I propose a new theory of questions that takes strength of exhaustivity to be encoded internal to the question nucleus rather than in different answerhood operators (c.f. Heim 1994). Strength of exhaustivity is relevant when we look at embedded questions. For example, *know* is claimed to embed strongly exhaustive (SE) questions while *surprise* weakly exhaustive (WE) questions. The strength of a question relates to how “complete” the answer to the question is. The WE answer to *Who came to the party?* is the proposition that names all the people who came, while the SE answer furthermore says that nobody other than those people came. The standard view takes question strength to be the result of having two answer operators apply to the Hamblin set in (1), as in (1a) and (1b).

\[(Q) = Ap_{\{s\}}\exists x \in \text{person} x \text{ came}\]

a. \[\text{ANS.WE}(Q) = \lambda w. \forall p \in Q [p(w_0)=1 \rightarrow p(w)=1] \quad \text{realize(Ann, ANS.WE(Q))} \]

b. \[\text{ANS.SE}(Q) = \lambda w. \forall p \in Q [p(w_0)=p(w)] \quad \text{know(Ann, ANS.SE(Q))} \]

~ Bill and Joan came.

\[\sim \text{Only Bill and Joan came.}\]

Among the shortcomings of such an approach to questions are the following two facts. First, the semantics of question embedding predicates (QEPs) needs access to more than just the proposition that constitutes the answer (cf. Spector (2005) and George (2011)). For *John knows who came* to be true, John needs to have no false beliefs with respect to the propositions in (1). In a system in which *know* (and QEPs more generally) take as their argument the answer to the question, it’s impossible to offer a compositional semantics for *know* that would derive the ‘no false beliefs’ requirement, suggesting that a departure from the system in (1) is independently needed. Similar arguments can be offered for other QEPs but I will instead focus on another shortcoming, which relates to an observation made by Guerzoni&Sharvit (2007). They claim that NPIs are acceptable in SE but not WE questions, see (2), but show that there is no way to maintain a uniform account of NPIs that takes them to be licensed in DE environments given that ANS.SE, as defined in (1b), does not create a DE context, but merely a non-monotonic one which is not sufficient for NPI survival.

(2) *John knows кто был* surprised by who ate anything at the party.

While I agree with them that ANS.SE is not DE, I disagree with their conclusion that the distribution of NPIs calls for a multi-layered approach “in which both entailment reversal and strength of exhaustivity . . . must play a crucial role.” I take their observation as a sign that our current understanding of how the WE/SE distinction is derived is flawed. We can account for both observations above by encoding the WE/SE ambiguity at the level of the question nucleus, thus doing away with ANS operators and instead having QEPs act directly on the set of possible answers. In this system, *surprise* would take as argument the set in (3a), while *know* would take as its sister (3b).\(^1\)

(3) a. \[Q_{\text{WE}}=\{B came, M came, J came, B&M came, B&J came, M&J came, B&J&M came\}\]

b. \[Q_{\text{SE}}=\{\text{only B came, only M came, only J came, only B&M came, only B&J came, . . .} \}

While my approach ultimately takes the meaning of answers to be the same as before, (3) vs (1), I depart from previous proposals in terms of the compositional steps that derive them. The LF corresponding to (3a) is provided in (4a), in line with current approaches to the underlying representation of questions. In order to derive (3b), a SE question, I assume we have a null IP-level only that associates with the wh-trace, as in (4b).

\[(Q) = \lambda p [\lambda 1 [\lambda w [g(1) \text{ ate}_w \text{ anything }]]]]\]

a. \[\text{Q}_{\text{WE}} = \lambda p [\lambda 1 [\lambda w [g(1) \text{ ate}_w \text{ anything }]]]]\]

b. \[\text{Q}_{\text{SE}} = \lambda p [\lambda 1 [\lambda w [g(1) \text{ ate}_w \text{ anything }]]]]\]

(i) \[\text{IP}_1 = \text{x ate anything} \quad \text{UE} - \text{^NPI}\]

(ii) \[\text{IP}_2 = \text{nobody other than x ate anything} \quad \text{S-DE} - \text{^NPI}\]

(iii) \[\text{IP}_3 = \text{x and nobody other than x ate anything} \quad \text{NM} - \text{^NPI}\]

\(^1\)One possible way to account for these selection requirements is by invoking some version of maximize strength. Observe that *we*-predicates, namely emotive predicates, are DE in their propositional incarnation, meaning that embedding an only proposition (which is stronger than its non-only variant) in their scope gives rise to a weaker meaning than embedding the non-only variant.

\(^2\)\(A\) stands for the assert operator which accommodates the presupposition introduced by only (and only that presupposition).
This more nuanced underlying representation of SE questions allows us to see why NPIs behave the way they do. The idea, in a nutshell, is that while globally, SE questions denote sets of non-monotonic propositions (also shown by G&x;S), at some level underlyingly, namely IP2, we have a Strawson-DE environment where the NPI can be claimed to be licensed; the same mechanism used to account for the licensing of NPIs in the scope of only can be shown to work here too. Positing a silent only underlyingly also allows us to account for the fact that NPIs like in weeks and either are never acceptable in questions since these types of NPIs are also ruled out from the scope of overt only, a novel prediction that no other account to date can make, particularly accounts that propose that questions contain a null negation.

With this new LF for SE questions we can now furthermore understand why the subject/object contrast noted by Han&Siegel (1997) holds, namely why NPIs can survive only if c-commanded by the wh-trace. In a framework that takes NPIs to enter into an agree relation with an exhaustifier &x;, we can account for the contrast below as an interplay between the satisfaction of 2 requirements: a syntactic requirement that different dependencies needs to nest rather than cross, and a semantic requirement that the NPI must be exhaustified above a DE operator (cf. Gajewski 2011, Chierchia 2004).

(5) He knew who ate anything.
only [&x; [t ate anything]] Syn SEM ALL
&x; [only [t ate anything]] ✓ ✓ ✓

(6) *He knew what anyone ate.
only [&x; [anyone ate t]] Syn SEM ALL
&x; [only [anyone ate t]] ✗ ✓ ✓

Another consequence of this account is that it allows for a straightforward analysis of alternate questions, namely questions with disjunctive phrases whose disjuncts are focused. I take these questions to have the same underlying representation as wh-questions by analyzing the disjunctive phrase a or b as a wh-phrase that moves covertly. The proposal for why disjunctions can function both as regular existentials and as interrogative existentials is that they can optionally bear a wh feature. Just like existential quantifiers have a +WH and -WH incarnation, (7a), so do disjunctive phrases, (7b). The only difference is that or+WH undergoes covert wh-movement (only at LF) while regular wh-words move overtly. By extension, I claim only can associate with the disjunction, helping us understand better why the disjuncts are prosodically focused.

(7) a.  
  \[ \exists \text{-WH (some)} +\text{WH (which)} \]

b.  
  \[ \neg \text{-WH (or)} +\text{WH (or)} \]

Lastly, note that this analysis makes the novel prediction that alternate questions, like wh-questions, should exhibit the same asymmetry wrt the relative c-command position of the NPI and the disjunction: NPIs are acceptable in alternate questions only if the NPI is c-commanded by the disjunctive phrase, (9) but not (8).

(8) *Did anybody order cake[f] or flan[f] for dessert? ~ Which of cake or flan did anyone order?

(9) Did Mary[f] or John[f] order anything for dessert? ~ Which of M or J ordered anything?

This account is specific to constituent questions and thus has nothing to say about the licensing of NPIs in YES/NO questions, which still remains a mystery for all accounts of questions. Space limitations preclude a detailed account, but the proposal, in a nutshell, is that Did Mary eat anything? is actually interpreted as the conditional I want to know if Mary ate anything. Given that the question as a whole ends up interpreted in the antecedent of a conditional, an S-DE context, we expect no subject/object asymmetries of the type mentioned above, which turns out to be true. We also predict that NPIs ruled out from the antecedent of conditionals to also be ruled out from polar questions, such as in weeks, which seems to be correct.


There are independently motivated concerns that require us to appeal to local accommodation which, however, are too involved to discuss in this abstract.