



S-P Interrogatives

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S-P INTERROGATIVES*

I

By an '*S-P* interrogative' I mean an English interrogative something like one of the following four:

- (1) Which *S* is a *P*?
- (2) Which *S*'s are *P*'s?
- (3) What's (an example of) an *S* which is a *P*?
- (4) What are some (examples of) *S*'s which are *P*'s?

'*S-P*' is supposed to suggest 'subject-predicate', but since I use 'subject' and 'predicate' in other ways, it will reduce confusion if I stick to just '*S-P*'. Let us call *S* the *S*-term and *P* the *P*-term of (1)–(4). I want to marshal three quite different apparatuses for your consideration as formal explications of *S-P* interrogatives, paying particular attention to the way in which *S*-terms and *P*-terms enter differently into the logic of the situation. Throughout, the primary aim will be to give an account of these questions in terms of their answers – 'answers' in the sense of 'possible answers' or 'what counts as an answer' rather than in the sense of 'true answers'.

The first interrogative form I want to introduce is a species of *absolute interrogatives*. The key feature of absolute interrogatives is that what counts as an answer thereto is defined on sheerly syntactic grounds; it is a matter of grammar and nothing but grammar. (Later we shall find out that what counts as an answer to what we shall call 'relativized interrogatives' depends on semantic considerations.)

The particular species is that of *which-interrogatives*. (My view of these interrogatives is discussed in detail in Belnap (1963). But I have changed my mind, my terminology, and my notation in the course of preparing Belnap (1968).) A which-interrogative on my account consists of two parts, called the *subject* and the *request*. Let me note in passing that this terminology, though defensible, is made up out of whole cloth. I shall

use it to explicate the similarities and differences among (1)–(4), suggesting that these interrogatives are alike in their subjects, but differ in their request.

Using the standard move from English common nouns (e.g., ‘man’) into formal open sentences (e.g., ‘ x is a man’), the common subject of (1)–(4) is to be represented by

$$(5) \quad (Sx//Px),$$

the surrogate of the S -term appearing on the left of the double virgule, and that of the P -term on the right. What such a subject does is to present a range of alternatives from among which the respondent is to select the material with which to construct an answer. We shall call Px the *matrix* of (5). Its job is to be the matrix from which the alternatives presented by (1)–(4) are derived by substitution of singular terms for the x in Px . We shall say that Sx is the *category condition* of (5). Its function is to determine which singular terms are eligible for substitution in Px in order to obtain an alternative. Unlike Px , Sx sometimes does not appear in the answer at all. (5) may be called a *categorically qualified* (see Åqvist, 1965) subject. Consider, for example,

$$(6) \quad \text{Which positive integer is a prime between 10 and 20?}$$

with formal subject

$$(7) \quad (x \text{ is a positive integer} // x \text{ is a prime between 10 and 20}).$$

Here the alternatives – what the interrogative is in some sense ‘about’ – are ‘1 is a prime between 10 and 20’, ‘2 is a prime between 10 and 20’, etc., where these alternatives are to be described as arising from the interaction of the category condition ‘ x is a positive integer’ with the matrix ‘ x is a prime between 10 and 20’ in the following way. As I stated above, the matrix ‘ x is a prime between 10 and 20’ provides a matrix from which the alternatives are to be generated by substitution of terms for x , while the category condition ‘ x is a positive integer’ controls which terms can be substituted for x – in this case, just the terms ‘1’, ‘2’, etc. Substitution-instances like ‘ π is a prime between 10 and 20’ are not admitted precisely because ‘ π ’ is not in the appropriate category suggested by ‘positive integer’. The variable x occurring in Sx is bound in (5). Since it is the queried variable, I call it the *queriable* of (5).

If (1)–(4) are alike in their subjects and in the alternatives they present, how are they different? Clearly they *do* put different questions, for what would count as an answer to one would not to another. I arbitrarily call the respect in which they differ their ‘requests’. Then I would say that their requests have two dimensions so that the four arise by cross-classification: (1) and (3) are alike in requesting that a single alternative be selected in any possible answer, while (2) and (4) in contrast put no limitation at all on the number of alternatives to be selected; and (1) and (2) are alike in requesting that in each answer a claim be made – I call it a ‘completeness-claim’ – that the list of alternatives selected in that answer are complete, while (3) and (4) make no such request. I have elsewhere proposed the following symbolism and nomenclature for these four kinds of interrogatives. (Parentheses around the request (left half) as in Table I, are hereafter omitted. The subscript and superscript respectively stand for the

TABLE I

	Requests completeness-claim	Does not request completeness-claim
Requests selection of single alternative	<i>Unique-alternative</i> $?(\overset{1}{\underset{1}{\forall}}) (Sx//Px)$	<i>Single-example</i> $?(\overset{1}{\underset{1}{-}}) (Sx//Px)$
Does not request limitation on number of alternatives selected	<i>Complete-list</i> $?(\overset{-}{\underset{1}{\forall}}) (Sx//Px)$	<i>Some-examples</i> $?(\overset{-}{\underset{1}{-}}) (Sx//Px)$

lower and upper limits on the number of alternatives allowed to occur in any answer, with ‘–’ signifying the absence of upper limit. Whether or not a completeness-claim is called for is signalled by the presence or absence of ‘ \forall ’, its absence being marked by a ‘–’. In the full apparatus, other subscript-superscript pairs are allowed, and room is made for a ‘distinctness-claim’ to the effect that the various substituted terms stand for distinct entities, but these complications are not relevant here since I am chiefly interested in the subject rather than the request.)

The definition of the crucial relation ' A is a direct answer to I ' is given for these four sorts of interrogatives by the following schemata:

- Single-example: Pa
 Unique-alternative: $Pa \ \& \ (x) \ (Sx \supset \ (Px \supset \ x = a))$
 Some-examples: $Pa_1 \ \& \ \dots \ \& \ Pa_n$
 Complete-list: $[Pa_1 \ \& \ \dots \ \& \ Pa_n] \ \& \ (x) \ (Sx \supset \ (Px \supset \ x = a_1 \ \vee \ \dots \ \vee \ x = a_n))$.

The universally quantified conjuncts of the unique-alternative and complete-list answer have the effect of claiming that the selection of alternatives given is complete: the whole truth. Although the category condition Sx does not appear in every answer, still its presence is felt throughout by way of the following requirement:

- (R) The names a, a_1, \dots, a_n must be in the category – since they are names we shall say *nominal* category – determined by Sx .

It is part of the explication that whether or not a name does in fact belong to Sx 's nominal category shall be entirely a grammatical matter and effectively decidable. It is also essential to a correct understanding of this explication that Sx be viewed not as an arbitrary predicate but rather as one from among a list of predicates – I call them *category-conditions* – antecedently given by the grammar of the language. Appropriate candidates in English (or middle English) would be ' x is an integer', ' x is a man', and ' x is a country', and cases similar to these in respect of allowing more or less straightforward and more or less non-empirical determination of which instances are true. Of course in our *formal* reconstruction we can strike out the 'more or less' clause. (The use of category-conditions is intended as a flexible and easily applicable variant on the use of a many-sorted logic.)

II

The second way of handling S - P interrogatives such as (1)–(4) is based on a completely different underlying idea. Instead of presuming that these interrogatives have exactly the same answers (in the sense of what-counts-as-an-answer) regardless of the state of the world, one supposes that answerhood is semantically relativized to world-states. (The notion of relativized interrogatives was inspired by some features of Åqvist (1965).

The present account overlaps that in Belnap (1969). In order to avoid pointless rewording, a few paragraphs have been lifted from that paper.) Since the idea is independently interesting, we develop it for a while without reference to (1)–(4). We shall need to invoke the single-example whether-interrogative notation $?_1^1 - (A_1, \dots, A_n)$, which is to be taken as an absolute interrogative the answers to which are just A_1, \dots, A_n .

The need and point of relativized interrogatives, as I call them, is most clearly seen in the case of *conditional* interrogatives such as

- (8) If you are going, are you taking your umbrella?

This is to be distinguished from a *hypothetical interrogative* like

- (9) If you were to go, would you take your umbrella?

since (8), unlike (9), does not call for answers having the form of a conditional (e.g., ‘If I go, I’ll take my umbrella’), but rather asks that an answer, itself unconditional in form, be supplied only if a certain condition is true. The intent of (8), as we read it, is that an answer is called for only if the respondent is going; if he is not going, then though he may take it upon himself to so inform the questioner, to do so is not directly called for.

One difficulty in generalizing from such examples is that English has no short and idiomatic interrogative way of making the distinction we require, since, as it seems to me, (8) *could* be taken as a plain hypothetical like (9), or even as an absolute interrogative $?_1^1 - (\sim G, U, \sim U)$, with the negation of the condition as an additional direct answer. More unambiguous would be what we take to be an English equivalent of (8): “If you are going, tell me whether you are taking your umbrella.” Nevertheless, it seems best to see what happens if we take (8) as a distinctive interrogative form construed along the lines suggested above. Evidently, then, (8) cannot be explicated as an absolute interrogative. We therefore require the following crucial pair of locutions, in which answerhood is relativized to world-states. (World-states can be identified with models or interpretations à la Tarski, or with the possible worlds of contemporary modal logic. Since the present development does not utilize modal operators, I temporarily make the former identification with interpretations.)

- (i) *I calls for an answer in world-state M.*
 (ii) *A is a direct answer to I in world-state M.*

It is understood that the second locution is only defined provided that I calls for an answer in world-state M , I shall use '*is operative*' as a synonym for 'calls for an answer', and say that an interrogative is *inoperative* if it does not call for an answer.

Absolute interrogatives are those for which only the straightforward ' A is a direct answer to I ' is defined, while *relativized interrogatives* are those for which direct answerhood is relativized to world states. The distinction between absolute and relativized interrogatives is then seen to depend on which metalinguistic locutions are defined, or in natural language, on which locutions are appropriate. Among the relativized interrogatives, however, we can single out those as *categorical* which have the same direct answers in every world-state and are always operative.

In order to subsume absolute interrogatives under the new concepts, we will say that, where I is an absolute interrogative, the new locutions apply to it in the following ways: (i) I is operative in every M , and (ii) its direct answers in every M are the same, namely, those previously defined as its direct answers in the absolute sense. Subsumed absolute interrogatives therefore turn out to be categorical.

Conditional interrogatives are clearly *not* all categorical since sometimes they do not call for an answer. Let us agree to use

$$(10) \quad (A/I)$$

as the *conditional interrogative* with *condition* A and *conditioned interrogative* I . For example, the going out/umbrella interrogative (8) would become

$$(11) \quad (G/?_1^1 - (U, \sim U)).$$

But what does the notation (10) mean? It follows from the above that to say what this interrogative means we must say (i) in which world states it calls for an answer, and (ii) for those in which it so calls, what its direct answers are. Application of these ideas to (10), in accordance with our informal account of (8) as calling for an answer only when G is true and then calling for an answer to the umbrella yes-no interrogative, is straightforward.

- (i) (A/I) calls for an answer in M iff A
is true in M and I calls for an answer in M .

- (ii) Provided (A/I) calls for an answer
in M , B is a direct answer to (A/I)
in M iff B is a direct answer to I in M .

For example, I calls for an answer if and only if G is true, and provided G is true, its answers are those to $?_1^1 - (U, \sim U)$, i.e., just U and $\sim U$. When G is false, the concept of direct answerhood is undefined, and all we can say is that the interrogative does not call for an answer.

An important reason for putting conditions on interrogatives is, to employ a happy expression of Åqvist, to *guard* them: not knowing whether an absolute interrogative has a true direct answer, we may ask, "If it does, please supply one" by putting the claim that it has a true answer as a condition on itself. For example, we may guard "Was it suicide or murder?" as expressed by, say $?_1^1 - (S, M)$, by asking "If it was either suicide or murder, which one was it?":

$$(S \vee M / ?_1^1 - (S, M)).$$

Suppose that in fact it was neither suicide nor murder but an accident. Then to use the absolute interrogative, "Was it suicide or murder?" would be to do something 'bad', to call for a true answer when it is not possible to give such. But to use its conditionalization would be acceptable, since in the given circumstances the conditionalization would simply be inoperative, not calling for an answer at all. A particularly entertaining form of this maneuver occurs when the guarded interrogative is a *Hobson's Choice*, i.e., an interrogative with but one direct answer, as $?_1^1 - (A)$: "Tell me that A ". Let us grant that this interrogative form is of no (?) utility. But consider its conditionally guarded cousin,

$$(A / ?_1^1 - (A))$$

which calls for an answer if and only if A is true, and then asks for A . In short, it answers to the form, "If it is true that A , tell me so," the nicety of which can be seen from examples like "If you can't hear me in the back row, tell me so."

Let us turn to another way of constructing new interrogatives out of old. Given a set of absolute interrogatives, we can define their conjunction as that interrogative which has as its answers a conjunction containing, for each interrogative in the set, a conjunct which is an answer to that interrogative. Thus an answer to a conjunction of a set of absolute inter-

rogatives provides an answer to every interrogative in the set. The natural adaptation of this idea to relativized interrogatives is to say that a conjunction of a set of relativized interrogatives has as its answers conjunctions containing, for each *operative* interrogative in the set, a conjunct which is an answer to that interrogative. Thus, an answer to a conjunction of a set of relativized interrogatives provides an answer to every member of the set which calls for an answer. The idea doesn't make much sense for infinite sets of *absolute* interrogatives, conjunctions being only finitely long, but it does make sense for infinite sets of *relativized* interrogatives for the following reason: although the entire set may be infinite, the set of its operative members, i.e., those calling for an answer, may well be finite, so that it is easy enough to concoct a (finite) conjunction with a conjunct answering each operative interrogative in the set. With this in mind, let us skip finite conjunctions of interrogatives and proceed directly to infinite ones via a new interrogative form, called a *universalized interrogative*,

$$(12) \quad \forall xIx,$$

where we assume x occurs free in the interrogative I , hence not as a querable. The interpretation is as follows:

- (i) 12 calls for an answer in M iff some substitution-instance Ia of Ix does so.
- (ii) Provided 12 calls for an answer in M , a formula is a direct answer to 12 in M iff it is a conjunction containing for each operative substitution-instance Ia of Ix , a conjunct which is an answer in M to Ia , and containing no other conjuncts.

For example, let Sx mean that x lies between 10 and 20, and let Px mean that x is a prime. Then

$$\forall x(Sx/?_1^1 - (Px, \sim Px))$$

amounts to the universalized conditional interrogative, "For each x , if x is a number between 10 and 20, is x a prime?" It should cause the respondent to reply with a nine-term conjunction, each conjunct of which directly answers an appropriate substitution-instance $?_1^1 - (Pa, \sim Pa)$ of $?_1^1 - (Px, \sim Px)$. Here 'appropriate' means that the matching substitution-instance Sa of Sx is true. And just because Sx is true of only nine numbers, the interrogative makes sense. This particular interrogative has 2^9 distinct

answers (ignoring order), only one of which, of course, is true. But it is to be noted that expressions containing more or fewer than nine conjuncts, or containing the wrong sort of conjuncts are not just false answers, but non-answers. To insert a conjunct $P(7)$ is not to directly respond to this interrogative, at least not in our world.

We are now ready to apply this machinery to S - P interrogatives, in particular to (2). The idea is that we do not, as before, interpret the S -term as a category grammatically delimiting the set of what-counts-as-an-answer. Rather, its action is semantical via its role in a universalized conditional interrogative. To see better what is happening, let us introduce $*A$ as an abbreviation for the conditionally guarded Hobson's Choice interrogative ($A/?_1^1 - (A)$), so that $*A$ is read, 'If A is true, tell me so'. Then 2 – 'Which S 's are P 's – is on this scheme to be taken as

$$(13) \quad \forall x(Sx/*Px),$$

which can be back-translated as 'For each S , if it is a P then tell me so', or perhaps just as 'Which S 's are P 's?' Formally, the interrogative 13 has the following properties: (i) 13 calls for an answer just in case at least one S is a P ; (ii) if a_1, \dots, a_n is a complete list of all the S 's that are P 's, then (ignoring subtleties of order, etc.) $Pa_1 \& \dots \& Pa_n$ is 13's one and only answer, an answer which is bound to be true; (iii) though *calling* for an answer even when infinitely many S 's are P 's, 13 does not in such circumstances *have* any answers. (Such an interrogative I call 'dumb', for that is how a respondent must remain.)

In order to handle single-example interrogatives like (3), one naturally uses a mode of interrogative combination more akin to existential than to universal generalization. By saying that an interrogative is the *union* of a set of interrogatives, I mean in the absolute case that an expression counts as an answer to it just in case the expression counts as an answer to at least one interrogative in the set, and in the relativized case, just in case it counts as an answer to at least one *operative* interrogative in the set. There is no problem here about infinite sets since we are not combining answers but rather taking them one at a time. As a symbol for the variable-binding operation I will use the set-theoretical union sign rather than an existential quantifier, since in contrast to universalized interrogatives, what is going on is a set-theoretical operation on sets of answers rather than a logical operation on the answers themselves.

$$(14) \quad \cup xIx,$$

called a *unionized interrogative*, is then defined as follows: (i) (14) calls for an answer in M just in case some instance Ia of Ix calls for an answer in M ; (ii) an expression is a direct answer in M to (14) just in case it is a direct answer in M to some substitution-instance Ia of Ix .

Then our candidate explication for (3), 'What's an example of an S which is a P ?', is

$$(15) \quad \cup x(Sx/?_1^1 - (Px)).$$

We might back-translate this interrogative by means of 'For some x if it is an S then tell me that it is a P ', or perhaps just by 'What's an example of an S which is a P ?' taken in the sense, 'Among S 's, what's an example of a P ?' The formal properties of our candidate 15 are as follows: (i) it calls for an answer just in case there is at least one S ; (ii) when operative, (15)'s answers each have the form Pa , where in fact a is an S . Of course if one wants to be sure of calling only for true answers, one could use instead a conditional Hobson's choice, $\cup x(Sx/*Px)$.

One interesting feature of unionized interrogatives is that in spite of the fact that $\cup x$ is very much like an existential quantifier, and in spite of the fact that we have been trained to avoid putting existential quantifiers in front of conditionals, it turns out that $\cup x$ sits very well in front of a conditional (Sx/Ix), giving exactly the desired effect of saying 'For some x such that Sx , answer me Ix '.

Unionized interrogatives have uses other than explicating (3). For example,

$$\cup x(Sx/?_1^1 - (Px, \sim Px))$$

could be used to ask, 'For some x between 10 and 20, is x a prime?', or more colloquially, 'Tell me for some number between 10 and 20 whether or not it is a prime'. And a version of (1) could also be given by a unionized interrogative:

$$\cup x(Sx/(Px/?_1^1 - (Px \& (y) (Sy \supset (Py \supset y = x))))))$$

would represent the version in which it is not presupposed that there is at least one S which is a P , but it is presupposed that there is at most one S which is a P . In this version the uniqueness claim occurs as part of the

answer. In contrast,

$$\cup x(Sx/[[(Px \& (y) (Sy \supset (Py \supset y = x))]/?_1^1 - (Px)])$$

would be a version in which neither existence nor uniqueness is presupposed, and in which the uniqueness is used as a condition on answerhood but does not itself appear as part of the answer. One could also substitute $\forall x$ for $\cup x$; this is always possible when, as in this case, at most one of the ingredient interrogatives can be operative. A third version,

$$\cup x(Sx/?_1^1 - (Px \& (y) (Sy \supset (Py \supset y = x))),$$

treats 1 exactly as a special case of (3), asking for an example among the S 's of a P unique among the S 's.

It does not seem possible to treat (4) with the devices at hand, nor does it seem possible to give alternative versions of (2) analogous to the above versions of (3). In both cases the trouble is that the answers contain elements which are not schematizable by first order matrices.

One way among several that these problems could be solved would be by introducing a variable, F , ranging over finite sets $\{a_1, \dots, a_n\}$, with the understanding that $y \in \{a_1, \dots, a_n\}$ iff $y = a_1 \vee \dots \vee y = a_n$. Then the some-examples interrogative (4) could be given by

$$\cup F \forall x (x \in F / (Sx/?_1^1 - (Px)))$$

which will then have as answers every conjunction

$$Pa_1, Pa_1 \& Pa_2, \dots, Pa_1 \& \dots \& Pa_n, \dots,$$

such that a_1, \dots, a_n are all S 's. And a version of (2) in which the completeness-claim is made part of the answer and not just a condition on answerhood would be given by

$$\cup F ((x) (x \in F \supset Sx) / ((x) (x \in F \equiv Px))),$$

which would have as answers the formulas

$$(x) (x \in \{a_1, \dots, a_n\} \equiv Px)$$

such that a_1, \dots, a_n is a complete list of all P 's among the S 's. This way is simple, and uses sets only in ways of which no nominalist need be ashamed.

III

Another way to solve the problems of explicating (4) and of giving alternate versions of (2) would be to introduce relativization on a different basis. In all the above examples the ground floor of relativization was occupied always by the conditional interrogative. Instead one can introduce relativization into the very subject ($Sx//Px$) of a which-interrogative itself. Since the function of a subject is to present a range of alternatives from among which the respondent is to make a selection, a relativized subject will in general present different alternatives in different world-states. Thus, for each relativized subject, σ , we must define the following two fundamental locutions:

- (i) σ is operative in interpretation M (which is to say that what alternatives it presents is defined); and provided σ is operative in M ,
- (ii) A is an alternative presented by σ in M .

The ground floor relativized subject will be

$(Sx///Px)$,

with the understanding that (i) it is always operative and (ii) it presents as alternatives exactly those instances Pa_i of Px such that Sa_i is true. (Another option would be to make $(Sx///Px)$ operative only when there are some S 's, or even only when there are S 's which are P 's.) Such a subject is said to be a *conditionally qualified* subject, in contrast with the categorically qualified subject $(Sx//Px)$.

For the four interrogative forms just like those in Table I, except for containing conditionally qualified instead of categorically qualified subjects, relativized answerhood is defined in *exactly* the same terms with just one exception: the requirement (R) of I, which said that the names used in substituting into the matrix Px must be in the nominal category determined by Sx , is changed to

- (R') The names a, a_1, \dots, a_n must be such that Sa, Sa_1, \dots, Sa_n are true in M .

It is understood that for conditionally qualified subjects $(Sx///Px)$ there is no restriction on the choice of Sx , as there is in the case of categorically

qualified subjects ($Sx//Px$). Nor is there any presumption that one can effectively decide whether or not Sa is true. It follows that, as for relativized interrogatives in general, what counts as a direct answer is no mere matter of grammar, but instead depends on the facts.

IV

Having developed these differing explications of the *S-P* interrogatives (1)–(4), let us draw some comparisons. We begin with some remarks on the which-interrogatives introduced in I in explication of (1)–(4).

(1) They are *absolute interrogatives* in the sense that answerhood is not relativized to the state of the world but is instead a purely grammatical matter.

(2) Because answerhood is grammatical, it can be *effectively decidable*; both questioner and respondent using this apparatus can effectively tell which pieces of notation are and which are not direct answers so that the questioner never has to ask, “Was that an answer to my question?”

(3) They are *subject-request interrogatives* in the sense that answerhood is defined by means of the interaction of a subject, which presents alternatives, and a request which lays down specifications as to how these alternatives are to be combined in order to form an answer.

(4) Their subjects are *categorially qualified*, which means that the *P*-term of (1)–(4) is used as a matrix in which to substitute and that the *S*-term of (1)–(4) shows up as a category condition used to limit in an effective way what is to count as an alternative and therefore, derivatively, what is to count as an answer. There are two reasons for designing a formal apparatus with this feature.

(a) In the first place, the formal apparatus is to be used in an explicatory way, and since one finds the feature in English, there is a *prima facie* case for including it in the formalism. The point from English is that given ‘What’s an example of a positive integer lying between 10 and 20?’ one counts something like ‘General Sherman is a prime lying between 10 and 20’ not as a false answer, but rather as recognizably not an answer at all, easily distinguishable from say ‘8 is a prime lying between 10 and 20’, which is just false. The General Sherman response is, relative to the interrogative, a category mistake, though it might not be a category mistake relative to an interrogative with a wider category condition. (I believe

category mistakes *generally* to be relative to interrogatives; there is a good story here.)

(b) Second, the formalism is to a certain extent to be taken normatively, so that its features are to be judged as useful or not independently of their occurrence in English. And being able to describe with maximum and effective specificity the area in which answers are to be found is of benefit to all parties to an interrogative transaction. It is desirable from the point of view of the respondent since the narrower the category condition which is used, the narrower will be the field in which he has to search for an answer – if search he must. And it is desirable from the point of view of the questioner since he can use the machinery to limit what-counts-as-an-answer to those responses he would find helpful. Thus, one *could* use the category apparatus to exclude ‘The author of Waverly is the author of Waverly’ as an answer to ‘Who is the author of Waverly?’, using instead a category predicate including in its nominal category only (say) recognizably proper names.

Passing now to the interrogatives introduced in II, we may make the following remarks.

(1) These interrogatives are not absolute but *relativized* in the sense that what counts as a direct answer thereto is relative to the state of the world.

(2) Because answerhood is semantical, it cannot be expected to be effectively decideable. For example, without knowing the truth-value of the condition *A* of a conditional interrogative (*A/I*), one cannot tell whether an answer is called for or not. This feature seems to me accurately to mirror certain aspects of the situation in English. For example, given ‘Robinson Crusoe is a conductor of the Vienna Philharmonic Orchestra’, we may well feel that it is an empirical matter whether or not one should count it as an answer to ‘Which Alpine guides are conductors of the Vienna Philharmonic Orchestra?’ – just as empirical as the matter of its truth.

(3) These interrogative forms are not subject-request. Rather they grow out of combining the ‘tell-me-that-*A*’ form, the conditional interrogative, and either universalization or unionization. To put it as a mouthful, they are generalized conditional Hobson’s Choices. These explications gain interest from the fact that the ingredient forms are both simple and independently interesting, and that the mode of combination sounds intuitively right.

(4) As in the case of the interrogatives of I, the *P*-term is, as above, used as a matrix in which to substitute, and also as above, the *S*-term is used to limit what is to count as an answer. But the limitation is semantical rather than grammatical, and by so much not effective.

I have suggested that I could see both an explicative and a normative point in introducing the categorically qualified interrogative. I have also allowed the explicative force of relativized interrogatives as answering to deep-seated features of our natural language. But I cannot at this particular stage of investigation claim any normative value for the machinery of relativization. For example, if it is to be an empirical matter whether the sentence 'Robinson Crusoe is a conductor of the Vienna Philharmonic Orchestra' does or does not count as an answer to 'Which Alpine guides are conductors of the Vienna Philharmonic Orchestra?', then I cannot (right now) see any point in differentiating between calling that sentence a non-answer and a false answer. But I remain diffident about this negative judgment, and in any case I am reasonably certain that the picture changes when temporal parameters are added to the machinery governing *when* an answer is wanted. There is, I think, no substitute for the tensed conditional reading of 'If there is a fire, then (i.e., at that time) tell me where the nearest exit is located'.

(5) Combining generalization, conditionalization, and whether-interrogatives, including Hobson's Choices, does not seem to give an adequate account of some-examples interrogatives, nor of readings of complete-list interrogatives which require the completeness-claim to be part of the answer.

Let me now say just a few words about the interrogatives introduced with considerable brevity in III.

(1) They are relativized interrogatives, thus in this respect like those of II and unlike those of I.

(2) They are subject-request interrogatives, in this respect being like those of I rather than those of II. Because of this they can be used to explicate in a relativized way the some-examples interrogative (4) as well as those versions of the complete-list interrogative (2) resistant to explication as generalized conditional Hobson's Choices.

(3) Their subjects ($Sx//Px$) are conditionally qualified rather than categorically qualified like ($Sx//Px$) of I. This means two things when this form is regarded as the target of the *S*-term and *P*-term of some English *S-P* interrogative.

(a) Unlike the categorically qualified subject ($Sx//Px$), there is no grammatical restriction on the choice of Sx . In particular, Sx need not answer to some common noun which we would naturally regard as a category-expression in English and for which we could lay down more or less effective conditions for truth of substitution-instances. For this reason this form is doubtless a better explication of an $S-P$ interrogative like 'Which Alpine guides are conductors of the Vienna Philharmonic Orchestra?', for the S -term of this interrogative is far from categorial. But the other form is probably better for 'Which men are conductors of the Vienna Philharmonic Orchestra?', in which the S -term is indeed categorial.

(b) In exchange for removing the restrictions on the choice of Sx , one has to pay the price of non-effectivity. The nature and significance of this price are to me at this moment obscure, though I have no doubt further research will provide further light.

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NOTE

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