

Supplement to 'A Q-based approach to clausal ellipsis: Deriving the Preposition Stranding and Island Sensitivity Generalisations without movement'

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Appendix: Syntactic accommodation of implicit *wh*-questions

[*Note*: References to examples and sections from the main article are prefixed with “M”.]

If one’s theory allows for the meaning of an ellipsis site to be recovered from an implicit *wh*-question, then one is obligated to specify precisely how implicit *wh*-questions are invoked from explicitly-uttered antecedent clauses. Fulfilling this obligation becomes even more pressing when implicit questions are envisaged not simply as semantico-pragmatic objects (as in Barros 2014 and Weir 2014, see also footnote M6), but as full-fledged syntactic structures, as they are in the current framework, following the QUD-Syntax Correspondence conjecture in (M37) in §M3. Moreover, seeing as ellipsis can be licensed in copular clausal sources which are anisomorphic to their explicit antecedents, as many of the examples from §M2 have already demonstrated, and assuming that clausal ellipsis can only be licensed by an explicit or implicit *wh*-question that displays the same focus-background structure as the elliptical source (following the Background-matching condition in (M32), it follows that implicit *wh*-questions can be syntactically anisomorphic to the explicit antecedents from which they are invoked. In other words, it cannot simply be case that syntactically derived implicit questions are structurally isomorphic *wh*-counterparts to the explicit antecedents that invoke them (where the correlate is replaced with a *wh*-phrase and *wh*-movement occurs, see Barros’ (2014: 17) “transformational heuristic”). Instead, the process by which syntactically derived implicit questions are invoked must be more complex. This appendix presents the first approximation of a theory of how implicit *wh*-questions are invoked.

From a broad conceptual perspective, this paper has assumed the conception of the QUD considered briefly by Carlson (1985: 100), expanded on by van Kuppevelt (1995; 1996), and recently formalised by Onea (2016), according to which implicit *wh*-questions can be invoked merely as a reaction to the current discourse move and need not be strategic, insofar as they are subquestions of a more general superquestion (as in Roberts 2012). Moreover, it has assumed that multiple discourse moves can be performed in the course of a single utterance; an idea exploited by Ott & Onea (2015) to explain how clausal ellipsis is licensed in appositional clauses (see also Döring 2015, Griffiths 2015a, Griffiths 2015b, and Ott 2016).

According to Carlson’s and van Kuppevelt’s early exposition of this view, conversation is rife with implicit questions. For van Kuppevelt (1995), even assertions uttered in succession as a monologue are interspersed with implicit questions. In (1) for instance, which is similar

in form to a number of monologues presented in [van Kuppevelt \(1995\)](#), the speaker’s second assertion (A_2) is understood as a response to the implicit question *who is his father?*

- (1) *Context*: An English period drama. An aristocratic yet rebellious young woman A is informing her traditionally-minded aristocratic mother about her new boyfriend, who she has been dating in secret for weeks.

A_1 : Mother, I’ve started courting a man called Gerald.

[_{fP} Who] is his father?

implicit wh-question invoked from A_1

a. A_2 : [_{ForceP} His father’s [[_{fP}] the Duke of DEVONshire]].

b. A_2 : * [_{ForceP} ~~His father’s~~ [[_{fP}] the Duke of DEVONshire]].

c. $\langle f, \text{Gerald’s father is } f(x) \rangle$

structured meaning of the implicit q

$\langle f, \text{Gerald’s father is } f(x) \rangle$

structured meaning of (1a-b)

Assuming the implicit question in (1) is indeed invoked (as it is pragmatically prominent for both conversational-participants in the context described above), then this question clearly cannot be used to recover the meaning of clausal ellipsis in (1b), even though the focus-background structures for the implicit question and the elliptical clause match, as (1c) shows. If clausal ellipsis can only be recovered from syntactically derived questions (following the QUD-syntax Correspondence conjecture in (M37)), this therefore entails that not all implicit questions can be syntactically derived implicit questions, and this in turn entails that entry into the MaxQUD is more restricted for syntactically derived implicit questions than for implicit questions that are merely semantico-pragmatic objects.

I propose that, unlike a purely semantic implicit question, a syntactically derived implicit question must be “syntactically similar” to the explicit utterance that invokes it. Put differently, I propose that the process by which syntactically derived questions are *accommodated* (if one adopts the listener’s perspective) makes reference to the syntax of the explicit utterance from which they are accommodated, following [Thoms \(2015\)](#). This proposal has the immediate benefit of retaining the advantages of QUD-based approaches to ellipsis recoverability (which are summarised in [Weir 2014](#)), while simultaneously aligning with psycholinguistic research that concludes that suitable utterances used for licensing ellipsis are not reached via a serial search through irrelevant representations ([Martin & McElree 2011](#)), but are instead generated by the listener “using the [syntactic] materials at hand” ([Arregui et al. 2006](#)).

Unlike [Fox’s \(1999\)](#) syntactically-specified accommodation process, my accommodation process, which is presented in (2) below, does not specify that only the implicit question displaying the greatest degree of structural similarity to the explicit antecedent can be accommodated (in this regard, I follow [Thoms 2013; 2015](#)). Instead, I choose to formulate my constraints on accommodation based upon empirical observations from the previous literature about in which anisomorphic sources clausal ellipsis can be licensed and in which it cannot. In the remainder of this appendix, I present these observations and then introduce constraints on syntactic accommodation based on them.

(2) Syntactic accommodation algorithm

Let W be a *wh*-phrase or a pied-piped phrase containing a *wh*-phrase.¹

¹ A more accurate version of this clause is: Let W be an *fP* that reflexively-dominates a *wh*-phrase (in the case of *wh*-movement languages, see §M3.2) or a phrase that reflexively-dominates *wh*-phrase to which *fP* is adjoined (in the case of *wh*-in-situ languages, see §M5.2).

Step 1: **To create a Merger-type elliptical clause:** Select a syntactic constituent XP from the explicit antecedent utterance and replace it with a W of the same syntactic category as XP. $[[W]]$ must equal $[[XP]]^f$.²

To create a sprouting-type elliptical clause: Do nothing additional with W at this step.

Step 2: Generate a syntactically well-formed *wh*-question containing W.

Examples (M11a) and (M12) from §M2, which are repeated below in (3), have already demonstrated that copular clauses make for suitable anisomorphic sources for clausal ellipsis. These examples therefore demonstrate that an elided copular verb may be present in the source when no corresponding copular verb is present in the explicit antecedent. They also show that an elided pronoun may be present in the source when no corresponding pronoun is present in the explicit antecedent. Furthermore, they also show that elided pronouns in the source must co-refer with a phrase (or phrases, in the case of *split antecedent* phenomena, see [Messick et al. 2016](#) and references therein) in the explicit antecedent (e.g. *he* can only be interpreted as co-referent with *a tall man* in (3a)) ([Fiengo & May 1994](#)).³ Lastly, these examples show that co-referent phrases can occupy different argument positions in the antecedent and the source (*contra* [Rudin 2018](#)). For instance, *a tall man* in (3a) occupies the object position in the explicit antecedent, whereas the elided pronoun *he* occupies the subject position in the ellipsis site.

- (3) a. Sue married a tall man, but I don't know $[_{ForceP} [_{CP} [_{TP} [HOW tall]]]_I [he is t_1]]$.
 b. Either something's on fire or Joe's baking a cake, but I don't know $[_{ForceP} [_{CP} [_{TP} WHICH]_I [it is t_1]]$.

Anisomorphic sources cannot contain elided morphosyntactic roots that are not also present in the explicit antecedent ([Chung 2006; 2013](#)). This restriction has already been demonstrated by (1b) from this subsection, which is unacceptable because it contains a novel token of the morphosyntactic root \sqrt{FATHER} .

The high degree of divergence in syntactic form observed between the elliptical clauses and their antecedents in (3) is not tolerated if the elliptical clause contains an elided lexical verb V which is also present in the antecedent. In such cases, any elided argument or event-modifying adjunct of V which is also contained in the elliptical clause must occupy the same argument-structure position in the elliptical clause that it occupies in the antecedent ([Merchant](#)

² The final clause of this step, which states that $[[W]]$ must equal $[[XP]]^f$, captures the observation that Merger-type fragments *inherit the content* of their correlates (see [Chung et al. 1995](#), [Romero 1998](#), [Barros 2013, 2014](#), [Weir 2014](#), [Jacobson 2016](#), and [Messick et al. 2016](#) for various perspectives on this idea).

³ Provided that they co-refer with a phrase in the antecedent, elided pronouns can assume a variety of E-type functions (see (i) and (ii)), including picking out unique individuals with a salient property (in (iiiB), for instance, *they* = $\iota x[\text{person-management-hired-last-Tuesday}(x)]$).

- (i) A: At least three flags will be flown.
 B: Okay, but $[_{ForceP} [_{CP} [_{TP} WHEN]_I [will \{they / \# \text{ at least three flags} \} be flown t_1]]$?
 (modified from [Merchant 2001: 212](#))
- (ii) What did John steal and $[_{ForceP} [_{CP} [_{TP} WHEN]_I [did he steal it t_1]]$? (see [Merchant 2001: §5.2](#))
- (iii) A: Management hired someone who speaks a Balkan language last Tuesday.
 B: Really? $[_{ForceP} [_{CP} [_{TP} WHICH \text{ Balkan language}]_I [do they speak t_1]]$?
 (modified from [Merchant 2001: 210](#))

2005; Chung 2013; Rudin 2018). Similarly, no interpretable morphosyntactic feature associated with V's "eventive domain" (see Rudin 2018 for a precise characterisation) can be present in the ellipsis site if it is not also present in the explicit antecedent (Merchant 2013).⁴ Evidence for these restrictions comes from the observation that neither argument-structure alternations (4) nor voice-mismatches (see Merchant 2013 for the relevant data) are permitted under clausal ellipsis.

- (4) A: They [_{VP} embroidered something with peace signs].
 B: * Really? [_{ForceP} [_{CP} [_{FP} [On WHAT]]]_T [~~did they~~ [_{VP} embroidered peace signs t_1]]]?
 (modified from Merchant 2013: 100)

Aside from these restrictions on the eventive domain, all other deviations from syntactic isomorphism are tolerated. The examples in (5) below demonstrate that mismatches in tense, aspect, modality, and polarity between the elliptical clause and its explicit antecedent are all permitted.

- (5) a. The footballer went public with his desire **to be** transferred. He doesn't care [_{ForceP} [_{CP} [_{FP} WHERE]]_T [~~he is transferred~~ t_1]]. (modified from Rudin 2018)
 b. Sally said that customers **should** be given lower rates, but Susie said it's hard to see [_{ForceP} [_{CP} [_{FP} HOW]]_T [~~customers {could / can / may} be given lower rates~~ t_1]]. (modified from Rudin 2018)
 c. I remember **meeting** him, but I don't remember [_{ForceP} [_{CP} [_{FP} WHEN]]_T [~~I met him~~ t_1]]. (Merchant 2001: 23)
 d. Either hand in your final paper by midnight or explain [_{ForceP} [_{CP} [_{FP} WHY]]_T [~~you didn't hand in your final paper by midnight~~ t_1]]. (Kroll & Rudin 2017)

For Chung (2006; 2013) and Merchant (2013), who both subscribe to the orthodox view that licensing clausal ellipsis principally involves establishing a certain identity relation between an elliptical clause and its explicit antecedent, the data presented in (3) to (5) motivate a hybrid theory of ellipsis licensing. This theory holds that the identity condition on ellipsis is predominantly semantic in nature (specified in terms of Merchant's 2001 E-GIVENNESS condition) yet has a recalcitrant syntactic aspect to it. Although recent research by these authors (and others) has drastically narrowed the search-space for an accurate characterisation of the syntactic aspect of this identity, no definite characterisation has yet been accepted by the research community, and therefore no deeper explanation for this characterisation has been advanced.

In the current framework, this "syntactic aspect" of the identity condition is reinterpreted as restrictions on the syntactically-specified process by which implicit questions are accommodated from the explicit antecedent. To generate all and only the acceptable anisomorphic sources presented in this subsection, the following constraints on syntactically accommodating implicit questions are required:

⁴ The eventive domains of an elliptical clause and its antecedent may display mismatching uninterpretable features, however. For example, an elliptical clause and its antecedent may mismatch in verbal agreement:

- (i) Bill mentioned his [_{NP} n [_{VP} PRO **plan** to do away with someone]], but he didn't mention [_{ForceP} [_{CP} [_{FP} WHO]]_T [~~he plans to do away with~~ t_1]]. (modified from Ross 1969: 275)

(6) **Constraints on syntactic accommodation**

- a. Aside from W (see (2)), an implicit *wh*-question cannot contain any morphosyntactic $\sqrt{\text{ROOTS}}$ that are not also present in the explicit antecedent.
- b. Any pronoun contained in the implicit *wh*-question must co-refer with a phrase in the explicit antecedent.
- c. If a lexical verb V is syntactically accommodated from the explicit antecedent, so are the interpretable morphosyntactic features of the eventive domain associated with V in the antecedent.
- d. If a lexical verb V is syntactically accommodated from the explicit antecedent, and if an argument or event-modifying adjunct XP associated with V in the antecedent is also syntactically accommodated, then the argument-structure relation between V and XP must also be accommodated.

As one might expect given the discussion immediately above (6), I cannot currently offer an explanation for why these constraints on accommodation – and not others – are operative in the natural language system. Any advancements made in accurately characterising and understanding the syntactic aspect of the identity condition can and should be carried over to the current approach, where they will be reinterpreted as advancements in our characterisation and understanding of the constraints on syntactically-specified accommodation.⁵

I end this appendix by addressing a potential concern about the division of labour in licensing ellipsis. Recall that (M35), which is repeated in a modified form in (7), was one of the crucial examples motivating this paper's appeal to a semantic approach to ellipsis licensing based on structured meanings. One might now wonder whether, when coupled with the simple QUD-licensing condition from (M25), the theory of syntactic accommodation outlined in this appendix can independently account for the contrast between (7a) and (7b), therefore rendering any appeal to structured meanings unnecessary. In other words, one may be concerned that the theory of accommodation outlined in this subsection undermines the Q-based approach to clausal ellipsis developed in §M3–M5.

- (7) A: I heard that the machine sent a certain number of signals.
- a. B: Yes, [_{ForceP} ~~the machine sent~~ [_{fP} [TWO signals]]].
 - b. B: * Yes, [_{ForceP} ~~the machine sent a signal~~ [_{fP} TWICE]].
 - c. How many signals did the machine send? *implicit q invoked from A's utterance*
 - d. How often did the machine send a signal? *implicit q not invoked from A's utterance*

I believe that this concern is misplaced. Although it is correct that, according to the accommodation procedure outlined in (2) and (6), the implicit question in (7d) cannot be accommodated from the explicit antecedent in (7A) for the intended Merger-type reading of the fragments in

⁵ As currently formulated, the accommodation procedure presented in this subsection incorrectly predicts that transitivity mismatches (as exemplified in (i) below) are permitted under clausal ellipsis. Although such cases are traditionally ruled out by appealing to the idea that ellipsis sites and their antecedents must mutually entail each other (Merchant 2001), which does not obtain in (i), I suspect that (i) is not permitted because it fails to satisfy a more general discursive constraint. Evidence that (i)'s unacceptability is not tied to ellipsis comes from the observation that its non-elliptical deaccenting counterpart in (ii) is also infelicitous.

- (i) # John ran a marathon, but I don't know [_{ForceP} [_{CP} [_{fP} WHEN]] [_{CP} [_{fP} he ran t₁]]].
- (ii) # John ran a marathon, but I don't know [_{ForceP} [_{CP} [_{fP} WHEN]]₁ [_{CP} [_{fP} he ran t₁]]].

(7a-b), clausal ellipsis is nonetheless predicted to be licensed in both (7a) and (7b) from the accommodated question in (7c) if one adopts the simple QUD-licensing condition from (M25). This is because (7a), (7b), and (7c) are all cointensional. In other words, the problem of cointensionality that motivated the use of Structured Meanings in §M3 is not resolved by syntactically constraining the accommodation of implicit antecedents. This means that, like Chung (2006; 2013) and Merchant (2013), I am advocating a hybrid approach to licensing clausal ellipsis, which employs both a semantic licensing condition – Weir’s Background-Matching condition – and syntactic constraints (namely, constraints on how implicit questions are syntactically accommodated).⁶

References

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⁶ If implicit questions are syntactically-accommodated explicit antecedents, then when does this accommodation process occur? Adopting the perspective of the listener, I propose that accommodation is triggered immediately after the remnant of clausal ellipsis is encountered.

There are two main reasons to adopt this position. Firstly, it dovetails with processing studies which show that elliptical configurations are projected by listeners immediately after encountering the remnant (Yoshida et al. 2013) – a process which, if the current approach is correct, will often require the accommodation of an implicit question. Secondly, the idea that accommodation is triggered immediately after encountering the remnant of ellipsis is required in the current framework to ensure that ellipsis can be licensed in infinitival embedded interrogative clauses. If accommodation occurred immediately after the first coordinand in (i), then only finite implicit questions such as *How would he fix the car?* could be accommodated and added to the MaxQUD, as root *to*-infinitival questions are syntactically ill-formed in English and are therefore denied entry into the MaxQUD (see §M4 for discussion). In this situation, clausal ellipsis would be precluded in an infinitival embedded interrogative clause, as there would be no well-formed question in the MaxQUD to license it. The fact that ellipsis is permitted in the infinitival clause in (i) shows that this situation cannot obtain. Instead, accommodation must occur after the remnant of ellipsis is encountered, at which point an implicit question such as (ii) can be accommodated by “recycling” syntactic material from both the first coordinand and the matrix clause of the second coordinand. Ellipsis is therefore licensed in (i) because the second coordinand in (i) and the question in (ii) have matching focus-backgrounds structures (see (iii) for the simplified representations).

- (i) He WOULD fix the car, but he doesn’t know $\{_{\text{FORCEP}} \{_{\text{CP}} \{_{\text{JP}} \text{HOW}\}_T \{ \text{to fix it } t_1 \}\}\}$.
- (ii) Doesn’t he know HOW to fix it? *implicit question invoked from (i)*
- (iii) $\langle f, \text{he doesn’t know } f(x) \text{ to fix the car} \rangle$ *structured meaning for second coordinand in (i)*
 $\langle f_{\{p, -p\}}, \langle g, \text{he doesn’t know } g(x) \text{ to fix the car} \rangle \rangle$ *structured meaning for q in (ii)*

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