

**This paper contains material which lies behind the talk I shall give at the workshop – I haven't been able to get the talk I want to give into written form.**

## Questions and epistemic evaluation

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### 1. Introduction: questions and epistemology

Inquiry is an activity directed at answering questions or solving problems. This means that we can only participate in inquiry effectively and responsibly if we are able to understand questions. We need to be able to recognize when something is a possible answer to a given question, and also to evaluate candidate answers in order to settle on the correct one. We also have to know when it is appropriate to ask or raise some question, especially when that question becomes the focus of a sub-inquiry whose successful completion is necessary for the achievement of our overall cognitive aims. This chapter is an attempt to identify what capacities are required if we are to be able to operate with questions and answers effectively. First we should remind ourselves of the roles of questions and questioning in inquiry: why are questions of epistemological interest?

One reason for taking questions seriously was identified in the previous chapter. The best way to describe the goals of our inquiries is to say that we seek correct answers to questions and correct solutions to problems. If this is correct, and if epistemic norms are primarily concerned with the regulation of inquiry, then a study of epistemic evaluation has to give a central role to issues about what makes something a correct answer to a question (or a good solution to a problem). We have already explored some of the issues that are raised by this role for questioning. At this stage I want to register some other reasons for talking questions seriously.

The first of these is the *eliciting* role, and this can be divided into two cases. First, a central (if not the only) way in which we gain knowledge is through the testimony of others, and that often involves asking them questions. I ask the plumber why my pipes burst, or I ask a better informed colleague where this afternoon's seminar is, and I expect them to give me the reliable answers to my questions. The search for knowledge through testimony can go wrong because, although the potential informant possesses the information I require, my question fails to elicit it. I have asked the wrong question, or I have asked the right question in the wrong way. It can also go wrong

because although my informant offers the information I require, she does so in a way that I cannot absorb or process. It is not always transparent what sort of answer the utterance of an interrogative sentence requires, nor is it always clear just how that information should be presented. Second, it is not implausible that something similar to what occurs when I learn from testimony happens when I elicit information from my own memory. Most of my memories are not being attended to most of the time. Success in inquiry depends upon my being able to attend to them when necessary - memories should be available for reflection attention when this is required for the regulation of my inquiries. It is a useful idealisation of how this works that I elicit such information through raising a question to which it forms an answer. And, just as in the case of testimony, I can fail to elicit relevant information which I possess by, in effect, asking the wrong question. This may reflect the cognitive architecture of our memories: if we think of memories as stored in files which are indexed in some way, then it is easy to see that we could fail to recover that information because our self-directed question does not successfully connect with how the information is stored. (EXAMPLE)

A third epistemological role for questions concerns the exercise of regulative control over inquiries. This Socratic role for questioning also divides into different cases. First, suppose I am evaluating you as a source of testimony. I shall do this as by asking questions: what reason do you have for believing that proposition? How reliable are you as a source of testimony on this topic? Have you taken account of some circumstances which may make you unreliable?, And so on: I may evaluate your value as a source of testimony by interrogating you about the legitimacy of your opinions. Second, such questioning has an important role in activities such as discussions, such as cooperative attempts to solve problems. In discussions, we question the proposals, opinions and arguments of each other, viewing this as a way of regulating this joint inquiry and ensuring that it conforms to the correct standards. Mutual questioning is a way of testing our different contributions to the discussion, and this is necessary as a means of improving our chances of success in our inquiries. And third, this can occur without anyone else being involved. I regulate my own inquiries and deliberations by asking questions about them: I wonder whether I should check how reliable evidence is, I consider whether I should be more careful in double checking my reasoning, I ask myself whether there are defeating considerations I've ignored or whether I'm right to treat some item of information as providing a potential defeater, and so on. Reflective inquiry - whether individual or cooperative - depends for its success upon our asking the right questions about its progress. Progress can be impeded by asking too few reflective questions. It can also be impeded by asking too many reflective questions.

The fourth, and final reason for taking questions seriously in epistemology concerns the logic of sentences about *knowledge*. It is commonly assumed that

knowledge sentences are of a similar form to belief sentences: both express propositional attitudes, perhaps concerning a relation between a subject and a proposition. This assumption has been questioned for a number of different reasons. One obvious reason for questioning the existence of this parallel rests on the observation that the word 'knows', unlike the word 'believes' takes an indirect question complement. As well as sentences such as:

John knows that 71 is a prime number.

There are also knowledge sentences such as:

John knows when the next train will leave.

John knows how the internal combustion engine works

Johns knows why water expands on freezing.

It is an attractive idea that the indirect question form is the fundamental one. We can always find an equivalent way of expressing what a propositional knowledge sentence expresses by using just the indirect question form. Our example above is equivalent to:

71 is prime and John knows whether 71 is prime.

It is far more controversial matter whether the indirect question forms listed above can always be paraphrased into statements of propositional knowledge. If we decide to begin with indirect question knowledge statements, then it is natural to treat knowledge as a relation between a subject and a question. A subject possesses knowledge when she possesses the answer to or 'a correct answer to' some question. Either way, as has been noted for some time, it is a reasonable conjecture that considering how and why we use these indirect question idioms should be a source of insight into how we should understand knowledge. (Williams 197?, Hookway 1990, 1995, Moore 198?,) Whether that is the case or not, it is clear that the study of questions and their answers should contribute to our understanding of at least some of the sentences we use to express and describe states of knowledge.

So we have seen four reasons for thinking that the study of questions should contribute to our understanding of epistemic evaluation. First, questions are used in formulating the aims of specific inquiries. Second questions are employed in order to elicit information from, for example, sources of testimony or memory. Thirdly, questions serve as important tools in subjecting epistemic states and activities to rational self-control. And fourth, and finally, we need to understand what questions (and their answers) are in order to make sense of many of the knowledge claims, and knowledge ascriptions, that we make. Questions have fundamental roles in the regulation of inquiry, and they are also important components of the states that are described using knowledge sentences.

The role of interrogatives in knowledge sentences represents a different sort of erotetic dimension to epistemology from the other three considerations. Indeed we might suppose that it will lead us to think that we should approach the understanding of

knowledge by exploring what counts as being in a satisfactory relation to a question when it is being deployed in one of the other three fashions. The idea of a question as setting an aim for might suggest that I possess knowledge in relation to that question just in case I have successfully completed an inquiry into it or would have no need to carry out such an inquiry. The observation that questions are used to elicit information might suggest that we have knowledge concerning some question when we can provide an accurate answer to it. Alternatively, if we take note of the fact that questions have a Socratic role in the regulation of inquiry, we might suppose that knowledge with respect to a question requires that we can provide an answer to it that will not succumb in the face of further questioning. Our explanation of knowledge will have to respond to the different uses that questions have in epistemic evaluation.

Those who have approached knowledge through its involvement with questions have tended to focus on the eliciting role of questions. We identify knowers because we want to exploit their testimony (for example). If someone knows Q (where that marks the place occupied by an expression giving a question), then, since the knower will possess the answer to that question, we can learn what the answer is from his testimony. In *Scepticism* (Hookway 1990), and in other publications, I suggested that we exploit the 'knowledge inference':

X knows Q  
X's answer to Q is P  
So P.

And I suggested that we can explain what features knowledge must possess by identifying what properties it must have if such arguments are to be generally reliable sources of information (cf Williams 197x).

Thinking about questions in this way would encourage two lines of thought. First, for us to be able to exploit such inferences in order to acquire information, it must be possible to ascertain that the subject possess the correct answer to the question independently of knowing what her answer is. If I know that someone has access to a window that I cannot see through, I can conclude that whatever answer they give to 'What is the weather like outside?' will be correct. So I can accept that they have the answer to the question and that I can obtain the correct answer myself by consulting them. Moreover since a question often has a set of alternative possible answers, it is plausible that, very often, a subject can possess the answer to a question only if they can reasonably dismiss all the other possible answers. A question, we might suppose, present a range of alternative possibilities (competing answers), and someone possesses knowledge only if she can eliminate all but one of those alternatives. It is easy to see how the role of questions in eliciting information can lead us to value beliefs that possess the sorts of features that are commonly introduced when philosophers try to

analyze knowledge. In *Scepticism* I urged that this was the best route to adopt in seeking an account of knowledge.

But an opposing moral can be drawn, that, while valuable, none of these features are *necessary* for knowledge. When I rely upon someone's testimony (or the testimony of a reference book) all I require is that I be justified in my assurance that what my informant tells me is actually *true*. I must be justified in this assurance, but it is not strictly necessary that my informant possess adequate justification. If a third party tells me that my potential informant has the right answer to my question, that she 'knows', then I have the right to expect that whatever answer she offers to my question will be the correct one. I can then use the inference pattern described above in order to learn from her testimony. So when we try to explain our concept of knowledge by examining the role of indirect questions knowledge claims, and we do so by treating the eliciting use of questions as the fundamental one, we obtain both:

1. An explanation of the epistemic value of many of the characteristics commonly appealed to in philosophical accounts of knowledge.
2. Reason to think that none of these features is actually *required* for a knowledge claim to be true.

It is important here that the source of this position is that, when I rely upon someone's testimony, it is *me* that must be justified in accepting the reliability of the informant's testimony. In some cases, my justification will depend on my believing, or simply taking for granted, that the informant is justified, but this is not the only possibility.

One way to avoid this conclusion is to refuse to treat the eliciting role of questions as the fundamental one for explaining our practice of epistemic evaluation. If the aim of an inquiry is to possess the answer to a question, then we can investigate what knowledge is by asking in what way the answer must be possessed in order for our inquiry to be successful. The fact that others can exploit the results of my inquiry, given suitable guidance by a third party, is not enough to make a flawed inquiry or deliberation into a successful one. It is still possible to give some centrality to elicitation: perhaps my aim in inquiry is to put myself into a position in which I can be a good informant, certifying my own reliability as a source of information. This rests upon a particular view of why knowledge is valuable: the primary reason that I seek and value knowledge is that, once I obtain it, I can pass it on to other people. This seems very implausible. But we can take from this discussion the moral that we can best understand the value and nature of knowledge if we begin by asking about the value we attach to possessing the answers to the questions that provide the goals of our inquiries.

In order to do that, we must investigate just what questions are, and what it is required for something to be an answer to a question. That is the main task of the current chapter.

## 2 Questions: some background

We shall now briefly turn aside from epistemology to explore some questions in the philosophy of language. First, what is involved in *understanding* a question? Second, what determines whether a given proposition is a possible *answer* to a given question? Many think they are related. Thus, in a famous passage, C.L. Hamblin wrote; ‘Knowing what counts as an answer is equivalent to knowing the question’ (1958, 162). This view reflected in David Harrah’s ‘sets of answers methodology’: a question can be identified with its set of answers. A weaker version is defended by Belnap and Steel: ‘the essence of a question is the way in which it determines its direct answers’ (REF).

Ideally, it would be good to have a wholly general account of what is involved in understanding a question and what the relations are that hold between a question and its possible answers. However it is best to start by focusing on a particular case. If we generalise too quickly, taking one or other kind of question as paradigmatic, we can fix the terms of the discussion in a very distorting way. Moreover at least one theorist doubts that much generality is to be found. Belnap (1982 p. 193ff) suggests that different sorts of questions (‘who’, ‘which’, ‘what’) must be treated differently because they do not work in the same way. It is best to work with a particular example, albeit with an eye to the possibilities of generalisation. ‘Who’-questions are a good choice. If we begin with, for example, ‘when’ or ‘How many’-questions, the ways in which answers are determined are probably too simple and we gain little insight into the role of contextual influences. The problem of ‘How’ and ‘Why’ questions, by contrast, is that there are few clues about how to say anything systematic about them. They are too dependent upon contextual or pragmatic matters. I hope that ‘who’-questions provide a suitable intermediate case.

It is common to treat a question as a distinctive kind of request or command.: when I ask you when the next train leaves, I am requesting you to provide me with information of a particular kind. Thus David Lewis identifies interrogative force with the instruction ‘Tell me truly!’ (1969, p. ); and Hintikka tries to characterise it as ‘Make it the case that I know!’. Both of these formulations appear to focus on a particular kind of speech act for which interrogative sentences can be employed. Indeed, they are both suggestive of the eliciting use of questions. This is a common feature of writings on questions by logicians and it may reflect the fact that work on the logic of questions has often been linked to research on database design. Research is concerned with how information should be stored so it can be recovered efficiently when questions are put to the database. Concentrating on such cases can encourage premature generalisation. We should not lose sight of the fact that questions are employed for other purposes too. We have already noted their role in setting aims for inquiry and as vehicles for Socratic reflective self-criticism. They can also be used to express puzzlement where no one can

be expected to provide the required information. Michael Dummett has noted some related problems: 'To ask a question is not, in general, to evince a propositional attitude, for instance to express ignorance or evince a desire to know; if it were, barristers, interviewers and examiners would be in the same category as actors.' (*Interpretation of Frege's Philosophy*, p. 113) When a lawyer asks his client a question when both know that both already know the answer, this is genuine exchange whose role is to put some information on the record or to inform the judge or jury.

The points here are familiar ones. Philosophers of language distinguish semantic issues about the contents of propositions from pragmatic ones about the force of asserting those propositions. Here too we must distinguish what is involved in understanding a question (the content of an interrogative in a particular context) from the force expressed when we use it to elicit information from an expert (or for some other communicative or cognitive purpose). And we must also distinguish some different ways of *accepting* a question. All involving recognizing that the question 'arises' in the context in which we find ourselves. But we can accept a question by trying to give the questioner the information she requires, by resolving to inquire into the matter in order to find an answer to the questions, by acknowledging that it is a puzzle but not one that we propose to deal with, by recognizing it as a question which can reasonably be given to students in an exam even if we already know the answer, and so on.

It is a common assumption that if you understand a question, then you must grasp what would count as giving an answer. It is this that makes attractive the idea that the content of the question can be characterised by reference to its set of possible answers - this is the most obvious route to the 'sets of answers' methodology. Moreover the most obvious way in which you can comply with a request for information is to express a proposition that 'gives (what we take to be) the answer'. In that case, it seems, understanding a question can put you in a position to identify the set of answers by determining the set of propositions which would provide an answer. It is then easy to accept the further common view that these propositions do not merely articulate the answers. Instead, they actually *are* the answers. The set of answers associated with a question is a set of propositions: answers are propositions. This suggestion is attractive because it holds out the promise of a formal or partly syntactic treatment of the relations between questions and their answers: the answers are propositions that bear distinctive formal relations to the sentences which are used to express the questions.

Characterising the sets of possible answers for sentential or 'yes/no' questions is straightforward: one can respond with the sentence itself or with its negation. It would not do to treat the answers as 'yes' and 'no': if questions are identified with the sets of

their possible answers, there would then be only one yes/no question. More relevant to our present purposes are a variety of ‘which’ questions such as:

- (2) Which even numbers are prime?
- (3) At which time (when) will you arrive home?
- (4) At which place (where) are you currently living?
- (5) Which students are attending your class this term?

In none of these cases are the propositions which provide possible answers explicitly given in the question. In each case, we are presented with a propositional function or matrix and the answers will be propositions which identify things which satisfy that function or matrix. Thus answers to questions (2) - (5) will involve completions of ‘ $x$  is prime’, ‘I will arrive home at  $x$ ’, ‘I am currently living at  $x$ ’, ‘ $x$  is attending my class this term.’ Moreover the questions impose category restrictions on the objects whose satisfaction of the matrix is at issue: (2) - (5) are concerned with identifying even numbers, times, places and students respectively. Thus we might represent these questions:

- (2’) (Which  $x$  such that  $x$  is an even number)( $x$  is prime)
- (3’) (Which  $x$  such that  $x$  is a time)( You will arrive home at  $x$ )
- (4’) (Which  $x$  such that  $x$  is a place)( You live at  $x$ )
- (5’) (Which  $x$  such that  $x$  is a student)(  $x$  is attending your course this term).

Although someone could understand one of these questions while unable to *formulate* all of the possible answers, they would still know how to recognise whether a statement was a possible answer.

More generally, a which question will involve a matrix involving a number of free variables (‘queriables’ (Belnap); ‘traces’ (Bromberger)), and a function which assigns some or all of those variables to categories. True answers to the question will be true propositions which replace all of those variables by appropriate expressions referring to objects of the specified categories. Thus, the question ‘Which boys are brothers of which girls’ requires us to identify pairs of objects which satisfy the matrix ‘ $x$  is a brother of  $y$ ’. And, once again, ‘category restrictions’ are imposed: it is stipulated that  $x$  is a boy and  $y$  is a girl.<sup>1</sup>

Two respects in the which the questions we have considered are particularly clear can now be explained. A question is sound if it has at least one correct answer; and those propositions which must be true if the question is to be sound are the presuppositions of the question. The existential presuppositions determine what sorts of

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<sup>1</sup> The subject of a which question is thus identified as a triple:

$$\langle X, g, Ax_1 \dots x_n \rangle$$

where  $X$  is a set of queriables,  $g$  is a category mapping in  $X$ , introducing a category restriction to members of  $X^1$ , and  $Ax_1 \dots x_n$  is a matrix.

objects must exist for the question to be sound, and the attributive presuppositions determine what properties must be instantiated for the questions to be sound.

Borrowing an example from Bromberger,

(6) What is the height of the Empire State Building?

carries the *existential presupposition* that the Empire State Building exists and the *attributive presupposition* that it has a height. So long as these presuppositions are met, the question has a true answer and so it is *sound*. Moreover reflection on (6) suggests that anybody who understands the question must recognize what these requirements are for the question to have a true answer, and this carries with it information relevant to establishing what is required if we are to discover what that answer is - or to search for it. In the case of which questions (and whether questions), we only need access to their logical forms - we only need to understand them - to work out their existential and attributive presuppositions. As Bromberger puts it:

In short, unassisted wits and cogitation on meaning alone will tell [someone] what he has to find out to know whether the question is sound, and thus to know whether it is accessible to him. (p.166)

When we search a database for an answer to a question, the category restrictions control the search by fixing the existential presuppositions of the soundness of the question, while the matrix fixes the attributive presuppositions.<sup>2</sup> Thus which-questions carry the information that is required for eliciting information.

### 3. Two kinds of who-questions

It is commonly assumed that who-questions fit the quantificational form just described, and that they have existential presuppositions which suffice to fix what is required for something to be a correct answer to such a question. This is a mistake, but we shall begin by considering some questions which are closely related to (but importantly different from) who-questions and do fit this pattern in order, then, to see what is distinctive and interesting about true who-questions.

Suppose I am the detective who, at the end of my investigation, asks everyone who was in the house at the time of the shooting to gather together in the library, I then announce that I know which of the people waiting nervously in the library is the killer. And one of them asks me: So which of the people gathered here committed the crime? We can think of this as a 'Which-of-these-people question. A question of these form does fit the quantificational pattern:

(Which  $x$  such that  $x$  is a person in this room)( $x$  killed the Colonel)?

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<sup>2</sup> This framework excludes some cases that we would wish to see included in the central class, for the 'queriables' or 'traces' are all first order variables. It is plausible that 'How many' questions (for example) do not fit this pattern, the respondent being required to provide a numerical *quantifier* that completes the proffered matrix. These complexities will be ignored in what follows.

The question is sound so long as one of the people present is the villain. And a correct answer to that question will identify which of those people it is.<sup>3</sup> In giving my answer, I can pick this person out in any of a number of ways. I might identify them as the butler, as Smithers, as the man sitting in the chair by the door, as 'That man'- pointing at Smithers, as the only person who had served with the victim in the army, and so on. So long as all of these responses pick out the same person, it is best to see them all as different ways of giving the same answer. Although these are all different versions of the same answer, it does not follow that they are equally good. If no one but myself is aware that the villain served with the Colonel during the war, an answer that picks him out through this characteristic is correct but useless to those who are waiting for my response. Indeed, my selection of one way of giving my answer in preference to others will normally implicate that the chosen one will be particularly salient for the audience. It is easy to imagine circumstances in which the audience is misinformed about the characteristics of their fellows and my correct answer sends most of them off in the wrong direction. A good presentation of the correct answer should enable the audience to pick the murderer out from their fellows themselves, a poor presentation of that answer may not give them this ability. If the answer is presented well, then the audience will know which of these people the murderer is. If it is presented poorly, then I am currently very unsure whether they would. We can easily see how someone else could learn who the murderer was from their testimony, so long as that person has appropriate background knowledge.

What is important here is, first, that the structure of the question gives clear sense to what would count as a *correct answer*: it is an answer that uniquely picks out the member of the universe of interrogative quantification who satisfies the attributive presupposition of the question. Second there can be variety of ways of presenting the same answer. This gives rise to pragmatic issues: some ways of presenting the answer will meet the questioner's needs and others may not. And some may meet these needs better than others. Thus responding to attempts to elicit information by trying to answer questions of this sort requires us to have the ability to identify which answer is correct and to identify which way of presenting that answer will be appropriate. We need to take account of what information the questioner already possesses, and also what they propose to do with the information that they obtain from me.

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<sup>3</sup> Such questions raise a host of interesting issues. Suppose my answer was: 'The person who killed the Colonel killed the Colonel'. Is that an answer that is correct but useless? Or is it not even a correct answer because it is empty: unless my questioner already knows the answer to the question, he will not be able to make anything of the answer. I shall not settle this issue here.

Similar points hold if we think of the question as setting the aim of an inquiry rather than being used to elicit information. Suppose that, in my role as detective, I gaze at the assembled people and ask: which of these people killed the colonel? I reflect on the evidence I possess and try to work out which of them it is. Once again, some ways of formulating the correct answer will not satisfy me: perhaps I need a formulation that will enable me to place my hand on the killer's shoulder and read him his rights and some answers will not put me into this kind of demonstrative contact with him. In other circumstances I may just need a name, and I can then trust my colleagues to pick him out when he tries to board a plane.

As I indicated, many people suppose that who-questions work in the same way as which-of-these-people questions: correct answers must always succeed in picking out some member of a universe of discourse. It is easy to see that this is not true. Suppose that we hear the doorbell ring and, after I return from answering it, you ask me who was at the door. In many cases, my answer will not succeed in picking out a unique individual yet will not be an evasion of the question. I may tell you that it is a Jehovah's witness, that it is one of the children from next door, that it was a postman, that it was someone asking for directions and so on. The characterisation I offer is an indefinite one, but is exactly what is required. Other examples are:

Who is Peter?: Peter is a bricklayer. (Belnap 1982: 195)

Who is Tully?: A Roman statesman and orator. (Stampe XXX: 168-9)

Denis Stampe calls such questions 'predicate-wanting'. (REF), and he follows Belnap in thinking that there is a syntactic ambiguity in who-questions, even if it is not evident from surface grammar. Some are predicate-wanting questions and others more closely resemble the which-of-these-people questions that we discussed above. We do not need to resolve this issue here. The predicate-wanting cases raise some issues that are interesting for epistemology.

As before, the same answer can be presented in different ways and which we should employ depends upon which is more likely to enable the questioner to grasp the answer. I might describe Tully as someone who was engaged in political activity in ancient Rome and was also famous as a speechmaker. These represent two ways of identifying the same property. But these questions raise additional problems that do not arise for the others. First, the criteria for *same person* are much clearer (at least in practice) than those for *same property*. If I tell you that Peter works on a building site, is this a different answer from the one in Belnap's example or a less precise way of giving the same answer? Or it might even be an evasion of the question. In our which-of-these-people question, the range of possible correct answers was carefully circumscribed within the question: in answering the question, we can pick out anyone, so

long as they possess the property of being in that room at that time. With a predicate-wanting question, the question itself gives very little guidance about what sort of predicate can be used, about what sorts of properties and characteristics can be picked out in giving our answer. Why should I tell you that Peter is a builder, rather than that he is a father of two, a Manchester United supporter, a keen cyclist, a Jehovah's witness ... ? The list of candidates is endless. And it seems to be possible to find circumstances in which each possibility would be a relevant answer, and others where it appears not to be an answer at all.

Examining these predicate-wanting who-questions introduces an additional layer of complexity. With which-of-these-people questions, we have two components:

1. A set of possible answers which, if the presuppositions of the question are satisfied, will include a correct one.
2. A variety of ways of expressing each of these answers.

Pragmatic considerations have a role in determining which way of presenting our favoured answer should be adopted. When we consider predicate-wanting who-questions, an intermediate layer can be identified. There are different ways in which we might describe the three layers. For example:

- 1<sup>a</sup>. A set of answers which cohere with the presuppositions of the interrogative utterance used in formulating the question.
- 2<sup>a</sup>. A subset of those answers which are relevant, given the questioner's needs and concerns.
- 3<sup>a</sup>. A variety of ways of expressing each of those relevant answers.

Contextual pragmatic consideration will then be relevant, not only to how answers should be expressed, but also providing a ranking of answers according to their degree of relevance. We might put this by saying that context helps fix what is required for something to be a *good* answer.

Many kinds of questions have the sort of an additional complexity we have noted in predicate-wanting who-questions. A why-question, for example, normally seeks an explanation of some kind, and, in the case of causal explanation, this involves identifying a particularly *salient* causal antecedent. In answering such a question, we do not give a complete explanation, but rather select a significant factor which meets the questioner's needs. So 1) there are a variety of factors which are causally relevant to the event occurring. 2) When asked why the event occurred, we select some of these as particularly relevant or salient among the causal antecedents. And then 3) we find a perspicuous way of conveying this causal condition to our questioner.

One source of clues concerning the role of context in guiding the use of interrogatives is provided by recent work in pragmatics on the nature of *focus* (REFS). A word or phrase is the focus of an utterance when it is given a sort of *pitch accent*,

something which lends it prominence within the intonation contour of the utterance (Glanzberg 2005: 75). Consider the difference between the following two utterances:

JOHN likes Jane

John likes JANE

It is natural to see the former as an answer to the question ‘Who likes Jane?’ and as eliminating alternative statements to the effect that some other person likes Jane; and the latter may answer ‘Who does John like?’ and it rules out propositions to the effect that he likes people other than Jane. It is often suggested that when a word or phrase is focussed within an utterance, this introduces a range of alternative propositions with which it is being contrasted. The verb might also be focussed: ‘John LIKES Jane’ may rule out the possibility that John loves Jane, or regards her with contempt, and so on. This has a bearing on issues about when questions can legitimately be raised during discussion and inquiry: generally, questions intended to challenge a claim will have a different target according to which part of the claim is focussed. The observation that John was very friendly towards Mary, for example, might challenge ‘John likes JANE’ but not challenge either of the others.

These patterns of pitch accent in an utterance relate to our interests in the role of questions in different ways. First, it is very natural to conclude that the focus of an utterance manifests the questions (explicit or implicit) to which it is an answer. In the cases discussed above, assertions are evaluated as answers to the questions ‘Who likes Jane?’, ‘Who does John like?’, and ‘What is John’s attitude towards Jane?’ respectively. Indeed theorists often insist that focus helps determine ‘question-answer congruence’. If we are asked ‘Who does John like?’, then ‘JOHN likes Jane’ is not a felicitous answer, while ‘John likes JANE’ is. (Glanzberg 2005: 77). Secondly, the pattern of focus of an utterance (and hence the question (implicit or explicit) to which it responds, affects which questions can then be raised as felicitous challenges to the claim. I may challenge the claim that JOHN likes Jane by presenting evidence that Jane has *other* admirers; and I can challenge the claim that John like JANE by suggesting that he likes other people too. We can see this as revealing how the identity of the question to which an assertion is a response can influence the kinds of challenges that can be raised to the assertion: we challenge the claim as an answer to a specific (implicit or explicit) question; and, in doing this, we often rely upon our sensitivity to the focus or intonation contour of the utterance.

Although most discussions of these phenomena concern the role of focus in conversation, it is also found when we try to solve problems through individual inquiries – focus has a place even in silent soliloquy. We can use focus, *inter alia*, to keep track of the questions currently under consideration in the course of an inquiry or deliberation. This helps us to identify some of the capacities we must possess if we are to respond to requests for information framed in questions of different kinds. We must

understand the interrogative sentence and thus identify the sort of thing that can serve as a candidate answer. We must draw on background knowledge and our understanding of the context to determine which answers are relevant to the question as posed. Having ascertained which of these answers are correct, we must then work out which of them is the best to offer to the questioner, or to adopt at this stage in our deliberations. And, when an answer can be expressed in different ways, we must be able to determine which formulation is appropriate, given our cognitive projects. One issue, brought to the surface by our remarks on focus, concerns the different ways in which context, including the context provided by the current inquiry, influences our understanding of questions and their answers.

#### **4. Relevant answers**

If asking and answering questions is fundamental to our practice of epistemic evaluation, then we need to ask how we can settle issues about what counts as a respectable and relevant answer to a question. If we have no confidence in our ability to do that, we can have no confidence in our ability to carry out inquiries and deliberations responsibly and effectively. We can now see that our ability to do this – whether in conversation or in the course of solitary inquiry – depends upon our being able to solve some distinct problems.

First, then, there is a range of questions concerned with identifying sets of possible answers. The most straightforward way of doing this involves identifying a universe of discourse – or, more generally, with picking out a set of objects. When I ask ‘Which of these people ....?’, then I need to settle what counts as ‘these people’. I must determine who is a *candidate* for being the answer to the question; whom must I be able to eliminate if I am to identify someone else as my answer? Related problems about a ‘universe of discourse’ arise when we consider ‘where’ questions: if we answer such a question by identifying a location, then there are questions about how large and approximate locations are. If you ask me where a particular book is, do I answer successfully when I tell you that it is in the library? Or is it required that the location be pinned down to a particular place on a particular shelf.

Questions like ‘predicate-wanting’ who questions raise more difficult issues. We need to identify a range of alternatives here, a range of properties or predicates, rather than arrange of objects. In the case we have just considered, there is a sortal which determines what sorts of thing belong in the set of alternatives; with a ‘who’ question, the only constraint is that we are looking for a potential property of a person, for example, which may, but need not, be uniquely individuating. What sort of property or predicate is appropriate is largely determined by contextual and pragmatic

considerations.<sup>4</sup> ‘Why’ questions are more complex still: presumably we look for a range of ‘possible explanations’ or something like that. When I ask a ‘who question’ or a ‘where question’, I am aware of a range of alternatives which can be eliminated, even if I am not aware of many of the relevant predicates or of which places are possible locations for a book (for example). It may not occur to me that I may have left it on the bus. When I ask a ‘why question’, I may not be aware of any possible explanations, or of any that I cannot eliminate. That is why ‘why questions’ can be so hard. The other issues arise because the same answer can be expressed in different ways, employing, for example, a different vocabulary. An answer can thus be infelicitously presented, even if it is correct. Thus effective inquirers need to be sure that they can formulate answers in ways that fit them for their intended use.

How does context settle these things? How should we think about the context here? It is common to think of the context of an utterance as an evolving body of presuppositions, of things that are taken for granted by the participants, and, perhaps, are known to function as a body of shared background knowledge. When we consider solitary inquiries, we can recognize a limiting case of this. One possibility is that the context is composed of propositions that are accepted or matters of full belief, perhaps things we take to be certain. Alternatively, we can take the context as containing propositions that are treated as uncontroversial.

What sort of information could be contained in these presuppositions which could be relevant to settling what sorts of answers to a given question are to be taken seriously. There can be information about what sorts of answers are recognized as not real candidates, as not being relevant at all. There can also be information about which candidate answers have already been ruled out. There might be information about what sort of answer the questioner wants, and about what sort of answer the respondent expects the questioner to want. There may be assumptions about what the questioner wants to do with the information he hopes to obtain from his question or about what he ought to plan to do with that information.

If we are concerned with the solitary case, the questioner and respondent will be the same, and this rules out one source of error and misunderstanding. It is not possible that questioner and respondent have different views about what sort of answer will be appropriate. But, even in this case, it is possible that the agent will be mistaken about the sort of answer that is required. Suppose I ask myself who some person is, intending to use the information in order to predict how what attitude they will take on some

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<sup>4</sup> We can distinguish two strategies for dealing with these cases. Suppose I notice someone I don’t recognize in the department and ask you who it is. Suppose you answer: it is a woman in blue dress. This information is useless to me, and you are aware of this. Have you given me a correct answer, but an irrelevant, useless and uninteresting one? Or have you not given an answer to *my* question at all? I shall not take a stand on this issue here – success at inquiry requires an ability to identify ‘relevant’ answers, and that is my concern.

political issue. Suppose, too, that I believe that the best clue for making such a prediction is information about someone's employment. So I assume that the range of serious answers to my question concerns different sorts of job that the person could have. In fact I am wrong: information about where they live, or about their religious affiliations, will be far more valuable. This is the information I need when I ask my question, although it is not the information I actively seek. So long as the answer has an appropriate form, then whether an answer is relevant or appropriate is a function of what it is to be used for, not of whether it is what the questioner explicitly has in mind.

Talk of 'presuppositions' here needs to be treated with caution. Philosophers generally think of presuppositions as things that are believed to be true, and, when I described a context as providing a set of presuppositions, I went along with this. We need to allow that the presuppositions that guide the use of questions in inquiry can often be suppositions rather than presuppositions. Much counterfactual reasoning involves considering a hypothetical possibility, without being committed to its truth. Against the background of that hypothetical possibility, I can then inquire into what the correct answers to various questions would be, if that hypothetical situation obtained. Within that part of the inquiry, we treat the supposition as fixed – at least for a short time – without being firmly committed to its truth. Indeed, if we are conducting a deliberation that involves a *reductio ad absurdum*, then we may treat something as true when we firmly believe it to be false. This does not affect the previous discussion.

We have already noted that inquiries and deliberations are extended, structured goal directed activities. This means that the context of the investigation changes rapidly, as possibilities are considered, investigated and eliminated, as challenges are raised and responded to. This means that our understanding of what the context of an utterance is must be equally structured and complex. As well as taking note of the information relevant to the interpretation of a particular assertion, judgment or question, we need to keep track of its place in the structure of the inquiry as a whole. I can illustrate this by means of a simple example that illustrates how different who-questions can occur in the same inquiry while having different sets of alternatives associated with them.

Suppose I am a detective, trying to identify who murdered the colonel. I am told that just three people had the opportunity to commit the crime, so, against the background, I ask the question 'Who killed the colonel?', against the background assumption that there are just these three candidates. Let us suppose they are Atkins, Burroughs, and Carter, and I don't know much about them apart from that. I plan my inquiry, intending to find which, if any, of the three candidates had a motive to commit the crime. I need information about these people that will help me to solve my problem. Perhaps I begin by asking 'Who is Carter?', seeking an answer that will suggest ways of establishing whether she has a motive to kill the colonel. But no such answer is

forthcoming, so I turn to the second of my three questions, ‘Who is Atkins?’ and, we may suppose arrive at an answer that helps to make it unlikely that Atkins is the criminal. When I then ask ‘Who is Burroughs?’, I am told that Carter knows more about him than anyone else, and I should seek information from her. In order to do so, I ask ‘Who is Carter?’ again, this time as a means to obtaining information about Burroughs. In that case, ‘The woman over there’ may be a fully satisfactory answer – it enables me to pursue my investigations about who Burroughs is. Having made some progress with that, I return to my question ‘Who is Carter?’, and once again, I have to admit that I don’t know. The information I possessed about her spatial whereabouts is irrelevant to my higher-level inquiry into her likely guilt.

We can picture the structure of the inquiry as comprising six levels:

1. **Target:** Who killed the colonel?
2. **Subordinate inquiry:** Which of A, B and C killed the colonel?
3. **Subordinate inquiry:** Which of A, B, and C had the motive to kill the colonel.
4. **Three subordinate inquiries:**  
Did A have a motive? Did B have a motive? Did C have a motive?
5. **Three more subordinate inquiries** (each subordinate to the question above it)  
Who is A?                                      Who is B?                                      Who is C?
6. **Yet another level** (subordinate to question immediately above it)  
Who is C?

In understanding, and answering, the questions, we need to keep track of this overall structure. The sort of information required of an answer to ‘Who is C?’ will vary according to the level at which it is raised and the other questions to which it is subordinate. I can answer this question at level 6, but not as a question at level 5: according to the level, it makes salient a different set of alternative possibilities.

#### 4. Real questions and understanding

We have discussed in general terms some issues about questions, answers and their roles in inquiry and deliberation. In this section we shall begin to examine two further questions. The first of these concerns what is involved in understanding questions. Since we can use questions even if we do not know what their possible answer, it would be unreasonable to identify understanding a question with knowing what its possible answers are. Nor would it be realistic to claim that we understand a question only when we know how to answer it: much research in the sciences and philosophy is devoted to trying to answer intelligible questions that we don’t know how to answer. So, what is required for understanding a question? A related issue concerns what is required for a question to be *real*, for us to be able to ‘get a grip’ on it and take seriously the idea that we might try to answer it. Yet another issue concerns reasons for doubt: when is it

reasonable for us to address a question, recognizing that it needs an answer and admitting that we do not currently have a secure answer to it. This section begins to address some of these questions.

I shall now start by exploring some ideas and concepts used by Nicholas Jardine in *Scenes of Inquiry*. We shall then use these as a tool for making sense of the cases we have been considering. Jardine's purposes are different from ours: his main concern is with the role of questions in the sciences and in the prospects for making the understanding of questions a central task in the historiography of science. He is interested in how we can understand the questions that were addressed by Galileo or Paracelsus or, his main example, eighteenth century natural history.

Some questions are real, others aren't. If we ask who discovered that the Thames was the longest river in Europe, the question is unreal because it rests on a false presupposition. When the logical positivists identified questions such as 'Why is there something rather than nothing?' as nonsensical, we can read this certainly implies that they are unreal, that they have no true answers. Jardine begins with the more contextualised notion of a question being 'locally real' (1991: chapter three). A question Q is real for a community when they can 'get a grip on it'. This rules out questions that are perceived as 'utterly inscrutable' or as carrying false presuppositions, and is explained as follows. First, an answer is *straight* when 'it is both direct and adequate, in the sense that it conveys all the information that is called for (57). And an 'evidential consideration E is relevant to a question Q? in community C just in case E is taken in C to favour one over (the disjunction of) the other assertions taken in C to be straight answers to Q?. A question is locally real in C when there is an evidential consideration E that is held to be relevant to Q? (57). So a question is locally real (for a community) when that community recognizes some things as straight answers to it, and recognizes that some evidence would favour one of those answers over the rest. This gives some minimal sense to the communities knowing how to try to answer it. It is compatible with this that their inquiry may not get far, and also that the question actually has no correct straight answer: in the light of further information it may emerge that it is not a real question at all.

We can understand both questions that are real and those that are unreal – think of the example about the river Thames above. Jardine takes these in turn. His explanations make use of the idea of 'cognitive frame': this is the totality of the beliefs and commitments of a community'. It includes general beliefs about what sort of evidential considerations are relevant to what sorts of questions, as well as the 'beliefs and methodological commitments' used by members of the community to justify those judgments of relevance. It thus includes what Ernest Sosa would call a 'epistemic perspective' (REF). Jardine suggests that we understand locally real questions when we understand 'the ways in which they are made real by our cognitive frame.' Our

understanding of unreal questions is much more varied (Jardine 1991: 63ff), but we shall note just one of these. We understand the question ‘Who discovered that the Thames was the longest river in Europe?’ by seeing how it would be real in a cognitive frame that differed from our own in including the belief that the Thames is the longest river in Europe. In general, we can understand unreal questions by considering variants of our cognitive situation in which they would be real; and often this will be very difficult.

These questions of understanding and intelligibility of questions arise in two different contexts. First there are questions about the sort of understanding possessed by ordinary speakers involve in eliciting information from each other and ordinary inquirers (including ordinary scientists) trying to solve problems. Second, there is the sort of understanding required by historians and social scientists trying to understand the practices of inquiry employed in communities, perhaps in communities remote from their own. As philosophers we can describe both sorts of understanding. As Jardine records when discussing the difficulties of historical interpretation, most local methods are ‘routine and habitual, under normal circumstances rarely discussed or even articulated by their exponents’. And, he suggests, it is these methods that have the largest role in determining which questions are real for a community. He mentions ‘tacit criteria by which {scientists} assign burdens of proof and judge the competence and worth of other practioners and their findings’, tacit conventions of how to present materials to other practioners, and the role of ‘habitual competence in the use of instruments’ in guiding experimental work (1991: 90). Although our concerns are not with scientific knowledge; however, it is easy to see that everyday inquiry and evaluation of argument is similarly guided by what is routine, habitual, unarticulated, and, in different ways, tacit. The task of the historian is to make explicit what is tacit and habitual; but our everyday dealing with questions achieves undestanding without this. We understand a question when our tacit and habitual understandings enable us to see how some evidential consideration or reason is relevant to its answer. It is clear, I think, that questions can be real for us that we don’t understand; we don’t see how or why the reasons favour some answer to our question.

The examples of who-questions that we have just been looking at suggest a further dimension of understanding. If we need to make judgments of relevance in identifying which things are actually candidate answers, we may also need to grasp what it is that makes something an appropriate or good answer. Jardine’s account takes for granted the ideas of a ‘straight answer’, and I have been suggesting that for understanding many of our normal epistemic encounters with questions, this is not something we can do. There are issues about how to identify what question is expressed by an interrogative, as well as issues about how, once we have identified a question, we can get to grips with it.

The fact that a question is real for us does not entail that we have any reason to try to answer it. We may not find it interesting. There may be none of our other concerns to which its answer would be relevant, either by providing information that would be useful for practical purposes or by offering information that will contribute to our ability to solve theoretical problems and better understand our surroundings. Jardine distinguishes our *scene of inquiry* (the range of questions which is real for us) from our *scene of response* (the questions in our scene of inquiry that ‘engage with some aspect – cognitive, moral, aesthetic, etc. – of [our] attention and concern.’ (1991: 68). These are the questions that are real in a stronger sense: they are experienced as needing an answer (rather than just as possessing one.) Such questions are relevant to our concerns, and we have standards (tacit as well as explicit) that govern entry into our scene of response: the question how many grains of sand there are on Blackpool beach, for example, does not belong there.

I now want to return to the discussion of questions and problems in chapter two, in order to argue that, if we define the local reality of questions as Jardine has, then there are questions which are not locally real, but which engage with our attention and concern. It can be right for me to try to answer a question that does not belong within our ‘scene of inquiry’. The kind of case I am concerned about is one where the only answers I can think of (if any) can be eliminated, but I am confident that there is a correct answer to be found. And we might add, I have no real sense of where this unknown answer lies.

Sylvain Bromberger suggests that explanatory why-questions are responses to particular kinds of cognitive predicament. His example is his ignorance with respect to why kettles emit a humming noise just before the water begins to boil (1992: 27). The character of his predicament is that he believes that this question admits of a right answer (it is ‘sound’), but he can think of no possible answer to which he cannot see decisive objections (1992: 29) Such a case may meet Jardine’s conditions for being locally real: Bromberger is aware of evidence that have been used to evaluate at least some answers; but he is not aware of how that evidence can be used to evaluate answers that we may come up with in the future. His evidence eliminates all the options he can think of. It can still be rational to inquire into such questions, guided by the confident *hope* that answers will emerge, and by the hope that we will be evaluate those answers in light of evidence. But in that case, our strategy of inquiry will be primarily focused, not on refuting or defending particular answers, but on looking for possible answers.

So what do we (or should we) do in such cases? The motivational force rests on a substantial presupposition: there is a real question here, and we can discover what it is, and when we do, it will be a question that we can handle directly. And the first task of inquiry is to create a situation in which our interrogative expresses that real question. In order for this to happen, we may have to revise answers that, we had thought, had been

rejected. We may have to uncover the possibility of answers that, at present, we are not aware of. We can thus see the initial interrogative, which expresses no real question, as setting in motion a course of activities designed to enable us to find such a question. This might involve exploring the subject matter, hoping that useful new information may emerge. It might also exploit our understanding of the unreal question. If we try to understand how the question could be real in counterfactual circumstances, where we lack information that we currently possess, then this can offer analogies and models to exploited in trying our different attempts to make the question real.

## **6. Is truth an aim of inquiry?**

To be written
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