DOCUMENT RESUME

ABSTRACT
        Four hypotheses concerning the linguistic structure
of yes-no questions and their answers are considered as hypotheses
relating to the abstract structure of yes-no questions and to this
abstract structure in all human languages. The universal base
hypotheses are the following: (1) The abstract representation of all
yes-no questions includes two disjunctively connected declarative
sentences, symbolizable as X or Not-X. (2) The abstract
representation includes a component paraphrasable as I ASK YOU TO
TELL ME. (3) For a semantic subclass of yes-no questions, those
called "biased" ones, the abstract representation includes an
additional declarative sentence. (4) Answers and questions are in a
member-to-class relationship with each other. Eighty-five languages
form the data base against which these hypotheses are tested. The
structure of all yes-no questions is shown to be, on some level of
representation, complex rather than simple. The underlying X or Not-X
structure is shown to be subordinated to a sentence paraphrasable as
I ASK YOU TO TELL ME. The underlying structure of tag questions
differs from that of neutral yes-no questions since it contains an
additional copy of the suggested answer. Evidence is also found to
support the fourth hypothesis. (Author/PM)

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SOME CROSS-LINGUISTIC GENERALIZATIONS
ABOUT YES-NO QUESTIONS AND THEIR ANSWERS

Edith A. Moravcsik

ABSTRACT

The thesis considers four hypotheses concerning the linguistic structure of yes-no questions and their answers. All four of these claims have been previously made by other linguists. The novelty of this thesis is that it considers these hypotheses as ones relating to the abstract structure of yes-no questions and as ones relating to the abstract structure of yes-no questions in all human languages.

The term "abstract structure" is meant to be in a sense that rests on the assumption that in order to relate properties of linguistic utterances to each other, and thus explain them, utterances must have a representation in the grammar which is different from observable groupings of elements.

The four universal base hypotheses are the following:

1. The abstract representation of all yes-no questions includes two disjunctively-connected declarative sentences, symbolizable as X OR NOT-X.
2. The abstract representation also includes a component paraphrasable as I ASK YOU TO TELL ME.
3. For a semantic subclass of yes-no questions, those called "biased" ones, the abstract representation includes an additional declarative sentence.
4. Answers and questions are in a member-to-class relationship with each other.

The data base against which these hypotheses are tested comes from about 85 languages of the world. Results are the following:

1. Concerning the first hypothesis, evidence from the intonation of yes-no questions is presented to show that the structure of all yes-no questions should be, on some level of representation, complex rather than simple. Various manifestations of an OR word in some types of yes-no questions are taken to be evidence to the fact that this complex structure is disjunctive rather than conjunctive. Furthermore, the presence of NOT words in yes-no questions, the relationship between interrogation, negation and emphasis, and some observations about question-answer relationship show that what is disjoined is an affirmative sentence and its negative counterpart. Rules, however, relating such an abstract representation to be surface structure of yes-no questions are in need of motivation within transformational theory.

2.   There is evidence to show that this underlying X OR NOT-X structure is subordinated to a sentence paraphrasable as I ASK YOU TO TELL ME.   There is also some support for an alternative theory of question marking whose distinctive characteristics are that it is a discourse-marking theory and it does not assume an underlying OR. In this case, there are reasons to suggest that declarative OR-s should have a conditional base which is thus different from that of interrogative OR-s.

3.   There is some evidence to show that the underlying structure of tag questions differs from the underlying structure of neutral yes-no questions in that it contains an additional copy of the suggested answer.

4.   Standard answers of various kinds of yes-no questions can be shown to be in a member-to-class relationship with their questions with respect to their above-defined underlying structure.

Acknowledgement

1. Introduction - Purpose, Domain, Scope

1.1 <u>Purpose.</u> The purpose of this study is to test four claims concerning the underlying representation of yes-no questions and their answers as possible candidates for language universals.

The first two of the claims that are to be tested here concern the structure of all yes-no questions; the third pertains to the structure of biased yes-no questions; and the fourth is about the structure of question-answer sequences. They are the following:

1. The abstract representation of all yes-no questions includes two disjunctively-connected declarative sentences, symbolizable as X OR NOT-X.

2. The abstract representation also includes a component paraphrasable as I ASK YOU TO TELL ME.

3. For a semantic subclass of yes-no questions, those generally called "biased" ones, the abstract representation includes an additional declarative sentence.

4. Answers and questions are in a member-to-class relationship.

The term <u>underlying representation</u> is meant to be taken in a sense that rests on the assumption that in order to relate properties of linguistic utterances to each other, and thus explain them, utterances must have a representation in the grammar which is different from observable groupings of elements.[1] Claims made about underlying structure are therefore radically different from claims made about linguistic objects in general. How does claim 2., for instance, differ from a claim 2.a. which says: "Anyone who asks a true question always expects an answer from the person(s) to whom the question is addressed."? The two alternative

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[1] This assumption has been the cornerstone of transformational generative theory from the early sixties. The principle itself is the basis of scientific explanations in other sciences as well (cp. Braithwaite 1960, 22ff; Nagel 1960, 29ff; Hempel 1966, 70ff).

claims differ, first, in the way in which they can be proved or disproved and, second, in their significance. Claim 2.a. could be disproved if a speaker of a language said he didn't always expect an answer to a question. Claim 2. is impervious to this kind of evidence; in fact, no immediate observation can directly disprove it, unless that observation is about some linguistic object which can be shown not to be derivable from the proposed underlying structure by the set of rules whose members are the only possible ones in a grammar. Second, claim 2.a. is not differentiated from any other true statement that one might want to make about questions whereas the fact that 2. is a claim about deep structure means that it has been chosen over alternative claims as more basic or more significant for the characterization of questions.

Testing such abstract linguistic representations involves two things. First, to adduce semantic, syntactic, and phonological facts that appear to be unrelated but which have the common feature of being derivable from the proposed abstract structures by means of a set of independently motivated rules. Second, to see whether there are any facts that cannot be derived from the abstract representation in this manner; and in case there are, whether there is some alternative theory which would account for these as well as the others. Testing an underlying structure thus implies the weighing of these proposed abstract representations against facts and against alternative theories. Accordingly, in this present study an attempt will be made to do both.

Since we will be trying to justify the four claims as being of universal validity, the facts that we are going to test them against will be taken from more than one language. Since similarities among languages constitute a shaky basis for claims about universality unless at least two other possible

sources of such resemblances -- genetic and areal influence -- are ruled
out, our language sample of altogether about 85 languages was drawn
from various language families and various parts of the world, as the
following list shows. The likelihood of the third possible factor to cause
crosslinguistic agreement -- chance[2] -- is assumed to be reduced to a
minimum by the size of the sample.[3]

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[2] For some theoretical and methodological considerations of these
three factors, compare Greenberg 1953.

[3] Languages more frequently mentioned in the paper are listed here
in a genetic breakdown:

AMERIND: Andean-Equatorial: Quechua
           Oto-Mangean: Chatino

EURASIATIC: Altaic: Azerbaijani
                    Bashkir
                    Buriat
                    Turkish
            Uralic: Finnish
                    Hungarian
            Japanese
            Korean

SINO-TIBETAN: Mandarin
              Tibetan

AUSTRO-ASIATIC: Khasi
                Kurku
                Vietnamese
                Pacoh

DRAVIDIAN: Tamil
           Kannada

AUSTRONESIAN-THAI-KADAI: Melanesian: Rotuman
                         Indonesian: Agta   Malay
                                     Atta Negrito   Sangir
                                     Balangao   Tagabili
                                     Bontoc   Tagalog
                                     Dibabawon Manobo
                                     Ilongot
                                     Kalagan
                                     Kalamian Tagbanwa
                         Thai-Kadai: Thai

(Footnote 3 continued)

NEW GUINEA: Enga

INDOEUROPEAN: <u>Italic</u>:   French
                                   Italian
                                   Latin
                                   Spanish
          <u>Germanic</u>:   Dutch
                                   English
                                   German
                                   Gothic
          <u>Slavic</u>:   Bulgarian
                                   Macedonian
                                   Polish
                                   Russian
                                   Serbo-Croatian
                                   Slovenian
          <u>Celtic</u>:   Scottish Gaelic
          <u>Baltic</u>:   Latvian
                                   Lithuanian
          <u>Iranian</u>: Persian
          <u>Indic</u>:   Bengali
                                   Gujarati
                                   Panjabi
          Greek

CONGO-KORDOFANIAN: <u>Niger-Congo</u>: Ewe
                                           Fante
                                         Fulani
                                         Gbeya
                                         Grebo
                                         Sango
                                         Swahili
                                         Temne
                                         Wolof
                                         Yoruba

NILO-SAHARAN: <u>Chari-Nile</u>: Nubian

AFRO-ASIATIC: <u>Semitic</u>: Akkadian   <u>Cushitic</u>: Burji
                              Amharic   Galla
                              Syrian Arabic   Konso
                              Iraqi Arabic   Maji
                              Chaha   Somali
                              Geez   Welamo
                              Harari
                              Soddo
                              Tigrinya
          <u>Chad</u>:   Hausa

Jamaican Creole
Basque

Almost all of these claims have been repeatedly made by various linguists although they differ widely with respect to the extent to which they have been shown to be empirically powerful and theoretically viable. The first proposal concerning disjunctive structure I found is in Kretschmer 1912 (also 1938), except that such structure is not claimed to underlie yes-no questions but to have preceded, historically, their present form. The proposal as one concerning underlying structure has been generally accepted in transformational theory since Katz and Postal advanced it in 1964. The claim about the "request" component is implicit in Katz and Postal's account (1964, 85) and was subsequently made explicit by Sanders (1967, 133ff) and by advocates of the theory of performatives. How to cope with biased questions has been recognized as a problem in transformational theory; the claim that our number 3. refers to is the one found in Stockwell 1968, 645 ff. Finally, the characterization of question-answer relationship as suggested in 4. has been repeatedly alluded to by many accounts, linguistic (e.g. Katz and Postal 1964, 114f) and philosophical (Katz 1968) and was made explicit by Sanders (1967, 154).

Although it is implied by all of these accounts that their claims hold, hopefully, for more than one language, none of them, except for Kretschmer's paper (1938), bring crosslinguistic evidence to bear on the question: all of them base their arguments on ENGLISH only. It is because of this narrowness of the empirical basis of previous accounts that novelty can be claimed and significance can be hoped for for this present study.

1.2 Naturalness of domain and class. Although the choice of the general object of investigation is clearly up to the researcher's interest -- so is the fact, for instance, that the subject of this study is determined primarily by syntactic criteria and thus we do not generally consider constructions that can be used as questions but which are not syntactically interrogative, or ways in which questions can be used for purposes other

than enquiry -- some justification of the scope of one's approach is
felt to be in order.

In one sense, the problem as to whether a question-answer pair is
a proper domain of linguistic investigation and whether all yes-no
questions form a natural class,[4] is the central problem of this paper.
If there are universal generalizations that hold true for such a domain
and for such a class of constructions, this by itself provides justification.
In other words, meaningful answers to these questions can be given only
after two things have been shown: that instances of the yes-no-question-
and-its-answer construction do exhibit common behavior ; and that there
are theoretically justifiable ways of representing them as a natural class.
The point in the course of this paper at which we will be in best position
to draw relevant conclusions will therefore be the very end. What will
be given here below by way of introduction is only a brief consideration of
alternative domains and alternative classes and some anticipation of the
extent to which the domain and class of constructions singled out in this
study will turn out to be justified.

1.2.1 Domain. The maximal domain of the proposed generalizations
will be a two-sentence discourse consisting of a question and an answer.
Two questions may arise.
a/ Why not limit our investigations to the domain of the sentence as has
been traditionally done?
b/ Provided that we accept the discourse as a legitimate domain, why
remain within the bounds of two-sentence discourses? Specifically, why
not consider multisentential question-answer pairs (i.e. where the ques-
tion and/or the answer consists of more than one sentence), and sequences
of question-answer pairs or of declarative sentences and question-answer
pairs?

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[4] On the notion "natural class" in linguistics, see Halle 1962 and
y 1968.

There is a three-fold answer to the first point. First, we step
beyond the sentence since it seems that there are observable limits to
the set of sentences that can serve as proper answers to a question and
that this relationship between yes-no questions and their answers can
be characterized; and, moreover, to describe properties of question-answer se-
quences, the same theoretical tools are needed as for sentence-linguistics, such as,
for example, the genus-before-species ordering rule (Sanders 1967, 154).

Sécond, it appears that if we do not aim at characterizing question-
answer relationships to start with, but want to explain properties of
questions by themselves and of answers by themselves as individual sen-
tences, there will be some properties for which no proper explanation
is found but which can be accounted for if we consider these sentences in
the context of their respective questions or answers. Such properties
are tags, for questions, and emphasis, in answers.

Third, the domain of discourse as a natural one for grammars is
independently motivated; i.e. even if question-answer pairs did not exist,
it would turn out to be the proper domain (cp. Sanders 1967 and Sanders 1969).

As for considering more-than-bisentential interrogative discourses,
the following remarks can be offered. That in this paper we will not
consider multisentential questions and multisentential answers is an arbi-
trary restriction on the scope of this present investigation. Although such
dialogues do have their own problems (cp. e.g. Did you turn off the radio
and turn off the light and lock the door? *Yes and no and yes (respectively).),
it seems that the nature of such dialogues is not basically different from
bi-sentential question-answer pairs. That sequences of declarative sentences
and question-answer pairs will not be investigated is seen as an equally
arbitrary and more significant limitation, since the rules which delimit
"grammatical" sequences from "ungrammatical" ones will be different
in nature from the ones that we will discuss for relating questions to their

proper answers -- if they are statable at all.[5]

1.2.2 Class of constructions investigated. Provided that one's natural interest lies in yes-no questions and their answers, the question is whether these constructions by themselves form a class which is sufficiently inclusive, on the one hand, and not too inclusive, on the other, from the point of view of stating generalizations. Three alternative classes offer themselves, a/ and b/ including yes-no question-answer pairs and c/ breaking down the class:

a/ any sentence-and-response pairs; i.e. declarative sentences related in this manner, greetings and their answers, imperatives and their answers, wh questions and their answers and yes-no questions and their answers all taken together

b/ any question-and-answer pair; i.e. both wh questions and yes-no questions and their answers

c/ some subclass of yes-no-question-answer pairs.

As for a/, it is true that considering any bisentential discourse where the second sentence is an answer, there are always some answers that are felt to be improper, as compared with the adequacy of some others. The nature of the limitations, however, varies. Considering greetings, imperatives and questions, they turn out to differ altogether on three counts with respect to their answers. First, in the extent to which answers are expected at all. Second, in the extent to which non-verbal answers are substitutable for verbal ones. Third, in the nature of the relationship between stimulus sentence and answer. Answers are most expected for greetings (although there are cultural variations here), less to questions and least to imperatives. The order of these three constructions is the same if we consider the

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[5] For a pessimistic view, see Bever and Ross, no date. Lang has collected interesting data on question-answer sequences as well as on question-series in Enga (1970, 4ff).

increasing substitutability of non-verbal answers for verbal ones. As for the relationship of the answer to the stimulus sentence, the first distinction to be made is between answers to greetings as opposed to other answers, since within type-limitations, the set of possible responses to greetings is usually restricted to a few tokens.[6] The second distinction to be made is between answers to questions versus the other two types, since the principle of member-to-class relationship which accounts for the majority of appropriate answers to questions is of much less use in accounting for other answers. In particular, while responses to greetings may bear member-to-class relationship to the stimulus sentence, the proper set of greeting answers can be governed by other principles and as far as imperatives are concerned, the principle of member-to-class relationship does not appear to figure at all. To illustrate these points, compare What do you want? A bucketful of coal., where the answer is a member of the set of possibilities raised in the question, with marḥaba. marḥabtēn 'Hello! Two hellos!', an Arabic greeting formula, where the response is again a member of class mentioned in the stimulus sentence (Ferguson 1967). On the other hand, some responses to greetings are a completion of the sentence (e.g. God be praised! Forever, amen.), or reciprocations (e.g. How are you? How are you?), rather than in a member-to-class relationship; and an answer to an imperative such as Go! I won't, cannot be interpreted as a member of the class mentioned in the imperative, either. In view of these differences between greetings, imperatives and questions with respect to their relationship to their answers, the decision not to treat all of them together seems justified. In addition, these three constructions themselves are of course very different in other respects as well; although notice should be taken of the similarity between imperative and interrogative constructions, both semantic and

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[6] It should be pointed out, however, that the token-restrictions on what responses are proper to what greetings have to do, beside grammar, with cultural conventions.

structural (cp. the optional presence of adverbs such as "please" and
the occurrence of tags in both constructions).

Now let us consider b/. The decision to treat yes-no questions as
separate from wh questions is more arbitrary than dividing questions
from imperatives and greetings. It will be claimed that the relationship
that holds between answers and yes-no questions also holds between answers
and wh questions. Furthermore, these two classes of questions[7] themselves
also share semantic and structural properties (such as question particles)
and there have been proposals concerning their abstract structures as well
to look similar (cp. Langacker 1969 , chapter III.)

We will next consider c/. There are various possible subclasses of
yes-no questions that could be talked about by themselves. First (1),
grammars often distinguish between yes-no questions and alternative
questions such as Did he read it? as opposed to Did he read it or not?
Arguing that these two questions mean the same, we could establish another
split among yes-no questions (2): those that imply a positive-negative pair
of alternatives and those that imply two alternatives that appear to agree
in affirmation value, such as Did he consult you or did he forget? In the

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[7] For an early differentiation of these two types of questions, see
Aristotle's De Interpretatione and Topics. In both places, binary choice
questions, called "dialectical questions" (πρότασις διαλεκτική), are dis-
tinguished from wh questions by the speaker's having made certan more specific
assumptions about the answer. De Interpretatione 20b 29: (in contrast with a
question like "What is man?", in a dialectical question) "The questioner
must specify further and ask whether man is this or not this." (J.L. Ackrill's trans-
lation, Oxford 1963) (δεῖ τὸν ἐρωτῶντα προσδιορίσαι πότερον τόδε ἐστιν
ὁ ἄνθρωπος ἢ οὐ τοῦτο). Topics 158a18: (a question like "What is Good?"
is not dialectical) "unless one says it having made certain distinctions
and choices e.g. "Is Good this or that?" " (ἂν μὴ αὐτὸς διορίσας ἢ
διελόμενος εἴπῃ οἶον ἆρα γε τὸ ἀγαθὸν οὕτως ἢ οὕτως λέγεται).
For various other logical and philosophical paraphrases of the same distinc-
tion, see Prior and Prior 1955. For general literature on questions by
philosophers, see e.g. Hamblin 1958, Leonard 1959, Steinmann 1959,
Harrah 1959, 1963, Katz 1968, Loeser 1968.

latter case, it is possible for the question to raise more than two
alternatives (Did he consult you or did he forget or didn't he need advice
anymore?), so we could talk about binary and multiple-choice questions.
Multiple-choice questions would then be semantically halfway between
wh and yes-no questions, resembling the former in offering multiple
choice and resembling the latter in that the choices are a limited class.
Whereas for (1) there may be at least surface justification -- alternative
and yes-no questions indeed are different structurally -- it would be hard
to justify (2): in no language have there been found corresponding structural
differences (e.g. in the shape of OR) and there are obvious paraphrase
relationships as well (cp. Did you see Peter or (not Peter but) John?).
Thirdly (3), we could treat only "neutral" or only "biased" questions by
themselves (such as Is he crazy? vs. He is crazy, isn't he?) Since here
both some semantic and some structural reasons support the classification,
we will indeed have to consider this dichotomy in making claims about under-
lying structure; but there are still enough shared properties to justify these
two classes as subclasses of one type only.

What is suggested, therefore, as the conclusion of this preliminary
discussion, is that yes-no questions and their answers are a proper domain
of linguistic analysis and that they consitute a natural class of constructions.
With respect to domain, the decision not to treat questions and answers
separately and not to treat question-answer sequences is judged to be
justified in that we would have to give up some generalizations and worry
about new problems, respectively. Not dealing with multisentential ques-
tions and multisentential answers, however, is by arbitrary choice only.
With respect to class, wh question and yes-no questions together appear
to be possible natural classes larger than just yes-no questions by them-
selves; and neutral versus biased questions are suggested as being legitimate
subclasses of yes-no questions.

2. The Alternative

2.1 The claim. We are now considering the hypothesis that the abstract representation of all binary choice questions includes the following structure: X OR NOT-X, where X stands for a proposition.[1] This suggestion was assumed in Katz and Postal 1964 (100, 128) and was claimed and argued for in Sanders 1967 (e.g. 134f), Stockwell et al. 1968 (esp. 633-035 and 642-644) and Langacker 1970. Prior to them, as early as in 1912, Paul Kretschmer argued that the disjunctive sentence was the most ancient type of yes-no question and almost all other yes-no question constructions were derived from it (cp. Kretschmer 1912, 1938).

What the claim implies is that a structure paraphrasable as <u>John is a Swede or John is not a Swede.</u> is taken to be part of the structure of such questions as

<u>Is John a Swede or isn't John a Swede?</u>

<u>Is John a Swede or isn't he?</u>

<u>Is John a Swede or not?</u>

<u>John is a Swede, isn't he?</u>

<u>John is not a Swede; or is he?</u>

<u>Is John a Swede?</u>

<u>Isn't John a Swede?</u>

<u>Is John a Swede?</u>

Observations that we consider as evidential fall into three classes. Some facts seem to indicate merely that the underlying structure of yes-no questions must be a <u>complex</u> one: coordinative or subordinative. Others limit the notion "complex underlying structure" by indicating that this structure is coordinative, and, in particular, <u>disjunctive</u>. Again others specify that the disjoined sentences are an <u>affirmative and a negative</u> one.

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[1] We will use capital letters (e.g. NOT) for representing underlying structures and we will underline words (e.g. <u>not</u>) that are "actual" bits of speech.

Facts that merely indicate that the structure of yes-no questions, on some level of abstractions, is that of a non-simple sentence come from yes-no question intonation (2.2.). Questions with the surface structures x or not-x, x or not, and x or, in all of which there is an overt or, belong to the second class in that they point at disjunctive structure (2.3.). Finally, surface types overtly containing a negator such as x not x and x not (in addition to the above-mentioned x or not-x, and x or not), some shared properties of questioned, negated, and emphasized constituents, some facts about question-answer relationships and about the meaning of yes-no questions (2.4.) all converge to indicate that it is an affirmative and a negative sentence that are disjoined.

2.2 Evidence for complex structure: intonation. Grammars of many languages report the following facts about intonation:

1. (Non-alternative) yes-no questions have a rising pattern.[2]

2. Alternative questions have rising-falling intonation[3].

3. Alternative statements also have a rising-falling pattern.

What is interesting about these empirical observations? Their interest -- as the interest of any linguistic fact -- could lie in their bearing on some known relationship, whether confirmingly or disconfirmingly, or in their pointing to some new relationship. The three observations

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[2] For a cross-linguistic investigation involving more than one-hundred languages and making this observation as universally valid, see Hermann 1942. Compare also Ultan's cross-linguistic study (1969) where only a few exceptions are noted such as CHITIMACHA, FANTI and GREBO, languages that do not have rising intonation in yes-no questions even as an alternative to some other pattern. TWI, a third Kwa language is also an exception (Victoria Fromkin, p.c.); also WOLOF (Stewart and Babou 1956, IV, -9.), which belongs to the larger group of Niger-Congo languages to which the Kwa group also does.

[3] E.g. AZERBAIJANI (Householder and Lotfi 1965, 208).

above are interesting since they disconnect members of a natural class --
alternative and non-alternative yes-no questions (since they do not agree
in their intonation pattern)-- and they relate alternative questions and
alternative statements (in that they have the same intonation pattern)
which, one might think, belong to different classes. An explanation of
why intonation patterns should be distributed this way yields itself if we
complement these facts with two assumptions: that alternative questions
have an alternative statement in their deep structure and that non-alterna-
tive yes-no questions are derived from the same deep structure and the
difference between them and the alternative type is that in simple yes-no
questions the second alternative is deleted. Putting facts and assumptions
together, the following coherent picture reveals itself about intonation:
there is no such thing as a specific yes-no question intonation, in the sense
of its being different from any other intonation pattern; the intonation of
yes-no questions is predictable from the intonation of the alternative state-
ment that their deep structure contains: they are identical patterns[4].

It is because this best available explanation of intonation in yes-no
questions rests on the assumption that there is an underlying disjunction
to all such questions, that intonation counts as a piece of confirming
evidence for our posited X OR NOT-X structure.

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[4] This observation concerning the relationship between the intonation
of yes-no questions and disjunctive statements was made by H.O. Coleman
in 1914 (Intonation and emphasis. In: Miscellanea Phonetica, p. 22, as
quoted in Bolinger 1957, 78). In 1912 (p. 518) and later in 1938 (27-35),
Paul Kretschmer made this observation the cornerstone of his argument
to the effect that yes-no questions are historically derived from disjunctive
sentences. Hermann (1942) rejected this idea mainly because he claimed
disjunctive constructions were "young", whereas yes-no questions are
ancient. Whereas Coleman simply made the observation, and Kretschmer
used it to support an argument about historical derivation, Langacker
(1969, ch. II; and 1970), just as this present study, uses it for corrobora-
ting evidence for the logical derivation of yes-no questions from a disjunc-
tive construction.

Although it is clear that if we assume a disjunctive underlying
structure for yes-no questions, we can explain their intonation pattern,
it should be recognized that for the sole purpose of explaining intonation
a less restrictive hypothesis would do just as well. Such a less specific
hypothesis would be: "The underlying structure of yes-no questions is
some non-simple sentence." This is because not only disjunctively co-
ordinated sentences have rising-falling intonation but also other coor-
dinative types, such as conjoined structures and, in fact, subordinative
constructions as well. In other words, in order to explain rising intona-
tion in yes-no questions, we only have to assume that yes-no questions
are represented in the deep structure as sentences included as first member
in another sentence. We therefore need other evidence to specify exactly
what kind of complex sentence structure is to be assumed.

2.3 Evidence for disjunction.

2.3.1 x or not(-x). Searching for evidence to show that the underlying
structure of yes-no questions is, of all non-simple types, a disjunctive
one, we find three surface types which all share the property of containing
an overt disjunctive connective: x or not-x, x or not, and x or. In this
section we will consider the first two.

Alternative questions of an x or not(-x) surface structure have been
found described by grammars of a number of languages as one possible
way of formulating binary choice questions. although it is a more preferred
construction in some than in other languages. The existence of this construc-
tion may be a universal. An example of the x or not-x type question is
ENGA: baá pélyape (páde baá) nápelyape " he goes or he not-goes". An
example of x or not is FINNISH: menetkö, tai et 'Are you going, or not?'
(Russell Ultan, p.c.).[5]

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[5] Other examples for x or not(-x) are the following:
ARABIC (SYRIAN): btəzji walla laʔ 'Are you coming or not?' (Cowell 1964,
530)

Beside the fact that these questions contain an affirmative part,
a disjunctive connective, and the negative version of the affirmative part,
three additional shared characteristics can be noted: these sentences
can all be pronounced with an intonation pattern such that the resulting
question is void of any expressed expectation on the side of the speaker
concerning which alternative might be right; the order of the two parts
is affirmative followed by negative (or else, the question ceases to be
neutral); and their answers must consist of more than a single affirmator
such as 'yes' or 'no' (unless disjunction is meant in a "non-focused" sense
such as Have you seen Jim or Mary? (meaning 'either one of them, doesn't
matter which') to which either Yes. or No. would be a proper answer).

The observed ordering can be explained, as Sanders suggested, by
a genus-before-species rule (Sanders 1967, 155). The rule is to predict
the ordering of two coordinate structures if one of them is wholly included
in the other but the other is not wholly included in the first -- i.e. one is
genus to the other one, the species. The order predicted by the rule is
for the species to follow the genus. As evidence for the rule, Sanders
cites, besides question-answer sequences and interrogative-response
sequences, such constructions as appositives (A cat, that cat on the mat,
is mine. but not *That cat on mat, a cat, is mine.), other-iterations
(I saw one bird and another bird and another other bird. but not *I saw
another bird and one bird and another other bird.), numerals (I saw one

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(Footnote 5 continued)

BENGALI: oʈa dekhte paren ki ɲa 'Can you see it or not?' (Dabbs 1965,
sub whether or not)

BURIAT: axa jereegy ali ygiigy 'Has the elder brother come or not?'
(Poppe 1960, 82)

MANDARIN: nǐ dào túshūguǎn qù háishi bú qù 'Are you going to the library,
or not?' (Elliot 1965, 57)

PERSIAN: in naezdikiá raesturáni háest ya nae 'Is there a restaurant in
this vicinity, or not?' (Obolensky et al. 1963, 4. 138)

RUSSIAN: jest' il'i n'et 'Is there or isn't there?'

THAI: nai chit yōō teenee rēu plow 'Does Nai Chit live here, or not?'
(Campbell and Shaweevongse 1957, 81)

two three four five birds. but not *I saw two one three four five birds.),
prosodic versus morphemic connectives (Napoleon, Caesar, and Darius
ran. but not Napoleon and Caesar, Darius ran.), cases of stylistically
preferred ordering (men and women as opposed women and men) and even
such subordinate constructions as someone good but not *good someone
(153-156).

There is also another class of questions which exhibit surface
realizations of disjunction and negation but for which none of these
criteria hold. These are what one might call "afterthought questions"
such as You have never met her... or have you? These are non-neutral,
the order of the affirmative and negative elements is not predictable by
the genus-before-species rule and they are answerable by a single affirm-
ator.

Both neutral and afterthought questions of this kind vary crosslinguis-
tically, on the other hand, depending on what part of the underlying structure
does not have to be expressed superficially -- i.e. according to one concept
of grammar, by the rules of deletion that may operate on them. Conditions
of deletability have not been observed in many languages for the purposes
of this study; for some remarks on ENGLISH and MANDARIN, see Elliot
1965, 86ff, 92 and Wang 1965, 460-464; for ENGA see Lang 1970, 55-56,
63-65.

2.3.2 x or. Next, question forms will be presented which contain the
connective 'or' and, in addition, only one of the two alternatives. An
example is provided by POLISH. Czy is a disjunctive connective e.g.
czy dziś czy jutro 'today or tomorrow' (as part of a statement) (Damerar
1967, 132-133; for its relationship to a question pronoun (cp. Russian čto),
see Vondrák 1928, 451). On the other hand, czy is not a connective but
a question particle in czy to jest pióro 'Is this a pen?' (cp. to est pióro

'This is a pen. ') (Schenker 1966, 15).[6]

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[6] Other examples are given below. In citing examples we gave a "literal translation" in addition to the gloss whenever it was easy to obtain one; otherwise, morpheme-by-morpheme analyses are given only to the extent to which they are important to the argument. It should be pointed out that we do not count questions such as Or weren't you there? where the presence of or is clearly because the question assumes some discourse-antecedent with respect to which the possibility raised in the question is an alternative (such as You must have met him at the party yesterday.). This use of 'or' is widespread in many languages: it occurs in ARABIC, AZER-BAIJANI (Householder and Lotfi 1965, 101), HEBREW, HUNGARIAN, EWE (Westermann 1905, 331, sub alá) and YORUBA (Rowlands 1969, 35ff). An example from CHATINO: ta noʔ lko nskeye tiʔ 'Or do you think it is I?' (Pride 1965, 203) (cp. with a sentence where ta is a disjunctive connective: ni ndška tiʔ rantšu ta ndška tiʔ tiyeta 'What do you want, a ranch, or do you want a shop?' (Pride 1965, 168-169)).

FANTI: anée in simple question: iríko anée 'Are you going (or what)?' (cp. iríko 'You are going.') (Welmers 1946, 57f) anée in disjunction: na oye bibiníʼ anée (oye) buro-níʼ 'Is he an African or (is he) a European?' (Welmers 1946, 70) (or cp. ɔbayɛ àná ɔnkɛyɛ 'Will he do it or will he not do it?' ɔbayɛ àná 'Will he do it?' (Balmer and Grant, 1929, 67). For further discussion, see Christaller 1875, 90, 94 and Christaller 1933, 324 sub aná, anáa.)

FULANI: koo in simple question: sei nder yiite jahannamaaye koo 'Only in the fire of hell?' (Stennes 1961, 55)

koo naa non ɗum uinda haa kaha Mariyama 'Or not so is it written in the book of Mary?' (Stennes 1961, 46) koo in disjunction: koo boɗeejo; koo ɗaleejo; koo irin woi 'a red man, or a black man, or whatever' (Stennes 1961, 49; cp. also 19, 44, 50)

GBEYA: wéndé in simple question: kéey dɛ́ mɛ́ wéndé 'Are you afraid?' (preceded in context by 'Why are you going?') (Samarin 1966, 60) wéndé in disjunction: wa gbɛ́ wi-ré taa wéndé gan náá wéndé gan mɔɔrɔ "They kill people three or (=wéndé gan) four or five." 'They kill three or four or five people.' (Samarin 1966, 71) Professor Samarin, however, does not think that the question-final wéndé should be given the gloss 'or' (personal communication).

GREBO: he in simple question: ple ɔ didɔ ne he 'Did he come, after all?' he in disjunction: ple do no he nyema 'Is it Do or Nyema?' (Innes 1967, sub he)

While x or not-x type questions are perhaps universally available,

x or type questions, however widely observable, have a much more

restricted cross-linguistic distribution. Thus, one might expect languages

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(Footnote 6 continued)

GUJARATI: ke in simple question: teo chālī gayā chhe ke 'Have they
gone away?' (Tisdall 1892, 100)
ke in disjunction: təhmahre cah piwi che ke kOphi 'Do you
want tea or coffee?' (Cardona 1964, 46)

HAUSA: kō in simple question: zā kà tàfi, kô 'Will you leave, huh?'
(Kraft 1963, I. 168f) kō dà wurîn dà zân fakè 'Perhaps there
is a place that I may get in (out of the rain)?' (Kraft 1963, II. 129)
kô in disjunction: zâi zō yà , kô bâ hakà ba 'He is coming today,
or isn't it so?' (Kraft and Abubakar 1965, 164)

JAPANESE: ka in simple question: ano ié desu ka 'Is it that house?'
(cp. ano ié desu 'It is that house.') (Martin 1954, 46)
ka in disjunction: ano hito wa Igirisu-jin ka Amerika-jin ka
desu 'He is either English or American.' (Vaccari and
Vaccari 1942, 231)

KANNADA: -oo in simple question: ad cākō 'Is that a knife?' (cp.
ad cāku 'That is a knife.') (Bright 1958, 46)
-oo in disjunction: soomvaarvoo, mangaLvaarvo, avr ill
barbohudu 'Either on Monday or on Tuesday he can come here.'
(Bright et al. 1960, 55.)
(Nayak 1967, 106 says that -oo and -aa are allomorphs; -aa
in simple question: āvnāā 'Is he?', synonymous with āvnōō;
cp. av(a)n(u) 'he', also Jensen 164: nidde māḍuttīyā 'Are you
asleep?' cp. nīnu baruttīyō 'Are you coming?'; -aa in dis-
junction: avr vidyārthi galā athva mēṣtrā 'Are they students
or masters?' (Bright 1958, 45). There also appears to be a
third variant, -ee; according to Bright 1958, 45, it is an idio-
lectic variant of -aa; Spencer 1914, 34 says -oo and -ee are
free variants and -aa is used in the singular and plural second
person.)

LATVIAN: vai in simple question: vai māte mājā 'Is mother at home?'
(Lazdiṇa 1966, 13)
vai in disjunction: vai iesim uz teatri vai koncertu 'Are you
going to the theatre or to the concert?' (Lazdiṇa 1966. 228-229)

LITHUANIAN: aȓ in simple question: aȓ tù buvaȓ vākar miestè 'Were you
in the city yesterday?' (Dambriūnas 1966, 79)
aȓ in disjunction: paaiskēs. aȓ às tiēsą sakaū, ar nê 'it
will turn out whether I speak truth or not.' (Senn 1966, I. 483)

that do have x or type questions to have had a historical period when
such constructions had not yet come into existence, but x or not-x had.
Historical data have been found only with respect to one language, JAPANESE.

(Footnote 6 continued)

    The LITHUANIAN and LATVIAN examples do not necessarily seem
to illustrate the point i.e. the identity of a question particle and a
disjunctive connective, since the sentences with vai...vai and ař...ař
can be analysed not only as questions not marked by a question marker
and containing 'either...or' but also as double questions each marked
by a question marker vai and ař, with 'or' deleted in between. Since,
however, vai and ař can also occur in disjunctive declarative sentences,
this shows that the former interpretation is correct. It is interesting
to note that although the JAPANESE situation is the same -- ka connects
alternative questions, it is a question particle in simple yes-no questions,
and it also occurs as a disjunctive connective in declarative sentences --
Vaccari and Vaccari (1942, 67; compare with 231) claim that ka in the
disjunctive question is a question, rather than a connective, particle.

MARGI: ndə̀gá in simple question: kə̀ jⱼ́ashîlí ndə̀gá 'Shall he come
    (or not)?' (Hoffmann 1963, 98)
    ndə̀gá in disjunction: Hoffmann (1963, 97) states that it is used
    in disjunctive questions to mean 'or'.

SAMOAN: po/pe in simple question: po'o Paulo se taïe'au 'Is Paul a
    pastor?' (Marsack 1962, 61)
    po/pe in disjunction: sa e alu i le fale meli, pe leai 'Did you
    go to the post office, or not?' (Marsack 1962, 112)
    (Gerald Sanders called my attention to the Samoan facts.)

SANGO: wala in simple question: tongana mɔ tɛ̈ ngunzá, mɔ tɛ̈ susu
    mɛlangé na ni wala "When you eat greens, you eat fish mixed
    with it, or?" 'When you eat greens, do you eat fish mixed with
    it, or not?' (Samarin 1967, 130)
    wala in disjunction: ála bóngbi na dimanche 100, wala 200, wala 90
    'They meet on Sunday, a hundred, or two hundred, or ninety (in
    number).' (Samarin 1967, 129)

    In addition, TIBETAN has this pattern (Lalou 1950, 36). One may also
cite the Slavic question particle li in comparison with the disjunction ili.
Binary choice question formation by means of li or l'i attached to the
constituent queried is non-colloquial in RUSSIAN and SERBO-CROATIAN
and colloquial in BULGARIAN and MACEDONIAN, whereas the particle is
obsolete in SLOVENIAN. (Bidwell 1969, 81; for BULGARIAN, see also
Beaulieux 1950, 349ff; for SERBO-CROATIAN, see also Bidwell 1965, 258-
259.) On the other hand, the disjunctive connective is ili in SERBO-CROATIAN

Sansom (1928, 270), while noting that x ka y ka type questions also existed at that time, cites an example of binary-choice-question-final ka from the 9th century A.D. What this shows is that both constructions are stable ones and that one may have to go back by more than twelve-hundred years in the history of a language to discover a stage where the later x or question construction did not yet exist.

This far we have seen some evidence to show that the structure of yes-no questions, on some level of abstraction, is complex, and, it is, in particular, a disjunctive one. Questions of the type x or not-x and x or not may be taken to be evidence for the nature of the two disjoined sentences showing that they are an affirmative and a negative one. Is there some more evidence to show this?

2.4 Evidence for the negative conjunct.

2.4.1 x not(-x). Additional evidence to show that the second conjunct is a negative one comes from the surface type x not(-x).

An example of such connective-less alternative questions, without

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(Footnote 6 continued)

(Bidwell 1965, 243) and in RUSSIAN, which appears to be analysable as the conjunction i 'and' and li. A highly conjectural analogy to this ety-mology might be FANTI anée. This word, as we have seen above, is a question particle and also a disjunction. Since in FANTI 'and' is na (Welmers 1946, 69) and -a is a binary choice question suffix (Welmers 1946, 57f), anée alternating with anáa might derive from prefix a- plus conjunction na 'and' plus question suffix -a. What these etymologies seem to suggest is that disjoining is questioned conjoining, i.e. "x and not-x?", a questioned contradiction, resolves in "x or not-x". The vague notion that 'or' is somehow the "natural" connective in questions, as opposed to 'and', the "natural" connective in statements, is suggested by some other facts as well. to be presented later (cp. Section 3.4.3).

Although in the majority of cases the 'or'-question particle occurred in affirmative questions (e.g., among 7 HAUSA questions with ko given by Kraft 1963 (I. 169, 223, II. 129ff), six are affirmative and one negative), no stated restriction of this sort has been noticed in any description, except that Bidwell (1969, 81) says that questions containing li in RUSSIAN are usually negative ones.

deleting X, is AMHARIC: yəgabal yəwatal 'Is he entering or leaving?'
(Cohen 1936, 312f). Others are given in the footnote.[7] THAI and VIET-
NAMESE, on the other hand, provide examples for x not;

THAI: koon chorp len tennit mȳ 'Do you like playing tennis or not?'
(Campbell and Shaweevongse 1958, 80)

VIETNAMESE: ta còn guên gi nũ˘a khồng "I still-have forget something
or not?' (Emeneau 1951, 211)

In THAI and VIETNAMESE, as the examples show, 'not' is a "question
marker" in that it is the only morpheme that differentiates an affirmative
question from an affirmative statement -- and this is all that it does in
this context. Other languages where 'not' has such a double function of
being both a negator and a yes-no question marker are TAMIL and SOMALI.
In TAMIL, -aa is a yes-no question marker but it is also a negative mar-
ker of inanimate future verbs, defective verbs and in conditional clauses
(Srinivasan 1919, 32f). In SOMALI, ma prefixed to a verb makes the
sentence into a yes-no question; and ma prefixed to a verb which has nega-
tive inflection makes the declarative sentence into a negative declarative
one.[8]

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[7] BASHKIR: kiläyemme kilmäyemme´ 'Shall I come or shall I not come?'
(Poppe 1964, 79)
BURIAT: bĩ gy, ygii gy 'Is there, or isn't there?' (Grammat'ika
Burjatskovo Jazyka 1962, 325)
MANDARIN CHINESE: shir bu shir 'Is it so or is it not so?'
(Svadesh 1948, 12)
TAMIL: aran raaman-aa kannan-aa 'Is he Raman or Kanan?'
(Agesthialingom 1966, 14).

[8] In addition, ma is also a variant of ama 'or' and also means 'which?', 'what?'.
(e.g. a noun with ma suffixed to it means 'which/what (noun)?' and a defi-
nite article with ma suffixed to it means 'who?', 'whom?' (Moreno 1955,
288, Bell 1953, 43, 54ff, 66). For the relationship between the disjunctive
particle and a negator, see also QUECHUA, where -ču is 'or', but mana·
Verb-ču is the negative form of the verb (Bills and Vallejo 1969, 37.
Leonardi 1966, 61f.)

In some languages, the question marker has no negative function in contemporary use but is derived from a negator. One example is MANDARIN CHINESE; cp. ta hui shuo Zhongguo hua ma "he can speak Chinese language ma" 'Can he speak Chinese?' (Elliot 1965, 91). Elliot points out that there is historical evidence to show that ma derives from a negative marker wú, later replaced by bú. Another language where the question particle is historically related to a negator is LATIN (-ne; cp., for instance, Seiler 1952, 86).

Thus far, the only evidence that we have seen to indicate that the second conjunct of yes-no questions is a negative one came from yes-no questions whose surface structure in fact includes such a negative conjunct. But what about questions whose surface structure includes a second conjunct which in fact is not a negative one, such as Did he use a pencil or a pen? or Are we going or what? And what about questions whose surface structure does not include a second conjunct at all such as Did he use a pen?

As far as yes-no questions with a non-negative second conjunct are concerned, we will not discuss them here but only suggest that these, too, may have an underlying X OR NOT-X included in their structure; Did he use a pencil or a pen? would then come from an underlying structure paraphrasable as Did he use a pencil or did he not use a pencil, but he used a pen?[9]

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[9] Questions whose second conjunct is a 'what' i.e. they are of the type x or what or x what seem to be fairly widespread. In BENGALI, ki 'what?' occurs in the following binary choice question types: 'Has he taken medicine, na ki ("or what")?' (Hudson 1965, 33), and, without the connective, in apni-ki bæsto achen 'Are you busy?' (apni 'you') (Dabbs 1965, sub ki), and in ʃe baɾi ɟacːe ki 'Is he going?' (synonymous with ʃe ki baɾi ɟacːe and ʃe baɾi ɟacːe) (Page 1934, 166). According to C. A. Ferguson (p.c.), the question particle ki in the first two sentences quoted has a different intonation from ki 'what?' and is not felt to be identical with ki 'or', although the historical relation is clear. In ENGLISH, there is Are we going or what? but the deletion of the connective is not possible. The same 'or what' construction is used in ENGA neutral questions (Lang 1970, 45). In GUJARATI, as Tisdell (1892, 100) points out, ṣuñ 'what?' is a binary choice question particle as well, placed either before or after the question and when sentence-final, it is either preceded

For the class of yes-no questions where there is no second conjunct
at all, there seems to be other convincing evidence that underlyingly
there is still an additional negative conjunct. Such evidence comes
from some observations concerning the relationship between inter-
rogation, negation and emphasis, from the nature of question-answer
relationship and from a consideration of the semantics of questions.

2.4.2 Interrogation, negation, emphasis. Although cross-linguistic
evidence is grossly lacking at this point, just by the inspection of a few
languages a relationship between three processes: negation, interroga-
tion, and emphasis, becomes conspicuous.[10] In particular, there are a
number of syntactic rules that apply to negative, interrogative, and
emphatic constructions and, some of these, only to those. Such rules are
of three types: rules that yield some "extra structure" (such as an extra

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(Footnote 9 continued)

by 'or' or not. Thus, the following constructions exist:
    śuñ te avyo chhe
        te avyo chhe ke śuñ
        te avyo chhe   śuñ
where ke is 'what?' and the whole construction is glossed as 'What? has
he come?' or 'Has he come, or what?'. In HUNGARIAN, vagy mi "or
what?" occurs, e.g. beteg, vagy mi 'Is he sick, or what?' which is a
marginally used unbiased question. In JAPANESE, there is a comparable
'x or how' type construction but it seems to be restricted to dependent
questions; e.g. mó kitá ka dó ka wakarimasén "he arrived or, how or,
I don't know" 'I don't know whether he's arrived or not.' (Martin 1962,
231; compare also Vaccari and Vaccari 1942, 459). In KANNADA both
"or what" and "what" occur with differring semantics. Spencer (1914,106)
gives the following examples: aranu iddhānō ēnu 'Is he (here) or not?',
a question "indicating doubt", where -o is 'or' and ēnu is 'what', aranu
iddhānēnu 'Is he here?', presumably a neutral question, with -o 'or'
omitted. For examples from additional languages, see Kretschmer 1938,
34f. Whereas binary choice questions with '(or) not' are related to
Did he go or did he not go? type alternative questions by deletion, all of
these binary-choice questions containing '(or) what' are relatable to
them by sentence-pronominalization.

[10] Worth (1964) assigns a common lable -- "suprasyntactics" -- to
the three categories. See also Hetzron 1970, 902ff.

pronoun, an auxiliary, or a "cleft sentence"), rules of ordering, and rules of stressing. We will discuss evidence as to the operation of these in negative, emphatic, and interrogative contexts.

1. "extra structure"

a/ redundant pronouns   In HUNGARIAN, the personal pronouns may or may not be used with the verb and the possessed noun, unless one of three conditions arises, in which case they must be "spelled" and also stressed. The three conditions are the following: if the pronouns are negated, emphasized, or questioned. For instance (* indicates that the construction thus marked is ungrammatical in the sense of its gloss, or, if it has no gloss, in the sense of the gloss of the previous sentence):

neutral: a kávém "the coffee-mine"   } 'my coffee'
         az én kávém "the my coffee-mine" }

         látok   "see-I"   }
         én látok "I see-I" } 'I see'

negative: nem az én kávém 'not my coffee'

            * nem az én kávém

            * nem kávém

           nem én látok 'it is not I who sees'

            * nem én látok

            * nem látok

emphatic: az én kávém 'my coffee'

            * az én kávém

            * a kávém

           én látok   'I see'

            * én látok

            * látok

interrogative: az én kávém 'my coffee?'

* az én kávém

* a kávém

én látok 'Do I see?'

* én látok

* látok

Such emphatic pronouns must be expressed by an extra element in
other Uralic-Altaic languages as well, such as in TURKIC languages;
also in ANCIENT GREEK (cp. Apollonius Dyscolus Synt. I, 15 where he
notes this concerning contrastive pronouns), in AKKADIAN (von Soden
1952, 40), in BAKI (Fraser 1891, 78), in MAASAI (Tucker and Tompo 1950,
53), in COPTIC (possessive pronouns; Mallon 1956, 33); and, perhaps, in
all other languages with pronoun-incorporation.

b/ auxiliary support In ENGLISH, do-supported (and stressed) verbs
are used under three conditions: if the verb is negated, or if it is emphasized,
or if it is questioned (for relevant transformational discussion and literature,
see Stockwell et al. 1968, 620). Conversely, all negated and questioned
and some (but not all) emphasized verbs[11] must have do support.

c/ clefting In ENGLISH, and also in HUNGARIAN, cleft sentences
are common if the extraposed sentence is either emphatic, or negative,
or a question, such as It is the color that I hate., It isn't the color that
I hate. and Is it the color that you hate? . Langacker identifies the
FRENCH question forms est-ce que and qu'est-ce que with inversions
of cleft sentences (Langacker 1965, 587-600). Clefting in TEMNE appears to be
obligatory in emphatic sentences and in wh questions and optional in yes-
no questions and negative sentences (Hutchinson 1969, 56-71).

2. ordering In HUNGARIAN, if a constituent immediately precedes the
main verb of the sentence and it is stressed, it must either be a negated

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[11] Those that Householder calls yes-emphasized verbs are the ones
that have do-support.

constituent, or an emphatic one, or a questioned one. Conversely, all
questioned and negated (but not all emphasized) constituents must be
stressed and must immediately precede the main verbs.   E.g.:

question: Maryt szereti Jim 'Does Jim love Mary?'

   * Maryt szereti Jim

   * Jim szereti Maryt

negation: nem Maryt szereti Jim 'Jim doesn't love Mary.'

   * nem Maryt szereti Jim

   * Jim szereti nem Maryt

emphasis: Maryt szereti Jim   'Jim loves Mary.'

   * Maryt szereti Jim

   ?Jim szereti Maryt

Also, there is a cross-linguistic tendency for negated, questioned,
and emphasized elements to occur early in the sentence.   In some languages,
even if they are suffixing (e.g. ENGA), the negative affix is a prefix. Bellugi
and Klima (1964) note that not tends to appear sentence-initially in children's
ENGLISH.   Relevant is also Baker's observation (1970) according to which
wh question movement is always to the left.

3. stressing   As it was mentioned above, all negated, emphasized, and
questioned constituents must be stressed in HUNGARIAN and in ENGLISH.
Ibañez (1970) points out that, in GERMAN, stress marks negative and em-
phatic constructions.

Beside the existence of such rules that provide "extra structure",
the same order, and stress for negated, emphasized and questioned ele-
ments, it should also be pointed out that the set of syntactic constituents
that are within the domain of these rules and the number of applications of
the rules are also seem to be the same for negative, interrogative, and
emphatic contexts.

a/ <u>distribution over grammatical categories</u> Any constituent,
and only those, that can be negated can also be emphasized and queried,
and vice versa. Although this observation is only trivially true for those
very few languages considered from this point of view, since in these all
constituents seem to undergo any of these processes, it may become an
empirically testable claim if languages are found, where only some constituents
cannot undergo some or all of these processes.

b/ <u>distribution within the sentence</u> There is clearly some limitation
on how many constituents in a sentence can be negated, queried (and, may-
be, emphasized) at the same time. In particular, it seems that usually
one constituent only has undergone one of these processes in a superficially
simple sentence. Compare the following GERMAN examples:

negation: Nicht <u>er</u> ist ins Theater gegangen.   'It wasn't he who went
to the theater.'

Er ist nicht ins <u>Theater</u> gegangen.   'It wasn't the theater
that he went to.'

* Nicht <u>er</u> ist nicht ins <u>Theater</u> gegangen. } 'It wasn't
Nicht <u>er</u> ist gegangen und nicht ins <u>Theater</u>. }
he who went and not to the theater.'

question: Ist <u>er</u> ins Theater gegangen? 'Did <u>he</u> go to the theater?'
Ist er ins <u>Theater</u> gegangen? 'Did he go to the <u>theater</u>?'
? Ist <u>er</u> ins <u>Theater</u> gegangen? } 'Did <u>he</u> go to the <u>theater</u>?'
Ist <u>er</u> gegangen, und ins <u>Theater</u>? }

Notice also that the three processes, negation, emphasis and ques-
tioning, are also similar in that they apply both on "phrase level" and on
"sentence level". Under a/, sentences that result from presumed sentence-
level applications are listed and under b/, sentences resulting from pre-
sumed phrase-level applications.

a/ negation: <u>I didn't eat it.</u>
question: <u>Did you eat it?</u>
emphasis: <u>I did eat it.</u>

b/ negation: I didn't <u>eat</u> it. (although I saw it)

      or: I wanted <u>not to eat it.</u>

question: Did you <u>eat</u> it? (actually)

      or: <u>What did you do to it?</u>

emphasis: I <u>ate</u> it. (as opposed to just seeing it)[12]

Finally, the three processes also resemble each other in that they do not affect the presuppositions of the sentences to which they apply.

To what extent have these shared properties of negation, emphasis, and questioning been accounted for in transformational generative grammar? All three processes are usually represented by means of a sentence-initial marker in the deep structure. To this extent, some relationship among these processes is suggested, but since the notion "similar deep structure" has no theoretical status, no actual claim about relationship is made in such accounts. Klima (1964) went a step further by assigning the feature "affective" to both questions and negative constructions. To represent natural classes by inventing new features in uneconomical and arbitrary (Zwicky 1968). Thus, we conclude that the observed resemblance among the three syntactic processes has remained unexpressed in transformational grammars.

The proposal made here is to assign partially-identical deep structures to negative, interrogative and emphatic constructions, by positing AXB A$\bar{X}$B (where $\bar{X}$ stands for NOT-X) as included by all three. Pronoun-"spelling", auxiliary-support, and clefting rules, as well as ordering

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[12] The two types of emphasis, corresponding to what we here label "sentence-level" and "phrase-level" emphases, were pointed out to me by F. Householder. He labels the first kind "yes-emphasized", because what is emphasized is that the action did not <u>not</u> take place, and the second as "<u>this</u>-emphasized", since what is emphasized is that particular verb, as opposed to some other commutable verb. He also points out that all yes-emphasized verbs must have auxiliary support.

and stressing would then apply to non-identical constituents (i.e. X and
NOT-X).[13] Respective surface structures would then be derived by
deletion rules. The implication of this claim is that all question, negative,
and emphatic constructions are two-sentence-structures on an abstract
level.

This account appears to be good for explaining properties shared
by all three of these processes discussed. It should be pointed out, how-
ever, that there are some features that questions and negative constructions
share but emphatic ones do not. Such is some-any suppletion in ENGLISH
(compare Hall 1963, 3; this of course occurs in other constructions as well,
as it is pointed out there), the fact that a, the indefinite article in ENGLISH,
is generic in questions and negative constructions (Jackendoff 1968 233)
and that negative constructions and questions show inversion in some
Negro dialects of ENGLISH (Labov 1970). This would show that the rela-
tionship between negation and questioning is closer than that between either
of these and emphasis. Our account is not able to provide for this.

2.4.3 Question-answer relationship. Looking at superficially dis-
junctive questions and their most common answers, such as Do you ski
or don't you? Yes, I do. or No, I don't., an obvious generalization leaps
to the eye: that answers are selected from the class of alternatives speci-
fied in the question. Whereas this generalization would explain the choice
of answers to superficially disjunctive questions, it does not explain, how-
ever, why either of the two answers above is appropriate also to the
question Do you ski?, since No, I don't. has no representation in the
"visible" structure of the question. The generalization, however, can
be made to encompass a larger number of cases if we do, indeed, assume,
that both the affirmative and the negative alternative are represented in

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13 See Sanders 1967, 241ff where it is proposed that this principle
governs contrastive stressing.

the question structure, regardless of whether they both actually get realized (i.e. the question is an alternative question) or not. It is in this sense that the observation about question-answer relationships is a piece of corroborating evidence for an underlying X OR NOT-X.

2.4.4 Meaning. Finally, apart from any syntactic considerations, whether they relate to sentential or discourse syntax, just by considering what yes-no questions mean and trying to set up an underlying representation that matches this meaning, one would conclude that an X OR NOT-X component should be part of this underlying structure, since it is true for all yes-no questions that they raise basically two alternatives: the truth of a proposition and the falsity thereof.

2.5 Some thoughts on rules. Provided that we have a X OR NOT-X type underlying component for yes-no questions, what are the rules that would be needed in order to derive surface structures of various yes-no question types? We will consider here only two kinds of these rules: deletion rules and the one which assigns intonation.

There are three different deletion rules that appear to be necessary: one that deletes the part of the second conjunct which is identical with the first conjunct, one that deletes the negator and one that deletes the connective. The following list indicates which deletions are necessary for the derivation of which type:

    x or not-x: none

    x or not: conjunct deletion

    x or: conjunct deletion, negator deletion

    x not-x: connective deletion

    x not: conjunct deletion, connective deletion

    x: conjunct deletion, negator deletion, connective deletion.

Of these three deletion rules, only the first, conjunct deletion, appears motivated, in that it is an identity deletion. The other two are unique and not justifiable in token or in type outside the realm of yes-no question. That is to say: or-s and not-s, are not deletable in other constructions unless the identity condition is fulfilled, nor are any other comparable connectives or particles. An alternative solution to avoid at least the connective deletion rule will be discussed later (3.4.3.).

In connection with the rule assigning intonation to yes-no questions, with respect to superficially simple yes-no questions such as Does he listen?, this rule would be able to make use of the underlying disjunctive structure only if it applied prior to the rules which result in the deletion of the negative conjunct. In other words, as Langacker noted (1970), a phonological rule would have to be wedged in among syntactic ones. This mechanism is in need of independent support.

3. The Request

3.1 The problem. Thus far we have been discussing properties
of yes-no questions which are not unique to them but are also shared
by disjunctive statements. Such properties were some of the meaning
of yes-no questions, the presence of disjunctive and negative elements
('or'-s and 'not'-s) in some such questions, their intonation, the pre-
sence of some emphatic elements and properties of order and stress.
These shared features of disjunctive statements and yes-no questions
have been taken to justify the proposition that yes-no questions have,
in fact, as part of their underlying representation, a structure which is
also the underlying representation of disjunctive statements, or part of
it.

From looking at the discourse context of some sentences which have
the position and function of yes-no questions in a discourse, it is not at
all obvious that anything else is needed for the abstract representation
of these sentences. Some disjunctive statements seem to be responded
to just as if they were questions, such as the one in the following
discourse: Speaker A: She must have left it either in her office or in
her car. Speaker B: Yes, she left it in her office.

There is a crucial difference, however, between this kind of dis-
course and one involving a real question (Did she leave it in her office?):
that an answer is required in the latter case, while it is encouraged but
not required in the former.[1] Thus in spite of such sentences the fact
remains that questions are a distinct class of utterances with specific
semantic and syntactic properties; and that these properties would remain
unaccounted for by an abstract structure which consists of X OR NOT-X
only. What exactly are the differences between disjunctive statements and

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[1] Householder (p.c.) differentiates statements which disclaim know-
ledge but exhibit indifference towards obtaining it from real questions by
a feature (± Hearer) indicating hearer's involvement.

yes-no questions and what kind of abstract structure would have to
complement X OR NOT-X in order for these differences to be derivable
from it?

There are two main questions that we would like to ask about these
differences: Are the differences between disjunctive statements and
yes-no questions properties which are at the same time shared by yes-
no questions and some other constructions? And do the differences
between disjunctive statements and yes-no questions hold between these
two sentences types or between some larger chunks of discourse of which
such sentences are only a part?

Answers to these questions determine the scope and the domain of
the generalizations that the abstract structure should make about yes-
no questions. In addition to properly choosing scope and domain, we also
require that the total logical derivation of yes-no questions which includes the under-
lying structure and a set of rules should have predictive power with
respect to the specific differences that are found between disjunctive state-
ments and yes-no questions; i.e. it should be such that the particular
differences that are attested in the languages of our sample should not
seem to be arbitrary; e.g. that the possibility of some systematic way
of marking sentence subjects if the sentence is a question should be
excluded.

We will first survey the set of semantic and grammatical differences
between statements and questions (3.2. and 3.3.); subsequently we will
draw conclusions concerning each of these two questions mentioned above
thereby defining what an abstract structure of questions to complement
X OR NOT-X we expect to be like (3.4.1.). Next, we will discuss pro-
posals concerning the abstract structure of yes-no questions that have
been made by various linguists (3.4.2.); and, finally, we will advance an
alternative solution (3.4.3.).

3.2 Some semantic differences between disjunctive structures and yes-no questions. Semantically, yes-no questions differ from disjunctive statements in that they also convey a request on the speaker's part for the specification of which of the alternatives raised is true. In other words, the semantic differences between Either my teacher is a Dane or he is not a Dane. and Is my teacher a Dane? is adequately expressed by complementing the first sentence by Tell me, to read: Tell me either that my teacher is a Dane or that he is not a Dane.

As it is obvious from this paraphrase, this difference between disjunctive statements and yes-no questions also lumps yes-no questions together with imperatives in the sense that imperatives, too, are requests.[2] Many imperatives, however, do not offer a choice as to what the hearer should say -- in the sense in which Say "cheese", please! does not -- or they may constitute requests for some unspecified verbal performance (in the sense in which Call tomorrow! does); or else they may not require any verbal performance at all (e.g. Go!). Yes-no questions are, therefore, semantically a subclass of imperatives.

From synonymy pairs such as Who is your cousin? and Tell me who is your cousin! it is clear that wh questions, too, are requests and thus a subclass of imperatives. From examples such as I want you to tell me whether it rained at the time. it is clear that at least some indirect questions, too, have the same semantic property. Thus, we conclude that all direct questions whether yes-no or wh, and some indirect ones constitute together a subclass of imperatives.

On the other hand, from the synonymy of Tell me your name! and I ask you to tell me your name. it is clear that imperatives are a subclass of declaratives. In particular, they are semantically equivalent to declarative sentences embedded in a matrix sentence of the sort

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[2] Loeser (1968, 24-25) does not think questions and imperatives share this semantic characteristic, to him, a question expresses a search for an answer but not a command that one be given.

I ask you. We therefore conclude that if the abstract representation of
all questions, including yes-no questions, incorporates, in addition to
X OR NOT-X, a structure paraphrasable as I ASK YOU TO TELL ME,
that representation would be adequate inasmuch as it would properly
differentiate the meaning of yes-no questions from that of disjunctive
statements and, at the same time, it would express the semantic rela-
tionship between yes-no questions, wh questions, whether direct or
indirect, on the one hand, and independent and embedded imperatives,
on the other.

3.3 Some syntactic differences between disjunctive statements and
yes-no questions. Let us first consider the discourse context of ques-
tions and disjunctive statements. Questions -- all independent ones and
some indirect ones -- are characteristically followed by an answer. Does
this property differentiate them from disjunctive statements; and if yes,
does it differentiate them from all other constructions as well? The
answer to this question is that many statements and a number of other
constructions are also normally followed by some sentence intuitively
felt to be a response; but that the kind of response questions require may
well be unique to them.

Sentence types other than questions that are characteristically fol-
lowed by a response are imperatives, greetings, and some types of
declarative sentences definable either in semantic or in syntactic terms.
As it was pointed out in an anticipatory discussion on pp. 8ff, greetings,
imperatives, and questions differ from each other both in the degree to
which verbal answers are expected to them and also by the rules which
define a "proper response" to such stimulus sentences.[3]

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[3] On greetings, besides Ferguson 1968, see Fries 1952, 29ff, Searle
1969, 66-67, also Dressler 1970 where anaphoric deletions in responses
to greetings are discussed.

As for declarative sentences, Sacks (1970, chapter 6) points out that challenges, threats, warnings, offers, invitations, complaints and announcements all are first members of paired utterances and are used to select a next speaker in a conversational sequence. Schegloff's (1968) summon-answer pairs (as in a telephone conversation) also involve declarative sentences followed by a response. Besides such semantic classes of declarative sentences, there are some syntactically definable classes also which are characteristically followed by a response. Such are disjunctive statements, (e.g. You were born either in Alabama or in Louisiana.), sentences with indefinite noun phrases (such as You wanted to say something.) and others. Bellack, Kliebard, Hyman, Smith (1966, 102ff) discuss the mode of presentation in classroom situations. They conclude that questioning can take place in the imperative mode, in the interrogative mode and in the declarative mode. The examples for answer-eliciting statements that they give are the following:

1. "It can also be due to factors that we haven't mentioned at all."

2. "Two of the biggest things that we import in this country we do produce ourselves."

3. "Of course, we discussed the great exception to this rule, yesterday."

Of these, it is interesting to note that the first two involve indefinite noun phrases.

Finally, it should be pointed out that all statements, in fact, can be followed by responses which express agreement or disagreement or which are just signs of attention on the part of the hearer. One becomes particularly aware of this if one listens to a sermon in a Black church community or to any other speech attended by Black American audience. Fries, in fact, who classifies all utterances as communicative vs. non-communicative, classifies all statements as communicative in that they elicit signals of attention, just as greetings, calls and questions elicit oral responses and commands or requests elicit action responses -- as opposed

to non-communicative sighs etc. (1952. 29ff). Similarly, Householder
(p.c.) contends that all statements are meant as summons to the hearer
to believe what is asserted.

It is because of such facts that questions cannot be said to be unique
in that they are followed by an answer; although they may be unique in
that they require one, as well as in what kind of answer they require.
This latter point will be taken up in the last chapter of this thesis.

Having considered the discourse context of yes-no questions and
statements, let us now consider their sentential syntax. As individual
sentences, yes-no questions differ syntactically from disjunctive state-
ments in various languages by one or more of the following properties:

a/ word order

b/ the presence or absence of particles and adverbs

c/ verb inflection

d/ the shape and deletability of the disjunctive connective

e/ the deletability of the negative alternative.

We will next discuss each of these.

a/ As to word order, Ultan observed (1969, 48f) that inversion
is an uncommon interrogative device in yes-no questions, but widespread
in wh questions. Although direct and indirect yes-no questions are
similar in many respects, word order rules that apply to them are not
always the same. An example where direct and indirect yes-no questions
have different word order is GERMAN. A language where these two types
of questions have the same word order which, at the same time, is dis-
tinct from that of declarative sentences is BLACK and COLLOQUIAL
ENGLISH, as well as some historical dialects of ENGLISH (cp. BLACK
ENGLISH Could he go? and I asked could he go. (C.A. Ferguson. p.c.))

b/ The distribution of question particles shows better than word
order does that direct and indirect yes-no questions belong to the same
class, as opposed to statements. Here are some examples. (For addi-
tional languages, see Kretschmer 1938, 40ff.)

FANTE: ana /anɛɛ 'or' is a question particle occurring in non-alternative
independent questions; e.g. ɪriko anɛɛ 'Are you going?' (Welmers
1946, 57). The particle can also occur in non-alternative de-
pendent questions, e.g. kɪ́we sè owo fie ana̅ "go-look whether
is at-home or" 'Go and look whether he is at home!'
(Christaller 1875, 94)

FINNISH: ko in independent question: tuleeko hän 'Will he come?'
ko in dependent question: en tiedä, tuleeko hän 'I don't know
whether he will come.' (Lehiste 1963, 453)

HUNGARIAN: e in independent question: vajon jön-e "whether comes-
question" 'Is he coming?'
e in dependent question: nem tudom vajon jön-e 'I don't
know whether he is coming.'

Also OLD CHURCH SLAVIC li (Vondrák 1928, 454f).

The relationship between yes-no questions and wh questions, on the
other hand, is borne out to a lesser extent by the criterion of shared
particles, in that this phenomenon appears to occur sporadically only.

The few languages observed where yes-no questions and wh ques-
tions do share particles are AGTA (hud), BURJI (-da; M. Bender, p.c.),
ENGA (-pe, Lang 1970, 12, 53), JAPANESE (ka), and OLD CHURCH
SLAVIC (li, Vondrák 1928, 454). In TELUGU, the use of the question
particle is obligatory in yes-no questions and optional in wh questions.

In some languages verb inflection marks questions. There is
a special present modal described for MARI (Reeter 1969) used both in
yes-no questions and in wh questions. In MODERN SCOTTISH GAELIC,
a special interrogative verb form is used both in direct and in indirect
questions (Calder 1912, 231). In GOTHIC, either indicative or
subjunctive is used in questions, and the rules for choosing are the
same in independent and dependent questions (Streitberg 1906, 240).
There is a special imperative-question form in WIYAGO (Ohman and Hass

1970) as well. See also Kreischner (1956, 44ff). In HAUSA, the aspect
prefixes of the completive and continuative aspects are different in
statements from those in questions and relative clauses (Eulenberg 1970,
24).

What is common to these syntactic devices is that they have been
observed in some languages only and that at least in some cases not only
yes-no questions but also wh-questions share them. Next, we will consi-
der two classes of properties of yes-no questions both of which are specific
to direct and indirect yes-no questions, as opposed to wh-questions, and
both of which may have a good chance of being universals. These pro-
perties relate to the shape and deletability of disjunctive connectives and
the deletability of the negative alternative.

d/ The shape and deletability of the connective in disjunctive ques-
tions and disjunctive yes-no questions. Since, in principle, any number of
sentences or phrases can be disjunctively connected and the connective
between any two of these could be different in shape from the others,
there is no end to the logically possible variation of distinct disjunctive
connective sets. There are some general observations, however, which
indicate that the actually observable variation is much more limited.
First of all, disjunctive connective sets have apparently never more than
two members that are different in shape, and non-first members are
always identical. To illustrate the point, there is no construction in
any language like "either Mary, or John, x Bill", where x stands
stands for a disjunctive connective different in shape from either and or
not. Nor is there any like "Mary, either John, or Bill". These
generalizations allow us to restrict our attention to not-longer-than-
binomial connective sets. We will consider disjunctive connectives in
three constructions: direct yes-no questions, indirect yes-no questions
and disjunctive statements, in relation to each other. First
of all, the connective that appears in yes-no questions is different from

each other as A...B, C...D, and E...F. Besides this case of maximal difference, the three sets could be different in a number of other ways; in particular, assuming first that the second member is different in all three, the first member could be the same in any two sets (and there are three possible pairings of three sets) and it could be the same in all three sets:

$(\widehat{N})...B, (\widehat{N})...D, (\widehat{N})...F$

$(\widehat{N})...B, (\widehat{N})...D, E...F$

$(\widehat{N})...B, C...D, (\widehat{N})...F$

$A...B, (\widehat{N})...D, (\widehat{N})...F,$

where $(\widehat{N})$ marks the identical connectives and other letters the different ones. Then, with the first member different in all three sets, the second could be the same in all three or in two; and then various combinations of differences between first and second members are also possible. Two additional empirical generalizations, however, provide a further limitation on the number of different connectives sets that we have to be dealing with. One is that no sets of disjunctive connectives have been found to differ in their second members but not in the first in any language.[4]

The other is that for the three constructions that we are considering in no language have three sets been found that are different in both of their members, but only two at most. In other words, the only variations

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[4] This is a generalization of a very wide scope. It applies to disjunctive connectives distributed over constructions other than direct questions, indirect questions, and non-questions. Also, it may apply to conjunctive connective sets as well. The generality of the statement is also supported by the fact that it seems to correspond to a regularity about deletion; that the deletion of the second member of a connective set always implies the first one having been deleted. The two observations can be collapsed in the following manner: if two connective sets differ from each other in a way that affects only one of the members -- whether it is by deletion or in difference in shape -- it is the first member that exhibits this difference. Putting it in another way, the second member appears to be the "stable" one, both by resistance to deletion and by resistance to secondary.

in shape that have been observed in disjunctive connective sets of
direct and indirect questions and non-questions are the following:

all three sets the same (X...Y, X...Y, X...Y, where X and Y
may not be the same)

two sets the same, the third different in both members (X...Y,
X...Y, A...B)

two sets the same, the third different in the first member only
(X...Y, X...Y, A...Y).

Since we now have two distinct sets at most and three different
contexts (direct questions, indirect questions, and non-questions) and
two sets can be distributed over three contexts in three different ways,
the question arises as to which two of the three contexts ever occur as
having the same set. The answer has been found to be the following:
non-questions and direct questions, or non-questions and indirect ques-
tions are never lumped together; it is always the two question contexts
that have the same set as opposed to non-question contexts. The range
of variation is therefore the following: same set for all three contexts,
same set for questions and different for non-questions; and then this
latter has two subclasses depending on whether the difference is in both
members or only in the second:

non-question:	direct question:	indirect question:
X...Y	X...Y	X...Y
A...Y	X...Y	X...Y
A...B	X...Y	X...Y

Of 24 languages considered from this point of view, 11 were found
to have disjunctive connectives identical in independent and dependent
questions but different in non-questions; 2 have disjunctive connectives
belonging to the type where the non-question set exhibits partial simi-
larity to the question sets in that the second members are identical but
the first are different; and 8 were found to have one single set in all

three construction types.[5]

Non-question and question connectives totally distinct:

    KANNADA (-ā versus āthavá)

    LATIN (aut versus an)

    LITHUANIAN (arba versus ař)

    VIETNAMESE (hoặc versus hay)[6]

    (AMHARIC   (wayəm versus wayɪs))

    (SYRIAN ARABIC   (ʔaw, yā, yamma, ʔamma, yəmma, ʔəmma,

                    versus wəlla))

    (BURIAT   (ygü versus ali))

    (GOTHIC   (aíþþáu versus þau))

    (MANDARIN CHINESE   (hwòshr versus haíshr))

    (YORUBA   (tàbí versus àbí))

    TIGRINYA (wáy(nn) versus wáyas, wáyəmməs (Leslau (1941, 147)

             notes that wáyas is etimologically derived from wáyam.)

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[5] Some languages that belong, by token of some of their disjunctive connectives, to the first or the second type also belong to the last one: i.e. in addition to two connective sets, one used in non-questions and the other in the two question-constructions, there is also a connective that can be used in all three. In AMHARIC, for instance, wayəm is used in non-questions and wayɪs in questions most of the time, but wayəm can also be used in questions. The pattern is the same for the rest of the language as well: it is always the non-question OR that can also be used in questions to freely vary with the question-OR and not vice versa. This may count as evidence that the use of disjunctive connectives spreads from non-questions.

[6] VIETNAMESE is on the verge of being a counterexample. There are two OR's, hoặc used in statements and hay used in questions and statements. Emeneau (1951, 202) gives an example of a dependent question, where either hay or hoặc can be used as a connective, the two being in free variation, although we would expect hay to be used only. ETHIOPIC may be a real counterexample in that both disjunctive connectives used in dependent question are different from both of those used in independent questions, and one of these is identical with one of the ones used in statements.

Non-question and question connectives partially distinct:

ENGLISH (either...or versus whether...or)

EWE (aló versus lóo(aló))

FINNISH (joko...tai versus jos...tai)

GERMAN (entweder...oder versus ob...oder)

HUNGARIAN (vagy...vagy versus vajon...vagy)

SERBO-CROATIAN (ili...ili versus dali...ili)

SWAHILI (ama...au versus kama...au)

(ANCIENT GREEK) (ē...ē versus poteron...ē)

(BULGARIAN) (ili...ili versus dali...ili)

Non-question and question connectives identical:

BASQUE   ala

FULANI   ko

HAUSA   ko

JAPANESE   ka

LATVIAN   vai

POLISH   czy

AMHARIC   wäyäss

SYRIAN ARABIC   ?aw, yá, yəmma, yəmma

BULGARIAN li

BURIAT   ah

GOTHIC   aiþþau

ANCIENT GREEK ē...ē

MANDARIN CHINESE   háoshr

YORUBA   tàbí

This closes our discussion of the shape of disjunctive connective sets in yes-no questions versus non-questions.[7]   Next we turn to

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[7] A full discussion of the shape of disjunctive connectives would also have to include negative forms. For some crosslinguistic data on this, see Jespersen 1917, 103ff. and Moravcsik 1971.

conditions on deletion. First, let us make a generalization which holds for disjunctive connective sets in any constructions, and, in fact, for conjunctive connective sets as well (cp. Sanders 1967, 148, 153 and Dik 1968, 41f): that all but the last connective may be omitted (and sometimes the last one, too) with the stipulation that a deleted connective cannot follow a non-deleted one. To illustrate the point, there is either Mary or John or Jim, Mary or John or Jim and Mary, John, or Jim but no either Mary, John, or Jim. Thus, the possible questions that remain to be asked are these: first, is this deletion of not-last connectives ever obligatory? second, when is the last connective deletable? Symbolizing the first member of disjunctive connective sets by EITHER and the last member by OR, the problem is what features of linguistic context determine whether EITHER...OR, OR, or zero is used.

Considering first the distribution of EITHER...OR as opposed to OR, the following can be said about our language sample. The majority of the languages do offer a more or less free choice of using either EITHER...OR or OR, in sentences other than alternative questions i.e. in declarative sentences, for instance, such as He gave it (either) to Mary or to Jim. The choice can be said to be more or less free, with EITHER...OR generally said to be more emphatic.[8] Of 37 languages, 32 seem to show this pattern, such as AMHARIC (e.g. (waymn) set waymn word 'either son or or man'). HUNGARIAN (e.g. (vagy) John vagy Mary ion 'Either John or Mary is coming.'), or MANDARIN CHINESE (yhige (hwóu)shr húngde hwòshr búshr húngde 'It is either red or not red.'). In one language, YORUBA, there is explicit evidence that there is no EITHER...OR in non-embedded sentences; in four other

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[8] Dik claims (1968, 41f) that n-membered connectives always imply more emphasis than corresponding n-1-membered ones. Householder (p.c.) thinks EITHER...OR marks exclusive disjunction whereas OR is ambiguously exclusive or inclusive.

languages there may be an EITHER...OR but no evidence has been found to show this. On the other hand, in KOREAN only a two-membered connective was found and no single OR. [9]

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[9] The total list of languages and the relevant forms are the following: (EITHER)...OR in statements:

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AMHARIC    (wayəm)...wayəm
ARABIC (SYRIAN)   (?aw)...?aw
                  (ya)...ya
ARABIC (IRAQI)   (?imma)...?aw
                 (loo)...loo
AZERBAIJANI   ya...ya
BASHKIR   ya...ya, yöröy
BASQUE   (ala)...ala
BENGALI   (hay)...nay
          (ba)...ba
BULGARIAN   (ili)...ili
BURIAT   жэ baa...ya baa; ali
CHINESE (MANDARIN)   (hoòshr)...hoòshr
DANISH   (eller)...eller
ENGLISH   (either)...or
FINNISH   (joko)...ta(h)i
FRENCH   (ou)...ou
FULANI   (koo)...koo
GERMAN   (entweder)...oder
GOTHIC   (jabai)...aíþþáu
         (andizuh)...aíþþáu
GREEK (ANCIENT)   (ę)...ē
HAUSA   (ko)...ko
HUNGARIAN   (vagy)...vagy
JAPANESE   (ka)...ka
LATIN   (aut)...aut
LATVIAN   (vai)...vai
LITHUANIAN   (ar)...ar
PANJABI   (ya an)...ya
PERSIAN   (ya)...ya
POLISH   (czy)...czy
QUECHUA   chus...chus
RUSSIAN   (ili)...ili
SERBO-CROATIAN   (ili)...ili
SWAHILI   (ama)...ama
TAMIL   enum...enum, allatu
VIETNAMESE   (hoăc)...hoăc
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Although conjunctive connectives -- i.e. BOTH...AND-s -- have not been investigated in any detail, we venture to hypothesize that the rule of free variation between one- and two-membered connectives also holds for BOTH...AND versus AND. Whereas, however, it holds for these regardless of whether the sentence is declarative or interrogative (compare (Both) Jim and Peter left., Did (both) Jim and Peter leave?), the rule about disjunctive connectives has not been found to be valid for alternative questions in most languages. In particular, of 32 languages, 11 seem to have this rule of free variation also in independent alternative questions, but 21, the majority, that -- allow in alternative questions for a single OR only; i.e., they allow, just as ENGLISH, for Did Jim or Peter come? but not for *Did either/whether Jim or Peter come? (in the same "focused-on" disjunctive sense).[10]

(Footnote 9 continued)

OR in statements:		EITHER...OR in statements:	
ETHIOPIC?	zäw	KOREAN?	-nah...-nah
GUJARATI?	athv (tu); ke		
THAI?	rý		
TIGRINYA?	wäy(ämu)		
YORUBA	tàbí		

[10] It should be noted that I have found this restriction explicitly stated in perhaps none of the grammars consulted. Thus, for most languages, all I have drawn on is the lack of example sentences that are interroga-tive and that contain a correlative disjunction, as contrasted with the availability of statement examples of this sort. This lack of examples can of course be interpreted in many ways. In addition to assuming that it is due to a grammatical rule that excludes correlative disjunctions in questions. It may reflect frequency differences in favor of questions with a single disjunction as opposed to ones with correlative ones, or it may also be an accident. It is rather the cumulative effect of the con-spicuous lack of such examples in grammars, reinforced by explicit evidence against such constructions in those very few languages for which native informant was available, that our generalization is based on. The generality of the avoidance of correlative disjunctions in questions is in fact supported by the fact that grammars do not state this principle ex-plicitly, since the explicitness of descriptive grammars, naturally most concerned with the peculiarities of the language they describe, is usually in inverse ratio with the cross-linguistic generality of linguistic rules.

Languages that allow both for EITHER...OR and OR can be examplified by HUNGARIAN (e.g. vajon jön vagy nem jön 'Is he coming or is he not coming?') and MANDARIN (e.g. jèige hwòshr/haíshr húngde hwòshr/haíshr búshr húngde 'Is it red or not red?'). An example of a language with a single OR in questions is AMHARIC:

correlative disjunction in statement: wayəm sⁱet wayəm wånd 'either a woman or a man'(Cohen 1936, 312-313)

simple disjunction in question: irsasu Kə́yy nəw, wəyis biCa 'Is the pencil red or yellow?' (Obolensky et al. 1964, 213)[11]

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[11] Other examples:

ARABIC (IRAQI): correlative disjunction in statement: štiri loo raggi loo tiffaaʕ 'Buy either watermelon or apples.' simple disjunction in question: š-tiṣṣawwar, raʕ-yⁱⱬsilha l-haṣ-šaġlə loo laa 'What do you think, is he going to get this job or not?' (Erwin 1963, 307)

ARABIC (SYRIAN): correlative disjunction in statement: lāzem ʔaxod hal-bant, yamma b-rəḍa mʕallmi yamma b-ġaṣṣnen ⱬammo 'I must have that girl, either with my master's approval or in spite of him.' (Cowell 1964, 396); simple disjunction in question: daraže ʔūla yamma daraže tānye 'First class or second class?' (preceded by someone saying 'Give me two tickets!')

FINNISH: correlative disjunction in statement: joko Matti tai Pekka tulee 'Either Matti or Pekka will come.' (Lehtinen 1962, 443) simple disjunction in question: tuleeko Matti tai Pekka 'Will Matti or Pekka come?'; cp. ungrammatical *tuleeko joko Matti tai Pekka (Mrs. R. Ultan, personal communication)

FULANI: correlative disjunction in statement: koo boɗeejo; koo ɓaleejo; koo irin woi 'a red man or a black man or whoever' (Stennes 1961, 19) simple disjunction in question: mi huuwata ɗum koo mi acha 'Shall I do it or leave it?' (Taylor 1953, 69)

GERMAN: correlative disjunction in statement: Entweder Jim oder Mary wird kommen. 'Either Jim or Mary will come.' simple disjunction in question: Wird Jim oder Mary kommen? 'Will Jim or Mary come?'; cp. *Wird entweder Jim oder Mary kommen? which is ungrammatical in the sense intended.

In order to state our observations about the distribution of
EITHER...OR and OR, we have to refer to one more class of syntactic
constructions, besides independent alternative questions and sentences

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(Footnote 11 continued)

GUJARATI: correlative disjunction in statement: (no example found)
simple disjunction in question: tɜhmahre cah piwi che, ke
kOphi 'Do you want to drink tea, or coffee?' (Cardona
1965, 46)

HUNGARIAN: correlative disjunction in statement: vagy Jim jön, vagy
Mary jön 'Either Jim is coming, or Mary is coming.'
simple disjunction in question: Jim jön vagy Mary jön
'Jim is coming, or Mary is coming?'; cp.*vagy Jim jön
vagy Mary jön which is ungrammatical in the sense
intended.

PERSIAN: correlative disjunction in statement: (no example found)
simple disjunction in question: qæhvé mixaid, ya 'abejów
'Do you want coffee, or beer?' (Obolensky et al. 1963, 4. 138)

SERBO-CROATIAN: correlative disjunction in statement: moramoili
se boriti ili pobeći u šumu 'We must either fight
or flee to the forest.'
simple disjunction in question: jel' hoćeš hefu ili
čai 'Do you want coffee or tea?' 'Do you want
coffee or tea?' (Bidwell 1965, 243)

SWAHILI: correlative disjunction in statement: ama ni wewe ama ni
ndugu yako 'Either it is you or it is your brother.'
simple disjunction in question: ndivyo ama sivyo 'Is it so
or not so?' (Perrott 1965, 112)

The full list of relevant languages and connectives is the following:
(EITHER)...OR in independent questions:
BULGARIAN (dali)...ili
BURIAN (uu)...ab
GOTHIC (-u)...(u)bau
GREEK (ANCIENT) (poteron)...ē
HUNGARIAN (...)...vagy
LATIN (utrum)...an; (an)...an
LATVIAN (vai)...vai
LITHUANIAN (ar)...ar
MANDARIN (měshr)...lwōshr; haíshr...naíshr
POLISH (czy)...czy
SERBO-CROATIAN (dali...ili

different from these. This is the class of embedded alternative ques-
tions. Of 27 languages, 5 appeared to allow for free variation of
EITHER...OR and OR in such constructions (e.g. HUNGARIAN (e.g.
kiváncsi vagyok, (vajon) jön vagy nem jön 'I wonder whether he is
coming or not coming.') and MANDARIN (e.g. wǒ yàu jrdàu jèige (hwò)
shr/ (hái)shr húngde hwòshr/háishr bùshr húngde 'I want to know whether
it is red or not red.')) and 19 to require EITHER...OR (e.g. ENGLISH
and JAPANESE: 'e.g. Osaka desu ka, Kobe desu ka wasuremashita
'I have forgotten whether it is Osaka or Kobe. '); and two languages,
BENGALI and VIETNAMESE, have been found to apparently use OR only.[12]

(Footnote 11 continued)
    OR in independent questions:
        AMHARIC wäyəm, wäyəs
        ARABIC (SYRIAN) yəmma, yəmma, wälla
        ARABIC (IRAQI) loo
        AZERBAIJANI ya-
        BASQUE əda, ala
        BENGALI na, ki
        ENGLISH or
        ETHIOPIC ?əw; wämma
        FANTE anäa
        FINNISH vai, tai
        FRENCH ou
        GERMAN oder
        GUJARATI ke, athwa
        HAUSA ko
        PANJABI m
        PERSIAN ya
        RUSSIAN ili
        SWAHILI au
        TIBETAN am
        TIGRINYA wäymäs, yägun. wäyis
        YORUBA abí, tàbí

    [12] The full list is the following:
    (EITHER)...OR in dependent questions:
        GOTHIC (ha)...(hau)
        HUNGARIAN (vajon)...vagy
        LATIN (utrum)...an
        MANDARIN (hwòshr)...hwòshr; (háishr)...háishr
        YORUBA bí...bí; àbí

In sum, then, what we can state about the distribution of EITHER...
OR and OR, i.e. two- and one-membered disjunctive connective sets is
the following: the rule of free variation obtains for the majority of

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(Footnote 12 continued)

    EITHER...OR in dependent questions:

        ARABIC (SYRIAN) ?am...walla

        BASQUE -n...ala

        BULGARIAN (da)li...li

        CHATINO ta...ta

        ENGLISH whether...or

        ETHIOPIC ?ɨm(s)/ (ɨ?ɨmz ...wɛ(ɨ)?ɨm

        FINNISH jokohan...tai/vai; -ko...vai

        GERMAN ob...oder

        GREBO ple...he

        HAUSA? ko...ko

        JAPANESE to...to; ka...ka

        KOREAN ci...ci

        LATVIAN? vai...vai

        LITHUANIAN? ař...ař

        PERSIAN? aya...ya; c̆ah...chih, xvah...xvah

        POLISH? czy...czy

        RUSSIAN li...li

        SERBO-CROATIAN? dali...ili

        SWAHILI kama...au/ama

    OR in dependent questions:

        BENGALI na, ki

        VIETNAMESE? hai, hoặc

In a number of languages there is an introductory connective before
embedded alternative questions which is not a disjunctive connective and
which occurs with or without one. In HUNGARIAN, for instance, there
is Nem tudom, hogy jön-e vagy nem.. Nem tudom, vajon jön-e vagy nem..
where hogy is a subordinate sentence connective ('that'), and vajon
corresponds to whether. In order to avoid counting subordinate sentence
connectives as the first member of a disjunctive connective set, it is re-
quired for a member to count as the first member of a disjunctive
connective set that the sentence it introduces must always be possible
to be completed by a semantically redundant sentence conjoined by OR.
Thus, for instance, ENGLISH whether does qualify (I asked whether he
understands me (or not).), but HUNGARIAN hogy does not qualify as a
first member of a disjunctive connective set, since it occurs, among
others, in sentences such as Mondtam, hogy beteg. 'I said that he was
sick,' and there is no sentence (except one whose predicate is a synonym

languages in sentences other than alternative questions. For independent alternative questions, the rule of free variation applies to about half of our sample, languages of the other half requiring OR by itself. In dependent questions, few languages have the rule of free variation and the majority require EITHER...OR.

Next, we will consider the presence or absence of OR.[13] Again, it seems that there is no generalization to make to cover both conditions under which OR and those under which AND can be deleted,[14] and that if we want to make a generalization about the disjunctive connective, we must distinguish alternative questions from everything else, just as above. Let us first consider sentences that are not alternative questions. As we have seen above for ARABIC (Cowell 1964, 398), and

(Footnote 12 continued)
of 'sick') whose conjoining by OR to the original sentence would not alter its meaning. FINNISH _jos_, SYRIAN ARABIC _?iza_, IRAQI ARABIC _idaa_, and perhaps SWAHILI _kama_, although they all connect alternative embedded questions, are excluded as first members of a disjunctive connective set on the same grounds -- all of these also mean 'of' i.e. they also function as conditional clause connectors. It is interesting to note that such embedded question connectors are mostly 'that'-s or 'if'-s.

[13] Evidence to be presented below is counter to Sanders' observation, even if it is meant to hold for ENGLISH only: "While all connectives of a conjunction may be prosodic, every disjunction must contain at least one prosodic connective" (1967, 148; 152). Rather, what appears to be true is that there are specific conditions for deletion of the last connective, whether conjunctive or disjunctive: for _and_, the condition is non-contrastive meaning, as Sanders points it out (1967, 152; also Dik 1968, 272) and for _or_, the conditional contexts are some neutral alternative questions, dependent or independent and a few other contexts, all of which are discussed below.

[14] For asyndetic conjunctive constructions, see Cowell 1964, 394ff (for SYRIAN ARABIC), Poppe 1964, 79 (for BASHKIR), Poppe 1960, 127, 128 (for BURIAT), Los 1962, 161 (for DUTCH), Bailey, 131 (for JAMAICAN CREOLE), Macaris 1942, 19 (for JAPANESE), Bright 1958, 33 (for KANNADA), Boas 1911, 94 (for MINIABU CHINOOK), Armbruster 1960, 437 (for NUBIAN), Watson 1963 (for LUGODA), Bergsträsser 1928, 16 (for Semitic languages); and also Dik 1968, 321.

ENGLISH, there are some highly idiosyncratic idiom-like contexts
which are semantically disjunctive and where disjunctive connectives
may be omitted. Evidence for such contexts has been found also in
BENGALI (Dimock et al. 1965, 370), GERMAN, HUNGARIAN, KANNADA
(Bright 1968, 33; Spencer 1914, 95f), RUSSIAN, SWAHILI, TIGRINYA
(Leslau 1941, 147) and YORUBA (Rowlands 1969, 172). Certain numeral
phrases such as "two-three" are always among these contexts (note,
however, that in AZERBAIJANI, "or" must not be used in such approxi-
mate numbers (Householder and Lotfi 1965, 102) and that in MODERN
GREEK "and" is used.) Other relevant declarative contexts exemplified
in grammars are hard to generalize about and seem to be almost idioma-
tic, such as SYRIAN ARABIC ?aḷḷa yərhama ḥayye mayyte 'God have
mercy upon her, alive or dead.' (Cowell 1964, 398). Considering now
alternative questions, it has been found that, in sharp contrast with the
idiosyncracy of the semantic-syntactic conditions under which the dele-
tion of OR is possible in sentences other than alternative questions, if
the deletion of OR is possible at all in a language in an alternative ques-
tion, it is in fact possible in all such questions, without further restric-
tions. In some of these languages, such as AMHARIC, INGA, HUNGARIAN,
LATIN, and MANDARIN, the same deletion appears possible in embedded
alternative questions. In fact, no evidence has been found thus far counter
to the claim that OR-deletion never distinguishes between independent
and embedded questions in any language.[15]

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[15] Some examples of zero connective in independent questions:
AMHARIC: malkam näw käfu 'Is he good (or) bad?' (Cohen 1936, 312f)
HUNGARIAN: jön nem jön 'Is he coming? Is he not coming?'
KOREAN: i kes icy yo, ce kes icy yo 'Is it this one (or) that one over
    there?' (Martin et al. 1969, 17)
MANDARIN: nĭ máng bu máng 'Are you busy (or) are you not busy?'
    (Elliot 1965, 57)
TIGRINYA: şäbuq dayyu hamimaq 'Is he good (or) bad?' (Leslau 1941,
    147)

This ends our investigation of the conditions that determine the
presence or absence of EITHER-s and OR-s. Notice three shared pro-
perties of the generalizations that have been suggested. First, all of

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(Footnote 15 continued)
    Examples of zero connective in dependent questions:
AMHARIC: madrəg(en wəyim) alamadrəgen alnəgrihim "doing-my(-
        object - marker or) not-doing-my-object-marker I-am-not-
        going-to-tell-you" 'I am not going to tell you whether I'll
        do it (or) not.' (Obolensky et al. 1964, 433-434)
ARABIC (SYRIAN): mā btəfre? maƶi bēda söda 'I don't care whether
                    it's black or white.' (Cowell 1964, 398)
HUNGARIAN: nem tudom jön (vagy) nem jön 'I don't know whether he is
                coming (or) not coming.'
PANJABI: mera kiá na kiá ik bərābər "my saying not saying is equiva-
        lent to one" 'Whether I say so or not doesn't make any
        difference.' (Gill 2001)
    The full list of languages is the following:
OR in statements: ARABIC
                    BENGALI
                    GERMAN
                    HUNGARIAN
                    KANNADA
                    RUSSIAN
                    SWAHILI
                    TIGRINYA
                    YORUBA

OR in independent questions: AMHARIC
                                BASHKIR
                                BENGALI
                                BURIAT
                                ENGA
                                HUNGARIAN
                                KOREAN
                                LATIN
                                MANDARIN
                                TAMIL
                                TIGRINYA
                                VIETNAMESE

OR in dependent questions: ARABIC
                                ENGA
                                HUNGARIAN
                                LATIN
                                MANDARIN
                                TIBETAN

them are specific to disjunctive connectives, although before we saw
that there are some true generalizations that encompass both conjunc-
tive and disjunctive connectives. Second, in order to speak about the
distribution of two-membered versus one-membered versus zero-
membered disjunctive connectives, we had to refer to the syntactic class
of alternative questions as distinct from other sentences. Third, whereas
the class of alternative questions probably behaves homogeneously from
the point of view of the presence and absence of OR, it does not so behave
with respect to the presence and absence of EITHER.

To sum up our observations concerning the shape and deletability of
disjunctive connectives:

1. The deletion of a member of a connective set implies the deletion
of all of the members to its left (as observed, on a cross-linguistic basis,
by Sanders and Dik).

2. Non-first members of a connective set are always identical with
each other within that set.

3. EITHER...OR and OR are generally in free variation in sentences
other than alternative questions; EITHER...OR is generally required
for dependent questions and EITHER is generally excluded in independent
questions.

4. OR is deletable in some languages in all -- i.e. independent and
embedded -- alternative questions and in some languages in highly idio-
syncratic non-question contexts.

5. If in a disjunctive connective set the second member is dif-
ferent, so is the first.

6. Disjunctive connectives used in embedded and independent
alternative questions are generally identical in shape.

7. The fact that disjunctive connectives are more widely deleted
in alternative questions than in alternative statements seems to have a
parallel in another observation, which is also about the redundancy of a

constituent in yes-no questions and the non-redundancy of the same constituent in disjunctive statements. The observation is this: the negative alternative is deletable in all alternative questions perhaps in all languages; but it is not deletable in the corresponding non-questions; e.g. Is it hot? is synonymous with Is it hot or is it not hot?; but It is hot. is not synonymous with It is hot or it is not hot.

3.4 How is the questionhood of yes-no questions to be represented in the deep structure?

3.4.1 A summary of requirements. On the basis of all these facts discussed above, we will now answer the two questions raised in the beginning of this chapter about the nature of the difference between disjunctive statements and yes-no questions. The answer, along with the requirement of specificity mentioned there are taken to constitute requirements for what the abstract structure of yes-no questions, in addition to containing X OR NOT-X, should be like.

The first question was one about scope: whether yes-no questions are to be related to constructions other than statements. The answer is that yes-no questions are similar in certain respects to indirect questions and to wh questions as well as to other constructions such as imperatives, greetings and certain statement-types.

As to the second question the domain of these properties, we observed them with respect to sentences and also with respect to discourse contexts.

Finally, what about the requirement of specificity? Whereas we have not been able to make any generalizations extending to all of our sample about word order, particles, and verb inflection, we did find that such generalizations can be made in connection with the shape and deletability of disjunctive connectives and the deletability of the negative alternative. We would therefore like to set up an underlying structure for yes-no questions such that it, along with the rules that apply to it,

becomes explanatory of such widespread facts as the question-specific
shape of disjunctive connectives, and their frequent redundancy in yes-
no questions, as well as the redundancy of the negative alternative.

3.4.2 <u>Some proposals: Q-theory, performative theory</u>. Trans-
formational theories of "questionhood" all share two properties: they
differentiate questions from other constructions in the <u>deep</u>, rather than
in the surface, structure; and they differentiate them as a <u>sentence type</u>
rather than in terms of a discourse type. On the other hand, these
theories differ from each other with respect to the extent in which they
account for syntactic properties of questions. From this point of view,
their claims can be classified into two classes:

1. Questions should be distinguished from non-questions by an
underlying question marker which has semantic but no syntactic structure.

2. Questions should be distinguished from non-questions by an under-
lying question marker which has both semantic and syntactic structure.

The first approach is exemplified by Katz and Postal's account
(1964, 85-90), according to which there is a question marker in the deep
structure of questions which they call Q. This marker has the semantic
interpretation <u>I ask you to tell me</u>. Since Q is supposed to be a single,
unstructured and syntactically unanalysed marker of questionhood, there
is no specific prediction associated with it as to just how questions should
differ syntactically from statements. Katz and Postal use Q to enable
them prior to make correct surface restrictions on adverbs such as <u>certainly</u>
in English, which do not occur in questions and to trigger question-
specific transformations such as inversion; but Q could be used to mark
questions to differ from statements in any other, arbitrarily chosen ways
as well, and to this extent this question marker fails with respect to the
requirement of specificity: it does not distinguish between true and false
claims about the interactive structure of questions and statements.[1]

[1] Compare Bootsomalia 1968.

The only structural property that Q has is its specific relation to the sentence it marks: that it is, in Katz and Postal's formulation, sentence-initial. This is obviously one of many possible choices of ordering and since Katz and Postal did decide on a particular alternative, rather than positing unorderedness which would have been a way of evading the problem, this would suggest that there was some motivation for them to do so. Whereas this motivation was not made explicit by Katz and Postal, Baker (1970) did exploit the explanatory power inherent in ordering claims with respect to Q. He correlates the order of Q with the order of question particles and question pronouns in a sentence. Thus, for ENGLISH, he accepts Katz and Postal's sentence-initial Q, because of the fact that if, whether, and the wh pronouns are all sentence initial in this language. For languages where the question particle is sentence-final, he posits a sentence-final Q.

Katz and Postal's Q not only does not make syntactic claims about the statement-question contrast; it also appears to fall short of relating questions, semantically or syntactically, to constructions to which they bear resemblance. Imperatives, according to Katz and Postal, have a separate marker which shares no properties with Q other than sentence-initiality. Indirect questions are not assumed to have a Q in Katz and Postal 1964, although they do in Baker's account (1970) which is based on theirs.

The syntactic approach is exemplified by Ross' and Sadock's theories. Ross (1970) posits a sentence paraphrasable as I say to you into which all declarative sentences are embedded in the deep structure. For questions, he suggests that the performative should read I request of you that you tell me (2.18).[17] Sadock (1970a) posits a sentence whose subject

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[17] The theory of a performative sentence incorporated in transformational grammar was first suggested by Lerma 1968. Cp. also Sanders (1967, 54f, 133ff) who posits a Tell me either that... or that... type deep structure for yes-no questions. See also Hetzron's "question frame" consisting of I don't know or I ask you to tell me (1969, 27ff).

noun is the speaker, whose object noun is the hearer and whose verb is
a verb of saying responsible for the type of the sentence which is em-
bedded in this hyperstructure -- whether it is declarative, interrogative,
or imperative.

All the differences between the two theories stem from different
degrees of abstractness that they assume for their performative sen-
tences. These abstractness differences relate to lexical realization,
or 'pronounceability'', and whether performatives can be embedded or
not. Ross' performative sentences are fully lexicalized ones which can
be pronounced or they can be deleted. Sadock does not specify elements
of the hypersentence to the extent that lexical insertion would be possible:
hypersentences are entirely abstract structures that never surface.
Also, Sadock allows for the embeddability of hypersentences as the object
complement of ordinary verbs of saying in order to account for direct
quotations, and he allows for the nesting of hypersentences in order to
account for constructions such as echo questions. Ross claims that per-
formatives cannot be embedded into ordinary sentences, but he tacitly
allows one performative to be embedded into another; his question per-
formative is a declarative performative embedded in an imperative
performative.

It is the question of how to represent underlyingly overt performa-
tives which made Sadock feel dissatisfied both with his own theory
and with that of Ross'. In Ross' theory such performatives are not
dominated by any higher structure whereas constatives are dominated
by a performative e.g. I christen this ship Golda would be derived from
a structure paraphrasable as I declare to you that I christen this ship
Golda, if the verb is meant in its constative sense but, in its performative
sense, there would be no higher dominating structure. Thus the perform-
ative meaning is associated with the lack of something, as opposed to the
constative meaning. In order to account for shared features of performative

and constative sentences in a motivated way. Sadock (1970b) posits that performatives are dominated by an abstract hypersentence embedded into an abstract superhypersentence, itself unembeddable.

The performative hypothesis is clearly a more ambitious one from the point of view of explaining syntactic properties of sentences than Katz and Postal's Q marker. It seems that of the various syntactic properties that are posited for performative sentences of declarations by Ross and Sadock the strongest case can be made for the existence of a first and a second person noun phrase. Syntactic reasons to posit a first person noun phrase and a second person noun phrase as occurring in the performative sentence associated with declarative sentences are of two kinds. First, it enables one to derive the personal pronominal forms I and you that occur in ordinary sentences without any overt nominal antecedent (such as in I want to go.), and some antecedent-less first and second person reflexive pronouns (such as in This was written by Mary and myself.) by ordinary rules of pronominalization and reflexivization, respectively. For a detailed discussion of how strange facts about the distribution of personal and reflexive pronouns in ENGLISH may be explained within a performative theory see Ross 1970 and also Sadock 1970b. For some criticism of Ross' data and proposed rules, see Anderson 1970. Second, the distribution of various subclasses of personal pronominal forms can also be accounted for in this manner. Sadock (1970a) points out that in languages such as YANA and DAKOTA, the sex of the speaker, and in JAPANESE, KOREAN, FRENCH, GERMAN, ITALIAN and KIKUYU the social-personal "distance" between the speaker and hearer determines the choice of certain pronominal forms. These decisive properties he proposes could be specified in the higher first and second person noun phrases.

The answer is that on the same arguments can be used to posit a first and second person noun phrase in performative sentences associated

with questions is claimed to be in the affirmative here, although a
detailed presentation of relevant facts is omitted. We will just assume
here that such noun phrases are posited and we will now turn to the
question as to what kind of a syntactic construction contains these
noun phrases.

If the performative is a full sentence, then, according to the simplest
hypothesis, we would expect rules that operate on ordinary sentence
constituents also to operate on performatives. Ordinary sentences
can be negated, embedded, being embedded into, and conjoined, among
others. Can these syntactic processes apply to performatives?[18]

The possibility of negating performatives has not been explored,
but it does not seem unreasonable, both on semantic and on syntactic
grounds, that sentence negation be represented on a deep level by
performative negation.

Can performatives be embedded? As we have seen above, this is
assumed in Sadock 1970a, b. One reason why this seems to be an impor-
tant assumption is that in this manner we can relate questions to both
imperative and declarative constructions. Assuming that the performa-
tive sentence of imperatives is a structure paraphrasable as I order you
that...(you do such and such), and the declarative performative is I say
to you, and assuming that performative embedding is possible, we can
posit the question performative to be I order you that you say to me.... .
As it was mentioned above, this is the question performative suggested
by Ross (1970, 293) and, in that it relates questions to imperatives, it

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[18] In addition, they should also take sentence adverbs. This property
of performatives qua sentences can be exploited for explaining the occur-
rence of such adverbs as for the last time, first, finally etc. which show
no occurrence relations with the sentences they cooccur with and seem,
semantically, to refer to performative sentences (Sadock 1970a).

is superior to Sadock's proposal where there is a separate unanalyzable abstract verb corresponding to every sentence type.

The positing of this structure already assumes that performatives

only be embedded but that they can also be embedded into. Further evidence that this is true is suggested by certain properties of questions which they share with subordinated constructions. The following facts all seem to make it plausible that questions are, on some level, sub-ordinated constructions.[19]

In some languages there is a subordinative conjunction which occurs in embedded questions and, optionally, in independent questions. Such are HUNGARIAN hogy and WALBIRI yuŋu-. E.g. HUNGARIAN megkérdeztem, hogy kér-e "I-asked that he-wants-one-question" 'I asked him whether he wants one.'; WALBIRI payi-ni ka-na-ŋku yuŋu-npa tjapa tawunu-kura ya-nu. "ask-pres pres-i -you that-you whether town-to go-past" 'I'm asking you whether you went to town.' tawunu-kura tjapa yuŋu-npa ya-nu 'town-to whether that-you go-past' 'Did you go to town?' where yuŋu- is the general subordinator and tjapa is the question complementizer (Kenneth Hale, p.c.)

Ultan (1969, 44) noted that in a number of languages -- as diverse as INDONESIAN, HUNGARIAN, and the Romance languages -- the relative and the question pronouns are morphologically identical or similar, just

[19] That the same holds for statements is shown by two bits of evidence. One is a fact about ARABIC quoted by Ross 1970 that a particle which is obligatory for subordinated clauses can also be used optionally in independent sentences. The case of WALBIRI and HUNGARIAN to be mentioned below is an analogous one for questions. The other is the above-mentioned hypothesis that first and second person personal pronouns and reflexives which occur in statements without antecedents can be derived by ordinary pronominalization and reflexivization rules. In order for this to be true, these pronouns to be derived must be in pronominalize-like position with respect to their antecedents in the performative which would be assured by the assumption that the performative is a superordinated sentence.

as it is the case in ENGLISH. Katz and Postal (1964, 125-130) make
an attempt to derive these pronouns from a common source thus account-
ing for this fact of ENGLISH morphology. Stockwell et al. (1968, 630ff)
argue against this analysis by pointing out that the two classes of pro-
nouns behave differently from each other: Pied Piping does not apply
to interrogatives but it does to relative clauses; <u>there is</u> phrases can
occur in questions but not in relative clauses, there are only two relative
pronouns but a number of question pronouns and question pronouns are
"minus specific" whereas relative pronouns are either "plus" or "minus
specific". The last argument they have against the identification of the
two pronoun types is that relative pronouns are predictable by a stand-
ard pronominalization rule, whereas question pronouns are not.

If, however, questions are represented as embedded constructions,
then the same pronominalization rule that predicts relative pronouns
also predicts question pronouns and this last argument against the
identification of the two pronoun types which are morphologically iden-
tical in some languages becomes invalid.

Finally, let us see what evidence we have for the <u>conjoinability</u>
of performatives.

Peterson (1974) showed how certain facts of MORE and also of ENG-
LISH can be accounted for if we assume that performatives of declara-
tive sentences can be conjoined in these languages. In MORE, there
are two kinds of conjoined sentences: dependent conjunction, where the
conjoined verbs express sequential or simultaneous action; and independ-
ent conjunction where there is no necessary connection between the two
verbs. The connective is la in the latter case; in dependent conjunctions
the connective is la if the subjects of the two sentences are identical
and n otherwise. He then proposes to account for the distribution of
the two connectives, as well as for the semantic difference between the
two types of conjunction, by hypothesizing that in the case of dependent
conjunction there is one performative to which both sentences are

subordinated, whereas in the case of independent conjunction each con-
junct has its own performative, and these performatives are conjoined.
The la in these constructions, therefore, conjoins the two conjuncts
only superficially; on an abstract level, it is a connective between two
performatives. The distribution of la and ti can then be determined by
a simple rule according to which la connects sentences of identical sub-
ject and ti connects sentences of non-identical subjects. Petersen
claims that ENGLISH also has parallel constructions. Conjoined sen-
tences such as John went home, and he went to bed, too are of the
independent type, whereas John went home and went to bed, too, is of
the dependent type. Besides semantic correspondance, the relationship
between the corresponding MORE and ENGLISH constructions is shown
by two observations. One is that in both languages certain markers have
the whole sentence as their domain in the case of dependent conjunction
and only one of the conjuncts in the case of independent conjunction. In
MORE, for instance, there is only one declarative particle per depend-
ently conjoined sentence, whereas both conjuncts have to have one if the
conjuncts are independently conjoined; and in ENGLISH, too has only one
of the conjuncts as its domain in the case of independent conjoining, as
the above-given example shows, but it has both of them if they are de-
pendent conjuncts. Second, constraints on subject deletion also seem
comparable. In MORE, the second identical subject may be deleted in
case of dependent conjoining but it must not be deleted in case of inde-
pendent conjoining. In ENGLISH, subject deletion is obligatory in depend-
ent conjoining (compare *John went home and he went to bed, too.) and
optional in independent conjoining (compare John went to bed and (he)
did it, too).

If performatives of declarative sentences are comparable, performa-
tives of ... also have this property. The follow-
ing sentence ... intends to ...

Speaker 1: Möchten Sie Äpfel? 'Would you like some apples?'

Speaker 2: Nein, danke. 'No, thanks.'

Speaker 1: Und Bananen? 'And bananas?'

What consituents are connected here by und 'and'? Certainly not Äpfel and Bananen — since the two questions are not synonymous with Möchten Sie Äpfel und Bananen? The two questions are, however, synonymous with Möchten Sie Äpfel und möchten Sie Bananen? 'Would you like apples and would you like bananas?' In other words, in order to explain und in this discourse, we have to posit conjoined question performatives.

Further evidence for the conjoinability of question performatives comes from some observations about disjunctive connectives. How can we account for the difference between "focused" and "non-focused" OR-s, such as in Did John appear or was he sick? versus Did John appear or write a letter (or not)? Sentences such as the latter one with a "non-focused or" resemble dependent conjoining in that subject deletion is obligatory. In sentences with "focused or", subject deletion is optional, just as in independent conjoined sentences. This similarity would suggest that the two types of disjunctively conjoined sentences be distinguished the same way in which the two types of conjunctively conjoined sentences were: by the number of performatives. Focused-on OR would thus be derived from the disjunctive conjoining of two performative; e.g. Did John appear or was he sick? would come from a structure paraphrasable as I order you either to say to me that John appeared or to say to me that (John didn't appear but) John was sick, and Did John appear or write a letter (or not)? from I order you either to say to me that John either appeared or wrote a letter or to say to me that he did not appear and did not write a letter.

Thus far we have listed some facts which can be explained if we assume that question performatives can be conjunctively conjoined both in statements and in questions and that question performatives can be distinguished

The hypothetical structures would be the following: I say to you that
he is an American or I say to you that he is a Dane. (performative con-
joining) versus I say to you either that he is an American or that he is
a Dane. (proposition conjoining). The question is whether these two
constructions can be matched with any pairs of contrasting disjunctive
declarative sentences.

Declarative sentence pairs that contrast by the shape and/or the
semantics of their disjunctive connectives fall into the following classes:

1. He forgot to come or he left town.

   He either forgot to come or he left town.

Such sentence pairs are generally said to differ in emphasis.

2. Either he left town or he didn't.

   Whether he left town or he did not, I do not care.

Here the difference is whether the choice matters or not. Disjunctive
connective pairs of other languages that contrast as whether...or
and either...or do in ENGLISH in contexts as the above are:

akár...akár... (and hа(s)...he(s)... versus vagy...vagy...
in HUNGARIAN

o...o... versus and in ITALY

soit...soit... versus ou...ou... in FRENCH

xot'a...xot'a versus li...li... in RUSSIAN

sive...sive... versus vel...vel... and aut...aut... in LATIN

eite...eite... versus ē...ē... in ANCIENT GREEK

This type of connective is obligatorily two-membered; it is often identi-
cal with the disjunctive connective set used in indirect questions (e.g.
in ENGLISH and in ITALY); or it is derived from a verb meaning 'be'
(e.g. FRENCH) or from a verb meaning 'want' (e.g. LATIN, SPANISH
(siquiera...(si)... and probably also Volumn persons HUNGARIAN); or it is
identical with the correlative particle set such as in ANCIENT GREEK,
LATIN, and HUNGARIAN as noted above.

3. The third contrast is the traditionally claimed one between "exclusive" and "inclusive" disjunction, depending on whether the co-occurrence of both alternatives raised is possible or not. Dik, however, claims (1968, 274ff) that this identification is mistaken and that disjunctive connectives in natural languages either belong to the "exclusive" type or else they exhibit ambiguity between the exclusive and inclusive sense (for an example of such ambiguity, see Langacker 1969, 49, 61), but that they are never unambiguously inclusive; and that the distinction between the two morphologically distinct types is based not on this criterion but on whether the choice is relevant to some argument or not.[20]

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[20] Languages with two morphologically distinct disjunctive connectives where, however, there was not enough evidence to judge the semantic distinction are the following:

BASQUE: zein...zein... and nein...nein...versus ela (how about edo versus ela?)

EWE: ...o...o versus aló...aló...

GOTHIC: jabbe...jabbe... versus aibbau

JAPANESE: mo...mo... versus ...ka...ka

KANNADA: sari...sari... versus -ō

KOREAN: ina...ina... versus ?

LATVIAN: ař...ař... versus vai...vai...

POLISH: albo and bo versus czy

TIGRINYA: koynu...koynu... and yakun...yakun... versus wǎy etc.

AZERBAIJANI: ya versus vaeya

Additional varieties of disjunctive connectives have also been observed sporadically. These are the following:

a) In SYRIAN ARABIC and in LATVIAN, there is a disjunction specialized to connect synonyms (such as in the Bible or the Holy Script). In SYRIAN ARABIC ?aw is used in other disjunctive contexts as well but apparently only this distinction is used between synonyms. In LATVIAN jeb is used only between synonyms. LATIN an no is used as ENGLISH or rather i.e. indicating that the second item is more likely, whereas with LATIN aliqu and ANCIENT GREEK ē ē the two items are marked as exactly appropriate.

b) In SYRIAN ARABIC walla and in IRAQI ARABIC tara are used to connect a generalized particular thing as such or else such and such or else...

Although it seems that of these contrasts the one between "choice that matters" versus "choice that does not matter" could perhaps be correlated with performative and proposition conjunction, respectively, a detailed exploration of this possibility will not be carried out here. Thus we conclude that whereas evidence could be found for performative conjoining both in statements and in questions and also for performative disjoining in questions, the discovery of the empirical consequences of performative disjoining in statements remains an open question.

Comparing now the two alternative transformational theories in question, that of Katz and Postal's and Baker's versus that of Ross' and Sadock's, we would conclude that the latter theory is to be preferred. Katz and Postal's Q fails to relate yes-no questions to any other akin construction other than wh questions and it also fails to make specific predictions as to what the syntactic structure of questions might be like as opposed to that of statements. Within the performative theory, it becomes possible to relate independent questions to dependent questions and to imperatives. This theory can also be used to explain some syn- tactic properties of sentences, and, in particular, of questions, as we

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(Footnote 20 continued)
    c/ SYRIAN ARABIC ?amma...w?amma is distinguished from other disjunctions of the language by its emphatic nature. In general, correla- tive disjunctions in statements appear to be universally more emphatic than a single OR_2.
    d/ GOTHIC þe is said to be more formal than jthwa.
    e/ In SYRIAN ARABIC, FANTE, and GOTHIC, disjunctions differ by whether they connect words and phrases, or sentences. ?aw in SYRIAN ARABIC is said to be infrequent in clause-connection, aná in FANTE connects words and phrases, anáse connects sentences. GUJARATI ke and jthwa are used between words and phrases, jthwalo is used with clauses. This criterion is also relevant in some languages for formal distinctions of 'and'-s, e.g. GUJARATI tjtha connects only sentences, versus [...] similar sequences as well as sentences. YORUBA [...] is said to occur between nouns and pronouns and àbí be- tween sentences (Gaad[...] 1964. 491). LATIN que and ANCIENT GREEK te tend to be used to connect phrases rather than sentences.

have seen: the distribution of first and second person pronouns, the presence of introductory subordinating connectives, the similarity of question pronouns to relative pronouns and some facts about the distribution and meaning of AND-s and OR-s.

Reviewing the two theory types in the light of the requirements that we set up above, we would conclude that, with respect to <u>scope</u>, the performative theory is better than the Ω theory since it enables yes-no questions to be represented as related to more constructions. It seems, however, that both of them are equally weak from the point of view of the other two requirements. As far as <u>domain</u> is concerned, both theories view questions and statements as sentence types rather than deriving their differences from differences between discourse types. Third, the <u>specific</u> syntactic differences that we noted between statements and yes-no questions -- word order, question particles, verb inflection, the shape and deletability of OR-s, the deletability of the negative alternative -- seem to elude both approaches -- none of these specific features of yes-no questions are motivated within either of the two theories.

We will next explore the possibilities of an alternative theory. This theory differs from both Katz and Postal's in that it is about <u>interrogative discourses</u> rather than interrogative sentences; and that it tackles a set of <u>specific syntactic distinctions</u> observed to hold for statements and yes-no questions, those related to the shape and deletability of the disjunct in alternatives and the deletability of the negative alternative.

3.4.5 Interrogative discourse and the deep structure of OR.[21]

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[21] The concept "interrogative discourse" has been a common one within the work of linguists: relationships that questions bear to [...] sentences in the discourse have been observed and described mainly by philosophers, sociologists, scholars at law and [...] psychiatrists. Hintikka [...], for instance, is about the [...] question [...] Stahl [...] considers

Let us briefly recapitulat[e] in just what ways we found disjunctive
connectives are different in yes-no questions from what they are in
statements. Let us first consider deletability. We can note two things.
First, disjunctive connective deletion is apparently never obligatory
in non-questions, as contrasted with EITHER-deletion in independent
alternative questions which turned out to be obligatory in some languages.
Second, the scope of OR deletion, once a language has such a rule, is
always wider with respect to questions than with respect to non-questions:
once OR is deletable in a language in alternative questions, it is deleta-
ble in all alternative questions, whereas OR deletion in non-questions
is always limited to disjunctions of specific phrases only.

Both of these observations show that disjunctive connective deletion
rules have a wider scope of application in questions than in non-questions.
Since deletable elements are, by definition, semantically redundant, this
would mean that the content of disjunctive questions is more of a
"tautologous" context for disjunctive connectives than non-question con-
texts. Disjunctive connectives are "less needed", so to say, in alterna-
tive questions than in non-questions. Are there some additional facts
which also show some distributional difference of disjunctive connectives
in such contexts and which can be interpreted similarly? As was pointed
out above, non-alternative yes-no questions of some languages do provide
relevant data. Let us recall Polish as an example. To jest pióro.
means 'This is a pen'. and Czy to jest pióro? means 'Is this a pen?'.

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(Footnote 21 continued)
the index to [...] of questions. Maccoby and Maccoby
[...] Their discussion of this [...] 1954, and still in 1954 are representa-
tives of the naive attitudes sociologists have on how to construct useful
questionnaires [...] in sociological, controversial, educational and
psychological literature, as appendix to a monograph [...] discussion and refer-
ences see [...] Starr (eds.) Questions - a book of readings.
[...] Section 3. The
[...]

where *or* means 'or'. OR in such questions occurs without connecting
anything, as opposed to its connective function in declarative sentences.
The presence of this OR can be of course accounted for by deriving these
questions from an underlying disjunction and then by having a rule delete
the conjunct leaving the connective behind. Such a rule, however, is not
the final answer since, first of all, the question arises as to why such
a rule is possible and, second, it only explains the presence of OR but
not its function as a "question particle": this OR differentiates, by itself,
the resulting construction from a statement and marks it for being a
question. This strange distribution of OR seems to correspond to facts
about the distribution of disjunctive connectives in alternative questions
discussed above: those show the redundancy of disjunctive connectives
in questions, and this shows the redundancy of separate question markers
once a disjunctive connective is present.

To what extent has this specific relationship between disjunctive
connectives and question particles been expressed in theories of ques-
tions? Katz and Postal's account (see also Langacker 1969, 55, 60) of
yes-no questions seems, to some degree, to approximate to the idea
inasmuch as they represent the disjunctive connective itself as being
the questioned constituent in such constructions. This account makes
the redundancy of disjunctive connectives versus question particles,
and their versus at least intuitively plausible, but it strikes one more
like a formal expression of the gist of some facts, rather than an ex-
planation inasmuch as one is still left wondering why disjunctive con-
nectives and question particles also to be related in this manner.

In search for an explanation that satisfies, let us first take up the
question as to why disjunctive connectives often deletable in questions?
One way in which the optionality of these connectives could be explained
is if they were elements that could be used actually representing yes no
questions introducing disjunction. This idea seems plausible if one

thinks of disjunctions as indicating awareness of a class of events and making the assertion that only one of its members is true; and if one thinks of yes-no questions as also indicating awareness of a class of events and of the fact that only one of its members is true. Yes-no questions differ from disjunctions only in that they also stand for a request for specification of which particular member is true.[22]

Let us now take up the second question: why is it that disjunctive connectives by themselves can function as question markers. Slightly simplifying the problem, we may restate it as follows: how is it that some questions do not get marked for questionhood and yet they are interpreted as such? One way of explaining this would be by an argument similar to the previous one: by claiming that the optional element -- the disjunctive connective, above, and the question marker, in this case -- is predictable from the underlying semantic representation of the whole construction. The construction that we suggested makes the disjunctive connective predictable is the yes-no question construction -- what would be one to make question-markers predictable?

Suppose we posit a discourse type called interrogative dialogue. A chunk of discourse would qualify as an instance of interrogative dialogue if it consisted of a pair of sentences which are in a class-member relationship with each other. The interpretation of the marker of this discourse type -- let us call it ID -- is something like this: "not all members of the class are true; specify which are true". The function of this ID is, then, to define questions and answers in relation to each other. The defining characteristic of a question would be that it is a class-utterance

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[22] The theory of implicature that shows why disjunctive connectives are dispensable in questions may also provide for the explanation of obligatory you-deletion in imperative constructions. If the notion "imperative" is ... in ... involving a second person ... then it is obligatory so you and the resulting deletability is explained. This is suggested by McCawley 1970, n. 39.

paired off with a member utterance, its answer. This framework would
do away with the notion of question as a primitive in linguistic theory
replacing it with the primary category "question-answer pair". This
implies not only that answers by themselves have no status in linguistic
theory but that questions don't, either, without their matching answers.

We have suggested that the optionality of disjunctive connectives
and question markers in some yes-no questions could be explained by
positing an interrogative discourse-type. In terms of the definition of
this discourse type, questionhood and disjunctivity would be predictable
features of the class utterance which is one of the components. In order
to substantiate our suggestion, it must be shown to be useful for other
explanatory purposes as well. Some of such additional advantages deriv-
able from the proposed framework might be the following.

First, in this framework not only will some questions be character-
ized as such even if they are not marked superficially for questionhood,
but also some superficially-marked questions will be excluded from the
class of questions. Such are rhetorical questions, since they have no
answers, or other pseudo-question, such as "Why don't you come over
one Sunday afternoon?", taken in the sense of an invitation, since none
of the set of the appropriate answers -- "Thanks." or "I will soon." --
are in a member-to-class relationship with the "question". The intui-
tively plausible claim that such questions are in fact ambiguous between
a real-question sense and a rhetorical question sense and that it is up
to the hearer to disambiguate them by the kind of answer he decides to
give ("Because I have no time." could be answered to the above ques-
tion if the hearer conceives of it as a real question) follows from this
framework. That such pseudo-questions should not receive question-
al status at an abstract level is also desirable if we assume
that abstract-type features have more cross-linguistic generality than
superficial ones, since at least some of these extended uses of ques-
tions are language-specific.

Second, this framework allows for the characterization of at least some linguistically appropriate answers and for the exclusion of at least some linguistically unsatisfactory ones.

Third, it makes the respective order of questions and answers predictable in terms of a genus-before-species ordering rule, as Sanders pointed out (1967, 154).

Fourth, it would perhaps also bear on the question: why do wh questions — pronouns and indefinite pronouns (like who? and someone) show morphological similarity in a number of languages such as GEEZ (Bergsträsser 1925, 40) ANCIENT GREEK. SANSKRIT. GERMAN, HUNGARIAN, JAPANESE (cp. Bach 1970), or KANNADA (R. Lass, p.c.).[23] If disjunctive connectives are represented as class-markers, then this observation is parallel to the fact that disjunctive connectives may mark yes-no questions by themselves: in both cases a class-marker — or an and-or only — is also a question marker.[24]

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[23] Kretschmer (1938, 441) also cites FINNISH. LATIN. TURKISH, GEORGIAN, MALAY and TUPI. He thinks historically the interrogative meaning was prior to the indefinite one.

[24] Cp. Langacker 1969, 42-43 and McCawley 1969 (297) and 1970 on reasons for and possible ways of formally associating some and or. It is relevant here to note that in a number of languages a disjunction compounded with a question-pronoun yields a pronominal form of indefinite meaning. Examples:

BASQUE: zer 'what' edo zer 'whatever thing'
noz 'when' edo noz 'at whichever time'
(Lafitte 1962, 202)

BURIAT: ... jun 'or' jamar 'what kind?'
jamar negen 'whatever kind' (negen 'one')

HAUSA: ... (Robinson 1925, 19)

HINDI: ... 'whoever', 'anyone'
... 'somebody', 'anybody'
... 'everybody'

...: ... gallu, 'somewhere'

Fifth, certain diachronic processes are also rendered plausible within this framework. The two relevant processes are: a/ interrogative particles may historically arise from disjunctive connectives: this may be true for some of the languages mentioned above such as POLISH; b/ disjunctive connectives may arise from interrogative markers: this is the case for ili in Slavic languages, whose etymology is i 'and' plus 'li' yes-no question marker; for JAPANESE ka (Haruo Aoki, p.c.) and, possibly, for FANTE anée.[25]

Finally, one more general advantage of the proposed framework is seen in that it presupposes the discourse to be the adequate domain of linguistic theory — a proposal for which much independent evidence has been adduced by a number of linguists in recent years.

This account of yes-no questions directly predicts an important syntactic difference between yes-no questions and statements: the relative redundancy and the question-marking significance of disjunctive connectives in questions, as opposed to statements. But if this account is an adequate one, it follows that OR-s in statements will have to have a completely different source from the origin of OR-s in questions as specified above,[26] unless we want to claim that all

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[25] Vondrák (1928, 451) notes that li, the question marker, originates from disjunctive questions, "was übrigens von den meisten Frageparti-keln gelten könnte". No information has been found on whether in SOMALI ma developed from a question marker into a disjunctive connective or vice versa; and how YORUBA bí, the question marker, and (l)àbí 'or' are related. The FINNISH question marker -ko is etymologically related to HUNGARIAN ha 'if', 'whether' (R. Hetzron, p.c.).

[26] This conclusion seems very reasonable also for the following reason. Since questions, as opposed to statements, do not have truth values, the logic of questions, as Katz 1968 argues, should be different from the logic of statements. We would expect, therefore, that basic logical operations such as disjunction or negation should have different charac-teristics in questions and in statements. This can be readily seen for negation. The semantic difference between He went. and He didn't go. is of a completely different nature from the difference between Did he go? and Did he not go? (see the discussion of negative questions in 5.5). If we therefore are made, on grammatical grounds, to posit a different deep structure for disjunction in statements and disjunction in questions, we do something else in accordance with logical predictions.

disjunctive statements somehow originate from yes-no questions.
Two questions arise. First, are there reasons in addition to the
observation that OR-s are relatively redundant and that they can have
question-marking function, which would support the claim that disjunc-
tive connectives are of a basically different nature in statements as
compared with yes-no questions. Second, if there are, just what should
be the deep structure interpretation of OR-s in statements?

One additional observation pointing at the differential charac-
ter of disjunctions in statements as questions is their shape. As we
have seen in connection with [...], there are different words used for
disjoining in statements and questions.

In addition to these points about the redundancy and shape of disjunc-
tive connectives, a general observation can be added -- one about
periphrastic relations.

There is a tendency, observed in many languages, a disjunction is pre-
ferably expressed not by disjunction but by a construction which also does
not contain conjunction. One such type of favored alternative to disjunc-
tive construction is a conditional construction. Reed points out (1969,
87) that in MARTU-WANGKA ... the "if X then Y" type construction is fre-
quently used in lieu of disjunctive sentences although the language has
disjunctive particles. [...] In THAI, the only way of expressing
disjunction is to transform a disjunct into a "not X then Y" con-
struction. [...] meaning literally "not he or I" 'either he or I'
(Voegelin and Voegelin 1964, no. 35) (the construction that is used
[...] a conditional clause, although
[...] construction is used in questions; cp.
[...] 'either a dog or
a cat or...' [...] ... language is also like
[...] ...

non-questions (cp. Lang 19.., 3, ..). Furthermore, Longacre
points out (1968, 77) that many Philippine languages use an 'if' word to
express disjunction, such as ABORLAN TAGBANWA, BATAK, ATA
MANOBO, and WESTERN BUKIDNON MANOBO; but he gives no exam-
ples, and it is not clear whether this is the only way in these languages
to express disjunction. There is one other Philippine language, ILON-
GOT, which is claimed not to have a disjunctive connective at all and a
conditional sentence is the only standard way of expressing disjunction:
e.g. qipiya nu magiat "good if bad"

  qipiya nu qedsiya magiat "good if not-is bad",
both meaning 'It is either good or bad.' (Michelle Rosaldo, p.c.). R. Lang
(p.c.) informs me that in addition to ENGA in many other languages in New Guinea,
e. g. MELPA, KARAM and ASMAT, there is no declarative 'or', but
only an interrogative one. He suspects that if we discount some borrowed
'or'-s such as in KOIRARI, this may be a general characteristic of all
Papuan (i.e. non-Austronesian) languages of New Guinea. He also tells
me that at least in ENGA there is a conditional paraphrase for declara-
tive 'either...or', but such paraphrases are only reluctantly accepted
by ENGA speakers. An example is akáli támo-pi énda támo-pi dolápo-
nya méndé pai-á "man if and woman if-and they-two-gen. one" 'Of the
two, either a man or a woman did it.' All our data show that conditional
paraphrases of disjunction are not used in questions.

  Let us now turn to the other question: if declarative OR-s are really
so different from question OR-s and assuming that we have found a satis-
factory source for deriving question OR-s what should the deep struc-
ture source of declarative OR-s be?

  One answer to this question is that disjunction of statements is to
be expressed in the deep structure by simply positing a disjunctive con-
nective. There are two conceivable reasons why this most simple
answer may not in the be the best one: a. on theoretical grounds, some

other representation appears more satisfactory or if empirical evidence points at an alternative solution.

Sanders (1967, 136ff) points out that for the sake of axiomatic simplicity, it would be good to be able to eliminate from the deep structure the disjunctive element and substitute it by a construction which contains elements which have to be assumed anyway. He proposes that *or* can be made predictable in this manner by paraphrasing it in terms of negation and negation. The rule which he gives for predicting *or* and which he calls "possibly universal" is the following:

((NEG. (X. Y)), (NEG. ((Neg. X). (Neg. Y)))) $\xrightarrow{\text{opt.}}$

((X. (Neg. Y), OR. (Neg. X). Y))

In other words: *X or Y* means *neither both X and Y, nor no X and no Y* or, even simpler, *neither both of them, neither neither of them.* This deep structure then successfully eliminates OR from the deep structure by employing negation and coordination which have to be there anyway. There is, however, what seems to be a weak point of this analysis. The rule is an optional one which means that a disjunctive structure is equally well expressed in terms of negation and coordination. Although corresponding sentences may be grammatical in all languages, no data have been found to show that they are favored or that they would be a standard construction.

On the other hand, there is a non-disjunctive construction which is in standard usage in many languages to express disjunction. This, as it has been shown, is a conditional construction. Some languages, as it has been shown use the conditional construction as a standard alternative to the disjunction. However, other languages use a conditional construction as the only means to express disjunction. In addition, it is worth stating that in many languages the disjunctive connective itself is etymologically and historically related to an 'if'-word. This is the case with the English *either, or* being derived from gif 'if' and *to*

'and'), and in HITTIANIAN (hu-(is)...ha-(is)... again derived from 'if' and 'also/and'). As further examples, let us refer to KALAMIAN TAGBANWA which is described by Longacre (1968, II, 177f) as having in...in... 'if...it...' as a disjunctive connective, and SHONA kana meaning both 'if' and 'or' (Stevick 1965, 479f, 496).

These facts would indicate that if we want to represent disjunctive constructions in the deep structure as not involving a disjunctive connective, but only elements whose presence is otherwise motivated, a conditional construction may be appropriate.

As we have seen above when we were discussing performative disjoining, there are at least two main semantic classes of disjunctive connectives: those that express a choice where the decision matters and those that express a choice where the decision is immaterial, such as Whether it rains or not, we go. versus Either it will rain or it won't. Are both of these classes to be derived from some underlying conditional construction -- and what exactly would be that structure? As far as the "focused-on" type is concerned, given both the meaning and the form of the conditional constructions that languages use to express this, we suggest that on IF X THEN NOT NOT-X type underlying structure would be appropriate. As far as the "non-focused" kind is concerned, given its semantics, as well as the observations that we made above -- that it is often derived from a second person verb 'want' or a third person verb 'want', but rather from a conditional connective -- we suggest that these could be derived from a structure such as BOTH IF YOU WANT X AND IF YOU WANT NOT-X or BOTH IF X IS AND IF NOT-X IS.

To summarize our deep structure representations of disjunctive connectives, we thus conclude that there are three types of disjunctive connectives that have different deep representations on a deep level: the "focused-on" kind: IF X (THEN) NOT NOT-X
the "non-focused" kind: (BOTH) IF YOU WANT X AND IF YOU WANT NOT-X or (BOTH) IF X IS AND IF NOT-X IS

the interrogative kind: $\{ \text{N NOT X} \}_{\text{ID}}$.

What can be claimed for each of these representations is that they manage to eliminate the assumption of an underlying disjunctive connective by representing it in terms of otherwise-needed underlying elements such as IF, AND, NOT, YOU, WANT and BE, in a manner which is consistent with what we have observed about their semantics, syntax, and morphology.

If we compare the performative theory of questions with the discourse approach, it seems that the performative theory has several advantages. First, within this theory wh questions, indirect questions and imperatives get related to yes-no questions, whereas it is not clear how indirect questions and imperatives would be related to them in terms of the discourse theory. Second, by assuming that questions, as statements as well, are subordinated to a sentence which contains a first and a second person noun phrase, various facts about the distribution of pronouns, as well as some other syntactic properties of questions and statements can be explained, and these would remain unexplainable according to the other approach. On the other hand the performative theory is a sentence-level theory and thus says nothing about the extra-sentential constraints that hold for question-answer discourses. Also, at least one specific syntactic distinction between yes-no questions and statements gets directly predicted in the discourse approach, but not the performative theory, which is the distinctive shape of disjunctive connectives in some languages and the relative redundancy thereof.

4. The Gap

4.1 Semantic plausibility. Thus far, we have been discussing two aspects of the underlying structure of yes-no questions. One component of the posited underlying structure, X OR NOT-X, is one which yes-no questions share with disjunctive statements. The request-component, on the other hand, is one whose distribution is more restricted in that it is unique to questions. Such an underlying structure would seem to be sufficient for questions such as the following: <u>Are you a carpenter or are you not</u>, and <u>Are you a carpenter?</u> It is incomplete as an account, however, of questions such as <u>You are a carpenter, aren't you?</u>

<u>Aren't you a carpenter?</u>

<u>Are you really a carpenter?</u>

There is an additional meaning element in these sentences which is that although the speaker is aware of both alternatives, he would prefer to hear one answer more than the other. There has to be a third component, therefore, which is present in the deep structure of this subclass of yes-no questions to account for this preference of the speaker.

Let us compare the simplest paraphrases of a neutral question and a corresponding biased question. <u>Are you a carpenter?</u> means <u>I ask you to tell me whether you are a carpenter or not</u>. <u>You are a carpenter, aren't you?</u> means <u>Are you a carpenter or are you not? I suggest you are</u>. A semantically plausible way, therefore, of differentiating biased questions from neutral ones is by assuming that their abstract structure contains, in addition to a disjunctive statement and the request, also a proposition which is identical with one of the alternatives of the disjunctive statement. The semantic notion "speaker's preference" is thus interpreted as both stating and questioning an event.

There are serious possibilities, however, as to the representation of this proposition. First off, we could just suggest that

this statement must be incorporated in the deep structure somehow, without making any commitment as to the way of representation. Second (2), we could make a stronger claim by specifying the manner in which this statement is to be incorporated in the deep structure representation of yes-no questions. One possibility (2.a.) is that it is a constituent within the sentence structure of the biased question. The other possibility (2.b.) is that the statement appears in the under-lying discourse context of the disjunctive question.

What kind of considerations would serve to tilt the balance in favor of one rather than the other possibility? Since (1) makes no claim about the syntactic form of the semantic information to be represented in the deep structure, but (2.a.) and (2.b.) specify that it is a sentence and that it is a declarative one, we can choose between (1) and (2) by seeing whether there is any possible use to be made in accounting for the syn-tactic structure. If there is, we would choose (2). The further choice between (2.a.) and (2.b.), on the other hand, does not rest directly on empirical evidence: (2.b.) is preferable if there is independent justi-fication for the discourse as a domain of grammar.

By observational criteria, biased questions can be classified as tag questions, negative questions, questions with special mood, questions containing certain adverbs, and questions with special stress and/or intonation patterns. Of these, only tag questions and negative questions will be discussed in more detail.[1]

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[1] Some examples of biased questions where the bias is expressed by some adverbs are the following:
ADVERBS TO MAKE PREFERENCE FOR AGREEING ANSWER:
   AGTA: dej; e.g. miang-ón k-amin de 'Have you eaten yet?'
         (Healey 1960, 43)
   BULGARIAN: nali; e.g. nali e r'i 'Isn't it right?' (Beaulieux 1950,
         319)
   BURIAT: xama; also (' ' ith a shade of expectation that the
         answer will be positive) e.g. torzo osno xaja 'Dorzo is prob-
         ably g ne?', absono; aence altai 'Our father must have
         come?' (Poppe 1960, 12)

4.2 Tag questions.

4.2.1 Facts. In discussing tag questions, we will first list our explananda by giving a characterization of their most conspicuous properties as observed in our language sample. Subsequently, we will try

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(Footnote 1 continued)

JAPANESE: ne; e.g. takai desu ne 'It is expensive, don't you think so?'
  (Jorden 1962, 1, 212f)

KANNADA: tanē; e.g. bartīya tanē 'You are coming, aren't you?'
  (Bright 1958, 48; cp. also Bright et al. 1960, 23, 30)

KHASI: am used at the end of rhetorical questions asking consent from
  the person addressed (Rabel 1961, 64f)

TAMIL: -ē ("Frage mit angenommener Gewissheit; e.g. nīyē ceytāy
  'Du tatest (es)?' (Beythan 1943, 74)

TIGRINYA: day-, a verbal prefix: "la réponse doivre être positive"
  (Leslau 1941, 152)

ADVERBS TO MARK PREFERENCE FOR DISAGREEING ANSWER:

BULGARIAN: nima; e.g. nima e vŭzmozno takova nĕsto 'Is it really
  true that such a thing is possible?'(Beaulieux 1950, 349ff)

BURIAT: aal, bir; e.g. si moróo baraa alsi 'Did you really catch your
  horse?'; teden jeree bir 'Did they come for sure?' (Poppe
  1960, 125; "questions with a shade of disbelief")

FANTE: ampa; e.g. ana wɔkɔre ampa 'Did you really go?'
  (Balmer and Grant 1929, 67f)

GERMAN: wirklich; Ist sie wirklich krank? 'Is she really sick?'

SERBO-CROATIAN: zar implies "doubt, surprise, a scornful rejection
  on the part of the speaker. If the source sentence
  is negative, zar may imply belief that the opposite
  is true." e.g. zar je on ovde 'Why, is he here?'
  (Also zar da, "denotes surprise or annoyance at
  some necessity, obligation or expectation") (Bidwell
  1969, 25 ff)

TAMIL: -ō ("erstaunte Frage"); avanō ceytān 'Er tat es? Wirklich?'
  (Beythan 1943, 74)

VIETNAMESE: ... "you busy question" 'Are you busy?
  (I am surprised.)' (Hŏa 1957, 8)

For much regarding answer preference, see FRENCH, where, if
the main sentence with an embedded object clause is questioned and the
expected answer is affirmative, the object clause is in the indicative;
but if the expected answer is negative, it is in the subjunctive (Fraser
and Squair 1945, 171).

to imagine ways of accounting for these properties and we will raise the question as to what syntactic use could be made of an underlying structure which contains a declarative sentence, where the proposition is one of the alternatives.

Semantically, as it was observed above, tag questions belong to the class of biased questions. An observation will serve to characterize the nature of this bias. In every tag question, the tag itself is really optional, i.e. semantically redundant, at least in some languages such as ENGLISH, GERMAN, and HUNGARIAN; for instance, both You are going, aren't you? and You are going, mean the same thing provided the latter is pronounced in an interrogative situation.[2]

Syntactically, tag questions always consist of a non-alternative declarative statement (hereafter referred to as "main sentence") and an interrogative part (hereafter referred to as "tag", with the term "tag question" reserved for referring to the whole construction).[3] Let us first discuss the main sentence. To see that the main sentence must indeed be declarative in ENGLISH, compare

You are going.

You are going. $\left\{\begin{array}{l}\text{aren't you?}\\\text{right?}\end{array}\right\}$

Are you going?

*Are you going. $\left\{\begin{array}{l}\text{aren't you?}\\\text{right?}\end{array}\right\}$

(Footnote 1 continued)
As for intonation, one remark can be made. Whereas any neutral construction can be pronounced with an intonation pattern that turn them into a biased question, constructions that are made into biased ones by segmental devices such as too or adverbs can not be altered into neutral ones by intonation.

For still another way, observed in ENGLISH, of conveying bias in yes-no questions, observe similarly alternation in the following sentences: Did he eat something (neutral) vs Did he eat anything (at all)? (biased).

[2] Longacre (1968, II, 23) talks about neutral tag questions in SANGIR, but since no details are given, there is no way of judging his claims.

[3] Compare Ultan 1969, 19, who stated that tag questions "most often" contain a non-alternative declaration.

The declarative nature of the main sentence is also shown by the fact
that some sentence adverbials can occur in declarative sentences and
in the main sentence of tag questions, but not in interrogative sentences,
such as certainly (as it is pointed out in Katz and Postal 1964, 87). For
the requirement that this main sentence be a non-alternative statement,
compare ENGLISH You are going or you are not going.

*You are going or you are not going, are you?

The main sentence, therefore, appears to have two restrictions on
it in order to qualify: that it be declarative and that it be not alternative.
Let us now take a look at tags and see what are the properties that are
necessary for questions to have in order for them to be possible tags.

Looking at tags of various languages from a paradigmatic point of
view, one possible classification would be the following:

1. affirmative tags (e.g. He didn't fail, right?)
2. negative tags (e.g. He failed, didn't he?)
3. alternative tags (e.g. MANDARIN nǐ xiànzài huí jia shì bu shì
   'You are going home, aren't you?' where shì bu shì is "is not is".)
4. disjunctional tags (e.g. GERMAN Er ist krank, oder? 'He is
   sick, isn't he?' where oder is "or")
5. pronominal tags (e.g. GERMAN Das war gut, was? 'This was
   good, wasn't it' where was is "what?")
6. interjectional tags (e.g. He is coming, huh?)

The tag is an affirmative predicate in 1, a negative predicate in 2, a
disjunction of two predicates in 3, a disjunctive connective in 4, a
pronoun in 5, and an interjection in 6. 5, and 6 could be labeled
together as substitutive tags.[4]

What can be said in favor of this classification is that it is empiri-
cally satisfactory in that it appears to be exhaustive and the classes are
mutually exclusive (every tag observed can be uniquely classified within it)

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[4] Bolinger (1957, 21) calls what and eh reclamatory words since they
can be used to make the speaker repeat what he said.

and that it is non-arbitrary at least in the sense that all the classes are syntactic ones.

The classification of tag questions given here concerns a smaller set of linguistic structures than Ultan's classification (1969, 50) and the criteria are also different. Ultan first distinguishes multiple choice tags (e.g. How about...?) and binary choice tags. Of these two, we are only concerned with the latter, because of the principal interest of the paper which is about questions answerable by yes and no. He further subdivides binary choice tags into 1. alternative tags consisting of 'or' and 2. "request for information"-type tags. Of these, 'or'-s are considered here tags only if the resulting question is a biased one. "Request for information" type tags are subdivided by Ultan into a/ negative constructions (n'est-ce pas), b/ positive constructions (ROTUMAN ne 'is')/ c/ interjections, and d/ miscellaneous types (RUSSIAN pravda, TAGA-LOG ano, 'truth' and 'what', respectively). Our six surface types correspond to Ultan's categories in the following manner: affirmative to 2/b, negative to 2/a and some of Ultan's question particles (1969, 53-55), alternative to some of 2/d, disjunctive to some of 2/d, pronominal to some of 2/d, and interjectional to 2/c.

Looking at tags syntagmatically, i.e. considering their syntactic properties in relation to the syntactic properties of their context, rather than considering them just by themselves, there is again some emerging pattern. Some tags contain the repetition of some part of the main sentence, usually the predicate and perhaps also some other constituents. These tag-parts vary with some properties of the main sentence such as verb type (cp. aren't you vs. don't you in ENGLISH -- or person (cp. aren't you vs. isn't she in ENGLISH). The other class of tags does not show variation corresponding to properties of the main sentence. This complement class of the first one, however, can be characterized further in addition to this negative statement. Insofar as a tag does not

belong to the first class but it contains some kind of a predicate --
i.e. it is not disjunctional, pronominal, or interjectional -- the class
of lexical items that it contains can be characterized as being fairly
narrow: it is always an existential verb or a copula and/or words
such as 'truth', 'true', 'right', 'so', 'yes', 'no'. Furthermore, the
person and number, if any, is always singular third person.

An example for this type of tag question, henceforth called metatag
question , as opposed to the first type henceforth called resumptive tag
questions, is ENGLISH You are going, (is(n't) that) right? The fact that
both metatags and resumptive tags can be characterized independent
from each other, i.e. not just by lacking the properties of their com-
plement class, is taken to be an indication of the validity of the proposed
classification. Another piece of confirming evidence is that each of
these two classes of tags behave homogeneously by criteria other than
that of lexical composition as well. Three properties all further charac-
terizing their relationship with their main sentence have been found to
hold true for all resumptive tags. First, there are restrictions on the
respective affirmation values in the main sentence and in the tag: they
are ordinarily opposite.[5] Second, resumptive tags are never untruncated
sentences: some deletion or substitution seems always obligatory (cp.
ENGLISH *He read it, didn't he read it?, and HUNGARIAN *Olvastad,
nem olvastad? 'You-read-it, not you-read-it"). Third, the tag follows
the main sentence.

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[5] This is not quite so in ENGLISH. You are going, are you? is gram-
matical in BRITISH ENGLISH as a standard tag question and it also occurs
in AMERICAN ENGLISH although with meanings different from ordinary
tag questions. However, even ENGLISH has a restriction on the structure
of resumptive tag questions in terms of the respective affirmation values
of the main sentence and the tag in that they must not both be negative
(*You aren't going, aren't you?) It is interesting that as Brown and Hanlon
observed (1970, 57), ENGLISH children do make mistakes in the use of
resumptive tags in ENGLISH by using an affirmative tag after an affirma-
tive main sentence, but never by using a negative tag after a negative
sentence "

As far as metatags are concerned, all of them contrast with resumptive tags in terms of the first criterion, and at least some of them in terms of the second and third. Concerning the criterion of respective affirmation values, compare ENGLISH right, itself affirmative, FRENCH n'est-ce pas, itself negative, and MANDARIN shì bu shì "is not is", itself alternative, all of which can equally occur after affirmative or negative main sentences. Concerning the criterion of deletion, compare HUNGARIAN Jössz, igaz? 'You are coming, aren't you?' where the tag is a full sentence meaning 'Is it true?'. But ENGLISH right, for instance, shows that not all metatags are undeleted. As for sentence-final position, this is again a property which is true for all resumptive tags and not true for some but not all metatags. Non-sentence final position is always just another alternative to sentence-final position for metatags if it is possible at all. The metatag may be sentence-initial and sentence-medial in HUNGARIAN (ugye "so-question", e.g. elmész Péterhez, ugye; ugye elmész Péterhez; Péterhez ugye elmész all meaning 'You will go to Peter, right?') and in FRENCH (n'est-ce pas; cp. Ultan 19.., 50); and in FANTE nyɛ "not-is", mense "I don't say" are described as sentence-initial tags and there is no indication that they may be sentence-final at all. The same is true for HEBREW halo' glossed as 'but obviously, isn't it true that...', 'isn't it so', 'don't you', 'n'est-ce pas' and apparently consisting etymologically of ha, a binary choice question particle and lŏ', a negator (cp. Rosén 19.., 15, 73, 81, 146, 231). Longacre (19.., II, 23) points out that in BONTOC, BALANGAO and KAI AMIAN TAGBANWA the tag is either sentence-final or it may follow any sentence constituent which is the focal point of the question as opposed to TAGABILI, DIBABAWON MANOBO, KALABAN and ATTA NEGRITO where the tag is always sentence-final; but it is not clear from his account whether the tags involved are metatags or of the resumptive kind.

Of the four criteria mentioned in connection with the dichotomy
of resumptive tags and metatags -- lexical composition, affirmation
value, deletion, and ordering -- the two latter ones define resumptive
tags as one class (deletion and sentence-final position is obligatory for
all of them) but do not define metatags as one class; some are like
resumptive tags in these respects. Given that we have found much
fewer examples of resumptive tags anyway, we conclude that these two
properties are general properties of all tags, with occasional exceptions
which just happen to be all in metatags in our sample. We are thus left
with the other two properties -- lexical composition and respective
affirmation values in the tag and in the main sentence -- as operational
criteria for classifying tags: resumptive tags share lexical material
with the main sentence and there are restrictions with respect to the
affirmation values in the tag and in the main sentence; whereas metatags
are independent from the main sentence both lexically and in affirmation
value.

The following chart summarizes resumptive tag questions and
metatag questions according to the distribution of affirmation values
in the main sentence and in the tag, with illustrative examples for
easy identification. $\checkmark$ means "occurs", $\emptyset$ means "does not occur".

Tag type	RESUMPTIVE TAG QUESTIONS			METATAG QUESTIONS		
Main Sentence \ Tag	+	−	+/−	+	−	+/−
+	✔ You are going, are you?	✔ You are going, aren't you?	∅ *You are going, are you or aren't you?	✔ You are going, right?	✔ Sie gehen, nicht wahr?	✔ ni xiānzai huí jia, shì bu shì 'You are going home aren't you?' (Elliot 1965, 83)
−	✔ You aren't going, are you?	∅ *You aren't going, aren't you?	∅ *You aren't going, are you or aren't you?	✔ You aren't going, right?	✔ Sie gehen nicht, nicht wahr?	✔ maga nem betörő, igaz vagy nem igaz 'You are not a burglar, are you?'
+/−	∅ *You are going or you aren't going, are you?	∅ *You are going or you aren't going, aren't you?	∅ *You are going or you aren't going, are you or aren't you?	∅ *You are going or you aren't going, right?	∅ *Sie gehen oder sie gehen nicht, nicht wahr?	∅ *You are a burglar or you are not a burglar, is this true or isn't it?

Gaps in the last row are results of the requirement that the main sentence be non-alternative. The other occurrence gaps are due to the fact that there are coocurrence restrictions between main sentence and tag values in resumptive tag questions.

Let us next turn to the cross-linguistic distribution of resumptive tag questions and metatags questions. In general, the resumptive type has been found documented for a handful of languages only and all of these

languages also appear to have the meta-type. Brown and Hanlon note (1970, 15) that right -- a metatag in our terminology -- and interjectional tags such as huh are acquired earlier than "resumptive" tags.

Beside ENGLISH, KIWAI and TAMIL are the only languages found which appear to have tags that qualify for being resumptive by both the criterion of lexical composition and that of opposite affirmation value. [6] In TAMIL, only one single sentence was found to indicate their existence: nii py sollamaattee, solveeyaa "you lie tell-indicative-not-2sg tell-future-2sg-question" (Srinivasan 1968, 32). [7] Evidence for KIWAI is provided by the following sentences (S.A. Wurm, p.c.):

roro aimeriauriama paikiaurigo "you-singular-ergative you-singular-saw-them not-you-singular-saw-them" 'You (singular) did see them, didn't you? '

roro paikiauriamago riaurigo "you-singular-ergative not-you-singular-saw-them you-singular-saw-them" 'You didn't see them, did you? '

In addition to ENGLISH, KIWAI and TAMIL, there was one language found, FINNISH, which has resumptive tags, by the criterion of lexical composition, and two languages, THAI and YORUBA, with tags that appear to be resumptive by the criterion of opposite affirmation value.

For FINNISH, compare sina menet, et kü (nii) 'You are going, aren't you? ' and han menee, ei kü niin 'He is going, isn't he? ' Et and ei are two forms of the negative verb corresponding to the respective second and third person in the main sentence predicates. (Data from Russell Ultan, p.c.)

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[6] Wurm informs me that both colloquial TURKISH and colloquial JAPANESE have resumptive tags. Example sentences, however, have not been available.

[7] After an affirmative statement, illeyaa, "not-question", is used.

The suspected resumptive tag in THAI is mǎj. It is a single negator and thus the criterion of lexical composition does not apply, but by the criterion of respective affirmative values it turns out to be a resumptive tag, since it must not occur after a negative sentence (cp. Haas 1948, 352; Campbell 1962, 81; Voegelin 1965, 33; Chaiyaratana 1961, 225f).

The same argument applies to YORUBA. Àbí means 'or' and it is a tag (Delano 1963, 8). The criterion of lexical composition does not apply again, but it has the same restriction on it as THAI mǎj: it must not occur after a negative sentence (Ayọ Bamgboṣe, p.c.). In other words, we explain this restriction on the occurrence of mǎj and àbí by claiming that what is deleted in these tags is, for mǎj, the verb of the main sentence and, for àbí, the negated verb of the main sentence -- and by assuming that such resumptive tags must differ from the main sentence in affirmation value. The assumption, therefore, that there is such a tag type as resumptive turns out to be explanatory with respect to some facts of THAI and YORUBA.

If àbí is really a resumptive tag, then the generalization that the existence of a resumptive tag implies the existence of a metatag in all languages would have an exception, since àbí is the only tag YORUBA has (Ayọ Bamgboṣe, p.c.)[8]

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[8] Some examples of metatag questions are given below.
METATAG QUESTIONS WITH AFFIRMATIVE TAGS:
  ENGLISH: (is(n't) that) right; after affirmative statement: He is your brother, right? after negative statement: He is not your brother, right?
       F. Householder pointed out that in ENGLISH there is a stylistic difference between the use of resumptive tags and the use of metatags. Metatags are argumentative and occur particularly in opening premises of an attempt to persuade someone of something. He also provided some good examples: " The moon is made of green chese, right? Why not buy a share in my moon transportation company, then?"

The following generalizations can be made concerning the cross-linguistic distribution of the two types of tag questions. All languages investigated for which tag constructions were described at all have the

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(Footnote 8 continued)

" Five times five is twenty-five, correct? Then how come you paid twenty-seven fifty?" Bolinger (1957, 18) does not consider right to be a tag of the same order as didn't he etc., because he says that right is "intonationally separate and has primary stress."

GALA: miti "?"; after affirmative statement: Dufera, miti 'He has come, hasn't he?'; after negative statement: hinDufera miti 'He hasn't come, has he?' (Mulugetta Effetta, p.c.). It is possible, however, that miti is not a predicate and thus not an affirmative tag.

GERMAN: ja "yes"; after affirmative statement: Du wirst schlafen, ja? 'You will sleep, won't you?'; after negative statement: Du wirst nicht schlafen, ja? 'You won't sleep, will you?'

HAUSA: nē "is"; after affirmative statement: mu, munà dà shi nē "as-for-us, we have it do-we?" (Kraft 1963, I, 168); after negative statement: (no example found)

HUNGARIAN: ugye "so-question-particle", igen "yes"; after affirmative statement: beteg,{igen/ugye} 'He is sick, isn't he?'; after negative statement: nem beteg, {igen/ugye} 'He isn't sick, is he?'

JAMAICAN CREOLE: iing, yaa "yes"; after affirmative statement: Jien suo gud, iing 'Jane sews beautifully, doesn't she?'; after negative statement: uno no go de, yaa 'You won't go there, will you?' (Bailey 1966, 55, 91; Bailey, however, classifies the last example as one for a tag imperative)

MALAY: ja "yes"; after affirmative statement: saja tunggu, ja 'Ich warte, ja?' (Kähler 1965, 61); after negative statement: (no example found)

ROTUMAN: ne "is"; after affirmative statement: fā ta pot par, ne 'The man is very clever, isn't he?' (Churchward 1940, 61); after negative statement: (no example found)

RUSSIAN: pravda "truth"; after affirmative statement: ti yevó slušil, pravda 'You heard him, didn't you?' (Ultan 1969, 50); after negative statement: ti yevó n'e slušil, pravda 'You didn't hear him, did you?'

meta type.   The few languages that have been found to have the resump-
tive type also have the metatype, except possibly YORUBA, as it
was pointed out above.   Within both types, negative tags prevail over

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(Footnote 8 continued)

SOMALI: sow maaha "perhaps not-is"; after affirmative statement,
see Bell 1953, 56; after negative statement: (no example
found)

SPANISH: verdad "truth"

SWAHILI: ndiyo "yes"; after affirmative statement: mume stara,
ndiyo 'A husband is a protector, is this the case?'
(dubious, sarcastic; Closs 1967, 113); after negative
statement: (no example found)

METATAG QUESTIONS WITH NEGATIVE TAGS:

Negative statements with tags, as maybe negative statements in
general, are less frequent in use than their affirmative counterparts.
As a result of this, for some languages, no examples were found for a
negative statement with a tag, as the gaps in the listing above show.
Whereas these gaps did not hinder identification of affirmative tags as
belonging to the metatype -- the crucial point being that they cooccur
with affirmative statements -- lack of examples for a negative statement
cooccurring with a negative tag makes the criterion of independent affirm-
ation value inapplicable to such tags. If, in addition, such tags do not
even contain any lexical material other than just a single negator, classi-
fication becomes even more tenuous. Languages which have single-
negator-tags and there is no evidence stated or exemplified whether they
can cooccur with negative statements or not are starred in the listing below.

AMHARIC: a(y)dälläm "is it not"; after affirmative statement:
hedwal, adälläm 'He went, is it not?'; after negative
statement: alhedäm, adälläm 'He didn't go, is it not?'
(Leslau 1962, 147; cp. also Dawkins 1960, 52)

BENGALI: na "not" (also "or"); after affirmative statement: kal asbo
na 'I shall come tomorrow, shall I not?' (Hudson 1965, 34);
after negative statement: no example found, but Charles A.
Ferguson (p.c.) believes it occurs.

ENGLISH: no, isn't that so; after affirmative statement: He is still a
friend of yours, no? (idiolectic); after negative statement:
He is not a friend of yours any more, isn't that so?

FANTE: nyɛ "not is". mense "I don't say"; before affirmative
statement: mense ɔbayɛ "do-I-not-say he will do it "
'He will do it, won't he?'; before negative statement:
nyɛ nkɔkɔ "isn't it you not go" 'Will you not go?' (the
gloss is problematic here! Is this a tag question or a
negative question?) (Balmer-Grant 1929, 67, 70)

affirmative and alternative ones. In our sample, as the comparison
of the two lists shows, every language except for one (ROTUMAN; i.e.
8 out of 9) that have affirmative metatags also have negative metatags;

(Footnote 8 continued)

FINNISH: eikö niin "not-is-question so"; after affirmative state-
ment: sina menet, eikö niin 'You are going, right?';
after negative statement: sina et menet, eikö niin
'You are not going, right?' (Russell Ultan, p.c.)

FRENCH: n'est-ce pas "not-is not"; after affirmative statement:
Vous avez lu le livre, n'est-ce pas? 'You have read the
book, right?'; after negative statement: Vous n'avez
pas lu le livre, n'est-ce pas? 'You haven't read the book,
right?'

*FULANI: naa "not"; after affirmative statement: na nde Iisa naa
'It is Jesus, isn't it?' (Stennes 1961, 55, but Klingenheben
1963, 246 glosses this type of question as a neutral one,
e.g. ʔa wari na 'Bist du gekommen?'); after negative
statement: (no example found)

GERMAN: nicht (wahr) "not (true)"; after affirmative statement:
Du hast geschlafen, nicht wahr? 'You slept, didn't you?';
after negative statement: Du hast nicht geschlafen, nicht
wahr? 'You didn't sleep, did you?'

GREBO: hẽsea "or-lie-question" (conjectured etymology!); after
affirmative statement: ɔ duda bla hẽsea 'He pounded rice,
didn't he?'; after negative statement: ɔ yida bla du hẽsea
'He didn't pound rice, did he?' (Innes 1966, 108)

GUJARATI: ne "not"; after affirmative statement: e awyo chene 'He
has come, hasn't he?' (Cardona 1964, 238); after negative
statement: (no example found)

HAUSA: ba "not"; after affirmative statement: ka ze ba "you-have
come not?"; after negative statement: har yànɔu bà ku
"until now not you-have left not?" (Kraft 1963, I, 168)

HUNGARIAN: nem (igaz) "not (true)"; after affirmative statement:
ettél, nem (igaz) 'You have eaten, haven't you?';
after negative statement: nem ettél, nem 'You have
not eaten, have you?'

ILONGOT: (qed)be:t "(not) question"; after affirmative statement:
pilipinu siya, (qed)be:t "Philippine is, (not) question"
'She is Philippine, isn't she?'; after negative statement:
qawana quberi ma qansiN, (qed)be:t "not pretty the dress
(not) question" 'The dress isn't pretty, is it?' (Michelle
Rosaldo, p.c.)

and for ROTUMAN there is no evidence to exclude the possibility.
This implicational relationship also appears to hold for resumptive
tags: the only languages that have been found to have both affirmative

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(Footnote 8 continued)

*ITALIAN: no "no"; after affirmative statement: <u>fa bello oggi, no</u>
'It is a beautiful day, isn't it?' (Rabel 1961, 64f); after
negative statement: (no example found)

JAMAICAN CREOLE: no "not"; after affirmative statement: <u>im gaan</u>
<u>aredi, no</u> 'She has gone already, hasn't she?';
after negative statement: <u>Jan no waan go, no</u>
'John doesn't want to go, does he?' (Bailey,
1966, 55)

*KANNADA: <u>alla</u> "not"; after affirmative statement: <u>koṇegū</u>
<u>bandyallā</u> 'You have come at last, haven't you?'
(Bright 1958, 48; he says it is a rhetorical question;
cp. also Spencer 1914, 154); after negative statement:
(no example found)

*KHASI: ?een "no"; after affirmative statement: <u>wa phii la da san</u>
<u>katnikatni, ?een</u> "O, you have grown up so much, haven't
you?' (Rabel 1961, 64f); after negative statement: (no
example found)

*LATVIAN: <u>vai ne</u> "or not"; after affirmative statement: <u>māte ir</u>
<u>istatā, vai ne</u> 'Mother is in the room, isn't she?'
(Lazdina 1966, 35); after negative statement: (no
example found)

*MALAY: <u>bukan</u> "not (is)" (?); after affirmative statement: <u>tuan</u>
<u>saudaagar, bukan</u> "you salesman, no" 'You are a sales-
man, aren't you?' (Kähler 1965, 61); after negative
statement: (no example found)

PANJABI: <u>na</u> "not"; after affirmative statement: <u>ó grà si na</u> 'He
went, didn't he?'; after negative statement: <u>o nai si grà</u>
<u>na</u> 'He didn't go, did he?' (Gill and Gleason 1963, 266ff)

SPANISH: <u>no es verdad</u> "not is true"

*SWAHILI: <u>siyo</u> "no"; after affirmative statement: <u>mume siara,</u>
<u>siyo</u> 'A husband is a protector, isn't this the case?'
(Closs 1967, 113); after negative statement: (no exam-
ples found)

TAGALOG: <u>hindi ba</u> "not question"; after affirmative statement:
<u>siya ang pilipino, hindi ba</u> 'She is a Filipino, isn't
she?' (Bowen 1965, 30); after negative statement:
<u>hindi maganda ang damit, hindi ba</u> 'The dress isn't
pretty, is it?' (Bowen 1965, 25)

and negative resumptive tags are ENGLISH and KIWAI; FINNISH,
SWISS GERMAN and THAI have negative ones only. The only TAMIL
example of a resumptive tag is affirmative, however. All in all, the
availability of resumptive tags in any language generally implies the
existence of metatags; and the availability of affirmative tags generally
implies that of negative tags.

Of our six "paradigmatic" types of tags, three are amenable to
classification into the types resumptive and meta: these are the ones
which contain some predicate-type constituent and thus can be attributed
affirmation value to. These are the affirmative, the negative and the
alternative type. Let us now see whether the resumptive-meta dichotomy
could be made meaningful for the other three types: disjunctional, pro-
nominal and interjectional. First we will list our examples for each.

Disjunctional tags, i.e. ones consisting of a single disjunctive
connective 'or' have been observed in BENGALI, GERMAN, THAI and
YORUBA:

BENGALI: na in simple (i.e. not alternative) question: kal asbo, na
'I shall come tomorrow, right?' (Hudson 1965, 34); na in

(Footnote 8 continued)
METATAG QUESTIONS WITH ALTERNATIVE TAGS

CHINESE: shì bu shì "is not is", duì bu duì "correct not correct",
xíng bu xíng "possible not possible", hǎo bu hǎo "good
not good"; after affirmative statements: ní huì kāi chē,
shì bu shì 'You can drive a car, can't you?' (Vicky Shu,
p.c.); after negative statement: tā hái méi huàn yifu, duì
bu duì "she still not change clothes, correct not correct"
'She still hasn't changed clothes, isn't it right?' (Elliot,
1965, 97f)

HUNGARIAN: igaz vagy nem igaz "true or not true"; after affirmative
statement: ettél, igaz vagy nem igaz 'You have eaten,
right?'; after negative statement: nem ettél, igaz vagy
nem igaz 'You haven't eaten, right?'

VIETNAMESE: (có)phải không "(is)-correct is-not" (Hòa 1957, 66f)

disjunction: apni ča na kɔphi čaŋ 'Do you want tea or

coffee?' (Dabbs 1965, sub na); (na, however, is also a

negator; cp. ami jani na 'I don't know' (Dabbs 1965,

sub na)

GERMAN (also SWISS GERMAN): oder in simple question: Die sind

doch wirklich ungewöhnlich, oder? (Willy Brein: Der

Mann meiner Frau, Rororo Taschenbuch, 1968, p. 103.

Mrs. Edith Moravcsik called this sentence to my attention.);

oder in disjunction: Das ist Butter oder Margarin?

THAI: rɨ́ in simple question: k'un pay rɨ́ k'ráp "you go or (polite-

man-speaking)" 'You are going?'; rɨ́ in disjunction: tə̄ cà pāy

rɨ́ máy pāy "you will go or not go" 'Will you go or won't you?'

(Voegelin 1965, 33ff; cp. also Haas 1948, 352; Campbell 1962,

81; Chaiyaratana 1961, 109-114).

YORUBA: See p. 92 above. [9]

Pronominal tags have been observed in the following languages:

ENGA: sentence plus páde aipa "or what" (Lang 1970, 186)

ENGLISH: Good show, what?

GERMAN: Das wäre schön, was? "it would-be nice, what" 'It would

be nice, wouldn't it?'

HUNGARIAN: Jó lenne, mi? "good it-would-be, what" 'It would be

nice, wouldn't it?'

TAGALOG: hindi mayaman si Joe, ano "not rich the Joe what" 'John

isn't rich, is he?' (Bowel 1965, 27)[10]

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[9] AMHARIC wäy and KONSO hèlá, both disjunctives, are also said
to occur as tags.

[10] AZERBAIJANI has a question type where the interrogative marker
is, at least formally, identical with a relative wh word: ki/kı 'who,
which, that' and similar to the interrogative kim 'who?'. This particle
is said to be added to some sentence consituent in order to imply that the
answer is known. (Householder and Lotfi 1965, 88).

Interjectional tags have been observed in ENGLISH and in HUNGARIAN (Jó, hm? 'It is good, huh?). Since these tags have no affirmation value, they appear to fall outside the domain of our classification. One might, of course, decide that these 'or'-s (and 'what-s) are simply adverbs, such as really and others that turn neutral questions into biased one; but in this case the relationship of particles with alternative structure would be obscured. On the other hand, it also appears that these questions, even if they lack any expression of affirmation value, can still be classified into our two types on a semantic basis. As an example, let us take SWISS GERMAN. Oder may follow both affirmative and negative statements; cp. Er ist en Amerikaner, oder? and Er ist nöt en Amerikaner, oder? ('He is an American, isn't he?' and 'He is not an American, is he?', respectively). It is also the case that the first question is synonymous with the following more complete paraphrase: Er ist en Amerikaner, oder nöt?, but that oder nöt? is ungrammatical if attached to a negative statement: *Er ist nöt en Amerikaner, oder nöt?; the fuller paraphrase for the tag question with the negative statement in it would be Er ist nöt en Amerikaner, oder ist er? (Mrs. Rita Moravcsik, p.c.). This suggests that SWISS GERMAN oder is in fact a tag and that it belongs to the resumptive type. Since BENGALI and THAI informants have not been available, these constructions remain unclassified -- but not in principle unclassifiable .

The same criterion of paraphrasability could be applied to classify tag questions involving 'what' and tag questions involving interjections.

Having thus listed syntactic and lexical properties of tags both taken by themselves and also as compared with their main sentences, we will mention two more facts before turning to the question of explanation. Both of these concern comparing tags with other syntactic constructions. First, affirmative and negative tags -- whether resumptive or meta --

can also be characterized as, in a declarative form, all being possible
answers to the question. This holds for ENGLISH right (compare You
have known this all along, right? -- Right.), FRENCH non, HUNGARIAN
igaz vagy nem igaz "true or not true", and YIDDISH neyn, -- in other words, both
for affirmative and for negative tags (whether resumptive or meta), for
alternative tags and also for interjectional ones (not for disjunctional
and pronominal ones, however). Note also ENGLISH and HUNGARIAN
huh and unhuuh (e.g. You like this, huh? Unhuuh.)[11] Second, yes-no
questions are not the only constructions that have tags: imperatives is
another such construction, and, in fact, the only other one.

Our observations about tag questions can be summarized as follows:

1. semantics: biased questions; tag redundant

2. syntactic structure: sentences consisting of main sentence and tag
sentence

A. main sentence: non-alternative declarative sentence

B. tag sentence: structure: a yes-no question

kinds: paradigmatically: affirmative

negative

alternative

disjunctional

pronominal

interjectional

syntagmatically: resumptive (contains
some lexical material from main sentence, usually opposite affirmation
value but at least never negative after a negative statement and never
alternative; always truncated and always sentence-final)

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[11] See also VIETNAMESE, where phải is 'yes' and phải khộ is a tag;
and THAI, Chaiyaratana 1961, 115. The isomorphism is not complete,
however, in some languages. Not all answer words can be used as tags,
in ENGLISH for instance: right can, but yes only idiolectically. On the
other hand, not all tags can be used as answer words: in GERMAN nicht
is a tag, but the corresponding answer word is nein.

meta (lexically and with
respect to affirmation-value independent from main sentence; often
truncated and often sentence-final)

distribution of different types within languages: existence of affirm-
ative tags implies existence of negative tags

existence of resump-
tive tags generally implies existence of metatags

What is required of an account of tag questions is that it explains,
ideally, all of these facts, and that the formalism involved is independ-
ently motivated. We will next survey various proposed solutions and then
consider a new one.

4.2.2 <u>Previous accounts</u>. As Huddleston points our (1969), accounts
of tag questions fall into two classes: those that derive tagged questions
from one underlying sentence and those that derive them from two. Since
tag questions superficially consist of a full and truncated sentence, a
one-sentence base will have to be complemented by a copying rule and
a two-sentence base by a deletion rule. Two specific suggestions fall
into the "copying approach": that of Klima's (1964) and one raised about
accepted in Stockwell 1968. Klima has an optional rule (pp. 263ff) which
derives tag question from the underlying structure of neutral yes-no
questions by having a transformation add, in effect, the tag. The Stock-
well version (p. 648) also involves a copying rule with the difference
that tag-questions-to-be are so marked in the underlying structure.

The other solution that the Stockwell grammar suggests falls within
the other class where the base consists of two sentences and involves
deletion. Tag questions are represented as consisting of a statement;
e.g. <u>John left, didn't he?</u> comes from <u>John left; did John leave or didn't</u>
<u>John leave?</u>. The fact that the main sentence and the tag have opposite
affirmation values is then accounted for by the operation of a deletion

rule which deletes that part of the alternative question which agrees
in affirmation value with the statement (e.g. did John leave above).

All three of these accounts have serious deficiencies even if con-
sidered as theories of tag questions only and in ENGLISH only. Klima's
account is inadequate in that it does not assign an underlying structure
to tag questions which is different from the underlying structure of
neutral questions (as pointed out in Stockwell 1968, 646). The
Stockwell "copying" account, on the other hand, assigns a deep struc-
ture to tag questions which is completely different from that of neutral
yes-no questions; in particular, whereas neutral questions have an
alternative statement in their base, tag questions have a non-alternative
statement only. Besides, neither of these two accounts can derive em-
bedded questions with tags (as pointed out by Stockwell 1968, II, 649 and
Huddleston 1970, 216). These are points of criticism which apply even
if these accounts are to explain resumptive tags in ENGLISH only. Co-
pying rules of this sort become completely useless, of course, if we
also consider metatags, since these contain material which is not in
the main sentence; unless it is assumed that the performative includes
an IT IS TRUE-type component and it is this frame that gets copied into
metatags. The declarative performative would then be I SAY TO YOU
THAT IT IS TRUE THAT... and the question performative would be I
ORDER YOU TO TELL ME EITHER THAT IT IS TRUE THAT X OR
THAT IT IS NOT TRUE THAT X. Independent reasons for such a claim,
however, are yet to be found. Disjunctive, pronominal and interjectional
tags are completely beyond the scope of a copying rule. Altogether, the
copying approach is rejected in that it provides for a minute class of
tags only even in its more advanced Stockwell-version, it does this by
assuming a unique deep structure -- a reflection, in effect, of the state-
ment-plus-question surface structure -- and a very specific rule, there-
by not relating the tag questions that it generates to any construction

other than what in fact they superficially consist of.

The "deletion proposal" in Stockwell 1968 (II, 647ff) has the advantage that it assumes X OR NOT-X as part of the deep structure of tag questions thereby relating them to neutral yes-no questions. It also has the advantage that it is by a non-disjunctive statement that neutral and tag questions are made to differ from each other which seems semantically plausible as it was pointed out above. Also, it has the virtue of attempting to explain opposite affirmation value in terms of an independently motivated rule type: identity deletion. On the other hand, it has the drawback of positing a deletion rule identity conditions for which are hard to specify (as pointed out in Stockwell loc. cit.) and which is obligatory. Furthermore, it again cannot be used to derive non-resumptive tags, unless the above-mentioned IT IS TRUE frame is posited for every sentence, in which case negative metatags could be generated (the non-alternative statement would be framed by IT IS TRUE and the alternative would be perhaps IS IT TRUE OR IS IT NOT TRUE where IS IT TRUE would undergo identity deletion with IS IT NOT TRUE remaining, yielding n'est-ce pas etc.) but not affirmative or alternative metatags. Disjunctional, pronominal and interjectional tags are again beyond the reach of this approach. An additional observation to destroy the credit of the two-sentence approach is the following. Apparently, there is no possible conjunction that may stand between the main sentence and the tag in a tag question. [12]

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[12] Sentences such as ENGLISH You haven't seen him, or have you? which do have an or before the "tag" are thus differentiated from tag questions. We may call these afterthought question. Not only are they semantically distinct from tag questions, but also intonationally in that a pause occurs before the "tag". They also differ from tag questions in that deletion in the "tag" is not obligatory; cp. You haven't seen him -- or have you seen him? It should also be noted that only affirmative and negative resumptive tags, but not metatags, alternative, disjunctional, pronominal and interjectional tags have "afterthought" counterparts. The only example of an alleged tag question where there was a connective-- 'or' -- between the main sentence and the tag was found in LATVIAN: māte ir istabā, vai ne 'Mother is in the room, isn't she?' (Lazdina 1966, 35), but, given the general unreliability of glosses given in grammars. it may in fact be an afterthought question.

Whether the relationship of the two sentences is to be represented as paratactic or hypotactic, the obligatory asyndeton observed in all languages of the sample and thus possibly being a universal phenomenon would strike one as unique considering other paratactic and hypotactic sentence connections.[13] For tagged imperatives, too, accounts of two kinds have been proposed: ones starting with a two-sentence base (compare Arbini 1969) and ones starting with a one-sentence base (cp. Stockwell 1968, 688-90). Besides deficiencies of both types taken by themselves (for a critical account, see Stockwell loc. cit.), it is important to note that none of them are also capable of deriving tag questions. No theory has been proposed, in other words, which would account both for tagged questions and tagged imperatives.

Given such a state of affairs, it is understandable that the three latest summaries of tag-accounts -- Huddleston's of 1969, and the ones in Stockwell 1968, one on imperative tags (688-90) and one on question tags (645-49) -- reject all theories that have been suggested, including their own speculations.

4.2.3 One more alternative account. Next we will outline one additional possibility which has not been proposed before. This account is also deficient in many respects and it is also sketchy; yet, it appears more general in scope than those mentioned above in that it relates tag questions to other syntactic constructions to which they in fact bear observable resemblance. The gist of the proposal is that in tag questions the main sentence is to be represented as a yes-no question and the tag as the questioned form of an answer to the main sentence. That is to say, the main sentence in It is spring, isn't it? comes from an underlying question paraphrasable as Is it spring or isn't it; I suggest it is. and the tag from questioning one of the possible answers It isn't.

_____

[13] This is noted for imperative tags in Stockwell 1968. II, 690.

Indication that this account may be right is constituted by some of the observations we made above, as well as some other facts.

1. Some affirmative, negative, alternative and interjectional tags are identical with answers to yes-no questions, except for the fact that they are in an interrogative form.[14]

2. The only other construction that occurs with tags attached to it, imperatives, is also the only other construction (apart from greetings) that more or less requires answers. According to this account, both tagged imperatives and tag questions have the same structure: they consist of an answer-eliciting sentence -- an imperative and a question, respectively -- and the questioned form of a possible answer to this sentence, which is equally semantically redundant in both constructions: compare Open the window (will you?)! This glass is yours (isn't it?)?

3. The connection between the main sentence and the tag is asyndetic. In this respect this relationship is identical with the asyndetic relationship between questions and answers.[15]

4. To interpret tags as answers would also make it possible to conceive of John as a tag in the following wh question: Who came, John?, since John is a possible answer to the question Who came? Thus the distributional gap that wh questions, as opposed to yes-no question, do not have tags would be closed.

5. The prevailing sentence-final position of tags would be accounted for by claiming tags to be answers, since answers follow their questions.

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[14] This also holds for some adverbs which are used to suggest one or the other answer, e.g. really and indeed in ENGLISH and igazán 'really' in HUNGARIAN.

[15] Note also other comparable asyndetic relationships such as between affirmation word and answer sentence (Yes, I did.) and extraposed nounphrase and sentence (John, he is my friend.)

On the other hand, it is not clear how disjunctional and pronominal tags could be accomodated in this theory. Besides, it does not explain why the main sentence, a question in this account, must be superficially a non-alternative declarative sentence, i.e. why *Did you see him, didn't you?, for instance, is ungrammatical in all languages. It also does not explain why in resumptive tag questions we often find opposite affirmation values, as it does not explain obligatory truncation, either. The implicational relationship of different types that we observed within languages also remains unaccounted for.

Besides these empirical deficiencies, it is not clear how the idea that tags are questioned answers is to be represented. The tag part would presumably be represented as a regular yes-no question, i.e. with a request and an alternative underlying, and the same rules that derive alternative questions, affirmative questions and negative questions in general would also derive those that serve as tags. But how about the main sentence? Are questions that have the superficial structure of a declarative sentence underlain by an alternative in addition to a non-alternative statement? Since no intrasentential syntactic use could be made of an underlying alternative, the only reason to assume this would be that it functions as a question i.e. as a class utterance and, as the possibility of answering it either by an affirmative or a negative statement shows, it must, one might think, in some way incorporate both possibilities on some level of representation. However, this argument -- essentially, that an underlying alternative is necessary in order to account for the set of answers that can be given to such a question -- turns out to be invalid in view of the fact that imperatives, too, can be answered by both an affirmative and a negative statement, although there is no reason whatever why one should posit for them an underlying structure which incorporates both possible answers. Thus, the question as to how to represent the main sentence in tag questions, and, along with them,

any other "statement-question", is left open.

4.3 <u>Negative questions.</u>   Wherever information was available, it was found that negative questions all share one semantic characteristic; that the speaker thinks the state of affairs should be one corresponding to the affirmative.alternative; i.e. the opposite of the possibility raised in the question.[16]   Thus, <u>Aren't you going?</u> implies <u>I think you should be going.</u>   Some examples are given in the footnote.[17]

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[16] This was found stated for NUBIAN in Armbruster 1960, 406, for YORUBA in Ward 1956, 117ff and Rowlands 1969, 35ff and for Slavic languages in Vondrák 1928, 451.

[17]ARABIC (IRAQI): <u>muu</u> 'not' is used in exclamatory and rhetorical questions that suggest affirmative answer, e.g. <u>muu l-ǵada θallaj</u> "not lunch got-cold" 'Lunch has god cold!' (Erwin 1963, 330).   For such negative exclamatory-rhetorical questions compare also ENGLISH <u>Didn't I tell you not to go!</u> or HUNGARIAN <u>nem megmondtam!</u> "not told I" 'Didn't I tell you!' (in contrast with <u>nem mondtam meg</u> "not told verbal-prefix" 'Did I not tell you?') and CHINESE below.   BURMESE: <u>ma – –phû</u> 'not'; <u>maθwâbûtâ</u> 'Did he not go.' (cp. <u>maθwâbu</u> 'He didn't go.' and <u>θwâdê</u> 'He went.') (Cornyn 1944, 13-14)
   CHINESE: <u>bu</u> 'not'; <u>nĭi bu pàh láohŭu maa</u> 'Aren't you afraid of tigers? (of course, you are or should be)' (Chao 1965, 1075; Chao says: "When the question contains a negative adverb, it is a rhetorical question suggesting a reply to the contrary." cp. also Elliot 1965, 93, 95, 108,109)
   GERMAN: <u>nicht</u> 'not'; <u>Sind Sie nicht ein Sozialist?</u> 'Aren't you a socialist?'
   GUJARATI: <u>-ne</u> 'not'; questions involving <u>-ne</u> are glossed 'Is the preceding so?' with the suggested answer 'Yes, it is so.' (Cardona 1964, 149)
   HUNGARIAN: <u>nem</u> 'not'; <u>nem örülsz</u> 'Aren't you glad?'
   KURKU: "<u>la?</u> usually in negative interrogations, with the expectation of an affirmative reply i.e. the denial of the negation" (Drake 1903, 124)
   LATVIAN: "A negative verb in an interrogative sentence generally indicates that the speaker expects an affirmative answer." e.g. <u>vai tu negribi jāt</u> 'Will you not ride?' <u>jā es gribu</u> 'Yes, I will.' (Lazdina 1966, 88)
   SCOTTISH GAELIC: from examples and comments in Carmody 1945, 215f it seems that negative questions expect affirmative answer.

A theory of negative questions would have to explain the following facts: that, in all languages, presumably, a sentence type which is a question and which is negative has the meaning of a yes-no question expressing also that the answer ought to be affirmative although he has doubts that is will be such.

Since negative questions are yes-no questions, it follows that their deep structure should contain a request and a disjunctive statement. The question is what else should it contain. According to Stockwell 1968, 639f, negative questions are to be derived from an affirmative

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(Footnote 17 continued)

ILONGOT: gawan be:ta qunqay ma maitedu "not question coming the teacher" 'Isn't the teacher coming?' (Michelle Rosaldo, p.c.)

Some additional cases have been found, where an element formally identical with a negator appears in questions without the usual semantic effect. This is the case for AGTA hud. Healey (1960, 91f) declares hud to be a question indicator as well as a negator. It is a "question indicator" in ittá hud ya danum "there-is not ya water" 'Is there any water?' (but for analogous examples 'There is no water, is there?' -- type glosses are given) and it is a negator in ittá hud dandanum "There-is not plural-water" 'There is not a drop of water.' The same is true for JAQURU {-$i} : it is described as having both the function of negator and that of a question particle (Hardmann 1960, 100f). In order to decide whether these cases constitute counterexamples to the generalization that negative questions expect affirmative answers, one would have to know whether there is anything peculiar about the distribution of these elements in questions as compared with the expected distribution of a negator. If it turns out that these elements are distributed as negators should in questions, then these questions are counterexamples. If they have some distributional peculiarity, then they could be regarded as question particles (and one would also expect to find "genuine" negative questions in the language). Whereas I have no decisive evidence of this sort for AGTA and JAQURU, it may be pointed out that homophonous or historically related negators and question particles do exist. It was mentioned above that CHINESE ma, the question particle, apparently evolved from a negator. Wehr (1953) posits the opposite course of development for ARABIC mū, a negator in today's language, believed to be derived from mū 'what?' via rhetorical questions where mū was used expecting negative answers. Although it may be coincidental, compare also the similarity between BURIAT disjunctive connective-and-question particle gy and negative suffix gyí and the homonymy of na in BENGALI, both meaning 'not' and 'or'.

statement which has in its adverbial node embedded an alternative
question; i.e. Didn't it rain? comes from It rained, with Did it rain
or didn't it? embedded in it; and a subsequent deletion rule deletes both
copies of the affirmative sentences. The affirmative statement in the
underlying structure is presumably to account for the fact that the ques-
tioner thinks the answer should be affirmative. According to the Stockwell
grammar, the same underlying structure would serve for negative ques-
tions and tag questions with affirmative main sentences to be derived,
since they claim that they are synonymous, e.g. John jumped, didn't he?
and Didn't John jump? This claim about synonymy, however, appears
to be false. John jumped, didn't he? would be asked by a person who
thinks John jumped or ought to have jumped. Didn't John jump? however,
would be asked by a speaker who thinks John ought to have jumped but
there is something that makes him think he did not, in fact.[18] Thus, the
fact that the Stockwell grammar derives both tag questions with affirma-
tive statement and negative questions from the same underlying structure
makes at least one of these two derivations suspicious. Since, however, we have already
rejected the proposal that tag questions should be derived from this struc-
ture, we could accept their proposal about deriving negative questions
without making false claims about synonymy.

There is, however, an alternative proposal which has the advantage
of relating negative questions to some other sentence types. The draw-
back of this solution is that it requires a weaker linguistic theory within
which transformations are allowed to change meaning.[19] The idea is that
negative questions be derived from alternative questions by simply delet-
ing the affirmative part, just as affirmative questions are derived from

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[18] F.W. Householder helped me see this point.

[19] For independent motivation of such a theory, see Chomsky 1969,
Partee 1970.

alternative questions by deletion of the negative part. I.e. both <u>Was</u> <u>it lightning?</u> and <u>Wasn't it lightning?</u> would be derived from <u>Was it</u> <u>lightning or wasn't it lightning?</u> Beside the problem of how to motivate these deletion rules which was discussed before, there is also another question. Whereas the affirmative question is synonymous with the alternative one, the negative question is not and the question is how the special meaning of the negative questions is to be accounted for. The claim is that a semantic interpretation rule working on the surface structure of a negative question by itself would automatically yield the right "reading": the fact that the question is a negative one implies that the speaker presupposes that the affirmative alternative would be true. In its more general form, the claim is that negation always presupposes contradiction to an affirmative statement.[20]

Evidence for this general claim is provided by the fact that negative statements such as <u>You are not going.</u> and imperatives such as <u>Don't go!</u> imply, at least in some context, some reference to an affirmative statement (such as <u>Although you should be.</u> and <u>I know you would be inclined</u> <u>to,</u> respectively). Thus, the fact that <u>Didn't you go?</u> implies <u>I thought you</u> <u>would.</u> would be a simple corollary of this fact about negative sentence in general.

It should be noted that negative sentences are not the only ones which imply a contradiction to the opposite alternative. Emphatic affirmative sentences achieve the same. Notice the following parallelism:

<u>You are not going.</u> (in one "reading") implies <u>Although you should be.</u>

<u>You are going.</u> (in one "reading") implies <u>Although you shouldn't be.</u>

<u>Don't go!</u> implies <u>Although I know you feel inclined to.</u>

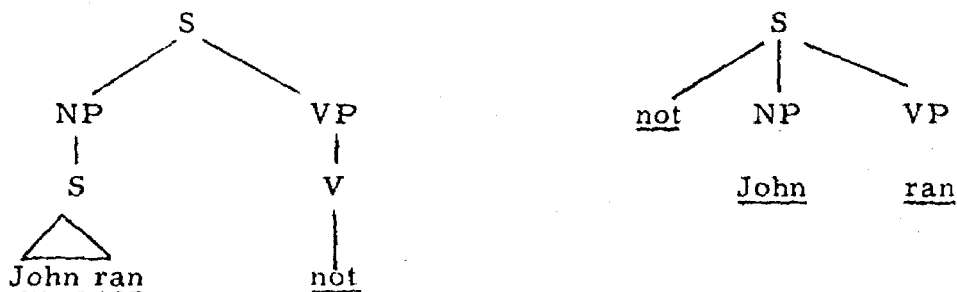<u>Go!</u> implies <u>Although I know you do not feel inclined to.</u>

<u>Aren't you going ?</u> implies <u>I think you should be.</u>

[20] A discussion with Elizabeth Traugott of these matters was very helpful. For this claim, see also Seiler 1952, 80.

Are you going? implies I think you shouldn't be.

On the other hand, non-emphatic affirmative sentences such as You are going., Go! and Are you going? do not imply any reference to the alternative possibility. The same phenomenon is shown by the fact that negative and emphatic sentences are, but non-emphatic affirmative sentences are not,appropriate discourse-opening ones. These observations, along with the ones made in 2.4.2. about the relationship of interrogation, negation and emphasis, all argue for the assumption that yes-no-interrogative, emphatic, and negative constructions all have a contrastive X NOT-X type underlying structure.[21]

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[21] A deep structure which seems intuitively to correspond to the idea that negative sentences somehow presuppose affirmative ones was proposed by McCawley 1970, 1-2, where he claims that negative sentences derive from a structure like the following:

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           S                            S
         /   \                        / | \
       NP     VP                   not  NP   VP
        |      |                        |     |
        S      V                      John   ran
       /\      |
   John ran   not
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This deep structure finds direct reflection in sentences of STANDARD ENGLISH such as It is not the case that it rains. and sentences of NEGRO ENGLISH of New York City such as It ain't no cat can't get in no coop. (Labov 1970)

5.   Questions and answers are in a class-to-member relationship.

   5.1 What is meant by the principle. What is meant by "class-to-
member" relationship is that the answer is a member of the class of
sentences its question represents.[1]

   Some evidence for the usefulness of this principle is indicated by
the fact that certain kinds of answers, to both binary choice and wh
questions, that are felt to be semantically unsatisfactory by speakers of
the language are in fact branded as unacceptable by this principle. More-
over, it seems that even degrees of semantic inadequacy of answers as
felt by the speaker correspond to the degrees to which answers fall short
of this requirement.

   Some such pseudo-answers do share assumptions with their questions,
but they fail to restrict the set of choices offered. Some of these just
restate that set, e.g.:

Who did it ? Someone did it.   or

Did you see John? I either saw John or I didn't. (making no choice)

                        Perhaps. / I don't know. (making no choice and
                                                  pleading ignorance)

                     Yes and no. (making a compatibility claim; cp.
                                   Strawson 1952, 17f)

Another group of answers failing to be more specific even enlarge the
set of choices e.g. Who did you see? What I saw was either a person
or a piece of furniture.;   Did John do it? Someone did it.   Other pseudo-
answers fail not only to restrict the choices offered but also to share
assumptions such as Who drank the milk? No one drank it. or Have you
seen Mike's pocketnife? Mike has no pocketknife. or such as answers

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   [1] For some discussion of what is a proper answer, see Katz and Postal
1964, 85, 90f, 94f, 113ff; Elliot 1965, 101ff; Langendoen 1969, 125; Steinmann
1959; Katz 1968; Langacker 1969, ch. III; Horn 1969, 98f; Chomsky 1969;
Pope 1970; Lang 1970, 195ff; Baker ch. III; Fillmore 1969, 220f; Jespersen
1924, 219, 292, 295; Churchill 1970. That Sanders claims that answers are
in a member-to-class relationship with their questions is clear from the
fact that he explains question-answer order by the genus-before-species
order rule (1967, 154).

expressing lack of interest (Don't bother me.) These answers that
fail to share assumptions with their questions are felt to be even more
frustrating than the ones mentioned above and this difference is paral-
lelled by the fact that whereas the above-mentioned answers are included
but not properly included in their questions, the scope of these does not
even overlap with that of their questions.

In the light of some other deviant answers, it seems that the
requirement for proper answers should be more restricted. If all that
there is to it were that answers have to be more specific than their ques-
tions, then answers in the following discourses would be judged adequate:
Who did you see? I saw someone last night.
Did you see John? I either saw John in the garden, or I didn't.
In fact, these are inadequate answers in spite of the fact that they mani-
fest subclasses of the classes referred to in the question. This is because
the additional specification is not effected with respect to the category
that is requested to be made more specific. Thus, a more precise for-
mulation of the principle is that member-to-class relationship is required
for the queried category as referred to in the answers, compared with
its mention in the question; and, otherwise, contents of questions and
answers must be identical.

In the face of some additional unsatisfactory answers, even this
modified version of the requirement seems not restrictive enough. Con-
sider the following discourses: Who did it? A girl did it.
                                   Did he go home, or to his office, or to
his sister's place? He either went home or to his sister's place. For
some speakers, at least, such answers are unsatisfactory[2]; at any rate,
they are certainly less satisfactory to perhaps everybody's taste than
the respective Jean did it. and He went home. Thus the requirement

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[2] Professor Householder called my attention to the unsatisfactoriness
of such answers to wh questions.

that answers should refer to specific members of the classes may have
to be added.

The principle seems useful not only in excluding answers as inade-
quate that are felt to be such, but also in characterizing semantically
satisfactory answers as adequate ones. Some simple examples can be
given for such answers to ENGLISH wh questions:

Who did you see? I saw John.

Where are you going? I am going for a walk.

While it is fairly easy to test the principle with respect to wh ques-
tions and their answers, it is less easy to do so for binary choice
questions. This is because the class of choices offered in wh questions
is always superficially manifested by a generic term (e.g. who? standing
for x or y or z...) and thus testing the hypothesis is simply to compare
the scope of this generic term with the corresponding constituent in the
answer. There is no such generic term, however, for the two possibil-
ties x and not-x to be subsumed under in the surface structure of binary
choice questions: at best, the possibilities are enumerated (Did you or
didn't you?) and often that isn't so, either (Did you go?)[3] Therefore,
when in the following pages we are trying to test this principle for binary
choice questions, what answers will have to be compared with is the
abstract structure of their questions as we have understood them in the
light of their surface shape and in the light of less direct evidence of
various sorts as presented in this paper.

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[3] That the class of choices in wh questions is represented by an
interrogative pronoun, but the class of choices in binary choice questions
is represented by one of the two alternatives involved (e.g. Who did it?
stands for X or y or z did it? and Did you do it? stands for Did you do it
or did you not do it?) also shows that the relationship between the choices
raised in the two types of questions is not the same. For wh questions,
the choices are of equal status, whereas in binary choice questions one of
the two, the negative, is perhaps "marked" as opposed to the affirmative
which is then unmarked and thus able to stand for the other as well (just
as man may stand for men and women etc.). For a proposal and some
evidence for who being a reduced disjunctive set, see Langendoen 1969,
125).

In surveying adequate answers to binary choice questions in various languages, the hypothesized principle will be taken to have gained support if the abstract representation of such answers turns out to be included in the abstract representation of their questions as posited on independent grounds. If we find some semantic or syntactic types of standard answers whose underlying structure does not seem to be includable in the underlying structure of their question, this will count as counterevidence against the principle.

It should be noted that cross-linguistic evidence on this point, as on any other aspect of discourse structure, is difficult to glean from language descriptions and the general, let alone universal, validity of our conclusions is even more doubtful here than elsewhere.

5.2 Answers to affirmative questions. Affirmative questions, unless modified by special adverbs or special stress and intonation patterns, express no suggestion that one rather than the other of the two possibilities offered should be given as an answer. They are in this sense neutral. [4]

Answers to affirmative questions are either a/ an affirmative statement (or some part of it) that is identical with the question except that it is a declaration (Did you go? I went.); or a negative statement that is the negated declarative counterpart of the question (Did you go? I didn't.). b/ one of these affirmative or negative statements preceded by an affirmator such as no (henceforth referred to as negator, with

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[4] The only possible bit of counterevidence found is in Chao 1965 (1075) where he claims that affirmative questions in CHINESE imply "slight or considerable doubt" about an affirmative answer, as opposed to alternative questions which are completely neutral. Elliot 1965, 90, however, says that affirmative questions in CHINESE are neutral.

the term affirmator to cover both affirmator proper and negator)
(Did you go? Yes, I did./ No, I didn't.) c/ an affirmator by itself
(Did you go? Yes./No.)

Maybe all languages have a/. What languages differ on with respect
to this type of answer is conditions on deletion and substitution. (Com-
pare ENGLISH Did you eat? I didn't. with the lack of the possibility of
such pro-verbial substitution in GERMAN and most other languages.)

Some languages do, others do not have answer types b/ and c/; but
perhaps all that have either of these have the other as well.

In trying to test the hypothesis about the requirement of member-
to-class relationship, the first thing to consider is that answers are
statements, whereas questions are questions. If the hypothesis is true,
then question structures must at some level be represented as containing
statements. The performative hypothesis is consistent with this require-
ment in that the interrogative performative I ORDER YOU TO SAY includes
the question performative I SAY TO YOU.

Since negative answers are possible answers to affirmative questions,
the hypothesized principle is true only if the structure of affirmative ques-
tions includes not only an affirmative but also a negative statement. Since
it was discussed above that there is all kinds of independent evidence to
show that this assumption about an X OR NOT-X underlying component
is necessary, the hypothesis is supported to this extent.

What about affirmators, such as yes and no? If these are parts of
answers, and if the member-to-class requirement is to be true, then
affirmators must also be present in question structures. While this
suggestion will be taken up later in this study, some evidence will be
presented here to show that affirmators themselves are in a genus-
species relationship with the statements they accompany and thus even
if they are not overtly represented in question structures, the fact that
"they are there" is shown by their statements "being there". Observations

that make the assumption that yes and no are extraposed and abbreviated copies, or pronouns, of their statements are the following :

a/ yes and no when accompanying a statement is always semantically redundant and syntactically optional   b   yes and no may in some cases substitute their statements   c/ perhaps in all languages (but see TIGRINYA, p. 124) these words ordinarily precede their statements, rather than following or interrupting them -- a fact which would be accounted for if affirmators were "pronouns" since then the same genus-before-species rule that orders pronouns before their noun phrases (cp. They prayed to Him, the Lord of the Universe. and *They prayed to the Lord of the Universe, Him.[5]) would order affirmators, too, before their statements.

5.3 Answers to alternative questions.   Alternative questions, unless modified by special adverbs, stress, or intonation, are neutral questions.

Of the three types of answers listed as possible to affirmative questions, only one -- a base statement by itself -- is a possible answer to alternative questions: a base statement accompanied by an affirmator and an affirmator by itself are not.[6]   E. g. :

Are you listening or aren't you listening?   I am.

I am not.

*Yes, I am.

No, I am not.

*Yes.

*No.

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[5] J. H. Greenberg called my attention to this kind of ordering of coreferential pronouns and noun phrases in ENGLISH.

[6] This point, as an unresolved problem, is pointed out in Stockwell et al. 1968, 643.

This point should be noted all the more since it throws considerable doubt on the "pronominal character" of the affirmators. If yes and no stood for an affirmative and a negative statement, the same way as ENGLISH he stands for male animate noun phrases, then alternative questions should be able to be answered by yes or no.

5.4 Answers to tag questions.   Ultan (1969, 50f) made a study about the relationship between the affirmation value of the main sentence, the affirmation rule of the tag in tag questions, and the suggested answer. He concluded that at least for his sample of 27 languages (minus 2 dubious cases) the suggested answer has the affirmation value of the main sentence. In other words, of the two possibilities what is held to be likely is stated (and what is held unlikely is questioned).

Tag questions can be answered either by a statement, or by an affirmator plus a statement, or by an affirmator by itself, just as it is the case for affirmative questions.   There are three observations, however, that can be made about the shape and distribution of the affirmators in contrast with those after affirmative questions.

a/ In some languages, the affirmator proper used to answer a negative tag question (i.e. one where the main sentence is negative) has a different shape from the one used to answer an affirmative or an alternative question affirmatively. Some of these languages are FRENCH (si, versus oui), GERMAN (doch, versus ja), and HUNGARIAN (de igen, versus igen). E.g. HUNGARIAN látod? igen 'Do you see it? Yes. '

látod, nem? de igen 'You see it, don't you? Yes. '

?látod, nem? igen

*látod? de igen

Of these special affirmators GERMAN doch, meaning also 'still' and HUNGARIAN de igen "but yes" are clearly adversative.

b/ In answers to tag questions, and most clearly in affirmative answers, some languages such as ENGLISH and HUNGARIAN have an additional set of affirmators that cannot be used in answers to neutral -- i.e. affirmative or alternative -- questions. In ENGLISH, for instance, besides You are going, aren't you? Yes, I am.

No, I am not.

You are going, are you? Yes, I am.

No, I am not.

there is also You are going, aren't you? (That's) right, I am.

You are not going, are you? (That's) right, I am not.

If we compare the affirmation values of such affirmators and the statements that they accompany, it turns out that these affirmators are distributed differently from the yes-no type. While the yes-no type affirmator is always in agreement with its statement in affirmation value, the right type is not necessarily.

c/ Compare now the case of TAGALOG with bisystemic ENGLISH. In TAGALOG (see Bowen 1965, 17, 25) there are altogether two affirmators, oo 'yes' and hindi 'no'. That is to say, in answers to questions such as 'Are you a Filipino?' or 'Are you a Filipino or not?' or 'Are you not a Filipino?' (or 'You are a Filipino, aren't you?'?) oo pairs with the affirmative statement 'I am.' and hindi pairs with the negative statement 'I am not.' E.g. hindi ba si Eddie ang guwapo? Oo, guwapo si Eddie. 'Isn't Eddie handsome? Yes, Eddie is handsome.' Consider, however, the following discourse, where the question is a negative tag question.

Q: hindi maganda ang damit, $\left\{\begin{array}{l}\text{ano}\\ \text{hindi ba}\end{array}\right\}$? "not pretty is dress $\left\{\begin{array}{l}\text{what"}\\ \text{not-question"}\end{array}\right\}$
'The dress isn't pretty, is it?'

A: (hindi), maganda "(no), pretty" 'Yes, it is pretty.'

oo, hindi maganda "yes, not pretty" 'No, it is not pretty.'

TAGALOG thus resembles ENGLISH in that in both languages there are

answers, where the affirmator and the statement do agree in affirmation
value and there are answers where they do not. The two languages dif-
fer in that in ENGLISH, negative tag questions may be answered accord-
ing to either of the two systems and that in TAGALOG negative tag
questions must be answered according to the system where there is no
agreement; furthermore, that in ENGLISH affirmators differ in shape
depending on which system they belong to, whereas in TAGALOG they
have the same shape.

What are the implications of these three observations concerning
our understanding of what affirmators are, and, more generally, con-
cerning the hypothesis of the class-to-member requirement? a/, b/,
and c/ equally show that the answerer is, in the cases illustrated, aware
of which answer the speaker suggests should be given and he taylors his
answer in relation to that, rather than just making "objective" i.e.
context-independent, statements. Our previous guess, therefore, that
affirmators are a kind of pronominal abbreviations of their statements
needs revision. Leaving alone the doch type affirmator referred to in
a/, it now seems that there are two types of affirmators: one kind that
is just a summary of the answerer's opinion per se, and the other which
is the summary of how the answerer relates to the questioner's sugges-
tion. The first kind, by definition, always agrees in affirmation value
with the statement and it exists both in answering neutral and in answer-
ing prejudiced questions. The second kind does not necessarily agree in
affirmation value with its statement. If the question is negative, then
an affirmator word will pair with a negative statement and a negator with
an affirmative statement. This second system exists, by definition, only
in answers to prejudiced questions, i.e. where the speaker does make
some suggestions.

The fact that the second system does exist -- i.e. that the speaker's

suggestion can be "agreed" or "disagreed with" (notice that affirmators that work according to the second system are optionally paraphrasable (or can be supplemented) by 'I agree', 'I disagree') is an additional argument for representing the speaker's suggestion by an underlying statement, since presumably only statements and not questions can be agreed or disagreed with.

It is interesting to notice that the two types of answers that we have distinguished appear to correspond to the two types of tags differentiated in 4.2. Our "first type" of answer corresponds to resumptive tags both in lexical material and also in that they have a structured correspondance with the affirmation value of their statements: resumptive tags are of opposite affirmation value and "resumptive answers" are of the same affirmation value as their statements. Our "second type" of answer corresponds to meta tags in lexical material [7] and also in that there is no structured relationship between their affirmation value and that of their statements.

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[7] Some examples of affirmators that are morphologically analysable as an existential or copulative verb or a verb of saying (plus something else) are the following:

AGTA: bakkan 'no' "it isn't " (Healey 1960, 90)
AMHARIC: yəlləm 'no' "there isn't", "It is not" (Obolensky et al. 1964, 14, Dawson 1960, 132)
GREEK (ANCIENT): u phēmi 'no' "I don't say"
CHINESE: bú shîr 'no' "not be"; bù hǎu 'no' "not-good" (Swadesh 1948, 14; cp. also Elliot 1965, 99)
KANNADA: illa 'no' "that which doesn't exist" (also "or", as BENGALI na!) (Bright 1958, 41; Bright et al. 1960, 133)
SWAHILI: hapana 'no' "is not" (also in UP-COUNTRY SWAHILI, Breton 1951, 26); ndeya 'yes', siya 'no' are copulative forms; cp. Closs 1967)
In AZERBAIJANI and in TURKISH the negative existential verb may serve as a negative answer (TURKISH yok, AZERBAIJANI yox).

respective affirmation
value of statement and tag:

		statement	tag	
questions with resumptive tags:	You are going, aren't you?	+	−] values
	You aren't going, are you?	−	+] opposite
questions with meta tags:	You are going, right?	+]	+
	You aren't going, right?	−]	+
resumptive answers:	(You are going, aren't you/ right?) Yes. I am.	+	+]
	No, I am not.	−	−] values identical
	(You aren't going, are you/ right?) Yes, I am.	+	+
	No, I am not.	−	−]
meta answers:	(You are going, aren't you/ right?) Right, I am.	+]	+
	?That's not the case, I am not.	−	−
	(You aren't going, are you/ right?) ?That's not the case, I am.	−	+
	Right, I am not.	+]	−

(Rotated annotations, reading column labels):
unstructured relationship between affirmation values for metatags
unstructured relationship between affirmation values for metatags
structured relationship between affirmation values for resumptive tags

Since the two types of answers correspond to the two types of tags
in distribution with respect to affirmation value and in lexical material,
there is reason to include answer-type elements in the structure of ques-
tions, in order to account for tag questions and to this extent our find-
ings about how tag questions are answered support the proper includability
requirement.

As a comment on the correlation of tags and affirmators, it should
be noted that alternative questions have neither tags nor single-affirmator
answers.

There is little that can be said about the comparative cross-linguistic

distribution of metatags and meta answers. Both may be universally available, so that the resumptive systems would then be only "secondary" systems in those languages where they exist at all. Note that there is no cooccurrence restriction between the type of tag and type of answer used, as is obvious from the above chart.

It is interesting to note that the two types of tags and answers appear to exist for imperative tags and their answers as well, in ENGLISH and HUNGARIAN, e.g. Don't go, will you/all right? (?)

                   No, I won't.

                   Right, I won't.

Apparently binary choice interrogative and imperative structures are the only ones that can have tags[8] and that can have affirmator-type answers, which is an additional bit of evidence for the relationship of tags and affirmators, as well as of interest for the hypothesis that interrogative structures are at some abstract level imperative structures. (For a structural comparison of interrogative and imperative tags in ENGLISH, see Arbini 1969.)

5.5 Answers to negative questions. As was stated above, all negative questions that have been found described or exemplified in language descriptions consulted are prejudiced questions; and what is suggested to be the answer is the affirmative counterpart of what is in the question.

The composition of answers given to negative questions is the same as that of those given to affirmative questions: a statement by itself, or an affirmator by itself, or both; except that some languages lack an

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[8] Furthermore, tag questions with a statement part that involves a future verb and a second person subject may be synonymous with imperative tag constructions; e.g. You will do this, won't you? is synonymous, in one of its meanings, with Do this, will you?, just as their statement parts by themselves may also be synonymous.

affirmator as it will be exemplified below. As for the shape and dis-
tribution of affirmators used to answer negative questions, there are
again a number of peculiarities that leap to the eye if one compares
them with affirmators used to answer affirmative questions.

a/ difference in completeness of inventory. In HARARI and CHANA,
there is an affirmator and a negator in answers to affirmative questions,
but there is no proper affirmator (although there is a negator) in answers
to negative questions, regardless whether this proper affirmator were
to accompany a statement or to constitute an answer by itself (Leslau
1962). The affirmator used to answer affirmative questions doesn't seem
to be used in answers to negative questions in GALLA either, but these
data are to be checked. No language has been found, however, where
the system is lopesided the other way, i.e. where the inventory of affirm-
ators is complete in answers to negative questions but incomplete in
answers to affirmative questions. This is perhaps parallelled by the
preferred avoidance of the proper affirmator in answers to negative
questions and to negative tag questions as a sole answer; cp. Did you go?
Yes. but ?Didn't you go? Yes. and ?You didn't go, did you? Yes.

b/ difference in shape. In some languages, one or the other affirm-
ator used to answer negative questions is different in shape from the one
used in answers to affirmative questions. The affirmative proper is
different in the following languages:

ARABIC (SYRIAN): ʔē, ʔēwa, naɣam versus mbala[9]
FRENCH: oui versus mais si
GERMAN: ja versus doch
HUNGARIAN: igen versus de igen
PERSIAN: bæle versus čera
SPANISH: si versus como(no)
TIGRINYA: ʔwwa versus ʔǝbba (both postposed! cp. Leslau 1962)

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[9] mbala cannot be used to answer non-negative questions, but the
other 'yes'-s may be used to answer a negative question (Cowell 1964, 53o)

The negator is different in CHAHA: bǎ versus ē

SODDO: yǎllǎ versus aw.

No language has been found, however, where there are four different affirmators, two to answer affirmative questions and two to answer negative questions.

For three of these languages, FRENCH, GERMAN, and HUNGARIAN, there is information available, as we have seen, to show that these special affirmators proper that are used in answers to negative questions are also used to answer negative tag questions. There is no information about how the other languages listed here answer negative tag questions.

c/ difference in the distributional correspondance between two sets of affirmators that are identical in shape. Languages that have only two affirmators both used in answers to affirmative and to negative questions may still differ from each other by how these affirmators are distributed with respect to the affirmation value of the sentence that they cooccur with. Compare ENGLISH with AMHARIC:

ENGLISH: Did you go? Yes, I did.

No, I didn't.

Didn't you go? Yes, I did.

No, I didn't.

AMHARIC: 'Does he know how to drive a car?' awon, he knows.

yǎllǎm, he doesn't know.

'Don't you know how to drive a car?' yǎllǎm, I know.

awon, I don't know.

(Leslau 1962)

The distributional difference is that in ENGLISH, yes always occurs with an affirmative sentence, and no always occurs with a negative sentence, regardless of the kind of answer, but in AMHARIC awon cooccurs with an affirmative statement in answer to an afirmative question but it co-occurs with a negative statement in answer to a negative question; and

the reverse holds true for <u>yəlläm</u>. This is of course exactly the same
phenomenon that we have observed concerning answers given to negative
tag questions in TAGALOG. Whereas there is evidence (pp. 119f above)
that this type of answering is restricted to negative tag questions in
TAGALOG as opposed to any other question <u>including</u> negative ques-
tions, there is no information for AMHARIC, or the other languages
to be listeḍ below, about how negative tag questions are answered. Some
other languages that are similar to AMHARIC in this respect are listed
in the footnote.[10]

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[10] CHINESE: 'Are you coming with me?' <u>shìde</u>, I am.
<u>bushìde</u>, I am not.
'Aren't you coming with me?' <u>bushìde</u>, I am.
<u>shìde</u>, I am not. (Elliot 1965,
102)

ENGA: To affirmative questions, <u>kini</u> is 'yes' and <u>daá</u> is 'no'. To
negative questions, <u>kini</u> cooccurs with a negative answer.
(Lang 1970, 207, 226. He also points out that this system
is nearly universal in New Guinea languages.)

ENGLISH (substandard): (<u>Do you have bananas? Yes, we have bananas.</u>)
<u>Do you have no bananas? Yes, we have no bananas.</u>
(Martin 1962, 364)

FANTE: 'Is Kodwo sick?' <u>nyew</u>, he is sick.
<u>oho</u>, he isn't sick.
'Will you not go?' <u>oho</u>, I will.
<u>nyew</u>, I will not. (Balmer and Grant
1929, 70)

HARARI: 'Will you come tomorrow?' <u>ī</u>, I will come.
<u>mē</u>, I will not come.
'Will you not come tomorrow?' (∅), I will come.
<u>ī</u>, I will not come. (Leslau
1962)

HAUSA: 'Did Mamman come to your house at night?'
<u>ī</u>, they came about nine o'clock. (Hodge 1963, 32)
'Is your son around?' <u>ā'à</u> ('no') I sent him to the market.'
(Hodge 1963, 38)
'Haven't they come to your house yet?' <u>ā'à</u> ('yes') they have
come and fixed it.
'You didn't come to the meeting yesterday?' <u>ī</u>, we didn't
come. (Hodge 1963, 75)

This "reverse" use of affirmators is generally described as hard to learn and rather to be avoided in speech by native speakers of other languages. It also appears vulnerable to foreign influence. In SWAHILI,

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(Footnote 10 continued)

ILONGOT: 'Is the teacher Philippine?' <u>quun</u>, she is Philippine.
$\left.\begin{array}{l}\underline{qiri} \\ \underline{qawan}\end{array}\right\}$ she isn't Philippine.

'The dress isn't pretty, is it?' <u>qiri</u>, it is.
<u>quun</u>, it isn't.

JAPANESE: 'Had that man much land?' <u>hai</u>, he had much.
<u>iie</u>, he didn't.

'Haven't you a dog?' <u>iie</u>, I have.
<u>hai</u>, I have not. (Vaccari and
(Vaccari 1962, 44) (cp. also Kuno 1970)

KOREAN: 'Is there a boat in the picture?' <u>nēy</u>, there is.
<u>aní</u>, there isn't.

'Isn't there a boat in the picture?' <u>aní</u>, there is.
<u>nēy</u>, there isn't.
(Martin and Lee 1969, 32)

RUSSIAN: <u>on n'e tam? n'et, on tam</u> "he not there? not, he there"
'Isn't he there? Yes, he is there.' (Tesnière 1959, 213)

SANGO: (no example; Professor Samarin mentioned to me that this language answers negative questions as JAPANESE does.)

SOMALI: <u>ha</u> 'it is correct' cooccurs with negative answers and <u>maya</u> 'it is incorrect' cooccurs with affirmative answers to negative questions. (Bell 1953, 110f)

SWAHILI: 'Is tax a "must"?' <u>ndigo</u>, tax is a "must".
<u>siyo</u>, tax is not a "must".

'Is tax not essential?' <u>siyo</u>, it is essential.
<u>ndigo</u>, it is not essential.
(Closs 1967, 113)

SODDO: 'Will you come tomorrow?' <u>ī</u>, I will.
<u>yälä</u>, I will not.

'Will you not come tomorrow?' <u>yälä</u>, I will.
<u>aw</u>, I won't. (Leslau 1962)

THAI: 'Does this train go to Udorn?' <u>krup</u> ('Yes.')
<u>plow krup</u> ('No.')

'Yesterday you didn't go to the Sport Club, did you?'
<u>pȳ krup</u> ("went krup" 'Yes.')
<u>krup</u> ('No.') (Campbell and Shaweevongse 1957, 168) (cp. also Chaiyaratana 1961, 112ff)

TONGAN: <u>io</u> 'Yes.' (used to answer greetings)
'Didn't you go?' <u>'io</u>, I didn't' (Churchward 1953, 79f)

In addition, YORUBA is said to have such distribution of affirmators (Ayo Bamgbose, p.c.).

there are also ARABIC loan-affirmators (naam and la) and these are
used according to the ARABIC (i.e. "normal") pattern (Perrott 1965,
75; Stevick et al. 1963, 22). In AMHARIC, yälläm may also be used
according to the "normal" distribution and it is suspected by Leslau
(1962) that this is due to ENGLISH influence. For JAPANESE (Martin
1962, 364) and for KOREAN (Martin et al. 1969, 36) it is pointed out
that if negative questions are meant as polite requests, then the "normal"
distribution of affirmators is used.

   d/ presence of two distributional systems with members different

also in shape   Although only the handful of languages listed above have
been found where the only affirmators used in answers to negative ques-
tions are ones that are different in shape from the other set (b/) or where
the affirmators do not show agreement in affirmation value with their
statements (c/), it seems that there are many languages where, in addi-
tion to the yes-no type set, there is also a second, formally quite dif-
ferent, set that can also be used in answers to negative questions and
which do not show agreement in affirmation value with their statements.
E.g. ENGLISH: (that is) right; e.g. Didn't you go? No, I didn't.

(That's right), I didn't.

   HUNGARIAN: úgy van "so it-is"; e.g. nem mentél? nem, nem mentem

úgy van, nem mentem

      'Didn't you go? No, I didn't. '

This is again the same thing as what we have seen in the case of negative
tag questions. The difference is, however, that whereas for negative tag
questions we were able to say that what the answerer agrees or disagrees
with is the questioner's guess or suggestion, this is not the right conclu-
sion for negative questions, since negative questions imply that the ques-
tioner expects an affirmative answer. Since in negative tag questions,
both the questioner's suggested answer and the form of the question are

negative, whereas for negative questions the expectation is affirmative and the form of the question is negative, the generalization that would cover both cases would be that the answerer reacts to -- i.e. agrees or disagrees with -- the form of the question (rather than the questioner's suggestion).

The two systems[11] are distributed in the following way. For neutral i.e. (unmodified) affirmative and alternative questions, by definition, only the pronominal type exists. For prejudiced questions, some languages have the meta-system only (such as AMHARIC), others have the resumptive and the meta answer system (such as ENGLISH). No language has yet been found with the resumptive type only. The meta answer system is thus perhaps a universal.

The conflict between the two systems, in languages that have both, is most conspicuous in answering negative questions (and perhaps negative tag questions) affirmatively. (In answering prejudiced affirmative questions according to the meta-system does not lead to conflict of affirmation values: agreement pairs with the affirmative statement and disagreement with the negative statement.) The manifestation of structures paraphrasable as Yes, you are right, I don't. is, as we have seen above, generally complicated and irregular in various languages: some have no affirmator in these answers to accompany the statement, or as a sole answer, others have special shapes for affirmators in such contexts. Apparently, a structure paraphrasable as No, you are wrong, I do. is "easier", or less frequent, since expressions of this structure turn out to be less irregular: no evidence has been found for the lack of affirmator or for special shapes of the affirmator in this context.

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[11] Besides the criterion of what kind of question do they answer, affirmators may differ in terms of other criteria as well, such as whether they respond to a vocative or to a real question (cp. JAMAICAN CREOLE, Bailey 1966, 59 or HAUSA, Robinson 1930, 79) or by formality of style (cp. IRAQI ARABIC, Erwin 1963, 327ff) or by degree of emphasis or agreement/disagreement as C.A. Ferguson has pointed out is the case for SYRIAN ARABIC (for forms, cp. Cowell 1964, 536).

Since no proposal has been accepted in this paper about the abstract structure of negative questions, the hypothesis about the relation of answers and question structures is not testable. Rather, we will now take the opposite course of argument. Let us assume for a moment that it is true that answers are in a member-to-class relationship with their questions and let us see what the implications of this principle would be for the abstract structure of negative questions. It seems that there are two features of negative question structure that can be argued for from the point of view of their answers. First, as it was pointed out above, the structure of negative questions must include a negative statement. Unless we want to assume that answer-formation takes place not on the "deepest" level of structural representation, this implies that negative questions should "start out" with a structure that includes a negative statement. But then how do we account for the semantics of negative questions -- that is to say, that they express the speaker's suggestion that the affirmative case is true? This could be done if negative statements all were interpreted as somehow implying the speaker's resentment of the lack of truth of the affirmative version -- a conclusion which has some support in the semantics of negative statements in general. But then how is the semantics of negative tag questions to be explained where the questioner's suggestion is negative? All of these questions are left unanswered here.

The second point is that the structure of negative questions should include elements from which the metatype answers are derivable. Besides meta answers to negative questions and negative tag questions, there are two more bits of evidence to show the existence of an IT IS TRUE type component in the structure of all questions. One is the existence of metatags. The other is paraphrase relationships for all kinds of questions, such as the following in ENGLISH:

alternative questions: <u>Are you going or are you not going?</u>

<u>Is it true or is it not true that you are (not) going?</u>

<u>You are going?</u>

affirmative questions: <u>Are you going?</u>

<u>Is it true that you are (not) going?</u>

negative questions: <u>Aren't you going?</u>

<u>Isn't it true that you are going?</u>

<u>Are you going, or isn't it true that you are going?</u>

Conclusions

Some of the more important conclusions that we can draw from the above study are the following:

1. Yes-no questions have a number of semantic and syntactic properties which appear explainable by an underlying structure which includes a disjunction of an affirmative sentence and its negative counterpart. The rule mechanism, however, that appears to be needed to derive yes-no questions from such a base requires the presence of transformational rules which are unique in this theory.

2. There is evidence to show that this underlying X OR NOT-X structure is subordinated to a sentence paraphrasable as I ASK YOU TO TELL ME. There is also some support for an alternative theory of question marking whose distinctive characteristics are that it is a discourse-marking theory and it does not assume an underlying OR. In this case, there are reasons to suggest that declarative OR-s should have a conditional base which is thus different from that of interrogative OR-s.

3. Standard answers of various kinds of yes-no questions can be shown to be in a member-to-class relationship with their questions with respect to their above-defined underlying structure.

4. There is some evidence to show that the underlying structure of tag questions differs from the underlying structure of neutral yes-no questions in that it contains an additional copy of the suggested answer.

BIBLIOGRAPHY

Abraham, R.C. 1959. The language of the Hausa people. London.

Agesthialingom, S. 1966. Interrogatives in Tamil. Indian Linguistics, 27, 1-20.

Anderson, S. 1970. On the linguistic status of the performative/constative distinction. Report No. NSF 26, I-1 — I-37.

Arbini, R. 1969. Tag questions and tag-imperatives in English. Journal of Linguistics 5.2. 205-214.

Armbruster, C.H. 1968. Dongolese Nubian. A grammar. Cambridge.

Bach, E. 1970. Some questions about questions. Mimeograph.

Bailey, B.L. 1966. Jamaican Creole syntax: a transformational approach. London.

Baker, C.L. 1970. Notes on the description of English questions; the role of an abstract question morpheme. Foundations of Language, 6, 197-219.

Balmer, W.T., F.C.F. Grant 1929. A grammar of the Fante-Akan language. London.

Beaulieux, L. 1950. Grammaire de la langue Bulgare. Paris.

Bell, C.R.V. 1953. The Somali language. London, New York, Toronto.

Bellack, A.A., H.M. Kliebard, R.T. Hyman, F.L. Smith, Jr. (eds.) 1966. The language of the classroom. New York.

Bergsträsser, G. 1928. Einführung in die semitischen Sprachen. München.

Bertagajev, T.A., C.B. Tsydendambajev. 1962. Grammatika Buriats-kovo jazyka. Sintaxis. Moskow.

Bever, T.G. and J.R. Ross (no date) Underlying structures in discourse. Mimeo.

Bidwell, C.E. 1965. Serbo-Croatian syntax. Language 41.2. 238-259.

Bidwell, C.E. 1965-66. The reflexive construction in Serbo-Croatian. Studies in Linguistics, 18.

_____. 1969. A morpho-syntactic characterization of the modern Slavic languages. Pittsburgh.

Bills, G.D., B. Vallejo C., R.C. Troike. 1969. An introduction to Spoken Bolivian Quechua. Austin, London.

Black, P. 1970. Konso notes. Type-written.

Bolinger, D.L. 1957. Interrogative structures of American English, Publication of the American Dialect Society, No. 28. Alabama.

Bos, G.F. 1962. The coordinative construction in Modern Danish. Lingua 11, 45-58.

Bowen, J.D. 1965. Beginning Tagalog. Berkeley, Los Angeles.

Braithwaite, R.B. 1960. Scientific explanation. New York.

Bresnan, J.W. 1970. On complementizers: toward a syntactic theory of complement types. Foundations of Language, 6, 297-321.

Breton, F.H. Le. 1951. Up-country Swahili exercises. Richmond, Surrey.

Bright, W. 1957. The Karok language. University of California Press, Berkeley, Los Angeles.

_____. 1958. An outline of colloquial Kannada. Poona.

_____., S. Rau, M. Narvekar. 1960. Spoken Kannada. Berkeley.

Brown, R. and C. Hanlon. 1970. Derivational complexity and order of acquisition in child speech. In: J.P. Hayes (ed.) Cognition and the development of language. 11-78.

Campbell, S., Chuan Shaweevongse. 1962. The fundamentals of the Thai language. New York, Melbourne.

Cardona, G. 1965. A Gujarati reference grammar. Philadelphia.

Carmody, F.J. The interrogative system in Modern Scottish Gaelic. UCPL. 1. 6. 215-216.

Chaiyaratana, Ch. 1961. A comparative study of English and Thai syntax. Indiana University Dissertation.

Chao, Y.R. 1965. A grammar of spoken Chinese. Berkeley.

Chomsky, N. 1969. Deep structure, surface structure and semantic interpretation. Reproduced by the Indiana University Linguistic Club.

Christaller, J.G. 1875. A grammar of the Asante and Fante languages called Tshi (Chwee, Twi). Basel.

_____. 1933. Dictionary of the Asante and Fante languages. Basel.

Churchill, L. 1970(?). Responses to questions. Misfires in questioning. Mimeo.

Churchward, C.M. 1940. Rotuman grammar and dictionary. Sidney.

_____. 1953. Tongan grammar. Oxford.

Closs, E. 1967. Some copula constructions in Swahili. Journal of African Languages 6.2. 105-131. (see also under Traugott)

Cohen, M. 1936. Traité de langue amharique. Paris.

Cornyn, W. 1944. Outline of Burmese grammar. Language Diss. 38.

Cowell, M.W. 1964. A reference grammar of Syrian Arabic. Washington, D.C.

Dabbs, J.A. 1965. A short Bengali-English, English-Bengali dictionary. Texas.

_____. 1966. Spoken Bengali: Standard East Bengal. Texas.

Dambriunas, L., A. Klimas, W.R. Schmalstieg. 1966. Introduction to Modern Lithuanian. New York.

Damerar, N. 1967. Polnische Grammatik. Sammlung Göschen, Berlin.

Dawkins, C.H. 1960, 1969. The fundamentals of Amharic. Addis Ababa.

Delano, I.O. 1963. Conversation in Yoruba and English. New York.

Dik, S.C. 1968. Coordination; its implication for the theory of general linguistics. Amsterdam.

Dimock, E., S. Bhattacharji, S. Chatterjee. 1964. Introduction to
    Bengali. Honolulu.

Dirr, A. 1894. Theoretisch-praktische Grammatik der Anamitischen
    Sprache. Leipzig.

Drake, J. 1903. A grammar of the Kurku language (Kolarian subgroup
    of Munda). London.

Dressler, W. 1970. Toward a semantic deep structure of discourse
    grammar. Sixth Regional Meeting of the Chicago Linguistic
    Society.

Elliot, D.E. 1965. Interrogation in English and Mandarin Chinese.
    POLA, 11. 57-117.

Emeneau, M.B. 1951. Studies in Vietnamese (Anamese) grammar. Berkeley.

Erwin, W.M. 1963. A short reference grammar of Iraqi Arabic.
    Washington, D.C.

Eulenberg, J. 1970. Complementation in Hausa. Typewritten.

Ferguson, C.A. 1967. Root-echo responses in Syrian Arabic politeness
    formulas. In: Linguistics Structures, in memory of R.S. Harrold.
    Washington, D.C.

Fillmore, C. 1965. Entailment rules. POLA

_____. 1966. Deictic categories in the semantics of come.
    Foundations of Language 2, 219-227.

_____. 1969. Verbs of judging; an exercise in semantic description.
    Foundations of Language 1, 91-117.

_____. 1970. Types of lexical information. In F. Kiefer (ed.)
    Studies in syntax and semantics. Dordrecht, 109-137.

Fraser, R.M. 1891. Grammar of the Baki language. In Macdonald, D.
    (ed.) 1891 South Sea languages, II. Melbourne. 73-97.

Fraser, W.H. 1913. A shorter French course. Boston, New York,
    Chicago.

Fries, C.C. 1952. The structure of English. New York.

Gallagher, M. 1970. Accounting for indirect discourse. Papers in Linguistics, 2.1. 83-89.

Gavol, H. 1929. Grammaire Basque. Bayonne.

Gill, H.S., H.A. Gleason. 1963. A reference grammar of Panjabi. Hartford Studies in Linguistics, 3.

Grammatika Buriatskovo jazyka. Fonetika i morfologija. Moskow. 1962.

Green, G.M. 1968. On too and either, and not just on too and either, either. Papers from the Fourth Regional Meeting, Chicago Linguistic Society, Chicago.

Greenberg, J.H. 1953. Historical linguistics and unwritten languages. In: Kroeber (ed.) Anthropology today. Chicago. 265-286.

Haas, M.R., H.R. Subhanka. 1945, 1948. Spoken Thai, I.II. U.S. Armed Forces Institute.

Hall, B.C. 1963. Remarks on some and any in negation and interrogative constructions, with a note on Russian. Typewritten.

Halle, M. 1962. Phonology in generative grammar. Word 18. 54-72.

Hamilton, E.R. 1929. The art of interrogation. New York.

Hamlin, C.L. 1958. Questions. The American Journal of Philosophy 36.3. 159-168.

Hardman, M.J. 1966. Jaqaru: outline of phonological and morphological structure. Janua Linguarum, Series Practica 22. The Hague.

Harrah, D. 1961. A Logic of Questions and Answers. Philosophy of Science 28. 40-46.

_____. 1963. Communication: a logical model. Cambridge.

Harries, L. (no date) Swahili sentence structure. University of Wisconsin.

Harris, Z. 1965. Transformational theory. Language 41. 3.1. 363-401.

Healey, Ph. M. 1960. An Agta grammar. SIL. Manila.

Hempel, C.G. 1966. Philosophy of natural science. New Jersey.

Hermann, E. 1942. Probleme der Frage. Nachrichten von der
   Akademie der Wissenschaften in Göttingen. Philologische-
   historische Klasse, Nr. 3,4. 121-408.

Hetzron, R. 1969. The deep structure of the statement. To appear in
   Linguistics.

_____. 1970. Nonverbal sentences and degrees of definiteness
   in Hungarian. Language, 46.4. 899-930.

Hòa, Nguyẽn Dihn. 1963. Speak Vietnamese. Saigon.

Hodge, C.T. 1963. Hausa basic course, Washington D.C.

Hoffmann, C. 1963. A grammar of Margi. London.

Horn, L. 1969. A presuppositional analysis of only and every. Papers
   from the 5th Regional Meeting of the Chicago Linguistic Society.
   Chicago. 98-107.

Householder, F.W. and M. Lotfi. 1965. Basic course in Azerbaijani.
   Uralic and Altaic Series, Indiana University Publication, Vol. 45.

Huddleston, R. 1970. Two approaches to the analysis of tags. Journal
   of Linguistics, 6. 215-222.

Hudson, D.F. 1965. Teach yourself Bengali. London.

Hutchinson, L. 1969. Pronouns and agreement in Temne. Indiana
   University Diss.

Ibañez, R. 1970. Emphase und das Bereich der Negation. Satz- und
   Satzgliednegation. Institut für Sprachwissenschaft. Universität
   zu Köln. Arbeitspapier Nr. 9.

Innes, G. 1966. An introduction to Grebo. London.

_____. 1967. A Grebo-English dictionary. West-African Language
   Monographs 6. Cambridge.

Jackendoff, R.S. 1969. An interpretive theory of negation. Foundations
   of Language, 5. 218-241.

Jensen, H. 1969. Grammatik der kanaresischen Schriftsprache.
    Leipzig.

Jespersen, O. 1924. Philosophy of grammar.

Jorden, E.H. 1962. Beginning Japanese I.II. New Haven.

Kähler, H. 1965. Grammatik der Bahasa-Indonesia (Malay).
    Wiesbaden.

Katz, J.J., P.M. Postal 1964. An integrated theory of linguistic
    description. Cambridge.

_____. 1968. The logic of questions. In: B. van Rootselaar and
    J.F. Staal (eds.) Logic, methodology, and philosophy of
    science, III. Amsterdam. 463-493.

Keefer, J. 1969. The interrogative in the Maji (Dizi) language of
    Kaffa Province. Ditto.

Klima, E. 1964. Negation in English. In: The structure of language,
    ed. by J.A. Fodor and J.J. Katz, 246-323.

_____., and U. Bellugi. 1966. Syntactic regularities in the speech
    of children. In: J. Lyons, and R.J. Wales (ed.) Psycholinguistic
    Papers. Edinburgh. 183-219.

Klingenheben, A. 1963. Die Sprache der Ful. Hamburg.

Koutsoudas, A. 1968. On wh-words in English. Journal of Linguistics,
    4.2. 267-273.

Kraft, C.H. 1963. A study of Hausa syntax. I.II. Hartford.

_____., and S. Abubakar. 1965. An introduction to spoken Hausa.
    Language Monograph, 5. Michigan State University.

Kretschmer, P. 1912. Sprache. In: A. Gercke and E. Norden (ed.)
    Einleitung in die Altertumswissenschaft. I. Bd.

_____. 1938. Der Ursprung des Fragetons und Fragesatzes. In:
    Scritti in onore di Alfredo Trombetti, 27-50.

Kuno, S. 1970. Notes on Japanese grammar. Part I. Report No.
    NSF 27. Cambridge.

Kuroda, S-Y. 1970. Remarks on selectional restrictions and pre-suppositions. In: Kiefer 1970, 138-167.

Labov, W. 1970. Negative attraction and negative concord. In: A study of the Non-Standard English of Negro and Puerto Rican speakers in New York City. Volume I: Phonological and grammatical analysis.

Lang, R. 1970. Enga questions; structural and semantic studies. Ph.D. Diss. Australian National University.

Langacker, R.W. 1965. French interrogatives: a transformational description. Language, 41. 4. 587-600.

_____. 1969. An analysis of English questions. Mimeo.

_____. 1970. English question intonation. Papers in Linguistics, Monograph Series I. 139-161.

Lalou, M. 1950. Manuel élémentaire de Tibétain Classique. Paris.

Langendoen, D.T. 1969. The study of syntax. The generative transformational approach to the structure of American English. Trans-Atlantic Series, New York, Chicago.

Lazdina, T.B. 1966. Teach yourself Latvian. London.

Lehtinen, Meri 1963. Basic course in Finnish. Bloomington, Ind., The Hague.

Leonard, H.S. 1969. Interrogatives, imperatives, truth, falsity, and lies. Philosophy of Science 26. 172-186.

Leonardi F., P.J. 1966. Lengua Quíchua (Dialecto del Nago). Gramatica y Diccionario. Quito-Ecuador.

Leslau, W. 1941. Documents Tigrigna. Paris.

_____. 1962. Yes and no in the Ethiopian languages. Language, 38. 2. 147-148.

Lewis, M.M. 1951. Infant speech: a study of the beginnings of language. New York.

Loeser, F. 1968. Interrogativlogik. Berlin.

Longacre, R.E. 1968. Discourse, paragraph and sentence structure in selected Philippine languages. I-III. Santa Ana, Calif.

Maccoby, E.E. and N. Maccoby. 1954. The interview: a tool of social science. In: Lindzey, G. (ed.) Handbook of social psychology. Vol. I. London.

Mallon, A. 1956. Grammaire Copte. Beirut.

Marsack, C.C. 1962. Teach yourself Samoan. London.

Martin, S.E. 1962. Essential Japanese. Rutland, Vermont, Tokyo.

_____., and Young-Sook C. Lee. 1969. Beginning Korean, New Haven, London.

McCawley, J. 1968. The role of semantics in a grammar. In: E. Bach and R. Harms (ed.) Universals in linguistic theory. 124-169.

_____. 1970a. English as a VSO language. Language, 46.2.1. 286-299.

_____. 1970b. A programme for logic. Mimeo.

Meillet, A., M. Cohen. 1952. Les langues du monde, I. Paris.

Meyer-Lübke, W. 1899. Romanische Syntax. Leipzig.

Moravcsik, E. 1971. Sentence negation and indefinite noun phrases. Typewritten.

Moreno, M.M. 1955. Il Somalo della Somalia. Roma.

Mullie, J. 1932. The structural principles of the Chinese language. Peiping.

Nagel, E. 1961. The structure of science. New York.

Nayak, H.M. 1967. Kannada: literary and colloquial. A study of styles.

Obolensky, S., K.Y. Panah, F.K. Nouri. 1963. Persian basic course. Washington, D.C.

_____., D. Zelelie, M. Andvalem. 1964. Amharic basic course. Washington, D.C.

Ohman, W. and Hailu Fulass. 1970. Welamo. Type-written manuscript of a chapter of The language survey of Ethiopia, to appear.

Page, W.S. 1934. An introduction to colloquial Bengali. Cambridge.

Partee, B. Hall. 1970. On the requirement that transformations preserve meaning. Reproduced by Indiana University Linguistics Club.

Perrott, D.V. 1965. Teach yourself Swahili. London.

Peterson, T.H. 1969. A case for the declarative performative verb: dependent and independent conjunction in Moore and English. Fifth Regional Meeting of the Chicago Linguistic Society. Chicago. 421-429.

Pope, E. 1970. Answers to yes-no questions. Linguistic Inquiry, 2.1. 69-82.

Poppe, N. 1960. Buriat grammar. I. U. Uralic-Altaic Series 2. Bloomington, Indiana.

_____. 1964. Bashkir manual. I.U. Uralic-Altaic Series 36. Bloomington, Indiana.

Pride, K. 1965. Chatino syntax. SIL. University of Oklahoma, Morman, Okl.

Prior, M.A. 1955. Erotetic logic. Philosophical Review, 64. 43-59.

Rabel, L. 1961. Khasi, a language of Assam. Louisiana State Univ. Studies, Humanities Series 10.

Rand, E. 1969. The syntax of Mandarin interrogatives. Univ. of Calif. Publications in Linguistics, No. 55.

Ray, P.S., M. Hai, L. Ray. 1966. Bengali language handbook. Washington, D.C.

Robinson, C.H. 1930. Hausa grammar. London.

Rosén, H.H. 1966. A textbook of Israeli Hebrew. Chicago.

Ross, J. 1970. On declarative sentences. In: R.A. Jacobs and P.S. Rosenbaum (ed.) Readings in English transformational grammar. Waltham, Mass. 222-272.

Rowlands, E.C. 1969. Teach yourself Yoruba. London.

Sacks, H. 1970. Aspects of the sequential organization of conversation. Mimeo.

Sadock, J.M. 1969a. Hypersentences. Papers in Linguistics, 1.2. 283-370.

_____. 1969b. Superhypersentences. Papers in Linguistics, 1.1. 1-15.

_____. 1970. Whimperatives. Papers in Linguistics, Monograph Series, No. I. 223-238.

Samarin, W.J. 1966. The Gbeya language. UCPL. 44.

_____. 1967. A grammar of Sango. Janua Linguarum, Series Practica 38. The Hague.

Sanders, G.A. 1967. Some general grammatical processes in English, Indiana University Diss. Bloomington, Ind.

Sanson, G.B. 1928. An historical grammar of Japanese. Oxford.

Schegloff, E.A. 1968. Sequencing in conversational openings. American Anthropologist, 70.6. 1075-1095.

Schenker, A.M. 1966. Beginning Polish. New Haven, London.

Searle, J.R. (no date) Speech acts. An essay in the philosophy of language. Cambridge.

Seiler, H. 1952. Negation, den Begriff des Predicats betonend. Studia Linguistica, 6. 79-91.

Senn, A. 1966. Handbuch der litauischen Sprache. I. Grammatik.

Spencer, H. 1914. A Kannarese grammar with graduated exercises. Mysore.

Srinivasan, R. 1969. Three theoretical approaches to the description of negation in Tamil. M.A. thesis, University of Illinois at Chicago Circle.

Stahl, G. 1962. Fragenfolgen. In: Käsbauer, M. and F. von Kutschera (eds.): Logik und Logikkalkül. München. 149-157.

Steinmann, M. 1959. Questions and answers. Graduate Review of Philosophy. 17-28.

Stennes, L.H. 1961. An introduction to Fulani syntax. Hartford.

Stevick, E.W. 1965. Shona basic course. Washington D.C.

_____., J.G. Mlela, F.N. Njenga. 1963. Swahili basic course, Washington, D.C.

Stewart, J.A. 1955. Manual of colloquial Burmese. London.

Stewart, W.A., C. Babou, D. Pedtke and others. 1966. Introductory course in Dakar Wolof. Washington, D.C.

Stockwell, R.P., P. Schachter, B. Hall Partee. 1968. Integration of transformational theories of English syntax II. UCLA. Mimeo.

Strawson, P.F. 1952. Introduction to logical theory. London.

Streitberg, W. 1906. Gothisches Elementarbuch. Heidelberg.

Swadesh, M.H. 1948. Chinese in your pocket. New York.

Swift, L.B. 1963. A reference grammar of Modern Turkish. Bloomington, Ind.

Tesnière, L. 1959. Éléments de syntaxe structurale. Paris.

Tisdell, W. St. Clair. 1892 (reprint 1961). A simplified grammar of the Gujarati language. New York.

Traugott, E. Closs. 1969. A history of English syntax. (manuscript; to appear in the Transatlatic Series of Holt, Rinehart and Winston, Inc.) (see also under Closs)

Tucker, A.N. and J. Tompo Ola Mpaayei 1955. A Maasai grammar with vocabulary. London, New York.

Ultan, R. 1969. Some general characteristics of interrogative systems, Working Paper on Language Universals 1. 41-63/a.

Vaccari, E., E.E. Vaccari. 1942. Japanese conversational grammar. New York.

Voegelin, C.F. and F.M. Voegelin. 1965. Languages of the World. Sino-Tibetan fascicle 2. Anthropological Linguistics, 7/3. Part I.

Vondrák, W. 1928. Vergleichende slavische Grammatik. II. Formen-lehre und Syntax. Güttingen.

von Soden, W. 1952. Grundriss der Akkadischen Grammatik. Roma.

Wang, W. S-Y. 1965. Two aspect markers in Mandarin. Language, 41. 457-470.

Ward, I.C. 1956. An introduction to the Yoruba language. Cambridge.

Watson, R. 1953. Clause to sentence gradations in Pacoh, Lingua, 16. 166-188.

Wehr, H. 1953. Zur Funktion arabischer Negation. Zeitschrift der morgenländischen Gesellschaft, 103. 27-39.

Welmers, W.E. 1946. A grammar of Fanti. Language Diss. 39.

Westermann, D. 1905. Wörterbuch der Ewe Sprache. Berlin.

_____. 1960. A study of the Ewe language. London.

Wigmore, J.H. 1970. Evidence in trials at common law. Vol. III. Boston-Toronto.

Worth, D. 1964. Suprasyntactics. In Proceedings of the 9th Inter-national Congress of Linguists, ed. by H. Lunt. The Hague. pp. 698-705.

Wright, J. 1899. A primer of the Gothic language. Oxford.

Zwicky, A.M. 1968. Naturalness arguments in syntax. Papers from the 4th Regional Meeting of the Chicago Linguistic Society, Chicago. 94-102.