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The semantics of questions

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Abstract

Pinning down the **semantics of questions** poses a challenge for the study of meaning. Unlike most declarative statements, questions cannot be assigned a truth value. They do not assert information about the world that can be easily verified as true or false, or accepted or rejected. Instead, their function as a speech act is to interrogate, to seek information about the world. Thus a truth-conditional approach to the **semantics of questions** runs into a dead end. We must therefore evaluate the **semantics of questions** in terms of the propositions that serve as their answers. But here, a number of questions arise that shape our investigation. What counts as a suitable answer, in general or in a given discourse context? How does the variability of question types within and across the world's languages influence our theory of a unified **semantics of questions**? When questions are embedded under a matrix verb like "know," which takes the question as a sentential complement, how does the **semantics of questions** feed into the assessment of the proposition expressed by this declarative utterance? What must the subject of the sentence know? Should they be required to know or list an exhaustive list of true answers or one true answer, should they know of the false answers that they are false? What answers are licensed? How can questions reflect a bias on the part of the speaker? These issues lie at the heart of an investigation of the **semantics of questions**.

This article is characterized under:

Linguistics > Linguistic Theory

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questions, semantics

1 | INTRODUCTION

Inquiry is so fundamental to our human experience that every documented natural language in the world encodes some way of forming a question. Virtual agents designed to respond to voice queries and adapt to individual users are now a part of everyday life. Researchers from a wide range of disciplines are engaged in work with questions at the heart of their enterprise. Philosophers have asked what it means to know an answer to a question, and how the process of inquiry constructs and illuminates our knowledge. Computer scientists who specialize in artificial intelligence, machine learning, natural language processing/understanding, and speech recognition have sought to improve the ability of virtual systems that interact with humans and respond to questions. Researchers who study language development have studied when young children produce questions and how they interpret the questions they hear.

Linguists have approached the study of questions from two main perspectives. On the one hand, syntacticians have been concerned with the principles governing the formation of different types of questions within and across the languages of the world, and what these patterns say about our grammar (Box 1).

On the other hand, semanticists have investigated the meaning of questions themselves. This last line of research proves especially challenging, and relevant to the work of all of the other aspects we mentioned above. It is precisely this aspect of questions we focus on here: the **semantics of questions**.

To appreciate the issues that arise in the study of the **semantics of questions**, let us start with the question (1).

(1) **Where** did Dana buy coffee?

Before we begin probing the semantics, we might ask, how do we know this is a question? In English, we can identify interrogative illocutionary force from a number of features. Specifically, the "wh"-word "where" has moved to the front of the sentences from its base position as an adverbial phrase following "coffee," followed by "do"-insertion, as in (2).

(2) a. Dana buy coffee **where**?

b. **Where**$_i$ did Dana buy coffee t_i?

Other languages, such as Japanese, Swahili, or American Sign Language, mark question status with the presence of a dedicated question particle. Notice that in asking a "wh"-question such as the one in (1), the speaker *presupposes* (i.e., takes for granted, or assumes it to be part of the common ground) that Dana has indeed bought coffee somewhere.

The prosody or intonation the speaker uses can signal an utterance's question status. A *yes–no* question such as "Did Dana buy coffee?" or "Has Dana bought coffee?" also involves some movement (inversion of the subject with the auxiliary verb, or head of the VP, and the possibility again of "do"-insertion). A *yes–no* question (also called a *polar* question) will be accompanied by a different intonational pattern (a rising boundary tone: H-H%). Even a declarative utterance (such as "Dana bought coffee at Dunkin Donuts?") can be interpreted as a question if it has a rising boundary tone. Incorporating negation into the

BOX 1 TYPES OF QUESTIONS

There are many different kinds of questions, and question formation varies across languages. The glimpse of question variation included here in English alone highlights differences in the types of answers each of these questions call for, as well as the discourse conditions in which they are felicitously used, including bias driven by speaker expectations or prior knowledge.

***Yes-no*/Polar Questions**
Has Dana read *Atonement*?

Alternative Questions
Will Dana watch *Brave* or *Up*?

Multiple *wh*-Question
Who brought **what** to the party?

Rising declarative
Dana got an A on the test?
There is a pop quiz today?

Tag Questions
It's hot today, isn't it?
You know exactly what you did, don't you?
Her mother is a pilot, right?

Echo Question
You're going *where*?

question ("Dana didn't buy coffee?") or framing the question as a tag question ("Dana bought coffee at Peet's, didn't she?") introduces speaker bias signaling (roughly) that the questioner had prior expectations regarding the space of possible answers. Thus, questions are not only information-seeking, but they encode important information linked to a speaker's knowledge. This issue of how speaker knowledge (whether on the part of the questioner or the answerer) becomes relevant when we turn to embedded questions.

Other questions such as "Can you pass the salt?" might be used to request an action on the part of the listener, rather than to request information. Still other sentences in natural language, such as the declaratives in (3), might serve as "indirect questions" in which the speaker implicitly asks the listener for information without signaling the illocutionary force of the interrogative through conventional devices such as intonation or subject-auxiliary inversion.

(3) a. I'm looking for a nice dark roast.
b. I'd like to know whether you have a nice dark roast.

It is the goal of linguists to account for both the variability in question formation (*syntax*) and interpretation (*semantics*), and for how those facts interact with *pragmatics*. Keeping that in mind, perhaps the easiest case study for the **semantics of questions** is a simple "wh"-question like (1). Here, we provide an overview of the major points, controversies and desiderata for a theory of the **semantics of questions**. We start by introducing the basics of truth conditional analysis and illustrating how the study of questions poses a prima facie challenge. We then introduce a solution proposed by Hamblin, which established the traditional analysis of the **semantics of questions** relying upon exhaustivity. We expand upon this basic idea to discuss various degrees of exhaustivity. Finally, we uncover additional issues in the **semantics of questions** that have arisen in light of the observed acceptability and contextual variability of non-exhaustive answers.

2 | TRUTH CONDITIONS AND QUESTIONS

The first challenge in the **semantics of questions** is that questions such as (1) cannot be assigned a truth-value, because they do not actually state something about the world that may be evaluated as true or false. What does this mean? Take a classic example such as (4) from Tarski (1935). In order to evaluate whether this sentence is true, we can look outside on a winter day at the snow that is falling and inspect its color. To state the truth-conditions of (4), Tarski developed truth-schemas as in (5).

(4) Snow is white.

(5) 'Snow is white' is true if and only if snow is white.

This approach was originally intended for artificial languages (e.g., first-order predicate calculus), and was later extended to the study of meaning in natural language by Davidson (1967), Lewis (1970), and Montague (1973). It is the cornerstone of modern semantic theory, and thus the framework in which the **semantics of questions** developed. While we cannot assign a truth-value to a question per se, we *do* have clear intuitions about the truth-values of most declaratives.

At the turn of the 20th century, Gottlob Frege distinguished the *force* (the speech act conveyed by the use of the expression) from the *content* of an expression (the information (meaning) that it conveys). This distinction facilitated the separation between the study of pragmatics (how an utterance may be used) and the study of semantics (what an utterance means). Take the sentences in (6). While (a) has *assertoric* force, (b) has *interrogative* force. However, they both contain the same *content*. This shared content is a *proposition*. A common assumption in formal semantics and philosophy is that propositions are the objects of attitudes and are the primary bearers of truth and falsity (Lewis, 1970, 1973; Stalnaker, 1984).

(6) a. Dana bought coffee at Stumptown.
b. Did Dana buy coffee at Stumptown?

We are *almost* in a position to capture the content of the question in (1), but there is still a problem. The derivation in (2) indicates that the "wh"-word has moved from its base position. If we want to evaluate the declarative counterpart of (1), we have to return the "wh"-phrase to its pre-movement position. Once there, it is expressed as a variable, as in (7), since the location of Dana's coffee purchase is unknown.

(7) Dana bought coffee at **x**.

A sentence with a variable is missing information that would allow for it to be evaluated for truth or falsity. It does not express a proposition. (7) is therefore called a *sentence radical*, or *open proposition*. How then do we proceed with a truth-conditional semantic analysis of questions?

Hamblin (1958) proposed a three-part solution. First, while a question may not express a proposition, an answer to a question is a declarative statement, which *does* express a proposition. Thus, answers to questions are amenable to truth-conditional analysis. Because a "wh"-word is expressed by a variable in the declarative statement, we can think of the "wh"-word as denoting a *set* of places (in our example, places where Dana can buy coffee). "Stumptown" is a member of this set—the actual place where she bought coffee, but we can also imagine inserting other locations (Starbucks, Peets, La Colombe, Wawa and so on). In this way, we can in principle generate a set of answers to the question in (1), for each member of the set.

Second, Hamblin suggested that knowing a question is equivalent to knowing what counts as an answer—knowing "where Dana bought coffee" is equivalent to knowing "that Dana bought coffee at Stumptown." Thus, the truth conditions of (8) and (9) should be the same. In other words, (8) and (9) mutually *entail* each other, because when one is true, the other must be true as well.

(8) Anna knows **where Dana bought coffee**.
(9) Anna knows **that Dana bought coffee at Stumptown**.

Third, Hamblin proposed that the possible answers to a question should be an exhaustive set of mutually exclusive possibilities. We generate this set by substituting for the variable each element of the set denoted by the "wh"-phrase. Let us say this set is {Stumptown, Starbucks, Peets, La Colombe, Wawa}. We can then generate the set of propositional answers in (10), assuming mutual exclusivity.

(10) {Dana bought coffee at Stumptown, Dana bought coffee at Starbucks,Dana bought coffee at Peets, Dana bought coffee at La Colombe,Dana bought coffee at Wawa}

In this way, not only did Hamblin's work establish the study of the **semantics of questions**, but along with the work of Rooth (1985) on focus, it laid the groundwork for what is now known as Alternative Semantics.

3 | ANSWERS TO QUESTIONS AND ANSWERHOOD

Hamblin's analysis generated considerable debate about *which* answers should count as possible or acceptable answers to a question. In theory, one might consider a variety of ways in which a listener could felicitously respond to the speaker's question in (1).

(11) a. Dana bought coffee **at Stumptown Coffee**.
b. **Stumptown Coffee**.
c. I don't know.
d. I don't keep tabs on Dana. Go ask someone else.

Some of these, such as in (c) and (d), are pragmatically acceptable (or *felicitous*), but they do not directly answer the question by filling in missing information. In both cases, the listener may or may not being fully cooperative with the speaker who posed the question. It is possible that they do not know the answer, and so they at least provide a response to the question that indicates as much in response to the speaker. Or, it is possible that they know the answer, and are withholding the information from the speaker.

Semanticists are concerned with the direct answers to a question, such as (a) or (b), which indicate that the speaker knows something about the content of the question. It is knowledge of these that Hamblin claimed constitutes knowledge of a question's answerhood conditions. We will refer to these as the *semantic* or *congruent answers*, because they maintain the syntactic and semantic form of the question, but with a value for the "wh"-word substituted in (11a) is a full, propositional answer, while (11b) is *fragment* answer. In a fragment answer, we might think of the rest of the proposition as having been elided. We can make further distinctions. If Dana bought coffee at multiple places, then responding as in (a) or (b) might be considered a *partial answer*. We'll return to these later. But if the listener provides a proposition corresponding to each of the locations where she bought coffee, then the listener will have provided a *complete answer*. As a reminder, a simple declarative answer

like (a) can be assigned a truth-value, because it asserts something true or false about the world. Thus, we take the simple question–answer pair in (1)/(11) as our starting point (Box 2).

We might ask about the status of the members of the set of propositional answers that a listener *could* provide. Consider a question such as (12), and the embedded counterpart in (13). Focusing on so-called "embedded questions" allows us to evaluate the truth value of sentences with questions in a way that focusing on "root questions" does not allow us to do. This insight is also due to Hamblin. Analyzing embedded questions also allows us to dive into the issue of *exhaustivity*, which stands at the heart of question semantics. To assess the truth value of (13), one must determine what Ellie (the subject) knows about the possible answers to the corresponding root question. We turn to this issue now, because there have been different accounts concerning how to evaluate the answers to these embedded questions.

(12) Who came to the party?
(13) Ellie knows who came to the party.

Hamblin proposed that questions set up a choice-situation between a set of propositions—those that count as answers to it. To know a question is to know what counts as a *possible* answer. For Hamblin, these propositions are possible answers *regardless of whether they are true or false*; what is important is that they directly address the question. Thus, to answer (12), Ellie must be able to report a possible answer (e.g., propositions such as those in (14)).

(14) {Anna came to the party, Brian came to the party, Camille came to the party, Devin came to the party}

Hamblin's proposal introduced an important question: Which answers should count as possible answers? Karttunen (1977) argued that only the *true* answers should count. Thus, if Devin did not, in fact, come to the party, Ellie need not know this fact. Intuitively, something about this seems right: if Ellie reports in response to (12) that Devin came to the party, does she

BOX 2 THE SEMANTICS AND PRAGMATICS OF THE QUESTION–ANSWER EXCHANGE

What is the function of a question, and what is the relation between the speaker posing the question and the listener providing the answer? Generally, questions are *speech acts*, which function to seek information from the interlocutors around us. They are inherently interactional: a speaker typically poses a question, because they have a *contextual goal* or are faced with a particular *decision problem*. Acquiring the information they are missing will help them reach this goal or resolve this problem, and they think the hearer can help them do this.

A speaker is therefore motivated to pose a question that maximizes the likelihood of eliciting from the hearer information relevant to resolving the goal. A cooperative hearer will provide an informative answer, insofar as they are able to calculate inferences about the intention and goal behind the speaker's question. This task inherently involves uncertainty: the speaker's goal, intentions and mental states are not directly observable and must somehow be inferred. In spite of all this uncertainty, human communication often proceeds effortlessly.

For the linguist, understanding the question–answer process requires an understanding of the **semantics of questions**, the syntactic structure and surface-level form of questions, cross-linguistic variability of question formation, the pragmatics of the conversational exchange, and the mental states or cognitive representations of the conversational participants.

really seem to know who came to the party? Karttunen provides evidence for his account by comparing the entailment patterns between propositional and question complements.

Consider the sentences in (15):

(15) a. Ellie knows that Anna came to the party.
b. Ellie knows that Devin came to the party.

An embedding verb such as *know* is factive. It presupposes the truth of its *propositional complement*. Note the difference between (15a) and (15b): (15a) is true in the situation we are considering, but (15b) is infelicitous, because Devin *did not* come to the party. (The sentential complement is false.) When "know" embeds a question, it is still factive: for (13) to be true, Ellie only need to know the true answers and list all of the people who came to the party (Box 3).

However, not all proposition-embedding verbs are factive. Compare (16a and 16b). Verbs such as "tell", "report", or "inform" do not impose a requirement on the truth of their propositional complement. In other work, Karttunen captured this difference by referring to *holes* and *plugs*, of which factive and non-factive verbs are members, respectively.

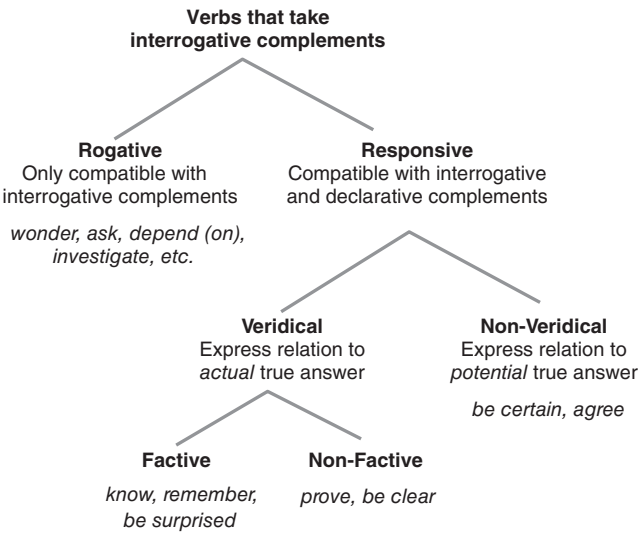
(16) a. Ellie told us that Devin came to the party.
b. Ellie told us who came to the party.

In the example above, (16a) can be true even if Devin did not come to the party. But when a non-factive verb embeds a question as in (16b), it does seem at first blush to impose a requirement that the complement is true (although one could still follow up that statement by indicating that Ellie was mistaken). Karttunen's approach to the **semantics of questions** captures *weak exhaustivity* of answers. Hamblin/Karttunen style theories of question semantics are generally called *proposition set* approaches.

Later researchers argued that weak exhaustivity is not strong enough. Groenendijk and Stokhof (1982, 1984) rejected the Hamblin/Karttunen-style semantics, and proposed that the root denotation of a question is a *partition* over possible worlds. According to Groenendijk and Stokhof, if (13) (repeated from above) and (17) are true, then (18) directly follows, because (13) entails (18).

BOX 3 TYPOLOGY OF INTERROGATIVE-EMBEDDING VERBS

Verbs impose restrictions on the complements they take. By looking at restrictions on answerhood imposed by different embedding verbs, we gain insight into the **semantics of questions**. Below is an adaptation of the typology of interrogative-embedding verbs (Lahiri, 2002; Spector & Egré, 2015).



(13) Ellie knows who came to the party.

(17) Devin didn't come to the party.

(18) Ellie knows that Devin didn't come to the party.

This proposal differs from a proposition set semantics, where Ellie would be required to know of the true answers (the positive extension) that they are true, but not necessarily know of the false answers (the negative extension) that they are false. Karttunen's semantics is thus compatible with Ellie having ignorance, or even false beliefs, about the negative answers. In contrast, Groenendijk and Stokhof require that Ellie knows which answers are true, and which are false. This *partition set theory* captures what was later called *strong exhaustivity* of answerhood.

Researchers on the **semantics of questions** disagree about whether a factive verb such as 'know' lexically *requires* strong exhaustivity. Sharvit (2002) said of (19) that many speakers find it "perfectly acceptable in certain contexts," (p. 112) (and we agree). At first blush, this seems to be a counterexample to strong exhaustivity. If Groenendijk and Stokhof are right, then the speaker/subject/agent must know of the people who were admitted that they were admitted, and of the people who were not, that they were not.

(19) I know who was admitted to the program, but I have no idea who wasn't admitted.

However, Sharvit introduced the following examples in (20) and (21) to highlight a contrast between "know" on the one hand and the emotive factive verb "surprise" on the other. Here, we see "know" requires strongly exhaustivity, while "surprise" licenses weak exhaustivity. These contrasts appear to stand for multiple languages, but we focus on English.

(20) John doesn't REALLY know who left.
For example, he doesn't know that Sally didn't leave.

(21) It didn't REALLY surprise Bill who cheated on the exam.
#For example, it didn't surprise him that Mary didn't cheat.

Why then should "know" seem to permit weak exhaustivity in (19), but demand strong exhaustivity in (13)/(20)(20)? George (2013) argued that one must consider what the agent knows, and how we restrict the domain of the "wh"-word.

Take the sentence in (22), which George (2011) adapted from the examples discussed by Sharvit (2002) and Guerzoni and Sharvit (2007). Consider a context where Rupert has only four students. George says that (22) sounds much odd than a sentence such as (19) (modified to have a name in subject position), because Rupert should know who his four students are, and the "wh" partitive phrase restricts the domain. (Again, we agree.) Thus when the domain of the "wh"-word is fixed, there is strong exhaustivity; when it is not, there is weak exhaustivity. George thus takes this contrast to provide a word of caution about jumping to a conclusion that weakly exhaustive readings with "know" are licensed, and that other factors must be considered.

(22) Rupert knows which of his four students were admitted, but he doesn't know which weren't.

Are strong and weak exhaustive readings all there are to consider? Perhaps not, especially if we think of exhaustivity in terms of *degrees of exhaustivity*. Klinedinst and Rothschild (2011) introduced a third kind of exhaustivity, *intermediate exhaustivity*, which is stronger than weak exhaustivity, but weaker than strong exhaustivity. On this reading, a speaker would know of the true answers that they are true (the weak exhaustive reading), and crucially hold *no* false beliefs about the false answers. Not all verbs allow for an intermediate reading: only non-factive verbs do (although, technically the semantics proposed by Klinedinst and Rothschild allows for the possibility that any verb may allow it).

To explore this reading, consider a context where we are playing a game in which John must tell me or accurately predict who sang, among Frank, Emilio, and some other people. He may answer "sang," "did not sing," or "not sure." Imagine that Frank and Emilio sang, but the others did not. According to Klinedinst and Rothschild, if John accurately reports that Frank and Emilio sang, then he should get a prize, because he accurately said or predicted who sang. And even if he reports that Frank and Emilio sang, but reports "not sure" about the others, then not only is (23) true, but (24) is, too.

(23) John {predicted/told me} who sang.

(24) John {predicted/told me} who sang, but he didn't {predict/tell me} who didn't sing.

Note that even when we have fixed the domain, as we did earlier, the strong exhaustive reading is not required with these non-factive verbs, because John need not name the non-singers. Now, imagine that another player, Bert, reports accurately of Frank and Emilio that they sang, but inaccurately reports of Bill that he did. Klinedinst and Rothschild say that Bert should not get a prize; false reports are not allowed.

From what we have said so far, it looks as though a statement with an embedded question will be assessed as true as long as the subject (the "attitude holder") can supply at least the true answers, and that the level of exhaustivity can be amplified based on the matrix, or embedding verb. However, the situation is even more complex. Consider example (25) in a context where Lindsay and Martin have attended the same potluck. Imagine that both Lindsay and Martin share a mistaken belief that Naomi, Olivia, and Patrick have left. Under these circumstances, (25) could still be true. Thus, "agree" does not require the propositional answers to the question it embeds to be true. For this reason, Beck and Rullmann (1999) argue that some question-embedding verbs are sensitive to *possible* answers, rather than to *true* ones.

(25) Lindsay and Martin agree on who left.

We have outlined three levels of exhaustivity, and presented data motivating them. Semanticists and philosophers continue to debate whether all of the various readings are available, and if so, under what conditions they are, and what gives rise to them. A number of questions arise, such as how much the lexical semantics of the embedding verbs play a role, what influence the context has, whether there are abstract operators in the semantics (or *logical form*) that give rise to the various readings, whether questions are ambiguous or under-specified, and so on. Other issues that we have not touched upon in this study include de dicto/de re readings and multiple "wh"-questions, which give rise to pair-list answers.

4 | NON-EXHAUSTIVITY

Up until now, we have restricted our attention to *complete* answers, because these form the foundation for investigating the **semantics of questions**. However, we can now expand our focus and consider answers that are controversially *partial*. Consider a scene that might have occurred before Dana ever bought the coffee we mentioned in (1). Let us say Dana is unfamiliar with the area and is looking to buy a coffee. She approaches someone (a local), and poses the question in (26). Let us imagine that the local truthfully gives a response as in (27).

(26) Where can I buy a cup of coffee?

(27) (You can buy coffee at) Stumptown.

The answer provided to Dana's question is certainly not exhaustive, unless this is a very small town and Stumptown is the only place that sells coffee. We call this answer a *mention-some* answer, because it provides a non-exhaustive answer to the question (Hintikka, 1976). Interestingly, in this context, Dana is most likely *not* looking for an exhaustive list of true answers, of any strength. She simply wants to know where, probably nearby, she can get some coffee. In that respect, the answer in (27) is not only acceptable, but is preferred to an exhaustive answer.

We have established that mention-some answers are acceptable answers to root questions. What do they reveal about the **semantics of questions**? They have two main contributions. First, the discourse conditions that license mention-some answers are informative about the ways in which pragmatics and semantics interact (see Grice, 1975), since we must not only identify what aspects of the grammar (the semantics) permits certain utterances in the first place, but also whether certain utterances are acceptable, given a particular discourse context or question–answer exchange, and what their occurrence signals to the interlocutor. For example, Do non-exhaustive, mention-some answers imply ignorance, a level of shared common ground, or implicit domain restriction?

Are mention-some answers sufficient for the purposes of evaluating the truth of a statement with an embedded question? Consider again the embedded question in (8), repeated here. The semantic theories discussed so far said of this question that Anna should know of the places where Dana bought coffee that she bought coffee there (weak exhaustivity), and perhaps also

of the places where Dana did not buy coffee, that she did not purchase coffee there (strong exhaustivity). But now suppose that Anna is the local person that Dana asked about places to buy coffee. Based on Anna's accurate response in (27), is (28) true? Many people say "yes" (and we agree). But now imagine a different scenario in which Dana is a food blogger reviewing local businesses. Although Anna's response in (27) may be accurate, Dana would expect much more from her, perhaps not just an exhaustive list of true answers, but even some level of knowledge about the false ones (Groenendijk & Stokhof, 1984). If exhaustivity is purely determined by semantics (either the question's or the matrix verb's), this contextual variability is indeed surprising.

(8) Anna knows where Dana bought coffee.

(28) Anna knows where Dana can buy a cup of coffee.

Some researchers have argued that the existential modal "can" (as in (26) and (28)) is responsible for licensing the mention-some answer (see Xiang, 2016). But this claim raises further questions. Is the possibility of a mention-some answer *dependent* on the modal, or does the modal only *facilitate* its availability? Is the mention-some reading available for any embedded question, even those without a modal? Other questions are being asked in parallel. Should an acceptable *mention-some* answer be a *mention-one* answer (Xiang, 2016), or can it simply be partial and not complete? If the latter, is a weak exhaustive answer a form of a mention-some answer (George, 2011), and is it an example of contextually permissible deviation from the complete answer? The answers to all of these questions (exhaustive or not) will lead to a much richer understanding of question semantics.

5 | CONCLUSION

We have provided an overview of the truth-conditional approach to the study of meaning, and its extension to the **semantics of questions**. We began with the observation that while we cannot identify the truth conditions of questions in the same way as for declarative statements, we can recruit the truth conditions of declarative answers to questions as a means to identify the **semantics of questions**. This led us to the proposal that the meaning of questions be thought of in terms of their propositional semantic answers. Then we observed several empirical patterns of root questions and answers, and embedded questions. We concluded that there are degrees of exhaustivity of answerhood. Finally, we covered context-dependent non-exhaustive readings, which raised a number of questions regarding the interaction of semantics and pragmatics, the role of the discourse context, and the source of answerhood.

We have focused on English throughout this article to highlight the range of issues that arise even with a handful of question–answer exchanges in one language. Once we move to any of the thousands of other languages in the world, additional issues arise. Investigating of the **semantics of questions** has been and will continue to be an important research enterprise in linguistics and philosophy for years to come, because—as we mentioned at the outset—every language has a way to express questions. Questions are a fundamental part of our daily engagement with others around us. Understanding the **semantics of questions** thus allows us to understand more about ourselves, and how we interact with others and the world around us.

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CONFLICT OF INTEREST

The authors have declared no conflicts of interest for this article.

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