APPARENTLY SEMANTICALLY-MOTIVATED EXTRACTION IN AN AUTONOMOUS SYNTAX*

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ABSTRACT

Central to the Y-model of grammar is the autonomy of syntax, i.e. the strict separation of syntax and semantics. Consequently, semantic units cannot be used in the syntax to license filler-gap dependencies. The literatures on pseudocoordination, and on participial and prepositional adjunction however suggest that natural language does not obey such a constraint: subextraction from adjuncts is possible just in case a single event interpretation holds between matrix and adjunct predicate (cf. Schmerling 1975, Truswell 2007a, 2011).

I show that these transparent constructions behave syntactically as a class distinct from canonical opaque adjunct islands. I formalise the distinction using phase theory (Chomsky 2000, 2001) in a transformational generative grammar by demonstrating how *c*-command and agreement, i.e. *Agree*, force some nodes to remain inaccessible to the projecting head. The account derives transparency without the need for semantic licensing of the filler-gap dependency.

1 INTRODUCTION

Central to the Y-model of grammar is the autonomy of syntax, i.e. the strict separation of syntax and semantics. Consequently, the semantics cannot license filler-gap dependencies. The present paper focuses on one particular semantic constraint on movement that has been proposed in the literature: the

availability of extraction from within single event constructions.[1] I argue that these single event constructions involve semantic licensing of the adjunct itself rather than semantic licensing of the filler-gap dependency. I then provide a syntactic analysis of the restrictions on extraction using phase theory.

The single event constraint can be observed by comparing (1) with (2). Whereas in (1) the matrix and adjunct predicates do not form a single event, in (2) the matrix and adjunct predicates do form a single event. This contrast correlates with a difference in the availability of adjunct-internal gaps.

The adjunct in (1) which does not form a single event with the matrix predicate remains opaque for extraction, in line with the adjunct island condition (Ross 1967, Cattell 1976) and the Condition on Extraction Domains (Huang 1982). In contrast the adjuncts in (2), where adjunct and matrix predicate do form a single event, are transparent for extraction. Transparency is illustrated by the acceptable extraction of *which tune* from within the adjunct introduced by *whistling* in the participial adjunct in (2a); by the acceptable extraction of *which car* from within the adjunct introduced by *and* in pseudocoordination[2] in (2b); and by the acceptable extraction of *which temperature* from within the prepositional adjunct introduced by *at* in (2c).

(1)   English: non-single event

          *Which celebrity did Mary eat an ice cream before she saw _?

                                                        (cf. Huang 1982: 503)

(2)   English: single event

      a.   Which tune did Monica arrive whistling _?
               (cf. Borgonovo & Neeleman 2000: (3a,b),200); Truswell (2011)
      b.   Which car did Mary go and buy _?
                                              (cf. Ross 1967: (4.108a,b,c),170)
      c.   Which temperature did Monica wash the jeans at _?
                                                      (cf. Sheehan 2013: (16a))

(3) and (4) suggest that the same contrast is found in Norwegian: subextraction

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1 Single event constraints on extraction have been discussed in the separate literatures on pseudocoordination (Schmerling 1975, Goldsmith 1985, De Vos 2005, Wiklund 2007) and on participial adjunction (Truswell 2007a,b, 2011); for discussions of more than one construction cf. Cormack & Smith (1997) and Jin (2014) for pseudocoordination and participial adjunction; and Sheehan (2013) for prepositional and participial adjunction. The most detailed discussion specifically on a single event constraint on movement paths can be found in Truswell (2011) in relation to participial adjunction.

2 Pseudocoordination is treated in the literature as involving either coordination or subordination but not adjunction, with the exception of Déchaine (1993) who takes the construction to involve leftward adjunction of the first conjunct predicate, *go* in (2b) (cf. De Vos 2005: 77-87 for a review of the literature).

from the adjunct is ill-formed in the non-single event construction in (3) but well-formed in the single event constructions in (4). Furthermore, the literature on extraction from within pseudocoordinate constructions across languages (cf. Kjeldahl 2010, Wiklund 2007), and the more limited discussions on extraction from within participial constructions (Truswell 2011: 195, Fabregas & Jiménez-Fernández 2015) suggest that some of the transparent constructions in (2) and (4) are found more widely in at least Danish, Swedish and Spanish.

(3)   Norwegian: non-single event

      *Hvilken stjerne spiste Marit en iskrem   før   hun så _ ?
      which   celebrity ate   Mary an ice-cream before she saw

(4)   Norwegian: single event

    a.   *Hvilken sang ankom Monika plystrende på _ ?*
      which   song arrived Monica whistling   on
                          (cf. also Truswell 2011: (26),195)

    b.   *Hvilken bil dro Marit og kjøpte _ ?*
      which   car went Mary and bought

    c.   *Hvilken temperatur vasket John olabuksene på _ ?*
      which   temperature washed John jeans.the   on
                       (p.c. Marius Jøhndahl, Kari Kinn)

The paper is organised as follows. Section 2 reviews previous accounts. Section 3 uses adverb scope tests to show that opacity correlates with position of merger: whilst the opaque adjunct in (1) merges with a projection of a phase head (vP), the transparent adjuncts in (2) merge with a projection of a non-phase head (VP). Section 4 uses phase theory to provide a unified analysis: some nodes remain inaccessible to projecting phase heads.

2   Previous analyses

Previous analyses of the transparent constructions in (2) (i) introduce redundant semantic units into the syntax, e.g. in the lexicon (De Vos 2005) or in Narrow Syntax (Wiklund 2007, Fabregas & Jiménez-Fernández 2015); (ii) advocate a partially semantic account, raising issues about how the syntactic or semantic nature of individual phenomena is decided (Truswell 2007a,b, 2011); or (iii) are wholly syntactic and do not introduce non-syntactic features into the syntax, but have technical shortcomings (e.g. Borgonovo & Neeleman 2000; shown in Truswell 2011: fn.11, 30, Sheehan 2013).

2.1 Semantic units in syntax

The accounts of pseudocoordination in both De Vos (2005) and Wiklund (2007) use semantic units in the syntax to restrict the position of merger of the adjunct. In neither case is pseudocoordination taken to involve true coordination. The contrast of pseudocoordination with true coordination can be seen by tests including distributive diagnostics (cf. De Vos 2005 for further diagnostics). The input conditions on the distributive operator *both* in (5) require two events. In (5a) this condition is met and the resulting sentence is felicitous. In (5b) in contrast this condition is not met and the resultant sentence is not felicitous.

(5) Distributivity

   a. Which car did Mary both buy _ and sell _?
   b. #Which car did Mary both go and buy _?

(cf. De Vos 2005: 41)

De Vos (2005) places the semantic units in the lexicon in the form of event-structural features, and uses these features to restrict which elements can be merged into a coordinate structure which forms a complex head. Extraction from within a conjunct in pseudocoordination is then only an illusion, as the internal argument is selected by the complex head as a whole. These features are redundant as they appear in addition to the event semantics in the semantic module. Predicates are conjoined to form complex heads, the combination of which selects the internal argument. The features act to restrict which verbs can be conjoined to form complex heads. For pseudocoordination, the combination has the effect of allowing the internal argument to be extracted without requiring an element to be asymmetrically extraction from within a coordinate island, thereby avoiding a violation of Ross' 1967 Coordinate Structure Constraint.

(6)
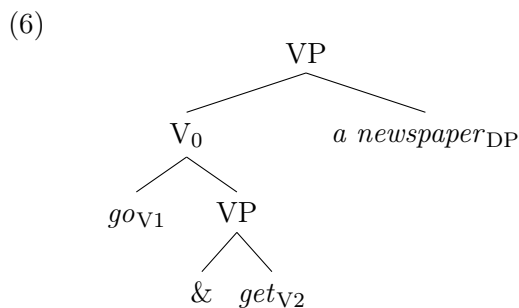
Extension to participial adjuncts could be possible, provided a covert coordinator introduces the participial adjunct (cf. Cormack & Smith 1997, also section 4 of the present work). However the event-structural restrictions on

participial adjunction appear to be quite different; Truswell (2007a) notes that in participial adjunction, the matrix predicate denotes the culmination point, whilst the adjoined predicate contributes the preparatory process. This division contrasts with pseudocoordination, where the first conjunct does not denote the culmination point. Such a difference would be difficult to capture if the same head, taking the same scope, were involved in both constructions.

More importantly however, the complex head account strictly prohibits internal arguments to either predicate being realised within the structure, thereby failing to derive examples like (7), where *a knife* intervenes between the first verb *take* and *and*. I leave the question open of whether extraction is possible from within the first predicate in this construction. Some informants suggest that extraction requires a covert preposition, cf. (7c)[3].

(7)   Extraction from within both predicates
   a.   Which steak did Lizzie take a knife and hack _ to pieces.
   b.   Lizzie took the knife and hacked the steak to pieces?
                                      (based on Schmerling 1975: (33),217)
   c.   ?Which knife did Lizzie take _ and hack the steak to pieces (with)?

Examples like (7a) also present a problem if the semantic units are placed in Narrow Syntax, e.g. by means of a templatic structure like that of Ramchand (1997, 2008). Such an analysis again places syntactic restrictions on which elements can be merged into which structures, allowing pseudocoordination and participial adjunction to be analysed as involving some kind of transparent configuration, e.g. CP-subordination in the case of pseudocoordination (cf. Wiklund 2007 for an analysis of pseudocoordination within this framework, and Fabregas & Jiménez-Fernández 2015 for an analysis of participial adjuncts).

2.2   Partially semantic account

In contrast, Truswell (2011) introduces a filter in the discourse module which directly licenses movement in single event constructions, by repairing movement violations provided a particular condition, the Single Event Grouping Condition in (8), is met.

(8)   Single Event Grouping condition
        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 grouping*.

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3 Thanks to David Willis, Adam Ledgeway, and particularly Andrew Cooper, for discussion of this intuition.

<div align="right">(Truswell 2011: (6),157)</div>

Where *event grouping* is defined as in (9):

(9)   Event Grouping
        An *event grouping* ε is a set of core events and/or extended events $[e_1,$
        $\ldots, e_n]$ such that:
        a.   Every two events $e_1, e_2 \in \varepsilon$ overlap spatiotemporally;
        b.   A maximum of one (maximal event) e $\in \varepsilon$ is agentive.

<div align="right">(Truswell 2011: (65),157)</div>

and *agentivity* is defined as in (10):

(10)   Agentivity in Truswell (2011)
        An event e is *agentive* iff:
        a.   e is an atomic event, and one of the participants in e is an agent;
        b.   e consists of subevents $e_1, \ldots, e_n$, and one of the participants in
              the initial subevent e_1 is an agent.

<div align="right">(Truswell 2011: (66),158)</div>

Truswell (2011) only discusses participial adjunction, but can be straight-forwardly extended to pseudocoordination which involves single events with a single shared agent. Equally, the prepositional adjunct in (2c) does not introduce an additional agent.

Technically however, formalisation of the single event constraint in terms of agentivity faces empirical issues. The Single Event Grouping Condition requires aspectual classes traditionally defined in terms of telicity (accomplishment/achievement) to be recast in terms of agentivity: accomplishments are agentive, whereas achievements are non-agentive (cf. Truswell 2011: esp. 98–103). Formulating the semantic requirement for extraction in terms of agentivity however causes problems when examples like (11) and (12) are considered.

In (11), adding the object *the YMCA* to the matrix predicate *dance* results in a more acceptable sentence, regardless of the fact that agentivity has not changed. This effect is possibly due to a garden path effect in (11a) where the first possible position for a gap (following *dance*) is not the intended gap.

(11)   Acceptability of extraction from within adjuncts to telic matrix predi-
        cates
        a.   *What does John dance$_\theta$ screaming$_\theta$ _?

<div align="right">(Truswell 2011: (73), 163-165)</div>

        b.   What did John dance the YMCA$_\theta$ screaming$_\theta$ _?

In (12), transparent adjuncts are intuitively unacceptable when combined with atelic matrix predicates, regardless of the agentivity of the adjoined predicate. (12) illustrates unacceptability of extraction from within a phrase adjoined to the atelic non-agentive predicate *shiver*, both when the adjoined predicate is nonagentive, e.g. *sitting on* in (12a), and when the adjoined predicate is agentive, e.g. *whistling* in (12b). Here the Single Event Grouping Condition wrongly predicts both cases of extraction to be well-formed. (12) suggests that the distinction relies on event-structural notions of telicity rather than on agentivity.

(12)   Unacceptability of extraction from within adjuncts to atelic matrix predicates
        a. *Which tune did Mary shiver$_\theta$ whistling$_\theta$?
        b. *Which chair did Mary shiver$_\theta$ sitting on$_\theta$?

Although Truswell (2011) places the Single Event Grouping condition in a post-syntactic module, avoiding a violation of the autonomy of syntax, such a condition can only cover a subset of movement configurations. For instance, whilst regular cases of *wh*-movement from within a matrix predicate such as (13) trivially satisfy a condition requiring that movement paths delimit a consitutent that can be construed as describing a single event, across-the-board movement from within coordinate structures fails to satisfy the condition. Even with an asymmetrical coordinate structure, at least one of the conjuncts will be positioned in such a way that the Spec,CP landing site of *which picture* and the conjunct-internal gap will fail to form a constituent to the exclusion of the other conjunct, meaning that the minimal constituent containing both the head and foot of the movement chain will contain both conjuncts and therefore more than one event. Such a situation violates the Single Event Grouping Condition which should lead to unacceptability, contrary to fact, cf. acceptable (14).

(13)   Trivially single event
            Which picture did Mary paint _?
(14)   Acceptable extraction across two events
            Which picture did Mary paint _ and Susan buy _?

Failure to capture configurations like across-the-board movement means that a semantic filter for apparently-semantically licensed movement nonetheless requires a different type of explanation for other movement configurations. A non-unified account of movement configurations in turn raises non-trivial challenges about how the syntactic, semantic or discourse nature of individual extraction phenomena should be determined.

2.3 Syntactic analyses

An alternative to introducing redundant semantic units into the syntax is to base the analysis around the position of adjunction and derive differences in extraction syntactically from the differences in position.

This approach can be seen in the Condition on Extraction domains (Huang 1982): projections are split up into two heights. An element can be merged low, as a sister to the head. The element is then a complement, satisfies a government relation with the head and allows subextraction. Alternatively an element can be merged high, to the maximal projection of the head. The element is then a modifier, is not in a government relation with the head and does not allow subextraction.

Borgonovo & Neeleman (2000) apply this height difference to transparent participial adjuncts by attempting to reduce transparent adjunction to the set of complements of a restricted class of predicates, namely reflexive predicates.

However, Truswell (2011) notes that such a restriction is descriptively inadequate. In (15), the participial adjunct does not occur with a reflexive predicate, and yet subextraction of *what* is possible.

(15)   What did John drive Mary crazy [whistling _]?

(Truswell 2011: (44a), fn.11, p.30)

Sheehan (2013) in contrast provides an analysis that maintains both types of complement in (1) and (2a) as adjuncts, and reduces the contrast to late and early adjunction. The analysis of extraction requires stipulating that adjuncts to phase heads beyond the canonical phase heads v and C involve late merger, and therefore constitute strong islands, whilst adjunction to non-phase heads involves early merger, meaning that the adjunct is transparent. The analysis both underlines the importance of phasality in determining opacity and transparency and has the advantage of avoiding a partially semantic account of movement.

In the present paper, I present a syntactic alternative based on feature licensing which maintains the importance of phasality for extraction configurations whilst avoiding the stipulation linking late merger to opacity. The analysis accounts for extraction patterns in a way that does not require redundant semantic units in the syntax, and is also general enough to potentially capture the range of movement configurations beyond both single event constructions and adjunct configurations.

3   TWO POSITIONS OF ADJUNCTION

In sections 3 and 4, I outline an account which distinguishes semantic licensing of adjuncts and syntactic licensing of gaps. First, I show two positions of adjunction. Second, I show how nodes within adjuncts to maximal projections of phase heads are inaccessible to the projecting phase head.

This section focuses on licensing of the adjunct. Rather than transparency being directly linked to semantic interpretation, I argue that both transparency and single-eventhood are otherwise unrelated effects of the position of adjunction. Specifically, the opaque non-single event construction in (1) involves merger with a projection of a phase head (vP), whilst the transparent single event constructions in (2) involve merger with a projection of a non-phase head (VP).

The existence of an interpretational difference between transparent and opaque adjuncts is clear: whilst the opaque adjunct in (1) situates two separate events in relation to each other, the participial and pseudocoordinate constructions in (2a) and (2b) modify aspect within a single event. Truswell (2007a) for instance notes that particpial adjuncts denote the preparatory process in a tripartite event structure of preparatory process, culmination point and consequent state, and co-occur with achievement predicates in the matrix clause. Similarly, pseudocoordination has been described, generally through the first conjunct predicate, as marking PRIORITY (e.g. Schmerling 1975), durative aspect (Ebert 2000: 605), progressive aspect (e.g. Platzack 1979), inceptive aspect (e.g. Wiklund 2007: esp. 127) and ingressive aspect (e.g. Darnell 2008: 264). Finally, Sheehan (2013) observes that transparent prepositional adjuncts, cf. (2c), are restricted to low readings.

Besides interpretational differences, the opaque (1) and transparent (2) constructions can also be distinguished syntactically in terms of their position of base generation.

Adverb scope tests suggest that the opaque non-single event constructions in (1) are vP-adjuncts whilst the transparent single event constructions in (2) are VP-adjuncts. In (16) and (18), the subject-oriented adverb *reluctantly* can scope either over the first predicate, or over the matrix-adjunct complex as a whole, suggesting that neither adjunct is merged higher than vP. However whilst the VP-adjunct *loudly* can modify the transparent matrix predicate-adjunct complex as a whole in (19), suggesting merger below the adjunction site of *loudly*, e.g. to VP, *loudly* cannot scope over the opaque matrix predicate-adjunct complex in (17), suggesting merger to a position higher than VP but lower than the position of adjunction of *reluctantly*, e.g. to vP.

(16)   Mary reluctantly ate an ice cream before she whistled the national

anthem.

(17) #Mary loudly ate an ice cream before she whistled the national anthem.

(18) a. Monica reluctantly arrived whistling the national anthem.
      b. Monica reluctantly washed the jeans at 60 degrees.
      c. Mary reluctantly went and bought the car.

(19) a. Monica loudly arrived whistling the national anthem.
      b. Mary loudly went and bought the car.
      c. Monica loudly washed the jeans at 60 degrees.

The different behaviour of the constructions in (1) and (2) with respect to adverb scope tests (16)-(19) suggests that rather than semantic interpretation regulating transparency, semantic interpretation is a result of the position of adjunction. Semantic constraints on adjunction can be captured under a scope-based account of adjunct licensing such as Ernst (2002), where adjunction is not regulated in the syntax but is instead derived through scope relations in the semantics. For instance, adjuncts forming single events with the matrix predicate will merge low (VP) according to Ernst (2002), whilst adjuncts that do not form single events with the matrix predicate will merge with a predicational layer higher than VP.

Differentiating between the licensing of adjuncts and of movement paths requires two separate theories. In the present account, the semantics licenses the position of adjunction, meaning that differences in acceptability will occur between infelicitous and ill-formed sentences. Where no extraction has taken place, an incorrect position of adjunction will result in semantic infelicity, as the mismatch will require coercion of the adjunct to satisfy the semantics of the adjunction site. If subextraction does take place however, the violation will be syntactic. In this case, semantic coercion will have no repairing effect and the sentence will be ill-formed[4].

A full formalisation of the licensing of adjuncts in single and non-single event constructions in (1) and (2) is left open for future work. One possible direction for formalising licensing constraints on single events however involves aspectual operators. Formally, Ernst (2002) suggests that the VP-layer be

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4 Thus a many-way contrast in acceptability is expected including (i) felicitous and well-formed sentences (e.g. interrogative sentences involving subextraction from adjuncts forming single events with the matrix predicate); (ii) infelicitous but well-formed sentences (e.g. declarative sentences without subextraction where adjuncts failing to satisfy the semantic constraints on single eventhood are merged at VP and must therefore undergo coercion in the semantics resulting in a (not total) reduction in acceptability); and (iii) ill-formed sentences (e.g. interrogative sentences involving subextraction from adjuncts in non-single event constructions where adjunction is to vP). The question of how this hierarchy maps to actual results of judgement experiments is left open in the present work.

represented in terms of aspect shift in a network of aspectual operators (cf. De Swart 1998, Moens & Steedman 1988). Potentially the semantic representation of the head of the adjunct in the single event construction could be represented as an aspectual operator that type-shifts between types in an aspectual network. The null preposition introducing the participial adjunct in (2a) could denote PROG in the framework of De Swart (1998), introducing a preparatory process. In contrast, pseudocoordinate *and* in (2b) could denote ADD-CUL in De Swart (1998), serving to add a culmination point.

The second question of how to license extraction is the focus of this paper. Until now, I have followed the claim in Truswell (2011) that the movement puzzle requires formalising single event constraints on extraction. However distinguishing between licensing of adjunct and of movement paths suggests that the movement puzzle can be viewed from a purely syntactic point of view: why are transparency and opacity contrastively linked to certain positions of merger? Specifically why can extraction take place from within adjuncts to maximal projections of non-phase heads but not from within adjuncts to maximal projections of phase heads?

The relevant contrast is summarised in the diagram in (20), where the nodes in green can undergo *wh*-movement to sentence-initial position whereas the nodes in red cannot undergo *wh*-movement to sentence-initial position. In Section 4, I derive the unavailability of gaps within free adjuncts to maximal projections of phase heads, here vP, using phase theory.

(20)
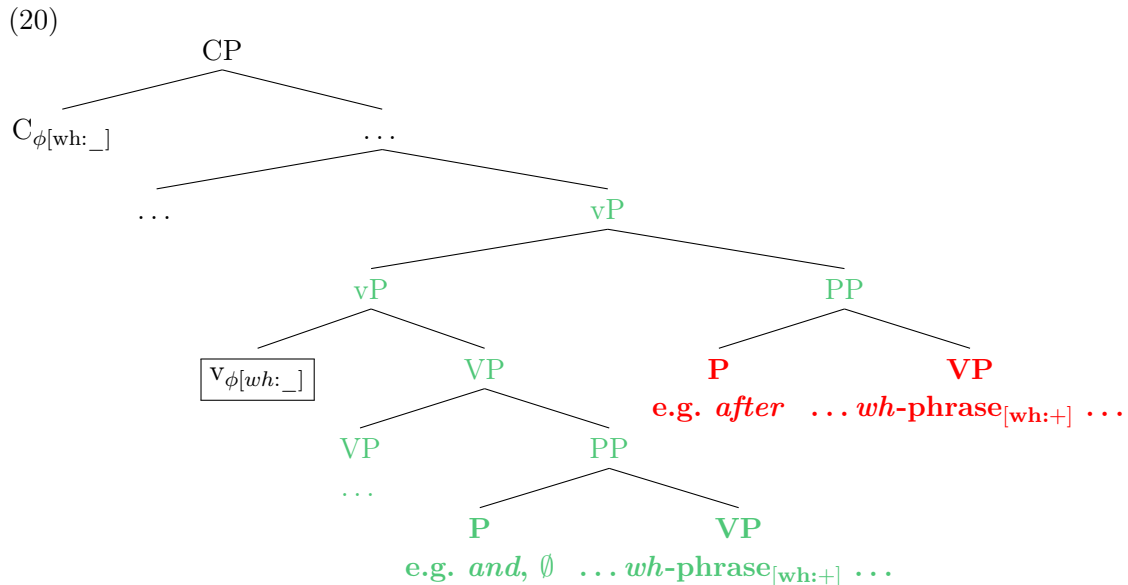
4   Phase theory account

Phase theory (cf. Chomsky 2000, 2001) derives (20) under a c-command definition of Agree such as (21).

(21)   Agree
       An interpretable feature stands in an Agree relation with an uninterpretable feature iff the interpretable feature c-commands[5] the uninterpretable feature within the same projection.

As standard, each phase head ϕ is assumed to contain uninterpretable copies of all the features in the derivation. These uninterpretable features must be checked under an Agree relation in order for the Principle of Full Interpretation to be satisfied and for the derivation to converge. In order for all uninterpretable features to be checked, a phase head ϕ probes its complement, i.e. those nodes c-commanded by ϕ that have not yet been spelled out. Where an interpretable copy is found, movement is triggered to a position from which that interpretable feature will c-command the uninterpretable feature on ϕ, i.e. to Spec, ϕP. From the specifier position, the uninterpretable feature on the projecting phase head is checked. In specifier position, the interpretable feature also escapes spellout of the complement of ϕ, meaning that the uninterpretable feature stays in the derivation and can check, and finally value, uninterpretable features on higher phase heads.

A consequence of (21) is that [wh:＿] on v_ϕ cannot be checked in subextraction from vP-adjuncts as (i) nodes internal to vP-adjuncts (in red in (20) and (22)) do not c-command v_ϕ from their in-situ position; and (ii) v_ϕ cannot trigger movement to an alternative Spec,vP node that does c-command v_ϕ, as nodes internal to vP-adjuncts are not c-commanded by v_ϕ. Subextraction from vP-adjuncts therefore violates the Principle of Full Interpretation and the derivation fails to converge.

(22) illustrates.

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5 C-command rather than asymmetric c-command allows for anti-locality effects where the sister node to a phase head must remain immobile, cf. Abels (2003) for discussion of anti-locality.

Apparently semantically-motivated extraction

(22)

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                    CP
         ┌──────────┴──────────┐
which tune[wh:+]              CP
                    ┌──────────┴──────────┐
              C_φ[wh:_]                   TP
                did              ┌─────────┴─────────┐
                               Mary                 TP
                                         ┌───────────┴───────────┐
                                         T                       vP
                                              ┌──────────────────┴──────────┐
                                        which tune[wh:+]                    vP
                                                          ┌─────────────────┴─────────┐
                                                        Mary                          vP
                                                                       ┌──────────────┴──────────┐
                                                                      vP                         PP
                                                                ┌──────┴──────┐           ┌───────┴───────┐
                                                          v_φ[wh:_]          VP           P              ...
                                                                     eat an ice cream   before    ┌───────┴───────┐
                                                                                                 ...            DP
                                                                                                          which tune[wh:+]
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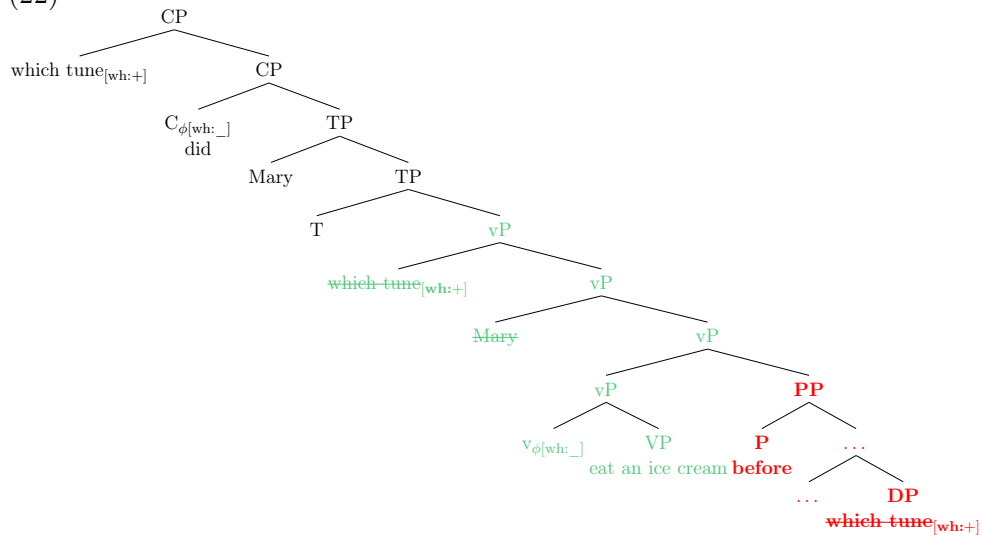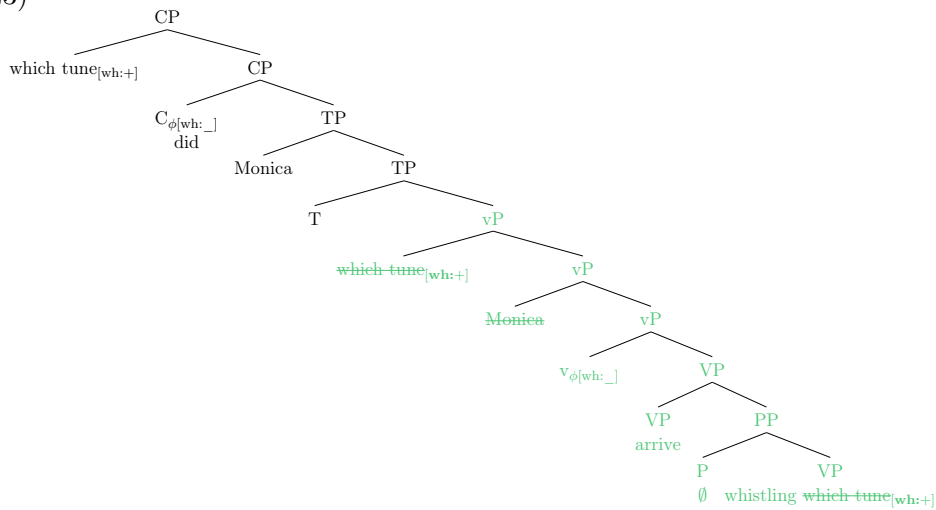
In contrast, nodes internal to VP-adjuncts (in green in (20), (23), (24) and (25)) are c-commanded by v_ϕ. Therefore whilst interpretable features in these nodes internal to VP-adjuncts cannot check [wh:_] on v_ϕ from their in-situ position, v_ϕ can trigger movement of these features to a c-commanding position from which [wh:_] on v_ϕ can be checked. Subextraction from VP-adjuncts therefore satisfies the Principle of Full Interpretation and the derivation converges.
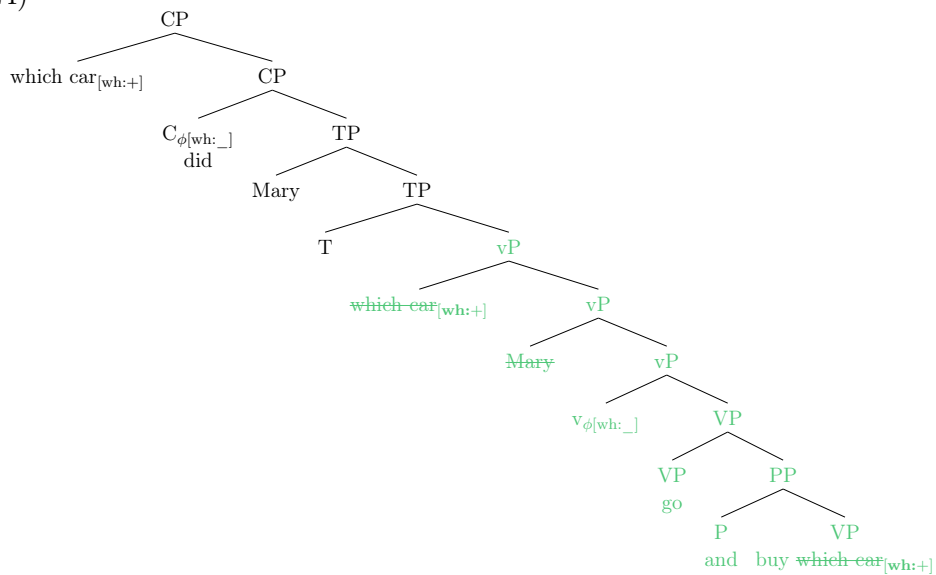
(23) illustrates the derivation for the acceptable extraction from within the participial adjunct in (2a). Here a null preposition acts to combine the matrix and adjunct predicates. It is not necessary that this element be prepositional, only that the element project a phrase heading the adjunct.

(23)

```
                    CP
         ┌──────────┴──────────┐
which tune[wh:+]              CP
                    ┌──────────┴──────────┐
              C_φ[wh:_]                   TP
                did              ┌─────────┴─────────┐
                              Monica                 TP
                                         ┌───────────┴───────────┐
                                         T                       vP
                                              ┌──────────────────┴──────────┐
                                        which tune[wh:+]                    vP
                                                          ┌─────────────────┴─────────┐
                                                        Monica                        vP
                                                                       ┌──────────────┴──────────┐
                                                                  v_φ[wh:_]                       VP
                                                                                      ┌───────────┴──────────┐
                                                                                     VP                      PP
                                                                                   arrive           ┌────────┴────────┐
                                                                                                    P                VP
                                                                                                    ∅    whistling which tune[wh:+]
```

18

(24) illustrates the derivation for the acceptable extraction from within the pseudocoordinate adjunct in (2b). Here the null preposition is realised by *and*. Again, it is not necessary that *and* be prepositional, only that this element project a phrase heading the adjunct. The question is left open in the present paper whether *and* should constitute a separate lexical entry homophonic to the true coordination *and*, or whether true coordination *and* and pseudocoordinate *and* should constitute instances of the same lexical entry, adjoined at different positions in Narrow Syntax (true coordination *and* at CP- or vP-level for instance, and pseudocoordinate *and* at VP-level).

(24)

(25) illustrates the derivation for the acceptable extraction from within the prepositional adjunct in (2c). Here the adjunct lacks a verbal predicate. The reduced adjunct still remains far enough removed from the phase head v_ϕ however to avoid anti-locality effects (cf. Abels 2003), where the sister of a phase head is frozen in place.

Apparently semantically-motivated extraction

(25)
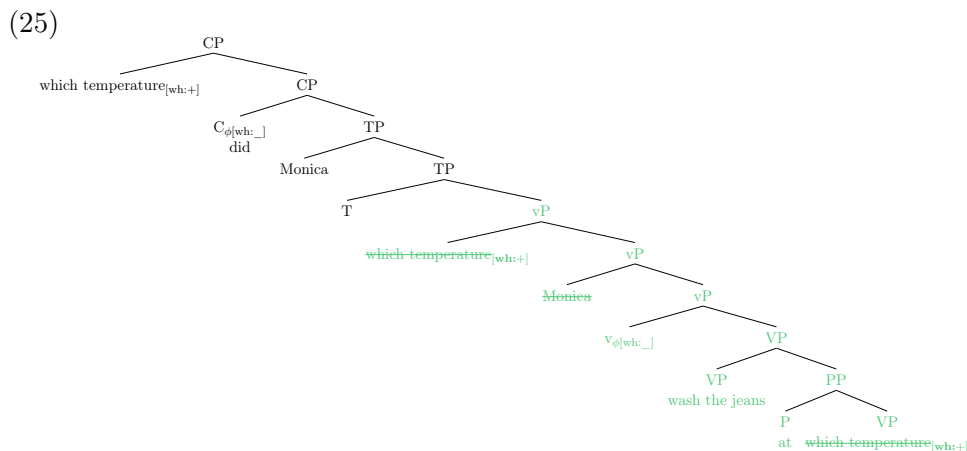
An alternative account could define the *phase edge* of a phase head ϕ as in (26), with the result that the nodes internal to vP-adjuncts would remain invisible both to computation at v_ϕ and at C_ϕ, and therefore be stranded in their in-situ position. Not only would the *wh*-feature on v_ϕ remain uninterpretable in such an account but also the *wh*-features on higher phase heads, i.e. on C_ϕ.

(26)   Phase edge (stipulated)
        The set of nodes $\{n_1 \ldots n_x\}$ in ϕP that dominate, asymmetrically
        c-command or stand in an identity relation to ϕ.

However such an account would (i) require an additional stipulation in the form of the definition of phase edge in (26); and (ii) require a departure from the more explanatory standard account of spellout in phase theory. Rather than spellout targeting the complement of the phase head, spellout would have to target the maximal projection of the phase head, and then return the phase edge to the derivation.

In contrast, the account proposed here does not require additional stipulations to standard assumptions about phase theory. It is however crucial under the present analysis that v possess a *wh*-feature. There are three potential arguments in favour of the presence of [wh:_] on v_ϕ: (i) standardly, phase heads are assumed to contain uninterpretable copies of all interpretable features; (ii) inheritance of *wh*-features is empirically motivated in cases of VP-adjunction, and so the simplest theory is to assume that inheritance takes place in all cases, including in derivations involving vP-adjunction; and (iii) the presence of [wh:_] on v_ϕ makes the empirical prediction that if an element is subextracted from the complement of v in addition to the nodes internal to vP-adjuncts, the derivation should be well-formed. Potential examples include parasitic gap configurations and across-the-board extraction from coordinate structures.

5   Conclusion

In conclusion, I have argued that semantic licensing of adjuncts should be distinguished from syntactic licensing of adjunct-internal gaps, focusing on single event constructions. I formalised the account in terms of phase theory: some nodes remain inaccessible to the projecting head. Significantly, the analysis reconciles three potential counterexamples to the autonomy of syntax with standard syntactic assumptions.

Going forward, the question arises whether other semantic constraints on movement, e.g. transparency in weak island constructions involving discrete individuals (Szabocsi & Zwarts 1990, Szabolcsi & Zwarts 1993), can also receive a syntactic explanation by distinguishing between semantic licensing of adjunction and syntactic conditions restricting filler-gap dependencies between nodes.

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