Factivity, Assertion, and Clausal Definiteness

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1. Introduction

This paper examines the claim that the presence vs. absence of illocutionary potential in embedded clausal complements such as (1) is syntactically reflected in the embedded clause. Specifically, we examine the joint claims that (a) clauses with illocutionary potential involve an extended left-periphery encoding elements relevant to ASSERTION (e.g. Rizzi 1997), and (b) clauses without illocutionary potential are referential or presuppositional, encoding syntactic properties of DEFINITENESS (Kiparsky & Kiparsky 1970; et seq).\(^1\) As illustrated in (1), the availability of illocutionary potential in embedded clauses has been argued to depend, in some form, on the type of embedding predicate:

(1) a. (Maria said that) \[P Simon won\] ✓ Illocutionary potential: extended CP
b. Maria resents that \[P Simon won\] ✗ Illocutionary potential: definite clause

To examine this claim, we look at three properties commonly used to distinguish clause as ‘assertive’ and ‘definite’ clauses, asking: (a) whether their distribution does in fact track the presence of illocutionary potential, and (b) whether these properties show the same distribution across embedding environments. Specifically, it has been proposed that clauses without illocutionary potential disallow main clause phenomena [MCP] such as topicalization (2), can only be referred to using the referential/DP pro-form it (3), and are weak islands for wh-extraction (4) (see for instance Hegarty 1992; Maki, Kaiser & Ochi 1999; De Cuba & Úrögdi 2010; Haegeman & Úrögdi 2010; Haegeman 2012; Kastner 2015).

(2) MCP (topicalization) (Hegarty, 1992:52)
   a. (John thinks that) \[this book\], Mary read \[this book\].
   b. *John regrets/resents/realizes that \[this book\], Mary read \[this book\].

(3) Clausal anaphora (Kiparsky & Kiparsky, 1970:362)
   a. John supposed [that Bill had done it], and Mary supposed [it/so], too.
   b. John regretted [that Bill had done it], and Mary regretted [it/*so], too.

(4) Weak island effects (Hegarty, 1992:1)
   a. How, do you suppose [that Maria fixed the car]??
   b. *How, did you notice [that Maria fixed the car]??

We find that while some MCP are sensitive to the presence of illocutionary potential (namely V2; §3.1–3.2), the choice of clausal anaphora appears to be sensitive to a more specific dimension of meaning (§3.3). Finally, we find that once other factors are properly controlled for, there is little evidence that the island effects track the absence of illocutionary force (§3.4). In short, these phenomena pattern differently, and appear to reflect different semantic-pragmatic distinctions. Theoretically, while we find

\(^1\) A brief note on terminology: By ‘factive’, I’m referring to verbs/sentences/clauses that typically project an obligatory inference that the speaker takes the embedded proposition (p) to be true. I do not make any assumptions about the discourse status of p, relative to the Common Ground (see §2). When necessary, I will use more specific labels such as ‘cognitive’ and ‘emotive’ factives to distinguish between sub-classes of factives. When using the terms ‘clause’ and ‘(clausal) complement’, I’m referring to finite declarative clauses.

evidence that the presence of illocutionary force is reflected in the syntax of the embedded clause, these properties do not support the idea that the absence of illocutionary force is syntactically marked.

Before turning to our examination of these properties, a note is in order. As some readers will no doubt have noticed, all of the b-sentences above (those exemplifying non-assertive complements) involve factive verbs. This illustrates the widely (though not universally) held assumption that clauses embedded under factive verbs lack illocutionary potential. In §2, I spell out the basis for this assumption; showing that ‘true factivity’ is not in fact at odds with embedded assertions (see also further evidence in §3.1).

2. Factivity, presupposition, and assertion

The assumption that factive complements lack illocutionary potential is a direct consequence of the standard analysis of factive verbs as presupposing the truth of their complement (p) (Kiparsky & Kiparsky 1970; Karttunen 1971; et seq). Empirically, the main thing that distinguishes factives like realize and resent from non-factives like believe and fear is that, while both types assert something about the attitude holder’s beliefs or preferences, the verbs know and resent additionally give rise to the not-at issue inference that the speaker takes p to be true. And moreover, as shown in (5), this inference tends to project from (i.e. survive from the scope of) negation and other operators that target entailments:

(5) a. Maria doesn’t know/resent that [p that Simon won]. \( \sim \)p Factive
   b. Maria doesn’t believe/fear that [p that Simon won]. \( \sim \)p Non-factive

On the analysis of factive verbs as presupposing p, both the not-at issue status of the speaker’s commitment to p and the fact that p typically projects, follow from a more general distinction between asserted and presupposed content (Stalnaker, 1974, 1978). The central idea is that the function of an utterance is to update the Common Ground (typically modelled as a set of worlds, the context, consisting of those worlds taken by the discourse participants to be live candidates for the actual world). For example, if I utter the sentence Mike quit smoking, there is an intuitive sense in which what’s at issue is that Mike no longer smokes. This assertion can then be explicitly accepted or rejected; if accepted, then the context update is successful and the proposition Mike quit smoking gets added to the Common Ground, thus removing from the context those worlds in which Mike still smokes. Suppose, however, that we know that Mike never smoked in the first place. If so, the context update is not defined, given that both options (quit vs. didn’t quit) rely on Mike having previously smoked. In this sense, the sentence Mike quit smoking (by virtue of the meaning of quit) presupposes that Mike used to smoke. The fact that this content is not available for the interlocutors to target with a yes/no answer, thus instantiates both projection and the non-at issue status of the presupposition. That is, on the Stalnakerian model of discourse, the presuppositions of a sentence are those propositions that need to be compatible with the context and taken for granted by the discourse participants, in order for the assertion of the sentence to be defined.

In the case of factives, the idea is that in order to successfully make the relevant assertion, regarding the attitude holder’s epistemic or emotive attitude towards p, the embedded proposition p needs to be compatible with the context, and taken for granted by the interlocutors. Thus, if factive verbs presuppose p, then p should not be a possible assertion of factive sentences – just like ‘Mike used to smoke’ is not a possible assertion of Mike quit smoking. In other words; complements of factive verbs should not have illocutionary potential. This, however, is incorrect. As shown by Simons (2007), using question-answer pairs like (6), factive complements can in fact function as the main assertion of the sentence.

(6) Simons (2007:1045)
   a. Where did Louise go last week?
   b. Henry discovered that [p she had a job interview at Princeton].

As many readers will no doubt be aware, Karttunen (1971) referred to cognitive factives like discover and realize as ‘semi-factives’; a term adopted by Hooper & Thompson (1973) and subsequent work on MCP, and generally contrasted with ‘true’ (emotive) factives like resent and regret. These terms suggest that factives like discover are therefore somehow ‘less factive’ than factives like resent. This, however, is not what Karttunen’s (1971) distinction refers to. Rather, the distinction has to do with the relative
sensitivity of the presupposition to entailment-cancelling operators like modals and negation, in contexts that establish speaker-ignorance with respect to p (see for instance Heim 1983; Simons 2001).

(7) Karttunen (1971:64)
   a. If I realize later that [p I haven’t told the truth], I’ll confess it to everyone. ¬p
   b. If I regret later that [p I haven’t told the truth], I’ll confess it to everyone. ¬p?

Given the link between projection and the non-at issue status of p on the presupposition analysis, it is reasonable to assume that factives that allow p to be asserted have a ‘weaker’ presupposition. There are several problems with this assumption, however. To start, in (6), though p is understood to be part of the asserted content, there is no weakening of the inference that the speaker takes p to be true. Conversely, in (7), what leads to the failure of the speaker-commitment inference to project isn’t that p is asserted, but rather, that the context (the first person conditional, which establishes the speaker’s ignorance with respect to p) conflicts with the presupposition, which requires that the speaker takes p to be true.

Moreover, as shown in (8), emotive factives like regret allow the speaker to reject p also in the absence of the relevant operators, if the context is such that the speaker’s and the attitude holder’s evidential or epistemic state fail to align. As shown experimentally by Djärv et al. (2018) and Schwarz et al. (2020) for English and Italian, such cancellation is not possible with cognitive factives like discover and realize.

(8) Egré (2008:14), citing Klein (1975) for (8-a) and Huddleston & Pullum (2002:1007) for (8-b)
   a. Falsely believing that he had inflicted a fatal wound, Oedipus regretted killing the stranger on the road to Thebes.
   b. Ed believed that he had offended his parents and very much regretted that he had done so, but it turned out that he had been mistaken: they had not in the least been offended.

Hence, the reason why p fails to project in (7-a) is not that cognitive factives (or semi-factives) are ‘less factive’ than the emotive factives. As shown by (8), it is the emotive factives that have the weaker presupposition (see Djärv 2019a for discussion and analysis). In short, factivity is not at odds with embedded assertions, in the (Stalnakerian) sense of updating the context. In §3.1, we will see experimental evidence in support of this claim.

3. Diagnosing clausal definiteness

To be able to investigate the proposed syntactic reflexes of illocutionary potential, we must first identify which embedding contexts do in fact allow for embedded assertions. For this, we turn to cross-linguistic experimental work in Djärv (2019a). For details of the experiments discussed in §3.1–3.2, see Djärv (2019a:§3.2), and Djärv (2019b) for a condensed presentation.

3.1. Identifying illocutionary potential

Above, we characterized assertion in terms of context updates. This perspective allows us to view the illocutionary potential of a clause-embedding verb in terms of its ability to introduce new information into the discourse. Other work, however, has suggested that the notion of assertion relevant to the syntax is not the discourse status of p as old vs. new, but rather, the presence of an appropriate commitment context. For instance, Truckenbrodt (2006) links the (un)availability of Verb Second (V2; a type of MCP) in contexts like (9) to an epistemic index on the embedded clause, which can be satisfied by either the speaker’s or the attitude holder’s belief that p. This data, however, is equally compatible with the account of Caplan & Djärv (2019), whereby V2 is licensed by assertion in the sense of discourse novelty.

(9) Maria {glaubt, *glaubt nicht, *bezweifelt}, Peter geht V2 nach Hause.
   Maria believes, believes not, doubts Peter goes to home
   Maria {believes, doesn’t believe, doubts} that Peter is going home.
To tease these accounts apart, Djärv (2019a) tested 40 sentences consisting of 20 attitude verbs, ±negation, in English, German, and Swedish, for the discourse status of p, as well as for speaker and attitude holder commitment to p. To derive these estimates, the participants saw items like that illustrated in (10), and were then asked to provide a rating (on a likert scale) for each proposed dimension of assertion (11).² The type of judgement was varied between subjects so that each participant only saw one type of question.

(10) Imagine that you’re at a party, and you overhear part of a conversation between your friends, Sally and Rory. Sally says: . . . however, Sophia said that Anna doesn’t like the landlady.

(11) a. It is likely. . . [scale] . . . not likely that Sally and Rory have previously talked about Anna not liking the landlady.

b. As far as Sally is concerned, Anna doesn’t like the landlady. [scale: no . . . maybe . . . yes]

c. As far as Sophia is concerned, Anna doesn’t like the landlady. [scale: no . . . maybe . . . yes]

The question of interest was the effect of the type of embedding predicate (say, in (10)) on the illocutionary potential of the embedded clause. The experiment included the 20 verbs in (12) (see Djärv 2019a:199 for the Swedish and German verbs); these are prototypical examples of five predicate classes commonly assumed in this literature (based on Hooper & Thompson 1973 and Cattell 1978).

(12) a. say, mention, tell me, claim  [Speech act, volunteer stance, non-factive]

b. believe, assume, reckon, guess  [Doxastic, volunteer stance, non-factive]

c. discover, find out, notice, hear  [Cognitive factive]

d. appreciate, resent, love, hate  [Emotive factive]

e. accept, admit, doubt, deny  [Response stance, non-factive]

Djärv also tested each verb with and without matrix negation, given the observation in Caplan & Djärv (2019) that matrix negation blocks the ability of a verb to introduce discourse new information:

(13) [Uttered out of the blue:] Guess what — / You know what — (Caplan & Djärv, 2019:21–23)

a. John told me/thinks/discovered that [P Bill and Anna broke up].

b. #John appreciates/doubts that [P Bill and Anna broke up].

c. #John didn’t tell me/doesn’t think that [P Bill and Anna broke up].

The first thing to note is that both ‘commitment scores’ (11-b)–(11-c) were found to greatly over-generate ‘assertive’ contexts. On this view of assertion, all factives as well as the positive response stance verbs (admit, accept) and the negated negative response stance verbs (don’t doubt/don’t deny) would be strongly assertive, given that they give rise to near ceiling-level speaker and attitude holder commitment ratings. This is of course unintuitive (e.g. Cattell 1978; Kastner 2015), but more detrimentally, as we will see next, these contexts do not license MCP (cf. Wiklund 2010). Discourse novelty, on the other hand, turned out to be a good predictor of (at least one type of) MCP, as we will see in §3.2. For this reason, we continue to view the illocutionary potential of a clause in terms of its context update potential.³

In line with (13), Djärv observes two asymmetries regarding the distribution of illocutionary potential: one based on the type of embedding predicate, and one based on the presence or absence of matrix negation. Clauses embedded under verbs like say (12-a), believe (12-b), and discover (12-c) are understood by participants to contribute discourse new information, close to unembedded control sentences such as Bill and Anna broke up. Clauses embedded under verbs like accept (12-e) and appreciate (12-d), as well as under all negated verbs (e.g. don’t think), were understood to be previously discussed content, closer to control sentences such as John thinks, like you do, that Bill and Anna broke up. Finally, note that Djärv finds essentially no cross-linguistic variation in the distribution of illocutionary potential across

² As described in §3.2, the same sentences were then varied by four types of MCP (14)–(15), and tested for acceptability; thus providing an independent estimate of the extent to which these different dimensions of assertion correlate with the availability of (each type of) MCP.

³ Though we note that this view is likely somewhat simplistic, given that commitment no doubt also plays a role in the pragmatics of assertion.
these embedding conditions. This speaks against attributing any cross-linguistic syntactic differences in this domain to cross-linguistic differences in the illocutionary potential of these verbs (see §3.4).

Based on these results, then, we are able to make predictions regarding the availability of embedded MCP, complement anaphora, and long wh-extraction across these embedded contexts, given the assumption, spelled out in §1, that the presence vs. absence of illocutionary potential is reflected in the syntax of the embedded clause, along the lines of (1). Our predictions for the syntax, given these results for the distribution of illocutionary potential across embedding contexts, are given in Table 1.

<table>
<thead>
<tr>
<th>Embedding Conditions</th>
<th>Verbs</th>
<th>Result</th>
<th>Predictions: syntax</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Assert p</td>
<td>MCP</td>
</tr>
<tr>
<td>Speech non-factive</td>
<td>say, mention, tell me, claim</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Doxastic non-factive</td>
<td>believe, assume, reckon, guess</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cognitive factive</td>
<td>discover, find out, notice, hear</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Emotive factive</td>
<td>appreciate, resent, love, hate</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Response non-factive</td>
<td>accept, admit, doubt, deny</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Negated verbs</td>
<td>not say, not doubt, not hear, etc.</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>

Table 1: Predictions for the syntax, given the presence/absence of illocutionary potential.

3.2. Embedded Main Clause Phenomena

Guiding a lot of work on (embedded) MCP, is the intuition that MCP are licensed by assertion; thus explaining their relatively free occurrence in main clauses and restricted availability in embedded contexts (Emonds 1970; Hooper & Thompson 1973, et seq). Restrictions in embedded contexts are often taken to depend on whether the embedding predicate is semantically compatible with embedded assertions. Though note that some authors, like Wiklund et al. (2009) and Kastner (2015), ultimately appeal to selection of the appropriate type of clause.

In the previous section, we looked at results from Djärv (2019a), testing the availability of embedded illocutionary potential for a set of clause-embedding verbs. In a second experiment, Djärv investigated the availability of four proposed types of MCP in German, Swedish, and English: embedded V2, topicalization, speech act adverbs, and scene-setting adverbs. This experiment used the same critical stimuli as in the first experiment: 40 sentences based on the 20 verbs in (12), ± negation. The sentences were then varied for each type of MCP, as illustrated in (14)–(15).

(14) a. Sophia said that Anna doesn’t like the landlady.  
    [Unmarked]  
   b. Sophia said that the landlady, Anna doesn’t like.  
    [Topicalization]  
   c. Sophia said that Anna honestly doesn’t like the landlady.  
    [Speech act adv]  
   d. Sophia said that right now, Anna doesn’t like the landlady.  
    [Scene setting adv]

(15) a. Sophia hat gesagt, dass Anna die Vermieterin nicht mag. 
    Sophia has said that Anna the landlady not likes  
    Sophia said that Anna doesn’t like the landlady.  
    [Unmarked]  
   b. Sophia hat gesagt Anna mag die Vermieterin nicht.  
    Sophia has said Anna likes the landlady not  
    Sophia said that Anna doesn’t like the landlady.  
    [V2]

The resulting sentences were then tested for acceptability. (The type of MCP was varied between participants.) V2 was tested only in Swedish and German (as it is not an option in English). Topicalization and scene-setting adverbs were tested only in English (as such clauses are obligatorily V2), and the

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4 For discussion and references, see for instance Vikner (1995); Heycock (2006); Aelbrecht, Haegeman & Nye (2012); Woods (2016); Djärv (2019a); Woods & Wolfe (2020).
unmarked controls and the speech act adverbs were tested in all three languages. Here, we only discuss the results from the English and German studies.\footnote{Descriptively, Swedish and German showed essentially the same pattern of acceptability for V2. However, unintended variation in the Swedish controls made it difficult to analyse the V2 responses, and the Swedish data was excluded from analysis (Djärv, 2019a:§3.2.4.3). Note, however, that the pattern found for German is in line with previous work on Scandinavian; e.g. Julien (2015); Wiklund, Bentzen, Hrafnbjargarson & Hróarsdóttir (2009); Bentzen (2010); Jensen & Christensen (2013); Woods (2016); Djärv, Heycock & Rohde (2017); Caplan & Djärv (2019).}

The ratings reveal a striking asymmetry between the constructions in (14) and V2. For each construction in (14), Djärv found essentially no differences in acceptability across embedding conditions; contrary to the intuition expressed in (2). V2, on the other hand, was found to be acceptable only in the complements of non-factive speech act and doxastic verbs (say, think), and the under cognitive factives (discover, realize). Under the response stance verbs (accept, doubt) and the emotive factives (resent, appreciate), as well as in all negated contexts, V2 was judged to be degraded. In short, V2 is acceptable in the same contexts as those in which the embedded clause has illocutionary potential (§3.1).

Regarding embedded V2, this study corroborates the widely held intuition that the semantic class of the embedding predicate matters. By systematically investigating a wider range of predicates, and by crossing predicate type and matrix negation, Djärv was further able to disentangle proposals that appeal to selection (e.g. Wiklund et al. 2009) and proposals that appeal to the assertive status of p (e.g. Truckenbrodt 2006; Julien 2015; Caplan & Djärv 2019). The fact that embedded V2 is sensitive to negation shows us that an account in terms of negation cannot be maintained (see also Caplan & Djärv 2019). Among accounts that appeal to assertion, this data further enables us to choose between accounts that appeal to commitment to p (e.g. Truckenbrodt 2006) and accounts that appeal to discourse novelty (e.g. Caplan & Djärv 2019), showing that the latter is what matters for the syntax.

The other important point to take home from this study is that the class of MCP is less homogeneous than generally assumed: besides embedded V2, none of the other constructions investigated showed any sensitivity to the type of embedding context. Regarding the scene setting adverbs (14-d), this is perhaps not surprising, given previous claims in the literature (e.g. Haegeman & Úrógdi 2010). For the speech act adverbs (14-c) it is possible that the participants didn’t access a speaker-oriented reading of these adverbs, which might then explain the lack of variation. However, it is less clear how to account for the lack of variation observed for topicalization (14-b). By most accounts, these involve A-bar movement to a high specifier position in the left-periphery (though see Bianchi & Frascarelli 2009). Interestingly, topicalization in English is among Hooper & Thompson’s (1973) original set of MCP, whereas V2 was in fact only added to the set of MCP later, by Andersson (1975). Nevertheless, it is V2 that displays the properties described by Hooper & Thompson (1973) as characterising MCP: both in terms of distribution and the association with illocutionary potential. In terms of the predictions outlined in Table 1, we find that the predictions for MCP are borne out, but only for embedded V2. Leaving the issue of the other types of MCP to the side, we turn now to the question of whether these predictions are borne out also in the domain of clausal anaphora and long extraction. (Spoiler alert: they are not.)

3.3. Clausal anaphora and propositional definiteness

As shown in (16), the proform so patterns like a CP, and not like a DP. However, as shown in (17), repeated from (3) above, that-clauses can also be pronominalized with the proform it. As this example further illustrates, verbs differ in terms of their choice of anaphor.

(16) Adapted from Moulton (2015:306)

\begin{itemize}
  \item a. *It seems \([D_P \text{that/it/}{\{\text{the fact/idea/notion/claim/rumor}\}} \text{that John left/John’s leaving}]\).
  \item b. It seems \([C_P \text{so/that John left}]\).
\end{itemize}

(17) \begin{itemize}
  \item a. John supposed [that Bill had done it], and Mary supposed [it/so], too.
  \item b. John regretted [that Bill had done it], and Mary regretted [it/*so], too.
\end{itemize}

The question of course is what the choice of proform represents. On Kastner’s (2015) system, clauses selected by factive verbs are presuppositional. Specifically, Kastner invokes Heim’s (1982) se-
mantics for (in)definites: just as regular definite DPs refer to existing discourse referents and indefinites tend to create new discourse referents, clauses embedded under factive verbs and response stance verbs are taken to refer to existing discourse referents (a proposition that is either Common Ground, or a previous claim or proposal), whereas verbs like *say* add new discourse referents. Syntactically, Kastner argues that these clauses are definite DPs, headed by a covert determiner, thus straightforwardly capturing the choice of proform. For Haegeman & Úrögdi (2010), on the other hand, the choice follows not from the syntactic status of the clause as a CP or a DP, but rather, from the status of the clause as *(non-)*referential. It is not entirely clear what precise notion of referentiality these authors have in mind (see discussion in Bhatt 2010). However, from De Cuba & Úrögdi (2010), whose notion of referentiality they adopt, it doesn’t seem as though referential clauses need to be contextually given (as opposed to discourse new). What is clear, however, is that non-referential clauses are taken to have illocutionary force, and that this involves adding new information to the discourse. It seems, then, that both accounts agree that *so* pronominalize clauses with illocutionary potential, while *it* refers to existing discourse referents.

In §3.1, we saw that clauses embedded under response stance verbs (e.g. *accept*), emotive factives (e.g. *appreciate*), and negated predicates (e.g. *not think*), impose a strong requirement that their complements are interpreted as discourse old. Thus, on the above perspectives on clausal anaphora, we expect the proform *it* to be obligatory in these contexts. This prediction, however, is not borne out: *so* is neither incompatible with response stance predicates (18), nor with negated verbs like *don’t think* (19):

(18) Moulton (2015:308: naturally occurring data)
She did pay the woman who cared for her daughter with drugs because that is what the woman asked for. She would not admit so to DYFS because she feared the consequences.

(19) Bill believes that John and Mary broke up, but I don’t think so/*it. (Djärv, 2019a:43)

As shown by Djärv (2019a) in the context of examples such as (20), *so* often improves when fronted.

(20) [Mary has been waiting hopefully for her lover who said he’d soon return] (Djärv, 2019a:42)
  a. Lisa: You know he’s gone, you know he’s not coming back…He’s skipped town.
  b. Mary: So I’ve accepted./So I’ve come to accept.

Finally, while there’s no general ban on *so* with factive verbs (21)–(22) (e.g. Bhatt 2010; Moulton 2015), the anaphor *so* does not seem to be available with the emotive factives:

(21) Rooney knew he was special from a young age. And those who nurtured a talent that comes along rarely in any sport knew so, too. (Bhatt 2010:177: naturally occurring data)

(22) [Mary walks into the room with soaked shoes.]
  a. Lisa: Oh by the way, the basement flooded.
  b. Mary: So I found out/discovered (the hard way). (Djärv, 2019a:41)

(23) Everyone here appreciates/resents/hates/is surprised that Lisa always wins, and . . .
  a. *I love/hate/appreciate/resent so too.
  b. *so I’ve come to love/hate/appreciate/resent too.
  c. *so surprises me too. (adapted from Djärv 2019a:42)

6 Unlike Kastner, who classifies all factives as presuppositionals, it is less clear if Haegeman & Úrögdi (2010) intend to include all factives, or just the cognitive factives (or ‘semifactives’, see §2), in the set of referential predicates.

7 The intuition is that *so* is less acceptable with the negative response stance verbs (e.g. *doubt, deny*) than with the positive ones (e.g. *accept, admit*). Nevertheless, naturally occurring examples such as (12-c) suggest that it’s not impossible (source: https://virginia.sportswar.com/mid/13502062/board/football/):

(i) [University of Virginia football messaging board; about a delayed construction project:]
  a. . . . doubt that shovels in the ground will take place anytime soon
  b. I doubt so as well, but construction will start in 2024
The central empirical observation is that obligatorily discourse old (referential or presuppositional) clauses do not need to be pronominalized with it. Thus, while the V2 data in §3.2 suggests that illocutionary potential is indeed reflected in the syntax of that clause (for instance, in the form of an extended CP), the flip-side does not hold: clauses that lack illocutionary potential, due to the obligatory status of p as discourse old, are not syntactically marked as definite. Rather, what we find is that the proform it is only obligatory in a narrower set of embedding contexts, namely with the emotive factives. As a full discussion of these facts would take us beyond the scope of the current paper, we leave our discussion of clausal anaphora here for the moment, and turn now to the island effects.


On the account of Haegeman & Úrõgdi (2010), referentiality is derived via operator movement from a TP-internal position to Spec,CP. This movement has the effect of blocking A-bar movement both to the left-periphery of the embedded clause (thus giving rise to a ban on MCP), and blocking movement to the higher clause, thus giving rise to a weak island effect, along the lines of Rizzi (1990). On this account, we expect to see (weak) island effects occurring in the same contexts as those found to ban V2. In fact, there is a long-standing assumption that V2 is licensed in the complements of so-called bridge verbs, i.e. verbs that allow extraction from their complements (see for instance Vikner 1995 for discussion). Kastner (2015), too, argues that the contexts which block MCP are the same as those which give rise to island effects. On this account, however, there are separate reasons why presuppositionality should prohibit both MCP and long extraction: while the ban on MCP is accounted for in terms of selection, Kastner appeals to Honcoop’s (1998) semantic account of factive and response stance islands to account for the extraction restrictions. As we shall see, however, the link between MCP and long extraction is shaky at best; leaving us to conclude that any connection is in fact only incidental.

The main problem has to do with the status of extraction under factive verbs. As shown in (4) above, factive verbs are generally assumed to give rise to weak island effects, allowing extraction of objects, but not adjuncts. In this sense, they seem to belong to a larger set of contexts that give rise to weak island effects, including wh-questions, negation, VP-adverbs, etc. However, as observed by Szabolcsi & Zwarts (1993), the embedding predicate is only one factor relevant to the island effects. Additionally, the effect depends on the set provided by the clause with the gap having no more than one element:

(24) Schwarz, Oshima & Simonenko (2019:529–530)
   a. *Where, did they know [that Caesar was murdered t_i]? [+factive, +singleton]
   b. Where, did they think [that Caesar was murdered t_i]? [–factive, +singleton]
   c. Where, did they know [that Caesar had sent troops t_i]? [+factive, –singleton]

What these judgements indicate is that factive clauses are not weak islands in the traditional sense. Rather, what this data suggests is that there is a compatibility issue between factivity and certain kinds of questions (see Abrusán 2014; Schwarz et al. 2019, a.o). This is supported by experimental results in Huang (2019), looking at the acceptability of long A-bar movement from the complements of 100 English attitude verbs. To avoid confounds stemming from the pragmatics of questions, Huang uses relative clauses, such as “This is the arrogant director that the actor whispered that everyone hated” (p. 195–6). Huang reports a number of statistical models based on different theoretical proposals. For us, the key questions are whether factivity plays a role, and whether there is a difference between cognitive and emotive factives, as expected on the view whereby the availability of MCP and long extraction are both linked to illocutionary potential. To answer these questions, we look at Huang’s model based on

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8 See Djärv (2019a:Ch.5) for a proposal linking it/*so with emotive factives to their particular presuppositions.
9 Along these lines, Djärv (2019a) suggests that long extraction in English is licensed in the same embedding contexts as those that allow for V2 in German and Swedish. However, this is based on the availability of subject-extraction (Djärv, 2019a:§2.3.1). As pointed out to me by Maribel Romero, p.c., subject-extraction involves a likely confound in terms of the that-trace effect and the availability of comp-drop with the relevant verbs.
10 Djärv (2019a) characterizes Kastner’s account in terms of blocking by the determiner. It is clear, however, that Kastner has in mind a more indirect relationship between the D-layer and the island effects.
factivity (p. 202–3), comparing non-factive verbs to: (i) veridical non-factives; (ii) cognitive ('semi') factives; (iii) emotive factives; and (iv) manner-of-speech verbs (see discussion in Huang 2019:169–170). Descriptively, Huang finds that the cognitive factives, the emotive factives, and the manner-of-speech verbs all receive lower ratings than the non-factives. Statistically, however, only the effect for the manner-of-speech verbs is significant; suggesting that factivity does not make long A-bar extraction per se less acceptable. In a second, smaller experiment, Huang (2019:§4.7) also compares extraction in Dutch and English, for sentences presented in an appropriate context. Here, the English speakers consistently rated extraction from the complements of cognitive factive verbs as close to ceiling (this study did not include emotive factives). The Dutch speakers, interestingly, rated these sentences as much less acceptable. They did, however, accept long extraction with verbs like denken (think), suggesting that the contrast is not due to a general ban on extraction.

Together, these results show us that the apparent weak island effect is not due to a general ban on extraction from the complements of factives, but stems from a semantic conflict between factivity and the interpretation of questions. They are also problematic for the idea that the presence vs. absence of illocutionary potential is what determines the availability of long extraction. To start, Huang found no difference between the cognitive and emotive factives, as we would expect on this hypothesis. Secondly, the Dutch speakers rejected long extraction from the complements of cognitive factives; which do have illocutionary potential, at least in German, Swedish, and English (§3.1). As German and Dutch have been argued to pattern alike with respect to extraction (Huang, 2019:4.2.3), this further undermines the link between extraction and illocutionary potential. In short, there seems to be little evidence that constraints on extraction reflect a lack of illocutionary potential.

4. Discussion

In this paper, we have examined the claim that clauses with and without illocutionary potential differ in terms of the syntax of the embedded clause. To investigate this claim, we looked at three properties often cited as diagnostics, or reflexes, of the syntactic status of the embedded clause. Specifically, that clauses with illocutionary potential have an extended CP, compatible with MCP and long extraction, and pronominalize with the proform so. Clauses without illocutionary potential, on the other hand, are argued to be presuppositional or referential, disallowing MCP and long extraction, and to pronominalize with the proform it, like a definite. In §3.1–3.2, we looked at experimental data from Djärv (2019a), showing that at least one type of MCP, namely V2, is licensed in clauses with illocutionary potential; understood in the Stalnakerian sense of updating the context. In §3.3 we then looked at the distribution of clausal anaphora; finding that while there is evidence that clauses with illocutionary potential have an extended CP, the lack of illocutionary potential does not imply that the clause is syntactically definite. Rather, as shown by Djärv (2019a), the proform it is only obligatory in a narrower set of contexts. Finally, in §3.4, we looked at the apparent weak island effects observed with factive and response stance verbs; finding again that these effects cannot be explained by appealing to the embedding predicate alone, but stem from a conflict between factivity and specific types of questions. In short, we have seen evidence from Germanic supporting the claim that illocutionary potential is reflected in the syntax of the left-periphery, along the lines of Rizzi (1997) et seq. These commonly discussed diagnostics, however, provide no evidence that the lack of illocutionary potential is reflected in the syntax of the embedded clause, in some form of definiteness. This, of course, is not to say that such a link may not exist in other languages (e.g. De Cuba & Úrðgdi 2010; Kastner 2015; Hanink & Bochnak 2016, a.o.). However, at least in the case of English, none of the properties investigated here support the proposed link between the lack of illocutionary potential and clausal definiteness.

References

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