and only if the speaker intends to impose an obligation by getting the hearer to recognize this intention’ regardless of the particular form of the sentence. Thus, an order may just as easily have the grammatical form of a question as that of an imperative, as indicated in 7:

(7) a. Could you come in at 9:00?
    b. Come in at 9:00!

On this basis, Zanuttini and Portner (to appear: §1) argue that illocutionary force is ‘not the right sense of force for the characterization of clause types’, and that what is relevant is ‘sentential force’, ‘the force conventionally associated with the sentence’s form’. Yet, as they show, even this more restricted notion of force cannot plausibly be seen as ‘syntactically realized as a single element or feature’, or as ‘consistently associated with a single projection’.

As the above remarks suggest, there are many reasons to doubt that complex ordering effects, discourse function, or illocutionary force can be insightfully analysed in terms of a cascade of functional projections in the C domain. A further reason to doubt the explanatory utility of this approach, which we turn to in the next section, is related to its claim that phrases assume the roles of ‘topic’ and ‘focus’ by moving to positions in the tree designated for these discourse functions. What we shall see there is evidence that certain fronted adverbials in English are not moved.

2. Some ‘lower’ LP adverbials that are not moved

Among the fronted adverbials that, I shall argue, are not plausibly treated as moved are those in 8:

(8) a. With perfect technique, John executed the triple somersault.
    b. As passionately as he could, Kim kissed Sandy.
    c. With nothing but a crowbar and a ballpeen hammer, I very much doubt that Terry will be able to repair the Vax in our office.

(Hukari and Levine 1995: 201, (16a))

What we find here are adverbials that receive manner and instrumental readings—that is, ones generally associated with VP-internal base positions. Yet these adverbials differ in various respects from those that are uncontroversially moved, such as the ones in 9:

(9) a. Only very quietly did John get drunk.
    b. How quietly did John get drunk?
Among these differences is that the fronted adverbials in 8 but not 9 are set off intonationally from the rest of the sentence,¹ and those in 9 but not 8 are associated with subject-auxiliary inversion. There also appear to be key differences in the behaviour of these two sets of adverbials. One of particular interest, for reasons that will emerge presently, is that the adverbials in 8 do not give rise to Principle C violations when they contain R-expressions coindexed with a subject NP, whereas those in 9 do, as indicated in 10 and 11, respectively:

(10) a. As fast as John's little legs could carry him, he ran to warn the others.
    b. More loudly than Mary had hoped, she tiptoed along the dark corridor.
    c. With nothing but a crowbar and Terry's ballpeen hammer, I very much doubt that he will be able to repair the Vax in our office.

(11) a. * So much faster than John's personal best was he running that the dog got scared.
    b. * Only with Ben's bare hands could he strangle the chicken.

This contrast is an intriguing one, since it is not predicted by any account that takes the adverbials in 10 to be A'-moved to positions high in the tree and reconstructed to their original positions. This suggests that these adverbials have not moved, whereas those in 11 have.

Intriguing though this contrast may be, enough difficulties have been raised regarding the status of Principle C in the grammar (e.g. Pollard and Sag 1994: 247–48; Shiobara 2003) to encourage us to seek out further evidence that adverbials like those in 10 are not moved.

As it happens, other evidence is indeed available. This includes the failure of the adverbials in question to obey standard movement constraints, as indicated by the contrast between the (a) and (b) sentences below:

(11) a. With his 'spider powers' alone, I very much doubt Peter's boast that he can wipe out terrorism.
    b. * With which of his special powers alone did Mary question Peter's boast that he could wipe out terrorism?

(12) a. Even using 'spider powers', you wonder who could wipe out terrorism.
    b. * By what means exactly do you wonder who could wipe out terrorism?

¹ Although, as Taglicht (2001: 4, 6) points out, this matter turns out to be more complicated, since these adverbials, like their parenthetical counterparts, are typically but not uniformly associated with prosodic boundaries.
Certain Fronted Adverbials in English

This evidence also includes the inability of these adverbials to occur above sentence adverbs like likely and probably, as in 13a. This behaviour again contrasts with that of adverbials associated with subject-auxiliary inversion, as 13b indicates, suggesting that the former adverbials are not moved while the latter are:

(13) a. * Swiftly, John likely ran.
    b. So swiftly did John likely run that he didn’t even notice the fire.

Still more evidence that these adverbials are not moved comes from their behaviour with respect to VP ellipsis (Espinal 1991: 731; McCawley 1982: 96), which is strikingly similar to that of parenthetical and afterthought occurrences of adverbials, a point to which we shall be returning in the following section. As 14 shows, all three classes of adverbials behave as elements independent of the antecedent VP, as reflected in the readings indicated:

(14) a. With his X-ray vision, John located the documents and Bill did too.
    = ‘Bill located the documents’;
    ≠ ‘with John’s/his X-ray vision, Bill located the documents’
    b. John, with his X-ray vision, located the documents and Bill did too.
    = ‘Bill located the documents’;
    ≠ ‘Bill, with John’s/his X-ray vision, located the documents’
    c. John located the documents, with his X-ray vision, and Bill did too.
    = ‘Bill located the documents’;
    ≠ ‘Bill located the documents, with John’s/his X-ray vision’

This pattern is precisely what McCawley observed for standard parenthetical expressions, as shown in 15:

(15) John talked, of course, about politics, and Mary did too.
    = ‘Mary talked about politics too’; ≠ ‘Mary talked too’
    ≠ ‘Mary talked, of course, about politics too’
    (McCawley 1982: 96, (5a))

Consideration of VP ellipsis structures reveals a final piece of evidence that the fronted adverbials in question are not moved from positions within the VP. This is that they can acceptably apply to both conjuncts in cases like that given in 16a, even though in doing so they clearly cannot have moved from the VP:

(16) a. With their X-ray vision, John located the documents and Bill did too.
    b. * John located the documents with their X-ray vision and Bill did too.

Taken together, the data given in this section provide substantial evidence that certain fronted adverbials in English with ‘lower’ readings are not moved from
the VP, contrary to the standard view of them (e.g. Ernst 2002: 407–33). Of course, such a claim about these adverbials raises new questions about how they should be analysed, to which we turn in the next section.

3. **So where in the tree are these things? Toward an ‘orphan’ analysis**

If we accept that these adverbials are not moved, then the standard alternative is to take them to be IP or CP adjuncts (e.g. Haegeman 2002). However, on this assumption, adjuncts in this position might be expected to make a constant contribution to interpretation in having sentential scope. Yet this is clearly not the case with the adverbials in question, many of which are compatible with a range of readings, as the sentences in 17–18 indicate:

(17) Happily, John sucks lemons.
= ‘It is a happy circumstance that…’
= ‘John is happy to suck lemons’

(18) a. Quietly now, what is the problem? = ‘Speaking quietly, tell us what…’
b. Quietly, John kept about his business. = ‘John quietly kept…’
c. Very quietly for a six year-year-old, Robert crept down the stairs.
= ‘Robert crept… in a quiet manner…’ (Ernst 2002: 395, (8.16b))

As the paraphrases above suggest, *happily* in 17 has both sentential and subject-oriented readings; while *quietly* in 18 has sentential, subject-oriented, and manner readings. Arguably neither lexical nor structural ambiguity is an attractive option for analysing these different readings: the key is simply that the argument of the adverb is not specified.

One plausible way to account for these patterns—which has already been proposed for a range of expressions that ‘bear no obvious syntactic relationship to the sentences they seem to be included in’ (Espinal 1991: 726)—is to take these fronted adverbials to be ‘orphans’ (Haegeman 1991). Elements of this kind, as Haegeman and others have described them, occupy positions that have no hierarchical relation to the sentences with which they are associated, and *a fortiori* are not in a c-command relation to these ‘host’ sentences. Significantly, such a claim is consistent with the binding, island, and VP ellipsis data reviewed in the previous section. It also gives us a way to capture the observation that these adverbials are typically set off intonationally from the rest of the sentence, the idea being that speakers may signal the presence of a distinct syntactic unit by this prosodic means.

More direct evidence for an ‘orphan’ analysis of these adverbials is their inability to license negative polarity items when they contain polarity licensors like *only*, where the licensor needs to be in a c-command relation to the negative polarity item. This behaviour, as indicated in 19a, again contrasts with that of moved adverbials like those in sentences 19b–c (19c being taken to display focus
Certain Fronted Adverbials in English

movement), in which the negative polarity item licensors are understood to be in a c-command relation to the polarity items:

(19) a. * Only quietly, John ever got drunk.
    b. Only quietly did John ever get drunk.
    c. ? Only QUIETLY John ever got drunk.

An 'orphan' analysis of the fronted adverbials described here and their parenthetical and afterthought counterparts thus captures the mismatch between their position and interpretation in a manner consistent with the evidence that they are not moved and without recourse to the discontinuous structures by which McCawley (1982) sought to solve the puzzle of this mismatch.² What is also worth noting is that 'orphans' arguably need to be recognized as grammatical elements in any case, given the existence of a range of elements loosely associated with their host sentences (e.g. Espinal 1991) and of the 'ordinary, unembedded, words and phrases' with which 'speakers can make assertions' (Stainton 1995: 281), as illustrated in 20 and 21, respectively.

(20) a. The secretary, well-mannered as anybody, will present an apology.
    b. Today's topic, ladies and gentlemen, is Nuclear Magnetic Resonance.
       (Espinal 1991: 726–27, (3b), (6a))

(21) a. Nice dress
    b. Black coffee with no sugar
       (Stainton 1995: 293, (20a), (20e))

Such considerations all point toward the existence of 'orphans' in the grammar and the plausibility of analysing fronted, parenthetical, and afterthought adverbials in 'orphan' terms.

4. Some open questions (and some tentative answers)
From the above discussion, it appears that an 'orphan' analysis can answer many puzzling questions about fronted, parenthetical, and afterthought adverbials. Admittedly, many more questions remain, adequate answers to which must await further research. It might, however, might be worth considering some of these questions—briefly, given space limitations—at least to indicate the direction that answers to them might take. Moreover, given the articulated C approach against which the discussion of 'orphans' has unfolded, it is worth asking whether an 'orphan' analysis is ultimately compatible with this approach.

Among the many questions that remain for our 'orphan' analysis is why various patterns of acceptability among supposedly 'orphan' adverbials are in fact

² Of course, it remains possible that parenthetical expressions take the form of adjunct structures fully integrated into the sentence, as Potts (2002) has argued for as-parentheticals. I discuss the difficulties of generalizing Potts's account to the adverbials discussed in this paper and certain more basic difficulties with his approach in Shaer (2003b).
consistent with a movement analysis. These patterns include the unacceptable fronting of manner adverbs over modals and of measure adverbs generally (Ernst 2002: 424) and apparent Principle C violations with fronted adverbials in configurations like those of the acceptable sentences in 10. These patterns are illustrated in 22, 23, and 24, respectively:

(22) a. * Carefully, he must ease the violin out of its case.  
    b. * Tightly, she must hold on to the railing.  
        (Ernst 2002: 422, (8.94))

(23) a. * Completely, he eased the violin out of its case.  
    b. * Partway, Karen filled the glass.  
        (Ernst 2002: 422, (8.95a–b))

(24) a. * In Ben’s office, he lay on his desk.  
    b. * For Mary’s brother, she was given some old clothes.  
        (Speas 1990: 51–52, (59b), (60b))

In fact, a plausible explanation of these patterns is available once we consider some of the properties of ‘orphans’ and of fronted elements more generally. By hypothesis, ‘orphans’ are syntactically independent of their host sentences and thus semantically integrated into their hosts only through a process of inference. We can also speculate that fronted adverbials, like other preposing devices, may serve as ‘links’, relating ‘the information presented in the current utterance’ to the ‘information evoked in or inferrable from the prior context’ (Birner and Ward 1994: 20–22). What this suggests is that the degraded acceptability of a sentence containing a fronted adverbial may have its source in the difficulty of inferring the relation of the adverbial not only to its host sentence but also to previous discourse. That the unacceptability of the sentences in 22–24 may have such non-syntactic sources is brought home by the acceptability of sentences with other adverbial-modal combinations, as shown in 25; by the existence of acceptable sentences, as in 10, that are structurally analogous to those in 24; and by the obvious difficulties involved in any attempt to infer the arguments of the measure adverbs in 23 (see Shaer 2003a: 249).

(25) a. Quietly, he will tell her that he loves her.  
    b. With the greatest of tact, she might suggest that he find suitable employment elsewhere.

The above remarks about the discourse functions of fronted ‘orphans’ put us in a good position to address the question of the compatibility of an ‘orphan’ analysis with the ‘articulated C’ analysis discussed above. Arguably it is impossible to find any strict incompatibility between them, since the former takes certain elements to lie beyond the sentence, while the latter concerns only elements fully integrated into the sentence. The latter can thus incorporate the results of the former without any alteration of its basic claims. Yet since the latter
Certain Fronted Adverbials in English

seeks to assimilate the patterns observed in one language to those observed in another, a significant point of tension does emerge after all. This is because of the close connection that the ‘articulated C’ approach posits between syntactic structure and both discourse function and illocutionary force. Of course, languages do exist—Italian and German among those that readily come to mind—for which the hypothesis of a C domain containing positions with well-defined discourse functions is a plausible one. Yet the present investigation of fronted adverbials in English suggests that such an hypothesis is far less plausible for this language, which makes very free use of ‘orphans’ and in which relatively few classes of adverbials can be seen as moved to LP positions. Since ‘orphan’ adverbials appear to fulfil the discourse functions of their moved counterparts, the tight connection between LP positions and discourse functions that is at the heart of the ‘articulated C’ approach and the limited degree of cross-linguistic variation that this approach envisages lead to the conclusion that its picture of the left periphery is not an accurate one.

5. Conclusion
In this paper, I have presented evidence that certain fronted adverbials in English have not moved to positions high in the tree, but are generated as ‘orphans’, elements syntactically distinct from their host sentences. This suggests that significant cross-linguistic differences may exist in the structure of the left periphery, and thus that reductionist approaches to this domain, like that proposed by Rizzi (1997) and others, are unlikely to shed light on its general properties. Moreover, consideration of the behaviour of ‘orphans’ suggests that no direct relation exists between syntactic position and either discourse function or illocutionary force, both of which are better accounted for in ‘modular’ terms. Finally, although the ‘orphan’ adverbials described here are admittedly rather strange linguistic beasts, their inclusion in the grammar offers a simple way to account for a host of refractory syntactic, semantic, and prosodic data.

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