### The Status of Main Point Complement Clauses

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#### **Abstract**

This paper provides support for the analysis of clausal complement sentences as consisting of two discourse units, defending the view against an alternative according to which the embedded content is communicated as a conversational implicature. The argument is based on two MTurk studies of the availability of embedded content for conversational continuations. Further consequences of these findings for modeling discourse are considered in the concluding sections.

### 1 Uses of Clausal Complement Sentences

What I will here call a *clausal complement* sentence (cl-comp) is any sentence whose main predicate takes as complement a full tensed clause, such as the sentences in 1:

 Jane thinks / heard / said / is glad that it's raining.

Sentences of this form have an interesting property (one which they share with other sentences with embedded finite clauses): they express two distinct propositional contents. The *matrix content* is the content of the sentence as a whole, typically an evidential, reportative or attitude claim. The *embedded content* is the content of the complement clause.<sup>1</sup>

Several researchers from different traditions have observed that these sentences can be used in two different ways (Urmson 1952, Hooper 1975, Simons 2007, Hunter 2016). In one use, the *matrix main point use* (MMPU), the matrix content is what, informally speaking, we would call the main

point of the utterance. In the other use, the *embedded main point use* (EMPU), the embedded content is the main point, while the matrix content serves some kind of secondary discourse function, often evidential. These two uses can easily be illustrated in Q/A pairs (cf. Simons 2007):<sup>2</sup>

- 2. A: What did Jane say?
  - B: She said that it's raining.
- 3. A: What's the weather like?
  - B: Jane said that it's raining.

In 2., the matrix content is the answer to the question, so this is an MMPU. But in 3., the answer is expressed by the embedded content. We naturally understand speaker B as intending to provide that answer – that it is raining – but also to be indicating the source of her information. This is an EMPU.

In this paper, we explore the following question: What is the status of the content that we identify as "main point content" in embedded main point uses of clausal complement sentences? In particular, we will try to adjudicate between two positions on this question, both of which are articulated in prior work. The first is that the embedded clause is an independent discourse unit, which, despite syntactic embedding, makes an independent contribution to discourse content (Hunter 2016). The competing position is that EMPUs involve a conversational implicature which happens to be similar or identical in content to the content of the complement clause (Simons 2007).

Now, if the latter position is correct, we would expect the main point in EMPUs to behave in similar ways to other types of implicature, such as Relevance implicature. One of the central features

<sup>&</sup>lt;sup>1</sup> When the complement clause contains an expression bound in the matrix, as in *Every linguist thinks they have the most interesting data*, the cl-comp does not express an independent proposition. As far as I can determine, these cannot have the embedded main point uses that are the focus of this paper.

<sup>&</sup>lt;sup>2</sup> The examples in this paper are all constructed by the author. See Hunter 2016 for a slew of naturally occurring examples of EMPUs, although restricted to reportatives; and Simons 2007 for additional naturally occuring cases.

of EMPUs is that the embedded content becomes highly available for uptake in conversational continuations, as in 4., where C responds to B with a denial of the content of the embedded clause.

- 4. A: What's the weather like?
  - B: Jane said that it's raining.
  - C: But it's not, I can see the sunshine.

To evaluate the proposal, we will explore the degree to which this feature differentiates mainpoint embedded content from Relevance implicatures. As we will see, embedded content in fact seems to behave differently; and this behavior is not even restricted to EMPU cases.

In the next section, I will explain in more detail the two positions on the status of embedded content. In section 3, I'll evaluate the implicature proposal, presenting results from two MTurk elicitation experiments, concluding that the data support a slightly modified version of the Hunter analysis. In sections 4 and 5, I will briefly discuss two important distinctions that the data reveal: the distinction between rhetorical structure and the intentional structure of a discourse, which reflects the commitments of speakers to propositions (section 4); and the distinction between main point status of a proposition, and the simple fact of a proposition having been expressed, which, as we will see, has a significant impact on its discourse status (section 5).

### 2 Two approaches to EMPUs

### 2.1 Hunter 2016: Embedded clause as independent discourse unit

Hunter, summarizing approaches to EMP uses of cl-comp sentences, says:<sup>3</sup>

"The treatment of discourse parenthetical reports in the [Penn Discourse Tree Bank], the [Copenhagen Dependency Tree Bank] and Hunter et al. 2006 [SDRT] all have in common the idea that discourse parenthetical reports are best modeled by attaching the embedded clause directly to the incoming discourse and that this attachment pattern distinguishes them from

John didn't come to my party  $\exists p. \ \text{Jill said that} \ p$   $\Diamond Explanation \qquad \qquad Attribution$ 

Figure 1: Illustration of Hunter 2016 analysis

he was out of town (=p)

**non-parenthetical reports**, in which it is the attribution predicate that is attached to the incoming discourse." (7, emphasis added).

In other words, on this view, the embedded clause is treated as making its own, independent contribution to the discourse structure. Hunter's 2016 analysis continues this approach.

For our purposes, Hunter's analysis involves two central claims. First, all cl-comp sentences are segmented into two discourse units: the contribution of the "attribution predicate" itself; and the contribution of the embedded clause. (See Figure 1.) Second, each of these units can participate independently in rhetorical structure. In EMPUs, the embedded content stands in some rhetorical relation to a previously introduced discourse unit, while in MMPUs, only the attribution clause is related to prior discourse. In both uses, the embedded content is obligatorily related to the attribution predicate via the *attribution* relation.

#### 2.2 Simons 2007: Main point as implicature

Simons 2007 suggests that EMP interpretations arise through Gricean conversational reasoning.<sup>5</sup> For example 3. above, the following sort of reasoning is suggested: *Information about what Jane said does not directly answer the question; but I expect B's contribution to be a cooperative response; the content of what Jane said would, if true, be an answer to my question; so plausibly B intends me to consider this reported content as an answer.* Further conversational reasoning can lead

<sup>&</sup>lt;sup>3</sup> Hunter limits her discussion to cl-comp sentences whose main predicate is a reportative, focussing on the issue of parenthetical reports. I assume here that Hunter's analysis can be generally extended to all cl-comp sentence. Hunter herself does not make this claim.

<sup>&</sup>lt;sup>4</sup> Hunter's analysis also involves substantive semantic claims; discussion of these is outside the scope of the current paper.

<sup>&</sup>lt;sup>5</sup> In that paper, I suggested *both* that the embedded clause has an independent discourse function, and also provided a Gricean account of how the EMP interpretation arises. In later work, (Simons 2013, 2016) I continued the argument that embedded clauses can make an independent contribution to discourse. I subsequently realized that in the 2007 paper, I had failed to establish a clear position on the status of the main point content in EMPU cases. This work is an attempt to remedy that situation.

to effects of hedging or of strengthening. For example, if Jane is a very reliable source of information, identifying her as the source might be a way for the speaker to enhance the reliability of the content.

The central claims of this analysis, which distinguish it from Hunter's, are these: First, the content of the matrix clause is asserted, and no other discourse contributions are directly made. The utterance implicates that the speaker has the more complex conversational intention described above, resulting in an implicature whose content is closely related to that of the embedded clause. In cases like 3. above, the implicated content is plausibly identical to that of the embedded clause. But as just noted, EMPUs often involve a degree of hedging of the main point content. Answering in 3. with Jane thinks that it's raining would, on the Simons 2007 view, generate a relatively weak implicature, along the lines of the modal It's possible that it's raining.6

### 3 Adjudicating between the approaches

The two approaches just outlined differ in their predictions in testable ways. First, if the Simons 2007 implicature analysis is correct, then we would expect other main-point implicatures to behave in relevant respects like the embedded content of cl-comp sentences in EMP uses. To illustrate a case of a main point implicature, consider example 5.:

- 5. A: Is Helen in her office?
  - B: The light's on.

The structure of this question/answer sequence is parallel to that of 3. above. B's utterance does not directly answer A's question; but assuming that B intends to be cooperative, A can conclude that B intends her to consider the light being on as evidence that Helen is in her office (just as the fact that someone *said* that Helen is in her office would provide such evidence). The implied answer, then, is that Helen (probably) is in her office. If the implicature analysis of how the main point of EMPUs arises is correct, then the implied answers in these two cases should have similar properties.

The second point of difference concerns the question of when the embedded content should be accessible for conversational uptake. On Hunter's view, cl-comp sentences *always* make available two distinct discourse units, regardless of whether

they are used in an EMPU or an MMPU. On the implicature view, in contrast, embedded content becomes independently available only in EMPU cases. When the matrix content coheres fully with the prior discourse, as in MMPU cases, no implicature is generated, and hence the embedded content should simply remain embedded: it is not present as an independent discourse contribution. In the next sections, I discuss the results of two small scale Mechanical Turk studies which provide evidence in favor of Hunter's analysis.

### 3.1 Embedded main point vs. standard implicature: conversational uptake

As noted above, the embedded content in a clcomp sentence not only determines the relevance of the utterance to the prior discourse, but can also be the target of conversational continuations: an interlocutor can respond directly to the embedded content, as illustrated in 4. above and 6. below.

- 6. A: What's the weather going to be like?
  - B: Jane thinks it's going to rain.
  - A: I'd better wear my raincoat then.

If the implicature analysis of EMPUs is correct, then we should expect that dialogues like 5. should also allow conversational uptake of the implicated main point content. And at first pass, it appears that it can. Speaker A might respond: *Good, because I have this form I need her to sign*, a response to the information that Helen is in her office, and not to the light being on.

To explore this issue more carefully, I conducted a small scale study on Amazon Mechanical Turk. Participants saw text of a sequence of three-segment dialogs; Examples 1 and 2 from the experiment are shown in 7-8:

- 7. A: Will Henry be here for the start of the meeting?
  - B: [Emb-Cond] Jane said that he won't be
  - B: [Imp-Cond] He missed the bus.
  - C: Yes that's right / I'm surprised.
- 8. A: Is Lili coming to the movie?
  - B: [Emb-Cond] Jeff said she's not coming out tonight
  - B: [Imp-Cond] She's working.
  - C: That's too bad.

<sup>&</sup>lt;sup>6</sup> Hunter deals with hedging by positing modalized rhetorical relations, as in Fig. 1.

<b>Embedded Condition</b>								
	Ex1	Ex2	Ex3	Ex4	Ex5			
IE	18	19	2	16	20			
LM	0	0	14	2	0			

Implicature Condition								
	Ex1	Ex2	Ex3	Ex4	Ex5			
IE	1	4	0	1	9			
LM	18	7	16	18	10			

Table 1: Counts per condition by example. Numbers may not sum to 20 due to uncodable items.



Figure 2: Relative proportion of responses per condition, by example

The A utterance in each case is a yes/no question. The B utterance is either a cl-comp sentence whose embedded content directly answers the question (Embedded Condition), or an atomic sentence from which an answer is inferable (Implicature Condition). The C utterance in each case is one of *yes, that's right, I'm surprised* or *That's too bad*. These responses are anaphoric, interpretable either as referring to the matrix content / literal meaning, or to the embedded content / implicature. (Each of the participants saw one version of each question+responses sequence, plus at least one filler, used to check for competence in the task.) A total of 20 responses was collected for each dialog in each condition.<sup>7</sup>

Immediately below the dialog, participants were given a write-in box, and the prompt: "Write in the box below what Cate [name used for C] agrees with / finds surprising / thinks is too bad". Responses were then hand-coded by the author for whether the participant understood the C utterance as referring to the matrix content or to the embedded content (in the Embedded Condition) or as referring to the literal content or to the implied

If it is correct that in EMP uses of clcomplement sentences, the main point is conveyed as an implicature, then, in this experiment, responses to the Embedded Condition and the Implicature Condition should not differ: participants should be just as likely to select the implicature as the target of a response in the Implicature Condition as they are to select the embedded content as the target in the Embedded Condition. For purposes of analysis, implicature responses in the Implicature Condition and embedded clause responses in the Embedded Condition were identified as a single value, IE. Similarly, literal meaning responses in the Implicature Condition and main clause responses in the Embedded Condition were identified as a single value, LM.

conducted in February 2018, used Exs 4 and 5. The second iteration, conducted in May 2019, used Exs 1-3.

content (in the Implicature Condition). Answers not clearly falling into one of these categories were treated as uncodable. In the Implicature Condition, some answers mentioned both the literal content and the implicature (e.g., in response to Ex.2 shown in 8 above: "Cate thinks it's too bad that Lili has to work and will miss the movie.") These were coded as *both*, but excluded from the data.

<sup>&</sup>lt;sup>7</sup> There were a total of 5 dialogs. These were run in two separate iterations of the experiment. The first iteration,

Table 1 above shows the raw counts of each response type per condition, by example. In the Embedded Condition, a total of 9 responses were uncodable. In the Implicature Condition, 8 were uncodable. An additional 8 were coded as *both* (as explained above) and excluded from the data.

Figure 2 is a mosaic plot that shows the relative proportion of responses of each type per condition, by example. Width of the bars reflects the number of coded examples; note that Ex.2 is particularly narrow. This is due to the fact that 7 of the 8 *both* responses were elicited by this example.

In order to test independence of condition (Embedded vs. Implicature) from the understood target of the C utterance (IE vs. LM), a Chi-square test of independence was performed.<sup>8</sup> The relation between these variables was significant ( $\chi^2(1) = 70.322$ , p < 0.0001), showing them to be highly correlated.

Although clearly all contents in almost all examples are construable as the antecedent of the C utterance, there is a robust difference between the Embedded Condition and the Implicature Condition. Overall, as shown by the statistical test, the two conditions give rise to clearly distinct patterns of response. A closer look at the data shows that in all but one example, there is a strong preference to treat the embedded content as the antecedent in the Embedded Condition.9 In contrast, in the Implicature Condition, the literal content is far more likely to be chosen as antecedent than the implicated content. In summary: an implicature, even when it is the main point of an utterance, is less available for conversational uptake than the embedded clause content of a cl-complement sentence, when that embedded content constitutes the main point.

These results provide preliminary support for the claim of a difference in status between the embedded content of cl-comp sentences, and an implicature (or invited inference). And there is in fact a very plausible explanation of that difference, namely, that the embedded content of cl-comp sentences is explicitly expressed. This, then, leads to a further question: is explicit expression enough to allow for conversational follow-up? We turn to this in the next section.

#### 3.2 Embedded content in EMPU vs. MMPU

Recall that if the availability of embedded content is understood to be due to an implicature, this predicts that when no implicature is warranted – that is, when the matrix clause is directly relevant to the prior discourse, as in MMPUs – the embedded content should not be available for conversational continuation. In contrast, on the view that the embedded clause by default constitutes an independent discourse unit, no contrast is predicted between MMPUs and EMPUs in this respect.

This issue was tested in a further experiment. In this study, participants were shown a four-segment dialog with an anaphoric final segment. In this case, the target sentence (response to the question) was always a cl-comp sentence. In contrast to Experiment 1, these cl-comp sentences involved an MMPU: in each case, the matrix content, not the embedded content, was a plausible direct answer to the question preceding it. (Recall that in the embedded condition in Experiment 1, it was always the *embedded* content of the cl-comp sentence which addressed the prior question.) Dialogs 1 and 2 are shown below:

- 9. Dialog 1
  - A: Alan never ceases to amaze me.
  - B: Why, what did he do now?
  - A: He announced to everyone that he got ticketed for DUI. / that he's going into bankruptcy.
  - C: That's weird.
- 10. *Dialog 2* 
  - A: I am so mad at Mike.
  - B: Uh oh. What happened?
  - A: He's going around saying that Helen's going to get fired / that there was a big security breach last night.
  - C: That's weird.

There were 4 different dialogs; as illustrated here, each dialog had two versions differing in the content of the clausal complement of A's second

<sup>&</sup>lt;sup>8</sup> The Chi-squared test treats each response as independent, ignoring any possible effects of subject. This variable could be explored in future work.

<sup>&</sup>lt;sup>9</sup> The outlier example (Ex.3) is as follows: *A: How was that book the kids were reading for school? / B: Fran thought it was really boring.* 

<sup>&</sup>lt;sup>10</sup> The initial statement by A, preceding the question by B, was introduced to help establish the main point status of the matrix content of the target sentence (A's second utterance.) For example, in 9, the inital sentence makes clear that the main point of A's second utterance is to report on something that Alan has done that is surprising.

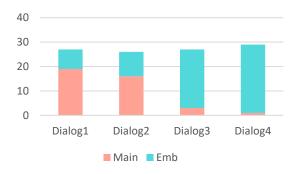


Figure 3: Exp 2, numbers of each response type (main clause reference vs. embedded clause reference), by dialog.

utterance. This was to safeguard against the possibility that one particular content might skew the effects. In fact, in no dialog was there any observable difference in distribution of responses across the two variants. As before, participants wrote in an answer to the question: "What does Cate think is weird / surprising?"; answers were coded by the author as referring to either the main clause content or the embedded clause content. 15 responses were collected for each dialog with each content (30/dialog). The results, arranged by dialog and excluding uncodable items, are shown in Figure 3.

The question under investigation here is whether the embedded content is available as the target of conversational continuations, when that content is not the main point in the utterance in which it is introduced. (We are not concerned here with whether that content is preferred as the target of conversational continuations.) The results indicate that it is so available. In dialog 1, 8 out of the 27 codable responses identified the embedded content as antecedent of the C utterance; in dialog 2, 10 out of 26 responses did so. In dialogs 3 and 4, the embedded content was the preferred understood target. These results support the view that the embedded content of cl-comp sentences constitutes an independent discourse segment even in MMPU cases, as in Hunter's analysis. The results are also consistent with the claims of Snider 2018 that propositional contents may be available as antecedents of propositional anaphors even when not at-issue.

An important caveat is in order here, however. It is true that in the dialogs in the study, the conversational situation does not support a true Gricean implicature that the speaker intends to communicate the content of the embedded clause:

there is no conversational violation to support such an implicature. But real world knowledge may well support an ordinary inference that the embedded contents may be true or of interest. Consider Dialog 1 from the study, shown in 9. above. The answer to B's question (What did Alan do?) is provided by the matrix content of A's reply: it's his announcing that he got ticketed that is amazing. But it is also simplest to assume that what Alan announced is true; moreover, his getting ticketed for DUI is a discussion-worthy topic in its own right. One might posit, then, that although the availability of the embedded content for a conversational continuation does not require a true Gricean implicature, it nonetheless requires inferences about how likely the embedded content is to be true or to be of conversational interest. These inferences help determine whether content will be available for a conversational uptake.

Recall, though, the results from the previous experiment, which clearly show that explicitly expressed content is significantly more likely to be the target of conversational uptake than implied content, even when the implied content is highly relevant and has more real-world significance than the explicit content. At the very least, we can conclude from the combined results of the two experiments that explicit expression of content makes that content more easily accessible for conversational uptake; and this result is better modeled by the Hunter analysis than by an analysis relying on conversational implicature or other types of conversational reasoning. Nonetheless, we should not overlook the role of pragmatic reasoning in the identification of the anaphoric antecedents in these experiments: In order for content to be the target of update, it must also be content that the interlocutors are likely to want to talk about.

### 3.3 Interim conclusions for Hunter 2016

These experimental results, although limited, provide support for the view espoused by Hunter (and others working within a rhetorical relations framework) according to which cl-comp sentences are segmented into two discourse units regardless of their discourse use, with the embedded content available as an anchor for a rhetorical relation even if it is not initially independently attached to the preceding discourse by any relation, as in the analysis below:

11. A: What did Mike say about Helen? $\alpha$ 

B: [He said] $_{\beta}$  [that she's in her office] $_{\gamma}$  Att( $\beta,\gamma$ ), QAP( $\alpha,\beta$ )

C: Yes that's right.δ

Affirm $(\gamma, \delta)$ 

On the other hand, there is no response-based evidence for the presence of the "attribution" discourse-unit proposed by Hunter, with the content (roughly) "Mike said something." (Hunter 2016, pp.17-18). There is, though, clear evidence for a discourse unit consisting of the matrix content in its entirety. This suggests a natural revision to Hunter's analysis, according to which cl-comp sentences should be segmented into discourse units as shown in 12.:

12. [He said [that she's in her office] $_{\gamma}$ ] $_{\beta}$  As well as being supported by the evidence cited, this modification has the benefit of maintaining fit between the discourse units posited and the syntactic and semantic units of the sentence. This modification still allows us to posit the holding of the Attribution relation between the matrix discourse unit and the embedded discourse unit; the matrix content indeed expresses the attribution in question. We will not pursue here any further questions for Hunter's analysis raised by this modification.

### 3.4 Aside on the role of the embedding predicate

While not directly relevant to the main issue, the differences between the dialogs in Experiment 2 are worth a brief comment. The embedding predicate in dialog 1 is *announced*; in dialog 2 is *going around saying*; and in dialogs 3 and 4 is *said*. Dialogs 3 and 4 are shown here:

13. *Dialog 3* 

A: What's going on with Jen?

B: Nothing that I know. Why?

A: She said she turned down that great job offer / that she isn't coming to dinner with us.

C: I'm surprised.

14. Dialog 4

A: I'm getting a little worried about Chris

B: Why, what's going on?

A: He said that Bill is avoiding him / Bill is being mean to him.

C: I'm surprised.

While respondents overall preferred the matrix clause as antecedent in Dialogs 1 & 2 (while allowing the embedded clause as a possible

antecedent), responses to Dialogs 3 & 4 almost unanimously selected the embedded clause as antecedent. The simple reportative *say* seems to carry almost no semantic weight, and respondents seem to straightforwardly take its complement to be presented as true. The comparison with Dialog 2 (with predicate *going around saying*) is instructive: responses to "What does Cate think is surprising?" included "Cate is surprised that Mike is spreading a rumor" and "That Mike is gossiping about Helen," both suggesting that participants did not necessarily take the content of what Mike was saying to be true.

Previous work on inferences about veridicality of events presented in texts (Sauri 2008, de Marneffe et al. 2012, de Marneffe 2012) has identified a variety of factors that contribute to these inferences. The current experiment suggests that quite fine features of the embedding predicate can have a significant effect; and also that there is a possible relation between veridicality judgments and judgments of "uptake worthiness".

# 4 The role of conversational inference in interpretation of cl-comp sentences: coherence vs. commitment

The crucial distinction between EMP uses and MMP uses of cl-comp sentences lies in how the cl-comp sentence coheres with prior discourse. This is articulated both in my 2007 description of the two uses, and in Hunter's model. Crucially, in EMP uses, the cl-comp sentence coheres with the prior discourse primarily by virtue of a rhetorical relation holding between the prior discourse and the embedded content. In MMP uses, the crucial relation is between the matrix content and the prior discourse.

But even in the EMP case, where the embedded content is one of the relata of a crucial coherence relation, the speaker need not be understood to be fully committed to that content. As we've noted, the speaker of a cl-comp sentence in an embedded main point use is often understood to have reduced commitment to the embedded content: this is what explains their choice to embed that content, rather than simply asserting it. In other cases, by providing a strong evidential source for the content, a speaker with full commitment to the embedded content can bolster their case for its truth e.g. My doctor told me that it's actually ok to eat a lot of eggs.)

The kind of reasoning described by Simons 2007 derives conclusions about both the intended main point of a cl-comp utterance, and about the speaker's degree of commitment (see section 2.2. above). Hunter concurs with Simons 2007 that the determination of speaker commitment requires "world-knowledge based reasoning." (p.11). Hunter goes on to say that "this kind of worldknowledge based reasoning...is generally independent of the reasoning used to determine rhetorical structure." Moreover, as Hunter further notes, "it can take many discourse turns to determine a speaker's commitment to the embedded content of a report."

These observations suggest a crucial distinction between two types of information: on the one hand, the rhetorical relations between elementary discourse units, modelled in rhetorical structure theories; and on the other, a higher level model of the intentional structure of a discourse, a structure which must reflect each speaker's conversational commitments. And reasoning about a speaker's likely intentions is essential to the determination of this structure.

A central case for distinguishing rhetorical structure from speaker commitment is the case of "no-commitment" uses of cl-comp sentences, as in 15. These were first discussed by Simons 2007, and taken up by Hunter 2016.

15. A: What course did Jane fail?B: Henry falsely believes that she failed calculus. In fact, she failed swimming.

More subtle cases are possible. Consider:

16. A: So, is Trump guilty of collusion?B: Well, Giuliani says he's completely innocent.

In these cases, the hearer is expected to infer that the speaker has no commitment to the embedded content. Because Hunter's modal rhetorical relations entail that the relata are epistemic possibilities for the speaker, her model cannot treat the embedded contents of such cases as rhetorically related to the prior discourse. She argues that in such cases, it is the attribution predicate alone which attaches to the prior discourse. In making this move, though, Hunter seems to conflate rhetorical structure with the determination of speaker commitment (a conflation which, earlier in the paper, she deems problematic; see her section 3.1.). Resolving this issue would require a significant overhaul of the semantic commitments of Hunter's analysis, which I will not undertake.

## 5 Concluding remarks: main point status vs. explicitness

The observations from Exp. 1, comparing cl-comp content to Relevance implicature, show an important difference between "main point" status of content, and availability for conversational continuation. Simons 2007 already noted that in both uses of cl-comp sentences, conversational contributions can target either the matrix content or the embedded content (Simons 2017, ex.16); and this is confirmed by the results of the study.

The data suggest that embedded content is available for conversational continuation even when not the speaker's intended main point. This observation is unsurprising if one considers normal, real-life talk, where interlocutors may pursue tangents or compete for topic control.

The data further point to the crucial importance of explicit expression of propositional content. That act of expression, in and of itself, makes the propositional content expressed available for conversational uptake.

These results have important consequences not only for our understanding of the discourse functions of cl-comp sentences, but for theorizing about the semantics and pragmatics of discourse in general. For example, Simons 2013 has argued that certain cases of local pragmatic effects arise through the application of conversational reasoning to the contents of non-asserted clauses (e.g. disjuncts, or the antecedent or consequent of a conditional); and that this is possible precisely because these clauses function as independent discourse units. The results reported here support that view, demonstrating that our thinking about discourse pragmatics must be attentive not only to what is implicit in discourse, but also to the function of explicit expression.

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### References

- Hooper, J.B. 1975. On assertive predicates. In: Kimball, J.P. (Ed.), *Syntax and Semantics Vol. 4*. Academic Press, NY: 91-124.
- Hunter, Julie. 2016. Reports in Discourse. *Dialogue & Discourse* 7(4): 1-35.
- de Marneffe, Catherine. 2012. *What's that supposed to mean?* Ph.D. dissertation, Stanford University.
- De Marneffe, Catherine, Christoper Manning and Christopher Potts. 2012. Did it happen? The pragmatic complexity of veridicality assessment. *Computational Linguistics* 38(2): 301-333.
- Sauri, Roser. 2008. *A Factuality Profiler for Evantualities in Text*. Ph.D. thesis, Computer Science Department, Brandeis University.
- Simons, Mandy. 2007. Observations on embedding verbs, evidentiality, and presupposition. *Lingua* 117: 1034-1056.
- Simons, Mandy. 2013. Local Pragmatics and Structured Content. *Philosophical Studies* 168(1): 21-33.
- Simons, Mandy. 2016. Local Pragmatics in a Gricean Framework. *Inquiry* 60(5): 493-508.
- Snider, Todd. 2018. Distinguishing At-issueness from Anaphoric Potential: A Case Study of Appositives.
  In William G. Bennett, Lindsay Hracs, and Dennis Ryan Storoshenko (eds.), Proceedings of the 35th West Coast Conference on Formal Linguistics (WCCFL): 374–381. Cascadilla Proceedings Project.
- Urmson, J.O. 1952. Parenthetical Verbs. *Mind, New Series* 61: 480-496.