On the Acquisition of *ne ... que* ‘only’ in English-French

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1. Introduction

French exhibits a bipartite *ne...que XP* construction (1), where *ne* is optional in colloquial usage, which can substitute for the adverbial expression *seulement* ‘only’ in (2) both of which are equivalent to (3). This construction has been discussed in the literature by Azoulay-Vicente (1988), Dekydtspotter (1993) and von Fintel and Iatridou (2005).

(1) Marie (n’) a vu que Stéphanie.
‘Marie (neg) saw que Stéphanie.’
(2) Marie a vu seulement Stéphanie.
(3) Marie saw only Stephanie.

There are two potential approaches to its acquisition: a holistic approach, under which the (discontinuous) structure (*ne*)...*que XP* is stored whole with the stipulation that it expresses *only XP*; or a compositional approach, where the *que XP* is treated as a kind of exceptive phrase (akin to “someone other than XP”) syntactically and semantically dependent on a negative head *ne* ‘not’. We investigate the manner in which English-French learners analyze the *ne que* construction.

A body of work argues that second-language (L2) learners get off the ground by storing expressions whole as fixed formulas together with dimensions of context. Decomposition and compositional treatment follows (Hakuta, 1974; Myles, Mitchell & Hooper, 1999; Towell & Hawkins, 1994; Weinert, 1995; Wong-Fillmore, 1976). Thus, Towell & Hawkins (1994, p.254) suggest that “…as the learner develops greater awareness of the linguistic system, it may be possible to reexamine the formulaic utterance and reinterpret its internal structure as part of the learning of the language system.” Bley-Vroman (1997) argues for L2 grammars as systems of constructions, without the generative component of native speaker grammars. Nick Ellis (2000a, b) reinterprets development in purely holistic terms: First, structures are stored whole; then, they acquire slots as well as refined semantic, pragmatic specifications, evolving into a system of constructions. However, Bardovi-Harlig (2002, in press) questions the solidity of the formula-to-generation scenarios, citing empirical difficulties and lack of clarity of the notions involved.

We present a case study investigating the manner in which English-French learners analyze the (*ne*)...*que XP* structure. Its syntax is quirky; its interpretation is either taught or contextually recognizable, but the relation between its form and meaning is opaque. A holistic meaning postulate and a compositional treatment have different consequences.

2. The (*Ne)*... Que XP Structure

Azoulay-Vicente (1988) noted that the *ne que* construction obeys strong locality constraints and a specific distribution: *Que* is banned from the sentential subject position (4) and the complement of prepositions (6). She argued that the construction involves an empty category (that we identify as an Op following Dekydtspotter, 1993) restricted by the *que* phrase. The contrasts in (4–5) and in (6–7) are explained by the Empty Category Principle (ECP), which requires empty categories to be properly governed.

We assume that [Op, que XP] is a polarity item locally licensed by negation. If it is embedded inside a complement, movement is required for local licensing. Thus, the que phrase can be embedded inside an NP, but only if movement is possible, as (8–11) show. Thus, in (8) que is felicitous in argument position, because the position allows movement, as (10) shows. The infelicity of (9) is due to the fact that the adjunct position does not allow movement as the ungrammaticality of (11) shows.

(8) Pierre ne prendra [des photos [Op, que de Jean]].
    Pierre neg will-take some pictures que of Jean
    ‘Pierre will take pictures only of Jean.’
(9) *Pierre ne prendra [des trains [Op, que de six heures]].
    Pierre neg will-take some trains que of six o’clock
    ‘Pierre will take only six o’clock trains.’
(10) De qui prendra-t-il des photos?
    of who will-take-he pictures
    ‘Who will he take pictures of?’
(11) *De quelle heure prendra-t-il le train?
    of which hours will-take-he the train
    ‘Which hour will he take the train?’

Support for the proposal is provided by the parallel distribution of que phrases and negative quantifiers like personne ‘no–one’ in embedded clauses, subject to the Condition on Extraction Domains: both are allowed inside verbal complements (12, 14), but are disallowed inside subjects (13, 15).

(12) Il ne voudrait qu’on garde une photo que de lui.
    he neg would-want that we keep a picture que of him
    ‘He would like us to keep a picture only of him.’
(13) *Il ne voudrait qu’une photo que de lui soit gardée.
    he neg would-want that a picture que of him be kept
    ‘He would like that a picture only of him be kept.’
(14) Il ne voudrait qu’on garde une photo de personne.
    he neg would-want that we keep a picture of no-one
    ‘He would like us to keep a picture of no-one.’
(15) *Il ne voudrait qu’une photo de personne soit gardée.
    he neg would-want that a picture of no-one be kept
    ‘He would like that a picture of no-one be kept.’

A compositional (16) or holistic (17) representation of ne que could be entertained by learners. On the compositional treatment of (ne)... que Stéphanie in (16), negation (irrespective of whether ne is present) locally licenses a null operator restricted by the que phrase. The null operator is interpreted as an existential quantifier (with an exceptive restriction introduced by que) construed in the scope of
negation, adapting von Fintel and Iatridou (2005). A phrase like ne voir que Stéphanie can be paraphrasable as not seeing anyone other than Stephanie, which means seeing only Stephanie, given that someone was seen. In contrast, on the holistic treatment of (ne)... que Stéphanie in (17), the semantics of only Stephanie are stipulated of the whole construction; ne being treated as an optional pleonastic element. On this analysis, the distribution of que XP expressions must also be directly stated.

(16) \[ NegP ne_{i} \ldots \left[ Op_{i} \text{ que Stéphanie } \right] \ldots \]
\[ \rightarrow \lambda.P. \exists x \left[ x \neq \text{Stéphanie } \& P(x) \right] \]

‘It is not the case that someone other than Stephanie has P, for any property P.’

(17) \[ \left[ \ldots \left( \text{ne} \right) \ldots \text{ que Stéphanie } \ldots \right] \]
\[ \lambda.P. \forall x \left[ x \in C \& P(x) \rightarrow x = \text{Stéphanie } \right] \]

‘For any property P, every x in the context with P is Stephanie.’

These two analyses make different predictions in certain environments. We focus here on intensional verbs. Consider (18): It could be a specific president, George Bush (de re construal) or there might not be a specific individual that Jean seeks (de dicto construal).

(18) Jean ne cherche qu’un président.

Jean neg seeks que a president

‘Jean seeks only a president.’

Both accounts yield the ambiguity. The de dicto construal is associated with an in situ interpretation of the object: Qu’un président is in the thematic position of the intensional verb chercher ‘seek’. It is, therefore, in the scope of the intensional verb. In contrast, the de re reading relies on an interpretation of the object outside the scope of the intensional verb.

The two analyses differ, but only in very subtle ways, in the case of a complex verb group such as rêve d’épouser ‘dreams of marrying’. Thus, in (19) where ne appears before the intensional verb rêve ‘dreams’, the que phrase can be interpreted in the scope of rêve or outside of it. In the latter case, there is a real individual to be identified as Brad Pitt. In (20) where ne is placed after rêve, the que phrase is interpreted in the scope of rêve, because the negative head ne is itself in the scope of the intensional verb and the interpretation of the que phrase is dependent on it. Therefore, we do not have a real individual to be identified as Brad Pitt. This is why the continuation C’est Brad Pitt is odd.

(19) Aurélie ne rêve d’épouser qu’un acteur.

Aurélie neg dreams to marry que an/one actor

‘Aurélie dreams only of marrying an actor.’

C’est Brad Pitt.

‘It’s Brad Pitt.’

(20) Aurélie rêve de n’épouser qu’un acteur.

Aurélie dreams to neg marry que an/one actor

‘Aurélie dreams of marrying only an actor.’

??C’est Brad Pitt.

‘It’s Brad Pitt.’

However, such a continuation is not impossible to get. When this happens, we assume that the que phrase receives a slightly different interpretation: Instead of being interpreted as an existential expression in the scope of negation, it is re-analyzed as an (inherently restricted) negative quantifier such as “no-one other than the contextually relevant actor”. This negative quantifier is derived by fusing negation with the existential null operator. This also requires accommodating a contextually relevant actor. This interpretation, however, requires extra steps, and is not as accessible.

Thus, under a compositional treatment, the placement of ne with respect to the intensional verb puts inherent limits on the range of possible interpretations, because the que phrase is dependent on negation. When ne is placed high in the structure, the existential que phrase can be interpreted in the scope of the intensional matrix verb or outside of it. When ne is placed low, the existential que phrase is interpreted in the scope of the intensional matrix verb. Negation and the existential que phrase can, however, be re-analyzed as a negative determiner taking wide scope. Crucially, under a holistic
treatment, these interpretive distinctions are not part of the interpretation: They require additional stipulations about the scope of *que* phrases and intensional verbs based on observation.

3. Learnability

Naïve native speakers are not consciously aware of the intricacies of the (*ne*)...*que* *XP* structure nor are these intricacies the object of instruction. At our institution, intermediate learners are only occasionally exposed to *ne*...*que* and told, if anything, that it means *only*. There is no instruction beyond this. There is little evidence for the type of asymmetries in which we are interested in the input: *ne* drops frequently in colloquial language; *ne* and *que* (when both present) are typically extremely local. Therefore, sentences such as (19) and (20) are not recurrently (if at all) present in the typical classroom input of intermediate learners, because they are not the preferred means of expression. In the interest of keeping *ne* and *que* local, one would rather say (21) in interaction with focus—which is ambiguous.

(21) Aurélie ne rêve que d’épouser UN ACTEUR.

*Aurélie dreams only of marrying AN ACTOR.*

But, even if the forms (19) and (20) were recurrently present, the world of conversation is often either too rich or too vague to reliably indicate on which interpretation a sentence was uttered. Crucially, *C’est Brad Pitt* can follow a sentence where *ne* occurs under the intensional verb. Casual observation, therefore, does not provide reliable information, making the feasibility of learning via induction remote in the extreme. Thus, if intermediate English-French learners do not calculate the interpretation, we do not expect the appearance of similar sensitivities to scope. If intermediate English-French learners display such sensitivities despite the lack of information provided by the world of conversation, it has to be because they calculate the interpretation and get the effects for free.

4. The Experimental Design

There were 97 intermediate level learners of French: 49 learners in their third semester of college French and 48 in their fifth semester, as well as 11 advanced learners and 22 native speakers. In addition to a short biographical questionnaire providing language background, respondents indicated: whether they were aware (even vaguely) of sentences as in *Marie n’a vu que Jean* ‘Marie saw only Jean’ in French, whether they experienced *Marie n’a vu que Jean* as unacceptable, and whether they had ever received instruction or training on the topic.

The task was administered in a language lab. Respondents sat at a computer monitor and accessed 40 sound files on the computer. Respondents were told that they were to act as scorers for a final comprehension examination in Mme Goyette’s English class, following an elaborate scenario: First, Mrs. Briggs read some stories in English to pupils. The pupils would then go to Mme Goyette to relate what happened in the story. As part of a team of graders, respondents were presented with random transcripts of proceedings with the names of pupils confidential. They read the stories in English, Mme Goyette’s information question *Qu’est-ce que tu as compris?* “What did you understand?”, and listened to the answer which was also printed. They were asked to evaluate how well the responses reflected solid understanding of the story on a scale of values:

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
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<tbody>
<tr>
<td>-2</td>
<td>Very badly</td>
</tr>
<tr>
<td>-1</td>
<td>Rather badly</td>
</tr>
<tr>
<td>0</td>
<td>Can’t tell</td>
</tr>
<tr>
<td>+1</td>
<td>Rather well</td>
</tr>
<tr>
<td>+2</td>
<td>Very well</td>
</tr>
</tbody>
</table>

Respondents were told that an answer need not have every detail of the story to show solid understanding, but it should not be false nor should it mislead a listener who had not previously heard the story about central aspects of the story. Respondents were told that Mme Goyette’s question could be answered in potentially more than one way, and that answers could be ambiguous. There were 6
training items. There were three versions of the task, containing 28 experimental items consisting of 7 quadruples.

We provide one quadruple in Figures 1–4, illustrating how context and ne placement were manipulated to induce different interpretations of the ne...que XP. The quadruples crossed de re (specific) and de dicto (non-specific) contexts with placement of ne with respect to an intensional verb such as rêver ‘to dream’. Thus, in Figures 1 and 2, the de dicto interpretation obtains regardless of the placement of ne; in Figures 3 and 4, however, the de re interpretation is more difficult to obtain when ne is placed after the intensional verb. This is what we expect under a compositional treatment.

**Figure 1:** Context requiring a de dicto interpretation with ne placed high.
Mrs. Briggs: Aurélie is a star-struck teenager who watches every movie that comes out and always reads the celebrity magazine *Us Weekly*. The funny thing is, whenever she looks at it, she fancies herself as an actor’s wife and nothing else.
Madame Goyette: Qu’est-ce que tu as compris ?
Elève: Quand elle lit *Us Weekly*, Aurélie ne rêve d’épouser qu’un acteur.
‘When she reads *Us Weekly*, Aurélie dreams of marrying only an actor.’

**Figure 2:** Context requiring a de dicto interpretation with ne placed low.
Mrs. Briggs: Aurélie is a star-struck teenager who watches every movie that comes out and always reads the celebrity magazine *Us Weekly*. The funny thing is, whenever she looks at it, she fancies herself as an actor’s wife and nothing else.
Madame Goyette: Qu’est-ce que tu as compris ?
Elève: Quand elle lit *Us Weekly*, Aurélie rêve de n’épouser qu’un acteur.
‘When she reads *Us Weekly*, Aurélie dreams of marrying only an actor.’

**Figure 3:** Context requiring a de re interpretation with ne placed high.
Mrs. Briggs: Aurélie is a star-struck teenager who watches every movie that comes out and reads the celebrity magazine *Us Weekly*. In fact, whenever she looks at it, she imagines her life as the next wife of the newly single Brad Pitt.
Madame Goyette: Qu’est-ce que tu as compris ?
Elève: Quand elle lit *Us Weekly*, Aurélie rêve de n’épouser qu’un acteur.
‘When she reads *Us Weekly*, Aurélie dreams of marrying only an actor.’

**Figure 4:** Context requiring a de re interpretation with ne placed low.
Mrs. Briggs: Aurélie is a star-struck teenager who watches every movie that comes out and reads the celebrity magazine *Us Weekly*. In fact, whenever she looks at it, she imagines her life as the next wife of the newly single Brad Pitt.
Madame Goyette: Qu’est-ce que tu as compris ?
Elève: ?? Quand elle lit *Us Weekly*, Aurélie rêve de n’épouser qu’un acteur.
‘When she reads *Us Weekly*, Aurélie dreams of marrying only an actor.’

Before conducting the analysis, we removed from consideration those learners who indicated in the initial questionnaire that they experienced the structure as unacceptable, as well as those who had had previous experience with languages such as Japanese and Spanish that express only with similar structures. As a result, we analyzed 56 intermediate level learners of French: 24 learners in their third semester of college French and 32 learners in their fifth semester of college French. Additionally, we analyzed 33 experts: 22 native speakers of French and 11 advanced learners. We calculated mean rates of acceptance, identifying positive answers. We calculated scores from positive and negative values, as these might provide information where acceptance rates do not.
5. Experimental Results

We first consider the results of the intermediate learners (Table 1). We conducted a 3-way repeated-measures ANOVA with placement of *ne* and specificity as within-subject factors and with semester as between-subject factor. There was no main effect of semester in the between-subject analysis: F(1, 54) = .842, p = .363. Tests of within-subject effects revealed no main effect of *ne* placement F(1, 54) = .039, p = .845 or specificity F(1, 54) = .676, p = .415. Interactions of *ne* placement with semester were marginal: F(1, 54) = 2.920, p = .093. Interactions of specificity with semester, however, were highly significant: F(1, 54) = 7.792, p = .007.

<table>
<thead>
<tr>
<th></th>
<th>de dicto</th>
<th>de re</th>
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<tbody>
<tr>
<td>3rd semester</td>
<td>5th semester</td>
<td>3rd semester</td>
</tr>
<tr>
<td>ne placed high</td>
<td>56.55% (26.47)</td>
<td>66.14% (29.73)</td>
</tr>
<tr>
<td>ne placed low</td>
<td>66.07% (28.51)</td>
<td>55.80% (30.21)</td>
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Table 1. Acceptance Rate for Third (n = 24) and Fifth (n = 32) Semester Learners

To examine the role of specificity in the data, we conducted 4 post hoc t-tests, adopting a Bonferroni protection measure of α = .05/4 = .0125. For 3rd semester learners, differences in the relative acceptability of interpretations did not reach significance: t(23) = 1.829, p = .080 when *ne* was placed high; t(23) = .561, p = .561 when *ne* was placed low. Crucially, for 5th semester learners, acceptance rates for the *de re* interpretation were significantly lower than those for the *de dicto* interpretation when *ne* was placed low: t(31) = 2.837, p = .008. When *ne* was placed high, the contrast in acceptability of interpretations was not significant: t(31) = 1.860, p = .072. Scores yielded parallel results, and will therefore not be discussed here. The pattern of contrasts in the behavior of 5th semester learners is highly suggestive: This pattern is naturally accounted for under a compositional analysis in which *ne* placed below the matrix intensional verb in the architecture of the sentence restricts the availability of the *de re* construal.

If the placement of *ne* constrains the scope of the existential *que* phrase in English-French interlanguage, we expect that there should be a general interpretation-dependent effect of placing *ne* low for learners who accept *ne* placed high. In Table 2, we consider the evidence provided by those learners who accepted *ne* placed high in *de re* context at rates above 50% (n = 36). We conducted two planned t-tests on Group A, adopting a Bonferroni protection measure of α = .05/2 = .025.

<table>
<thead>
<tr>
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<th>Group A</th>
<th>Group B</th>
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<tbody>
<tr>
<td></td>
<td>ne high</td>
<td>ne low</td>
</tr>
<tr>
<td>de dicto</td>
<td>69.44% (22.43)</td>
<td>67.05% (21.59)</td>
</tr>
<tr>
<td>de re</td>
<td>79.36% (15.43)</td>
<td>65.69% (19.83)</td>
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Table 2. Relative Acceptance Rate for Those Who Accept *ne* Placed High above 50% (Group A, n = 36), versus Those Who do not (Group B, n = 20)

This analysis of Group A learners revealed a crucial asymmetry: in *de re* contexts, these learners accepted *ne* placed high significantly more readily than *ne* placed low (t(19) = 5.648, p < .0005). In *de dicto* contexts, however, there was no such difference between low and high placement of *ne* (t(19) = .567, p = .575). This asymmetry is also accounted for if *ne que* is compositionally interpreted.

Lastly, we consider the response pattern of those respondents who reported not being aware of the *ne que* construction prior to testing (n = 17) in Table 3. We conducted two planned t-tests on acceptance rates and scores, adopting a Bonferroni protection measure of α = .05/2 = .025.
Table 3. Relative Acceptance Rate and Scores for Respondents with no Awareness of *ne que* (n = 17)

<table>
<thead>
<tr>
<th></th>
<th>Acceptance rates</th>
<th>Scores</th>
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<tbody>
<tr>
<td></td>
<td><em>ne</em> high</td>
<td><em>ne</em> low</td>
<td><em>ne</em> high</td>
</tr>
<tr>
<td><em>de dicto</em></td>
<td>68.07% (22.32)</td>
<td>58.82% (20.15)</td>
<td>.77 (.80)</td>
</tr>
<tr>
<td><em>de re</em></td>
<td>69.75% (20.75)</td>
<td>62.19% (21.30)</td>
<td>.87 (.52)</td>
</tr>
</tbody>
</table>

Acceptance rates revealed no asymmetry, but there was an asymmetry in the scores. Two planned comparisons on the scores revealed an asymmetry in the acceptance of *ne* placed high vs. *ne* placed low in *de re* contexts: t(16) = 2.578, *p* = .020, but not in *de dicto* contexts: t(16) = .980, *p* = .342. This is a suggestive result: These learners have reported that this structure is new to them, yet they display a pattern of behavior compatible with a compositional treatment.

We now turn to the behavior of our advanced learners and native speakers (Tables 4 & 5).

Table 4. Acceptance Rates for Advanced Learners (n = 11) and French Natives (n = 22)

<table>
<thead>
<tr>
<th></th>
<th>Advanced learners</th>
<th>French natives</th>
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<tbody>
<tr>
<td></td>
<td><em>ne</em> high</td>
<td><em>ne</em> low</td>
</tr>
<tr>
<td><em>de dicto</em></td>
<td>70.13% (17.44)</td>
<td>64.94% (28.83)</td>
</tr>
<tr>
<td><em>de re</em></td>
<td>67.53% (22.21)</td>
<td>59.74% (29.84)</td>
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There was no main effect of group in the between-subject analysis: F(1, 31) = 2.876, *p* = .100. Tests of within-subject effects revealed a marginal main effect of *ne* placement F(1, 31) = 3.019, *p* = .092, but no main effect of specificity F(1, 31) = .168, *p* = .685. There was no interaction of *ne* placement with group: F(1, 31) = .783, *p* = .383, nor any interaction of specificity with semester: F(1, 31) = .783, *p* = .188. Analysis of acceptance rates revealed no differences; we therefore analyzed scores for additional evidence.

Table 5. Mean Scores for Advanced Learners (n = 11) and French Natives (n = 22)

<table>
<thead>
<tr>
<th></th>
<th>Advanced learners</th>
<th>French natives</th>
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<tbody>
<tr>
<td></td>
<td><em>ne</em> high</td>
<td><em>ne</em> low</td>
</tr>
<tr>
<td><em>de dicto</em></td>
<td>.93 (.47)</td>
<td>.74 (.84)</td>
</tr>
<tr>
<td><em>de re</em></td>
<td>.72 (.66)</td>
<td>.40 (.89)</td>
</tr>
</tbody>
</table>

There was no main effect of group in the between-subject analysis: F(1, 31) = .885, *p* = .354. Tests of within-subject effects revealed a main effect of *ne* placement F(1, 31) = 6.863, *p* = .013, but no main effect of specificity F(1, 31) = 1.021, *p* = .361. There was no interaction of *ne* placement with group: F(1, 31) = .783, *p* = .383, and no interaction of specificity with semester: F(1, 31) = .783, *p* = .188. A post hoc analysis was conducted using 2 paired samples t-tests (α = .05/2 = .025); these t-tests revealed a significant contrast in acceptance of *ne* placed high vs. *ne* placed low in *de re* context: t(32) = 2.343, *p* = .025, but not in *de dicto* context: t(32) = .801, *p* = .429.

In sum, we found revealing asymmetries in the data from novices and experts alike with a subtle distinction between the two groups. Throughout L2 acquisition of French (as well as in native French), we found effects of *ne* placement on the relative availability of *de re* versus *de dicto* interpretations. However, whereas these trends were apparent in the acceptance rates of the novices, they were only revealed in the scores for the experts.
6. A Discussion

There is evidence from the acceptance rates of learners in intermediate proficiency levels that the *de re* (specific) interpretation is harder to get with *ne* placed low than with *ne* placed high. In contrast, the *de dicto* (non-specific) interpretation is unaffected by the placement of *ne* with respect to the intensional verb. This receives a ready explanation if *ne que* is analyzed as a bi-partite structure: In the standard theory of scope, the *de dicto* reading is due to interpretation inside the complement of the intensional verb and therefore in its scope. In contrast, the *de re* construal requires interpretation outside the scope of the intensional matrix verb, outside the complement of the verb. This involves added computations. When *ne* is placed low in the scope of the intensional verb, the *de re* interpretation outside the scope of the intensional verb comes with significant additional costs. On the holistic treatment, such knowledge would have to come from observation. In addition to the conceptual problems associated with induction which make it unfeasible, we do not expect that novices would exhibit any sensitivity to scope differences for lack of direct experience, but they do. This suggests that such sensitivity to scope results from calculations rather than from observations.

7. Conclusion

We found in English-French evidence of subtle scope interactions between negation, intensional verbs and existential exceptive expressions, which are naturally explained if English-French learners calculate the meaning of *ne que XP* in terms of two independent elements: negation associated with *ne* and an existential exceptive expression associated with *que*. In contrast, the hypothesis of a lexical stipulation that *ne que XP* means *only XP* together with additional scope statements established by observation seems unworkable on conceptual and empirical grounds. Thus, the evidence strongly suggests that English-French learners (like native speakers) are inherently guided to treat the *ne...que XP* structure compositionally, with *ne* as a negative head and the *que* phrase as an existential exceptive expression locally licensed by negation.

References
