
Michael Glanzberg (2005)

QUESTIONS

All too often when philosophers talk and write about sentences, they have in mind only indicative sentences, that is, sentences that are true or false and that are normally used in the performance of assertions. When interrogative sentences are mentioned at all, it is usually either in the form of a gesture toward some extension of the account of indicatives or an acknowledgment of the limitations of such an account. For example, in the final two sentences of his influential paper “Truth and Meaning” (1967), Donald Davidson remarks, “And finally, there are all the sentences that seem not to have truth values at all: the imperatives, optatives, interrogatives, and a host more. A comprehensive theory of meaning for a natural language must cope successfully with each of these problems.” Nonindicatives are an embarrassment to Davidson’s program of identifying meaning with truth conditions. They are equally an embarrassment for the old identification of meanings with verification conditions, as well as the newer identification of meanings with inferential roles. Nonindicatives in general, and interrogatives in particular, have neither truth conditions nor verification conditions, nor do they function naturally or principally as the premises or conclusions of inferences. Yet they are no less meaningful than indicatives. And they are certainly no less important. As Nuel Belnap has observed, following David Harrah, “[W]e will not assert anything ever, nor profit from the assertions of others, without at least the traces of such interests as can be expressed by interrogatives” (1990, p. 16).

Why have philosophers felt comfortable in virtually ignoring interrogatives and the other nonindicatives? Probably because of the persistent yet rather inchoate idea that indicatives and assertion are somehow fundamental to language and meaning, and that the other forms of sentences and speech acts are secondary or derivative, perhaps even unnecessary. J. L. Austin railed against this idea in How to Do Things with Words (1962). Austin’s pioneering work gave birth to the field of speech-act theory, which found its fullest development in the work of his student John Searle. Speech-act theory is one of the few areas in philosophy that pays due attention to uses of language other than assertion. But even here one finds a residue of the tendency to subordinate the nonassertive to the assertive. We will return to this issue a bit later on.

Outside of speech-act theory, the idea that interrogatives and the other nonindicatives are secondary survives in a number of forms. The aforementioned identification of meaning with truth conditions is a primary example. One sometimes hears philosophers defend this idea by observing that everything that can be done with language can be done with just assertions. One can ask what time it is by asserting, “I wish to know what time it is”; one can command another to lower a weapon by asserting, “You will lower your weapon”; and so on. In the opposite direction, any assertion can be performed by way of a question or an order. For any p, one can assert that p by asking “Did you know that p?” or by commanding “Be aware that p.” Just as questions and orders can be performed indirectly by way of assertions, assertions can be performed indirectly by way of questions and orders.

There is also the widespread view that the shared contents of all sentences and speech acts are propositions, which are nonlinguistic representations that are true or false and are the objects of belief and assertion. For example, it is thought that, in addition to its interrogative mood, the interrogative sentence “Did Martha shoot Henry?” expresses the proposition that Martha shot Henry, the same proposition expressed by the indicative sentence “Martha shot Henry.” Similarly, in asking whether Martha shot Henry, a speaker expresses the very same proposition as when asserting that Martha shot Henry. The difference between these speech acts is located in what is called their illocutionary forces, not in their shared propositional content. The study of questions thus becomes a branch of the theory of force and not part of semantics proper, which is concerned with propositions and truth conditions. This provides some excuse for the philosophical focus on the truth-conditional areas of language at the expense of the vast non-truth-conditional areas.

FREGE AND WITTGENSTEIN ON QUESTIONS

The distinction between the propositional content of a sentence or speech act and its mood or force is associated
with Gottlob Frege, for whom this distinction was a recurring theme. It is not often noticed, however, that Frege changed his mind about this distinction with regard to interrogatives. In his important paper “On Sense and Reference” (1970), Frege’s view was that interrogative sentences do not express propositions (Frege’s word for propositions was “thoughts”). Rather, interrogatives express what Frege called questions, where a question is not a proposition but something that “stands on the same level” as a proposition. In his later paper “Thoughts” (1984), he reversed himself, arguing, “An interrogative sentence and an assertoric one contain the same thought; but the assertoric sentence contains something else as well, namely assertion. The interrogative sentence contains something more too, namely a request.” (p. 355). In other words, the sentences “Martha shot Henry” and “Did Martha shoot Henry?” express the same truth-conditional proposition. The difference is that the indicative sentence includes the force of assertion in the form of the indicative mood and the interrogative sentence contains the force of request in the form of the interrogative mood. (On imperatives, in contrast, Frege, in “Thoughts,” did not reverse his earlier position. He held throughout these sentences express commands, that is, contents that are like thoughts yet lack truth-values. Also, it must be noted that in “On Sense and Reference” Frege was discussing embedded questions, e.g., the “whether” clause in “Nancy knows whether Martha shot Henry,” whereas in “Thoughts” he was concerned with stand-alone questions, e.g., “Did Martha shoot Henry?” If Frege held that the indirect reference of an embedded question should differ from the sense of its stand-alone counterpart, which seems unlikely, then we need not read him as having changed his mind.)

Ludwig Wittgenstein clearly rejected Frege’s later account in Philosophical Investigations:

Frege’s idea that every assertion contains an assumption, which is the thing that is asserted, really rests on the possibility found in our language of writing every statement in the form: “It is asserted that such-and-such is the case”… We might very well also write every statement in the form of a question followed by a “yes”; for instance: “Is it raining? Yes!” Would this show that every statement contained a question? (Sec. 22)

One of the ideas in this passage is a criticism of Frege’s arbitrary identification of the contents of interrogatives with propositions. One could hold instead that the shared content of “Martha shot Henry” and “Did Martha shoot Henry?” is an interrogative content, something akin to a proposition except that it has interrogative-satisfaction conditions, that is, conditions of being properly answered, instead of truth conditions. Then one could say that the indicative contains this interrogative content along with an element of affirmation (“yes!”). Wittgenstein’s point is not that this alternative is preferable to Frege’s, but rather that both accounts are arbitrary and should be rejected. In other words, indicatives and interrogatives have distinct kinds of contents. Of course, this was the view that Frege held in his earlier work “On Sense and Reference.”

QUESTIONS IN SPEECH-ACT THEORY

Despite Wittgenstein’s objections, many philosophers now accept Frege’s later view that propositions are the shared contents of indicatives and interrogatives. This idea is the foundation of Searle’s theory of speech acts. With a few exceptions (e.g., greetings, Searle analyzes speech acts on the basis of his schema F(p), where “F” stands for force and “p” for propositional content. A consequence of this is that, aside from greetings and a few other speech acts, most speech acts have propositions as their contents (a circumstance that is a residue of subordinating the nonassertive to the assertive). The distinctive feature of questions is their interrogative force, which Searle takes to be a species of request. For Searle, asking a question is a request for an answer. Questions thus fall into Searle’s more general category of directives, the paradigms of which are orders and commands. The defining feature of directives is that they are attempts by speakers to get hearers to do something. So on Searle’s account, a question is essentially an attempt by a speaker to get the hearer to provide an answer.

Another important feature of directives is that they have what Searle calls “world-to-words” direction of fit (1979, p. 14). This means that for a directive speech act to be satisfied, the world must come to match the proposition expressed in the performance of the speech act. When I order Martha to shoot Henry, I express the proposition that Martha will shoot Henry with the force of an order. My order is satisfied just in case Martha acts in the order expressed in the performance of the speech act. When I order Martha to shoot Henry, I express the proposition that Martha will shoot Henry with the force of an order. My order is satisfied just in case Martha acts to make this proposition true. This is the sense in which the order is satisfied if the world comes to fit the words used in the order. This position, however, leads to a problem when applied to questions. When I ask whether Martha shot Henry, my question is satisfied, that is, answered, just in case the hearer provides an answer. Yet the propositional content of my question is just that Martha shot Henry; it is not that the hearer will provide
an answer to the question of whether Martha shot Henry. There is no sense in which my question is satisfied when Martha shoots Henry. Another way to bring out this problem is to note that speech acts with world-to-words direction of fit require that their propositional contents describe future events or states of affairs. There is obviously no such restriction on the propositional contents of questions. The upshot of this is that questions do not fit neatly into Searle's category of directives. The fact that natural languages have a separate syntactic category of interrogative sentences, distinct from that of imperatives, further suggests that questions are not simply a variety of directives but rather constitute their own distinct category of speech acts.

THE HAMBLIN POSTULATES

The growing interdisciplinary cooperation between philosophers of language and linguists provides reason for hope that the philosophical neglect of interrogatives is coming to an end. Interrogative expressions have always occupied a central place in linguistics. For example, the behavior of so-called “wh-” words, for example, “who” and “what,” provided an important source of data for early work on Chomsky's theory of transformational grammar, and the phenomenon of “wh-” movement continues to be a rich topic for linguists working on the syntax of natural language.

Interrogatives have also received a great deal of attention from linguists working in semantics. Much of this work has been guided by a set of postulates about questions and answers first laid down by the philosopher and logician C. L. Hamblin in his paper “Questions” (1958):

1. To know the meaning of a question is to know what counts as an answer to that question.
2. An answer to a question is a complete sentence or proposition.
3. The possible answers to a question form an exhaustive set of mutually exclusive possibilities.

(Hamblin’s ordering and wording of these postulates is slightly different.) The first postulate is the analog for interrogatives of the idea that to know the meaning of an indicative is to know what the world would be like if it were true, that is, that to know the meaning of an indicative is to know its truth conditions. This idea is the intuitive ground for the identification of the meaning of an interrogative with its answers. This first postulate is thus fundamental to semantic approaches to interrogatives.

Like the corresponding principle for indicatives, the first Hamblin postulate for interrogatives has been challenged. It seems possible to understand an interrogative without having any idea of what would count as an answer to it. The linguist Jonathan Ginzburg provides the example “What is the word for ‘relaxation’ in Chukotian?” (1996, p. 400). Working in the semantic framework known as situation theory, Ginzburg has developed a semantic account in which the contents of interrogatives are fine-grained structures that determine answers but are not identical with answers. This approach bears affinities to semantic accounts in which the contents of indicatives are structured propositions. Another range of counterexamples to Hamblin’s first postulate derives from the work of the philosopher of science Sylvain Bromberger, who has argued that the search for answers to “why” questions for which we cannot formulate any answers is essential to the enterprise of science.

The first Hamblin postulate is also implicitly rejected by paraphrase theories of interrogatives, which analyze interrogatives by paraphrasing them into noninterrogative forms. In the theories of David Lewis and Max Cresswell, interrogatives are paraphrased as performatives. For example, “Did Martha shoot Henry?” is paraphrased as “I hereby ask you whether Martha shot Henry.” A basic problem for these theories is that the interrogative reappears in the analysis in embedded form, in the example, “whether Martha shot Henry,” which renders the analysis circular. In the epistemic-imperative approach of Lennart Åqvist and Jaakko Hintikka, “Did Martha shoot Henry?” is analyzed as the imperative “Bring it about that I know whether Martha shot Henry.” The remaining embedded “whether” clause is then eliminated in terms of “that” clauses. “I know whether p,” for example, is analyzed as a conjunction of conditionals: “If p, then I know that p, and if not p, then I know that not p.” This account has some plausibility in this case, but as Lauri Karttunen has pointed out, it falls apart when applied to other uses of “whether” clauses. “I wonder whether p” is clearly not synonymous with the possibly ungrammatical “If p, then I wonder that p, and if not p, then I wonder that not p.” And it is not clear even how to apply this account to a sentence like “Martha’s mental health depends on whether she takes her prescriptions.”

The second and third Hamblin postulates concern the nature of answers. These two postulates combine to form a conception of answers that differs from what can
count as an answer in ordinary discourse. For example, the second postulate is in apparent conflict with the fact that one can often answer a question with something less than a complete sentence. For example, the proper name “Alexander Hamilton” seems like a perfectly good answer to the question “Who was the first U.S. Secretary of the Treasury?” The point of the second postulate is that, despite appearances, answers are always complete sentences or propositions, in this case, the sentence “Alexander Hamilton was the first U.S. Secretary of the Treasury” or the proposition expressed by this sentence. This postulate is motivated by the idea that a correct answer must be true, and being true is a property of sentences or propositions. Furthermore, answers always convey information, and information comes in sentences or propositions.

Despite these considerations, the second Hamblin postulate has not been universally accepted. So-called categorial theories, such as that of Roland Hauser, take seriously the surface grammatical forms of answers. On these approaches, answers can be of various categories, for example, names, common nouns, sentences, set designations, and predicates, which denote respectively individuals, objects, propositions, sets, and properties.

The third Hamblin postulate requires first that the set of answers to an interrogative be exhaustive. This is related to the fact that many interrogatives carry presuppositions. To use Hamblin’s example, consider the question “In which continent is Honolulu?” (1958, p. 163). This question falsely presupposes that Honolulu is in a continent. According to one position, for the set of answers to this question to be exhaustive, it must include an answer that denies the presupposition, that is, “Honolulu is in no continent.” Alternatively, one might hold that the presuppositions of a question restrict the range of possibilities to just those in which the presuppositions hold. A set of answers would then be exhaustive if it exhausts this restricted range of possibilities. On this alternative, the denial of the presupposition of a question is not an answer but rather a rejection of the question.

The third Hamblin postulate also requires that answers are mutually exclusive. This is intended to capture the idea that genuine answers are complete, in the following sense. Consider the question “Who ran the marathon?” where the candidate runners are Martha, Henry, George, and Nancy. A complete answer will indicate both who ran and who did not. For example, the proposition that only Martha and Henry ran and no one else ran is complete, whereas the proposition that Martha and Henry ran is not complete, since it leaves unspecified whether George or Nancy ran. A consequence of this is that the proposition that Martha and Henry ran is at best a partial answer. The fact that answers can be merely partial is what motivates the requirement that answers be mutually exclusive. Allowing partial answers requires a contrasting criterion of completeness, which is provided by the notion that answers be mutually exclusive. (Incidentally, the above example illustrates how “wh-” words are context-sensitive, as are quantifier expressions. Intuitively, a speaker who asks “Who ran the marathon?” is not asking about everyone who has ever lived but rather about some contextually determined set of candidate runners. Parallel remarks apply to someone who asserts “Everyone ran the marathon.” In each case, a range of values for “who” and “everyone” is determined by features of the context of utterance. This is one of many similarities between “wh-” words and quantifiers.)

If answers are mutually exclusive, then there cannot be more than one complete and true answer to a question. This runs into problems with so-called mention-some questions. Suppose that Martha, who is new in town, asks Henry “Where can I buy an Italian newspaper?” (This example is due to Jeroen Groenendijk and Martin Stokhof.) On the most natural reading, Martha is only asking Henry to mention some place where she can buy an Italian newspaper. If so, Henry has available any number of complete and true answers, for example, “At the train station,” or “At the bookstore downtown.” Another sort of problem case, raised by Belnap, consists in choice questions, for example, “What are two cities that host marathons?” Intuitively, a complete answer mentions two cities that host marathons, and the choice of which two to mention is left up to the hearer. Thus, many complete and true answers are available, such as “Boston and New York host marathons,” “Chicago and Los Angeles host marathons,” and so on.

THREE SEMANTIC APPROACHES TO INTERROGATIVES

This section sketches three prominent approaches to the semantics of interrogatives, all of which are set in the framework of Montague semantics, also variously known as intensional semantics, model-theoretic semantics, or possible-worlds semantics. In this framework, expressions are assigned both intensions and extensions. Intensions are functions from possible worlds to entities of various kinds. The extension of an expression at a possible world is the value of its intension with respect to that world. For example, the intension of a complete indicative sentence is a function from possible worlds to truth-values. The intensions of indicatives essentially divide the
set of possible worlds into two subsets: those possible worlds in which the indicative is true and those in which it is false. The proposition expressed by an indicative is normally identified either with its intension or, more simply, with the set of worlds in which the intension has the value true. This identification of propositions with sentence intensions or with sets of possible worlds is a notoriously problematic feature of the possible-worlds framework. It has the consequence that all necessarily true sentences express the same proposition. As we will see later on, a related problem arises for interrogatives.

On C. L. Hamblin’s approach in his “Questions in Montague English” (1973), the intension of an interrogative is a function from possible worlds to sets of answers, where answers are propositions. The extension of an interrogative at a possible world is thus a set of propositions. This set is determined compositionally from the parts of the interrogative. For Hamblin, the extension of “who” at a possible world is a set of individuals. For example, suppose that the extension of “who” in a possible world \( w \) is the set \{Martha, Henry, George, Nancy\}. The extension of “Who runs?” in \( w \) is then the set of propositions \{\langle Martha runs\rangle, \langle Henry runs\rangle, \langle George runs\rangle, \langle Nancy runs\rangle\}. (Remember that each of these propositions is itself an indicative sentence intension or a set of possible worlds.) Hamblin is aware that this approach is a departure from his own third postulate, since there is no requirement here that sets of answers be exhaustive nor that answers themselves be mutually exclusive. The extension of the yes/no interrogative “Is it the case that \( p \)?” in a world \( w \) is the set consisting of the proposition that \( p \) and its negation. For example, the extension of “Does Martha run?” in \( w \) is \{\langle Martha runs\rangle, \langle Martha does not run\rangle\}.

Perhaps the best-known approach to interrogatives is due to Lauri Karttunen. Karttunen’s account is similar to Hamblin’s except that Karttunen requires that each member of the extension of an interrogative be true. In other words, on Karttunen’s approach, the intension of an interrogative is a function from possible worlds to sets of true answers. Suppose that in \( w \) only Martha and Henry run. For Karttunen, the extension of “Who runs?” in \( w \) is the set \{\langle Martha runs\rangle, \langle Henry runs\rangle\}. Similarly, the extension of “Does Martha run?” is the singleton set \{\langle Martha runs\rangle\}. Karttunen argues that the advantage of his approach over Hamblin’s is that his approach provides a simpler account of the semantics of question-embedding verbs like “knows,” as in sentences such as “Nancy knows who runs.” It is widely assumed that the content of the embedded interrogative “who runs” is identical with the content of its stand-alone counterpart “Who runs?” Very roughly, Karttunen’s idea is that “Nancy knows who runs” is true in \( w \) just in case in \( w \) Nancy knows each of the propositions in the extension of “who runs.” The advantage of Karttunen’s approach is that this extension includes only true propositions, which accords with the fact that one cannot know something false.

A third prominent approach to interrogatives is due to Jeroen Groenendijk and Martin Stokhof (1997). Unlike Hamblin and Karttunen, Groenendijk and Stokhof accept the third Hamblin postulate. On their account, the sets of answers to interrogatives are exhaustive, and each answer is mutually exclusive. A consequence of this position is that, on their view, the intension of an interrogative is a function from possible worlds to single propositions, that is, the unique, complete answers in each world. Suppose that in \( w \) only Martha and Henry run. Then the extension of “Who runs?” in \( w \) is the single proposition that Martha runs and Henry runs and no one else runs. Groenendijk and Stokhof’s approach is sometimes called a partition theory. This is because on their view the intension of an interrogative partitions the set of possible worlds into jointly exhaustive, nonoverlapping subsets, one for each possible complete answer. One advantage of this model is that it captures the apparent fact that if Nancy knows who runs, she knows both who runs and who does not run. For example, if George does not run, and Nancy does not know it, then it seems that Nancy does not know who runs, even if she knows that Martha and Henry run. For Groenendijk and Stokhof, this is captured by the fact that “Nancy knows who runs” is true just in case Nancy knows the complete answer to the question “Who runs?” For Karttunen, all that is required for the truth of “Nancy knows who runs” is that Nancy knows all the true propositions of the form \( \langle X \text{ runs}\rangle \). She need not know any of the true propositions of the form \( \langle X \text{ does not run}\rangle \).

A feature shared by all three approaches is that they assign contents to interrogatives that are distinct from those for indicatives. The content of an expression is its intension. This means that for Hamblin, Karttunen, and Groenendijk and Stokhof, the contents of interrogatives are not propositions. Rather, they are functions from possible worlds to sets of propositions (Hamblin, Karttunen) or single propositions (Groenendijk and Stokhof). These functions can be thought of as properties of propositions. Thus, for Hamblin, the content of an interrogative is the property of being an answer to that interrogative (where answers can be incomplete), for Karttunen it is the prop-
property of being a true (possibly incomplete) answer, and for Groenendijk and Stokhof it is the property of being a complete and true answer.

As noted earlier, the framework of Montague semantics faces difficulties arising from its identification of propositions with sets of possible worlds. Because they are set within this framework, all three of these accounts of interrogatives face similar problems. For example, the contents of “Does 5 + 7 = 12?” and “Is first-order logic undecidable?” turn out to be identical on all three accounts. Philosophers have responded to the problems for possible-worlds accounts of propositions by searching for more fine-grained entities, such as structured propositions, to serve as the contents of indicatives. Whether or not similarly fine-grained interrogative contents can be found is a question that is currently being explored.

See also Aristotle; Carnap, Rudolf; Explanation; Mackie, John Leslie; Non-Truth-Conditional Meaning; Presupposition; Prior, Arthur Norman; Propositions; Schlick, Moritz; Strawson, Peter Frederic; Why.

Bibliography


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REDUCTIONISM IN THE PHILOSOPHY OF MIND

Reduction can be understood in a loose or in a strict sense. In the loose sense, entities (or expressions) of a given type are reduced if they refer to “nothing over and above” other entities (expressions) that we consider well established. This is consistent with the conclusion that the reduced entities are among the posits of a mistaken world view and thus have no place in our ontology, and it is also consistent with the conclusion that the reduced entities are conserved among other accepted, better established or understood entities. In the first case we have elimination, and proposing this for entities of a given kind makes us eliminativists about those entities. In the second case we have reduction in the strict sense, and proposing this for a given kind makes us reductionists (sometimes called “conservative” or “retentive” reductionists). Reductionist projects can also be semantic or theoretical. A semantic reduction attempts to show that items belonging to a certain class of expressions are semantically equivalent to—that is, definable in terms of—another class of expressions. A theoretical reduction aims at showing that a given scientific theory can be fully subsumed under (that is, derivable from) another more basic theory.

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