Worrying about Trivial Questions

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1 Knowing Which and Knowing That

There are a many different ways of attributing knowledge to people. To name three: we can say *that* they know that some propositions is true, we can say that they know *whether* some proposition rather than another is true, and we can say that they know *which* things in some class satisfy some property.

Despite the diversity of linguistic means of ascribing knowledge, it's tempting to think that, at bottom, all knowledge can be thought of us as knowledge of propositions. This suggests that *knowledge-that* has some sort of priority over other types of knowledge, since knowledge that seems like propositional knowledge. One case that challenges this thesis is *knowledge-how*: it is not clear in what sense knowledge-how depends upon propositional knowledge.[1] By contrast, in other cases such as *knowledge-whether* and *knowledge-which* (together I'll call them knowledge-WH) it seems that the sorts of knowledge ascribed by these locutions always are constituted by knowledge-that.

I'm not here going to be interested in the question of which kind of knowledge ultimately depends upon which other kinds of knowledge. What I'm interested in is whether, in the general case, attributing knowledge-WH to someone is equivalent to attributing some particular propositional knowledge to them. I won't directly discuss knowledge-*whether* here (which I think is an easier case) but only knowledge-*which*.[2] For this case, the question I want to ask is whether there some proposition p such that saying that x knows which F is G is attributing the same mental state to x as you would if you said that x knows that p?

To take a concrete example, consider this knowledge attribution:

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[1]Stanley and Williamson (2001) defend the thesis that knowledge-how is just a species of propositional knowledge.

[2]Jonathan Schaffer (2007) gives arguments that knowledge-whether does not reduce to knowledge that, which I'll discuss in passing.

(1) John knows which students went to the opera.

If I use (1) without actually myself knowing which students went to the opera than obviously I don't know what p is. However, it might still be the case that my assertion of (1) has equivalent truth conditions to the assertion that John knows that p. So the real question is whether, in a given context, there is always a proposition p such that (1) attributes to John the knowledge that p. The thesis that there always is such a p, I'll call *reductionism* about knowing-which.

You might wonder how reductionism could fail to be true? After all, isn't knowing who went to the opera just a matter of knowing some proposition? Then, doesn't there have to be, in context, a reduction of the ascription in (1) to some ascription of knowledge-that? Not quite: Suppose there are two propositions p' and p'' that are logically independent and that (1) (when uttered in a given context) is true if and only if John knows p' or p''. If this is the case, then there is no p such that (1) is equivalent to John knows that p. So *reductionism* could be false even if all knowledge-which depends on knowledge-that.[3]

2 Which Propositions?

What would be good is to have a general method to get from a question Q, e.g. *which students went to the opera*, and a context to a proposition p that such John knows Q, e.g. John knows which students went to the opera, if and only if John knows p.

We have some help here from the extensive literature on the semantics of question. Hamblin (1958) analyzes questions by reference to their possible answers. He suggest that the set of all possible answers to a question is a set of exhaustive and mutually exclusive propositions. There is some dispute about whether this is the right way of thinking about the notion of the answers to questions. Obviously it is only going to be useful for thinking of *complete* answers, rather than partial answers, since the latter are not mutually exclusive. But it seems like knowledge attributions with embedded questions attribute complete knowledge of the answer not partial knowledge.[4]

A set of mutually exclusive and exhaustive propositions over logical space is equivalent to a partitioning of logical space, and equivalence relations form partitions. There are really two prominent answers to what sort of partition we need. Groenendijk and Stokhof (1984) suggest this equivalence relation as the relation partitioning logical space associated

[3]Essentially, knowledge-which might admit of multiple realizations. Note that the state of knowing p' or knowing p'' is not equivalent to the state of knowing p' or p''.

[4]Karttunen (1977) suggested that the complete answers to questions were *not* mutually exclusive. However, I think it's generally acknowledged that *for the purposes of knowledge ascriptions* it's best to think of the possible answers to a question as being mutually exclusive. See in particular Groenendijk and Stokhof (1984) and Heim (1994).

with the questions "Which students (Ss) went to the opera (are Os)". This is often called the *de dicto* notion of the questions, for reasons that will become clear soon.

(2) $w \sim w'$ iff $\forall x((Swx \& Owx) \leftrightarrow (Sw'x \& Ow'x))$

This partitions logical space into a set of cells, where, in each cell, exactly the same set of individuals are both students and went to the opera.

Such a partition of all the possible answers to a question naturally feeds into a reductionist theory. Knowing which students went to the opera is just a matter of knowing the answer to the question "which students went to the opera". The answer to the question is just the proposition expressed by the cell of the partition that the actual world is in. Consider, for instance, the set of possible worlds represented in Table 1. The partition

Table 1: Which students went to the opera

	S	O
w_1	a, b	a
w_2	b	a
w_3	a	a
w_4	a, b	b
w_5	a	a, b

defined by (2) has three cells, $\{w_1, w_3, w_5\}$, $\{w_2\}$, and $\{w_4\}$. Knowing which student went to the opera in w_1 or w_3 or w_5 is just a matter of knowing the proposition $\{w_1, w_3, w_5\}$, in w_2 it is a matter of knowing the proposition $\{w_2\}$ and in w_4 it is a matter of knowing the proposition $\{w_4\}$. So using the partitions associated with questions developed by Groenendijk and Stokhof (1984) seems to be a way of implementing a reductionist account of knowing-which.

Let me first argue that the above notion is too weak: Supposing you attribute to John the knowledge of which students went to the opera in w_1. It seems to follow from this that John knows, for each student, whether or not he or she went to the opera. However, if John's knowledge set includes w_5 then John does not know whether or not student b went to the opera. Thus, there is someone who actually is a student and all John can say for sure about him is that if he did go to the opera, then, in fact, he's not a student. In this case it seems odd to say that John knows which students went to the opera.

The more standard worry is that (2) is too strong: (2) requires that John not just know who the students who went to the opera are but he must also know that they are students. In some situations this may appropriate, but in some it is too stringent a notion. It is argued, for instance, that there is a sense in which merely in virtue of knowing exactly who went to the opera in total, John knows which students went to the opera, even if

John does not know who the students are. This reading of knowing-which attributions is usually called the *de re* reading, and it can be captured by this equivalence relation:

(3) $w \sim w'$ iff $\forall x (S_{@} x \rightarrow (Owx \leftrightarrow Ow'x))$

On this notion we simply require John to know of the actual students whether or not they went to the opera. So the partition defined by this is $\{w_1, w_2, w_3\}$, $\{w_4\}$, and $\{w_5\}$. This notion of course rules out the worry of the previous paragraph: to know which students went to the opera we need to know of every actual student whether or not they went to the opera. We can combine these two notions, (2) and (3) into one stringent notion that might be needed in some cases.[5]

How do things look so far reductionism? Well, what we have is two or three competing senses of what proposition constitutes a complete answer. If these distinct senses really exist, it's reasonable to think that questions are *ambiguous* between these different readings. Relative to one or the other reading however, each question in each context is used to ascribe a particular piece of propositional knowledge: the proposition expressed by the cell of the partition that the actual world is in.

3 Trivial Questions

Higginbotham (1996) observes that the following two questions differ sharply.

(4) a. Which bachelors are male?
b. Which men are bachelors?

While the first seems entirely trivial, and its answer knowable a priori, the second is a legitimate question. This also raises as a puzzle for the reductionist view of knowledge-which, since the two knowledge ascriptions associated with (4-a) and (4-b) differ:

(5) a. John knows which bachelors are male.
b. John knows which men are bachelors.

While, (5-a) ascribes what seems like entirely trivial knowledge to John, (5-b) ascribes substantive knowledge. Note, first, that according to (2) the possible answers to (4-a) and (4-b) are the same. Thus, the notion of knowing the answer in (2) is, on the face of it, inadequate to capture the distinction between (5-a) and (4-b).

Consider, on the other hand the *de re* notion of knowing the answer in (3). On this

[5]That is, for any two partitions you can define a third one where there is a cell corresponding to any pair of cells, one from each of the other partitions.

notion the two predicates in a the knowledge ascription have different roles, so it does not face the immediate problem of symmetry. However, note that, on (3), knowing which bachelors are male requires knowing this proposition:

(6) $\{w : \forall x(F_{@}x \rightarrow (G@x \leftrightarrow Gwx))\}$

This is a non-trivial requirement: it requires, for the case of (5-a), knowing of a certain set of men that they are men, which you certainly might not know (e.g. you don't know that Pat, the bachelor, is a man).

One way of putting the puzzle: on many semantics (7) comes out as being tautologous:

(7) All balloons are balloons.

This seems like a desirable feature. Likewise, we might hope that the answer to (8) is tautologous:

(8) Which balloons are balloons?

However, none of the accounts above managed to capture this. Table 2 gives an example. Even though both w_1 and w_2 are worlds in which all balloons are balloons (as any world

Table 2: Balloons

	B
w_1	a, b
w_2	a

is), to know which balloons are balloons at w_1 on either of the accounts above, means that your knowledge rules out w_2.

4 A Generalization

I think the problem of trivial questions can be reduced to a more general problem about the related notions of possible answers that I outlined in Section 2.

All/Which Connection If you know that all Fs are Gs then you know which Fs are Gs.

No/Which Connection If you know that no Fs are Gs then you know which Fs are Gs.

Note that the **No/Which Connection** but not the **All/Which Connection** follow from (2). Neither connection follows from (3). It should be clear that if we can explain the **All/Which Connection** we can explain the issue of trivial questions. After all, we can seem to know a priori that *all* bachelors are male, so given **All/Which Connection** we can know a priori *which* bachelors are male.

In the literature a distinction is often made between complete and incomplete answers to questions. This distinction is naturally understood in the partition view as a distinction between whether or not an answer tells you exactly which cell of the partition you are in, or merely eliminates some cells as candidates. You might think that knowledge that all Fs are Gs is some form of partial knowledge of the answer to a question, and *this* explains the **All/Which** connection.

(9) Which boys came?

(10) a. All of them.
b. None of them.
c. Most of them
d. Three of them.
e. Half of them.

We cannot respond to (10-a) or (10-b) by asking for further specification ("Oh really, which ones?") but we can for reply to the others this way. So knowing (10-a) or (10-b) would amount to knowing the complete answer to (9) but knowing (10-c) to (10-e) would not.

It seems to me that on all ways of understanding "which Fs are Gs" the **All/Which Connection** and **No/Which Connection** hold.[6] Thus, the attempt at spelling out reductionism in Section 2 seems to be incomplete since it cannot account for this. The rest of the paper will be concerned with what our options are.

5 Semantic Solution?

The first thought you might have is that the particular partitions we chose above were just not quite right. What we need is to refine them to account for the **All/Which** connection. Since we know already how to capture the **No/Which Connection**, let's only consider the **All/Which Connection**. To capture it directly we need to give a notion of answerhood according to which knowing that all Fs are Gs entails knowing which Fs are Gs.

The main point I want to make about this is that to make such as solution work we would need to have a notion of knowing the answer that is distinct from all the previous

[6] At the least it definitely seems to hold on some reading.

notions we have used. Consider, for instance, this set of possible worlds described in Table 3, which include all possibilities except those where F and G are empty. The proposition

Table 3: F and G

	F	G
w_1	a, b	a, b
w_2	a, b	a
w_3	a, b	b
w_4	a	a, b
w_5	a	a
w_6	a	b
w_7	b	a, b
w_8	b	a
w_9	b	b

you know when you know that all Fs are Gs is $\{w_1, w_4, w_5, w_7, w_9\}$. This proposition overlaps with *every* cell in every partition discussed in Section 2. So, if we are going to allow this to be a possible answer, it cannot simply be used to make the previous notions of possible answers slightly less fine-grained, rather it must entirely replace them! In order to give a semantic solution, then, we need to posit a *new* definition of the possible answers to a question.

Unlike the *de re*/*de dicto* distinction this third distinction does not seem to correspond to simply a different reading of the meaning of the question. Rather, it seems that this is a characterization of different *way* of knowing the answer to an unambiguous question (or at least not more ambiguous than we previously suggested). Thus, if we take a notion of answer on board that directly captures the **All/Which Connection** we will find ourselves in exactly the situation I described in Section 1: On a single reading of which Fs are G, there are different distinct, logically-independent propositions, knowledge of which constitutes knowing which Fs are Gs. In this case reductionism fails. For this reason, stipulating that the **All/Which Connection** does not seem like a plausible strategy for defending reductionism.

6 Non-Reductionism

Those who think that knowledge-which is *sui generis* can take comfort in the conclusions we have drawn so far. In this section I will discuss an independent argument, due to Jonathan Schaffer, against reductionism. Then I discuss a unified non-reductionist framework for treating both Schaffer's cases and capturing the **All/Which Connection**. In the end, though, I will suggest that Schaffer's independent argument for non-reductionism is not particularly compelling, so does not give independent support for the non-reductionist treatment of the **All/Which Connection**.

Schaffer (2007) considers constructions of the form "whether A or B." I assume that he is considering the reading of these questions that does not ask whether the sentence either A or B is true but rather that asks whether the sentence A or whether the sentence B is true. Here is an example of the kind of case he uses:

Schaffer-Style Case You are watching *Bill and Ted's Excellent Adventure* and Ted is talking. You are sure that it is Bill or Ted speaking (and not, say, Napoleon, who also figures in the film), but you do not know which one is speaking. According to Schaffer it is true to say you know whether Ted or Napoleon is speaking. You do not, however, know whether Ted or Bill is speaking.

This suggests that knowledge whether A or B does not depend upon knowing either A or B but rather on knowing, given that one or the other is true, which one is true. One way of thinking about this is to think that the question "whether A or B" induces a partition that only covers *part* of logical space. There is one cell where A is true and B is false and one cell where A is false and B is true. Knowing whether A or B is just a matter of being able to tell, which of those cells (if any) obtain—in other words you don't need to know *that* the actual world is in those cells, but just that if it is, which one it is in.[7]

We can expand this view to also try to cover the **All/Which Connection**. In Schaffer-type cases knowing whether is a matter of being able to tell *given the partition* what the answer to a given question is. Suppose x knows that all bachelors are men. If we give x the *de re partition*, the one yielded by (3), and he knows that it is the *de re partition* of the question "which bachelors are men?" then he can tell which cell of the partition the actual world is in.[8] So it seems that we can account for the **All/Which Connection** on the general picture of knowledge wh- according to which knowing the answer to a question depends upon being able to tell, *given a partition of logical space*, which cell the actual world is in.

If you want to abandon reductionism this seems like a perfectly good way of doing so. However, I don't think Schaffer's cases themselves give us any serious reason to abandon reductionism or even to resort to the idea that knowing whether A or B is true is not simply a matter of knowing the truth of A and B. It has often been observed that asking whether A or B is true tends to lead to a presupposition that one and only one of A and B is true. When someone presupposes something, we can often accept that they believe

[7]There's probably also a factivity requirement: the actual world does indeed need to be in one of those cells.

[8]The partition that the actual world is in is the one where the set of individuals who only vary in whether they are men between partitions and not within partitions are all men, x can obviously determine this without knowing (before he is given the partitions) who is a bachelor.

it and thus are given reason ourselves to believe it. Suppose in the **Schaffer-Style Case**, you are asked whether Ted or Napoleon is speaking. Having been asked that question can give you *knowledge* by testimony, through the presupposition, that either Ted or Napoleon is speaking (and not both). In this case, your old knowledge combined with your new knowledge puts you in a position to know that Ted is speaking. This, of course, does not explain why we are able to say (before we actually ask you whether Ted or Napoleon is speaking) that you know whether Ted or Napoleon is speaking. However, here I want to simply note that the intuitions that support the Schaffer cases are not that strong. Certainly there is contrast between whether it seems right to say that you know whether Bill or Ted is speaking or it seems right to say that you know whether Ted or Napoleon is speaking. The latter sounds much better to me, but it still is not clear to me that we should judge it as being absolutely true. Given that we have a good explanation of the contrast here, and why it is tempting to attribute knowledge in these cases, I do not think the cases provide a serious motivation for the non-reductionist partition view.

7 Guises and Knowing Which

Before discussing other ways of explaining the **All/Which Connection** I will discuss some well-known puzzles about what it takes to count as knowing which. These puzzles relate to classic philosophical discussions of *de re* beliefs and attitude ascriptions (e.g. Kaplan, 1986). We often answer which-questions by using a description (or descriptions) to identify one or more individuals. However, which description can be appropriately used varies with context. Suppose you know that Schmole Silverstein stole you car battery because he left his wallet under the hood. In a sense, you know who stole your car battery. However, if you only glimpsed Schmole in the act, and you are taken to a police lineup and asked to say which of five similar-looking men is the one who stole your car battery, there is a sense in which, in that context, you don't know who stole your car battery.

What lesson should we draw from this? There are really two choices here: one is to alter the *semantics* of questions to account for this relativity, the other is to use the *pragmatics* of knowledge ascriptions to do so.

7.1 Semantic Treatment of Guises

The most detailed attempt, that I know of, at handling these problems semantically can be found in Aloni (2001). She entirely reworks the semantics of question. Each question on her account is associated with what she calls a *conceptual cover*. A conceptual cover, relative to a set of worlds, W, and a domain of objects, D, is a set of individual concepts, I that such that *a)* there does not exist any world e in W s.t. two individual concepts in D

pick out the same individual in w and *b)* the cardinality of I equals the cardinality of D. Aloni defines the *the meaning* of a question in terms of the conceptual cover associated with it. In particular the meaning of which Fs are G is a partition of logical space according to which individual concepts in the conceptual cover satisfy $F\&G$.[9]

For example, in the lineup situation, if I am asked who stole my car battery relative to a conceptual cover where there is one individual concept for each person standing in front of me, then merely knowing that Schmole stole the car is not enough: I have to be able to pick him out relative to the descriptions picking out the people standing in front of me. I need to know some proposition along the lines of *the man on the far-most left is the battery thief.*

For our purposes we will need to discuss not only questions picking out single individuals but also questions picking out pluralities. Note, first of all that, that the same phenomenon occurs where a question can be answered by identifying a plurality rather than the individuals constituting it. For example:

(11) a. Which mushrooms in this box are poisonous?
 b. The red ones.

In some contexts this answer will suffice, and in others it will not. Moreover it has all the marks of being a complete answer in the right context. Suppose we try to treat this case using the individual concept theory. To give a concrete example suppose there are three mushrooms (you cannot see) and you know that whichever ones are red are poisonous. The individual concepts theory requires that for you to know which mushrooms are poisonous you must know how many are poisonous. But you do not know this. Nonetheless, there is a clear sense in which you know which mushrooms are poisonous. So, oddly enough, a feature that Aloni takes to support the individual concept theory (preservation of cardinality) appears actually to be a defect in the theory. Knowing-which does not entail knowing how many, a fact which neither Aloni (1999) nor Groenendijk and Stokhof (1984) provide an easy way to account for *directly.*[10]

A more basic worry is that the apparatus of individual concepts seems to attribute much more structure to questions than we find. It is not as if an utterance of question (11-a) is in any way associated with ways of identifying *each* mushroom in the world that satisfy the conditions Aloni associated with a conceptual cover. But the entire purpose of the notion of the conceptual cover is to capture the way in which we actually conceive

[9]This is a slight expansion of her approach.

[10]Aloni (1999, p. 19) writes that it would be "highly counterintuitive" to "that you know which card is marked without knowing how many cards are marked". I assume she means to apply this to the plural case as well, since it is trivial in the singular case where there is a presupposition that one and only one card is marked.

of the domain. Consider the mushroom case again. On Aloni's account (extended to deal with plurals in this way) knowing which mushrooms are poisonous would require knowing of a set of individual concepts that they are red ones. There are many such propositions that would entail that all and only the red mushrooms are poisonous. So it seems like the notion is too strong to capture the sense in which knowing that all and only the red mushrooms are poisonous can count be sufficient for knowing which mushrooms are poisonous.

We might, then, think that what we need is to treat questions as having different semantic values relative to a set of concepts picking out pluralities by description. We could just flat-footedly treat singular and plural questions on a par with the only difference being the assumption that the latter requires unique identification of a plural entity rather than of a singular one. In this case, each question would come with a domain of plural individuals and a set of individual concepts picking them out (a conceptual cover). Knowing the answer would be a matter of knowing that one individual concept for a plurality satisfied the question predicate. If we associate (11-a) with a set of individual concepts for plurals such as *the red ones*, *the black ones*, *the big ones*, etc. Then we can say that knowing that the red ones and only the red ones are poisonous constitutes knowing the answer. This strategy mightformally to work. However, it is rather implausible to suppose that questions in contexts come with sets of supplies of individual concepts for all the possible pluralities that could serve as answers. There are, after all, going to be a large number of possible pluralities (for n individuals 2^n pluralities) and it is hard to think that context can set individual concepts for each one of them that form a conceptual cover. So, it seems a bit odd to build this into the meaning of questions.

7.2 Pragmatic Treatment of Guises

The notion of knowledge of the answer in Section 2 is very strong. To know which Fs are Gs requires knowing of the actual Fs and Gs that (at the least) they satisfy G. However, how do we determine when we know something of some object o? Some philosophers talk as if there is an *acquaintance* relation: a relation an individual can bear to an object which can put them in a position to have thoughts about it. Without that acquaintance relation we can only think about objects by virtue of descriptions of one sort or another and our thoughts will only uniquely pick out that object if our descriptions have a unique satisfier. This story seems to me, as it does to many others, spooky.[11]

You might instead think that it's a contextually determined when we can attribute to someone a *de re* belief about an individual and when we cannot. So, for instance, it might often be perfectly legitimate to attribute to David the *de re* thought that his neighbor

[11] John Hawthorne and David Manley argue against this sort of view in unpublished work.

John is a psychopath. However, in the context in the dark club where everyone is wearing unfamiliar attire and strange wigs, it might be inappropriate to attribute that same *de re* thought to David if he cannot recognize John in those conditions.

One way of treating this relativity is to suppose that in different contexts, different descriptions can serve to *rigidly* pick out an individual. So, for example, in the club context a name couldn't rigidly to pick out an individual, but a description of his location could.

We can make similar comments about plural concepts. Certain plural descriptions can be used to support *de re* knowledge about their satisfiers. So, in the right context in which (11-a) has been asked, we can use the description "the red mushrooms" to pick out the actual red mushrooms. Thus, if we know that all and only the red mushrooms are poisonous we can know the answer to the question in the senses discussed in Section 2. We know this in virtue of knowing the proposition that the actual red mushrooms are poisonous.[12]

Again this approach has some difficulties. It also the same worry about cardinality that the semantic approaches do. Being able to rigidly pick out the red mushrooms suggests that one knows how many red mushrooms there are. A related worry is that *de re* beliefs about a plurality would seem to filter down to *de re* beliefs about the individuals comprising it. So, if our knowledge rules out every world in which the actual red mushrooms are not poisonous, then it seems we know *de re* of each red mushroom that it is poisonous. This is a highly unintuitive consequence.[13] Clearly, some way is needed to model knowledge of pluralities that handles this problem. In other words, we need the resources to allow for the possibility of having *de re* belief about a plurality without having a *de re* beliefs about all (or any) of its members.[14]

8 Discourse Status of Which-Phrases

These two pairs of questions (considered as dialogue) contrast in felicity:

(12) a. Who are the members of the secret society?
     b. I'm not sure. But, tell me, which secret society members/ones are on the football team?

[12]De dicto knowledge just requires knowing that the actual red mushrooms are mushrooms that are poisonous, that is why all sense are easily covered.

[13]Cian Dorr pointed this out to me.

[14]The problem here seems to be a typical instance of a problem about using tools for representing concrete possiblities for representing epistemic possibilities. There is no metaphysically possible world where the same set has different members, but you might be able to know something of a set without knowing it of its members.

(13) a. Who are the tallest members of the secret society?

b. I'm not sure. But, tell me, which secret society members are on the football team?

It's not at all impossible to know which secret society members are on the football team without knowing who the members of the secret society are. Nonetheless, (12) sounds considerably less natural to me than (13).

This suggests asking or knowing which Fs are Gs presupposes something like knowing who the Fs are in one way or another. In the syntax literature the expression "which F" is considered to be *d-linked* (Pesetsky, 1987; Enç, 1991), a discourse feature that is thought to have syntactic consequences. Saying that "which F" is d-linked is usually described as meaning that expressions of the sort "which F" are only felicitous when the individuals expected in the answer come from "a select set in the domain of discourse" (Enç, 1991, p. 7). I take it that this definition is meant to capture the sense in which asking which Fs are Gs presupposes that one can identify the Fs, in a sense that explains the contrast between (12) and (13). In this respect "which F" differs from other wh-expressions such as "who". One can see this by considering this minimal pair:

(14) a. Which people wrote this report.

b. Who wrote this report.

It seems that the first but not the second takes for granted a set group of people in the context.

9 A Syntax/Pragmatics Principle

I suggested in the last section that the syntactic construction "which F" comes with a conventional discourse status, namely the Fs are taken to be a set that is, in some sense, identifiable in the context. I propose that a consequence of this is that, at least for the purpose of answering or knowing the answer to the question "which Fs are Gs?", we consider the set of Fs identifiable in the sense that we can pick them out *de re* (in the sense discussed in Section 7.2).

This assumption alone, along with the semantics for questions outlined in Section 2, explains the **All/Which Connection**: If x knows that all Fs are Gs then he knows which Fs are Gs in virtue of knowing that the Fs are Gs. That is, when "the Fs" is taken rigidly it picks out all and only the actual Fs and, so, knowledge that they are Gs suffices for knowing the answer to the question in the sense defined in Section 2.

As an example consider Table 4. Suppose we know that all Fs are Gs. Then, we

Table 4: F and G

	F	G
w_1	a, b	a, b
w_2	b	b
w_3	a, b	a

can straightforwardly rule out w_3. Normally, without saying more, we couldn't tell if our knowledge discriminates between w_1 and w_2. However, if w_1 is actual and we allow "the Fs" to act as a rigid designator then we can know that we are in w_1 rather than w_2 and, hence, know which Fs are Gs.

This approach, of course, relies on the pragmatic treatment of guises. We could adopt it to interface with a semantic treatment, though, if that were preferred. We are still left with various puzzles, such as the puzzle of why *de re* thoughts about a group do not give one access to *de re* thoughts about its members. Moreover, we are simply left *stipulating* that there is a certain connection between which groups we can pick out *de re* and the linguistic form of a question. The only consolation is that the stipulation seems very close to something already acknowledged in the syntax/semantics literature.

10 Conclusion

The puzzle of trivial knowledge showcases the complexity of interactions between the syntax/semantics/and pragmatics of questions and knowledge attributions.

The cost of maintaining reductionism might seem high, were it not for the fact that both a treatment of the pragmatics of guises and the special discourse status of "which F" are independently needed. The only major step we made was connecting these two topics by cashing out the special discourse status of "which Fs" in terms of which guises are allowed in the context of discussing the knowledge of the answer to a question.

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