from Harvard Studies in
Syntax and Semantics (1980
ed. Susumu Kuno

Meaning and Mechanism in Grammar*

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I would like to consider the analysis of the so-called "double object construction" in English, as in (1).

(1) John gave Bill a book.
Harry made his mother breakfast.

In my discussion of this construction, I would like to recognize a tremendous debt to Richard Oehrle's 1975 dissertation on the subject. Though he does not arrive at the same conclusions as I do, I am indebted to him for the care and sophistication with which he approached the subject and for the many solid steps he took in his work. In proceeding to analyze the construction, the most important decision is the one that defines our goals, the one that defines which questions we want to answer. Traditionally, the question to be answered has been:

> What is the connection between double-object constructions as in (1) and the similar prepositional-object constructions, as in (2)?

(2) John gave a book to Harry.

Harry made breakfast for his mother.

I think this is a paralyzing move, however: it leads away from what seems to me to be almost self-evident generalizations.

The correct generalizations, I would like to suggest, are these, and they are pretty much the simplest ones imaginable:

1 -- the prepositions to and for have each an inherent meaning, and, in the simplest case, prepositional phrases with these prepositions may occur just in case they may sensibly cooccur with the verb.

2 -- The first noun phrase of the double-object construction plays a fixed semantic -- or more accurately, thematic -- role in the sentence, and this "dative" object, as I shall refer to it, may occur when it may sensibly occur with the meaning of the verb.

3 -- There is an appearance of a transformational alternation between the double-object construction and the prepositional construction because there are many cases in which the meaning of the dative position roughly coincides with the meaning of one or other of the prepositions.

This is the simplest possible situation, then: there are three "positions" to look at, one after the preposition

to, a second after the preposition for, and the third in between the verb and the direct object. We must show that each such position corresponds to a coherent semantics. When this can be demonstrated, there is no longer any use or need for a transformation. More interestingly, we will arrive at a situation where there is a discernible and interestly elaborate semantics for a particular syntactic position --here, the dative NP position. We will return to this below.

What does the preposition to mean and when can it be used? In terms of the so-called "thematic relations", it specifies a Goal, that is, the end-point of a movement. In the most concrete case, this means a movement in space. We will return to slightly more abstract cases of movement below. When a verb specifies a movement, then, all other things being equal, a to-phrase will be compatible, as in (3).

(3) John ran to school.
The bird flew to its nest.
Mary sent the package to Rome.
Harry sent a telegram to his congressman.

The preposition to is quite unconcerned, as we see, with whether its object is animate or inanimate, just as long

as the object can specify the end-point of a motion. It is frequently the case that the object in motion -- often called the "Theme" -- is the subject in an intransitive sentence, and the object in a transitive, but this is a rule of thumb with many exceptions.

Turning to the preposition for, again we see that any action (or near-action) that can be construed as being done for someone's benefit may be described with a for-prepositional phrase. While we won't accept the absurd Two plus two equals four for me, any of the sentences in (4) are fine.

(4) a. John ran to the grocery store for his father.
b. Mary sent the package to Rome for her grandchildren.
c. Harry made some sandwiches for his mother.
d. The bed is over by the window for my grandmother.

The notion of personal benefit is quite vague, and hence broad in coverage, but there is nothing to be done about that. (4c), for example, can mean that Harry's mother benefited in any of a number of ways: she might benefit by eating the sandwich, or she might benefit by being proud of her son, or she might be a professional sandwich

maker and her son Harry is filling in for her while she takes a coffee-break. All and any cases like these fall under the broad and vague rubric of the benefactive for-phrase.

As is well-known, however, only a small class of sentences with a to-prepositional phrase or a for-prepositional phrase have a double-object paraphrase, and by the same measure, only some of the specific senses that we have enumerated of a sentence like (4c) Harry made some sandwiches for his mother will arise in a double-object sentence such as Harry made his mother some sandwiches.

The history of transformational accounts of this construction is a history of attempts to find generalizations regarding which verbs permit the derivation of a double-object construction from the elaborated prepositional construction. Georgia Green, for example, sets up five classes of verbs which exhibit both a double-object construction and a for-dative. Her classes are these:

(5) 1. Verbs denoting creative acts -- acts in which an object is created or transformed to produce a certain effect: make, cook, boil, roast, sew, knit, paint, draw, etc.
2. Verbs denoting activities involving selection, such as buy, purchase, find, get, choose, pick

out, gather, save, leave,...

3. Verbs denoting performances considered artistic: sing, chant, recite, play (instruments and compositions), dance.
4. Verbs that express a kind of obtaining: earn, gain, and win are the most conspicuous members.
5. Benefactive constructions such as rob me a bank.

I think in fact we can certainly leave the fifth class off of the list, certainly such sentences do not arise in my own dialect, and I strongly suspect that those dialects that permit such cases as the fifth will include many other verbs and cases as well. Oehrle suggests, "the prospects of reducing [(Green's)] five classes to a single one seem remote at best, even excluding the fourth and fifth from consideration." (p.119). But this is putting the cart before the horse. The right question is this: is there a semantic role played by the dative NP in the double object construction which is consistent across all these five (or three, or two) classes of verbs? That is, can we assign a consistent semantic role to the dative NP in such sentences as the following:

(6) 1. John {made / cooked / roasted} his friends a delicious stew.

2. Mary {bought / found / got / saved} her friends a collection of back National Geographics.

3. John {?sang / played / ??recited} {me / ?his friends} his version of the Star-Spangled Banner.

Curiously, I find the third class rather ill-behaved in many cases. The other classes, however, clearly do revolve around a coherent and consistent role played by the dative noun phrase: the dative NP is the animate NP that is the projected possessor of the direct object. Let us see if that statement is not entirely adequate for a more general account of the construction.

Consider example (4c) again, Harry made some sandwiches for his mother. Only one sub-sense of that sentence shines through in the double-object version, Harry made his mother some sandwiches, the case where she gets the sandwiches. All the other sense of the for-phrase are, so to speak, eliminated from the range of meanings of the double-object construction -- exactly as we would expect.

Now, one might -- counter-intuitively, of course -- take this as evidence that there was a special preposition for whose meaning was that its object was the projected recipient of the direct object, and that furthermore it was only this preposition for that underwent dative-movement. This odd hypothesis would wrongly be based on the assumption that the benefactive fors do not form a coherent semantic domain, but let us consider such a hypothesis for a moment nonetheless. We can see that it must be wrong when we turn back to the cases in which certain to-prepositional phrases seem to have near paraphrases in the double-object construction as well. What we will find, once again, is that double-object constructions exist precisely where the semantic role of the dative NP is the projected animate recipient of the direct object, as in (7).

(7) a. John sent the package to Washington,D.C.
b. *John sent Washington, D.C. the package.
c. John sent the package to Mary.
d. John sent Mary the package.

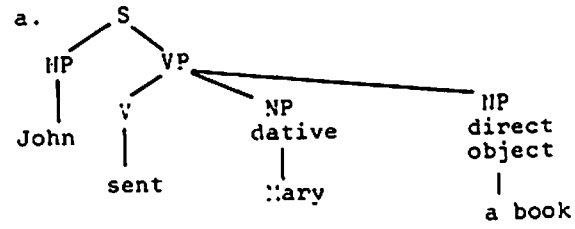
Again, we know that the to-phrase forms a coherent semantic domain; there is no motivation for separating out a distinct kind of to-phrase here; and the consistent,

coherent meaning assigned to the dative NP in the double-object construction is simply unrelated to the prepositional construction.

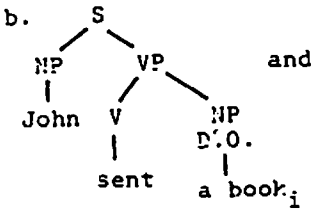
We may conclude, then, that just as there is a semantic value corresponding to the prepositions to and for, so there is a semantic role assigned to the dative NP position, a characteristic distinguishing it, we may note, from the subject or object position.

Let us express this characterization in the following way. We will say that a first semantic representation -- at what we shall call a "Thematic level" -- characterizes (7d) as in (8b), via rule (9).

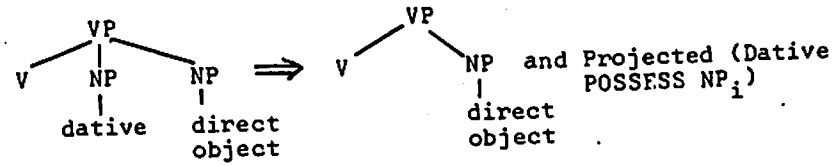
(8) a.



b.



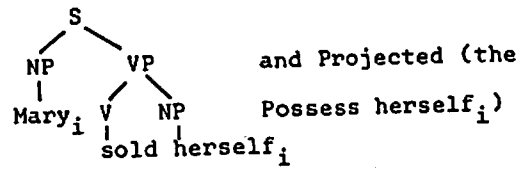
and Projected (Mary POSSESS a book$_i$)

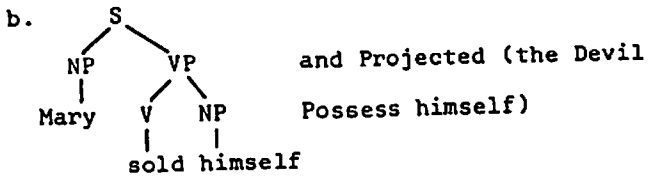
9. 

I might mention two tentative explanations for some facts that have been noted already, explanations based on these semi-formalizations in (8). First, consider the reflexivization facts mentioned by Oehrle (p.256). As he says, "a variety of contrasts seem to exist, but it is difficult to see how a transformational account could even describe them in a uniform way." Consider (10) first.

10. a. Mary sold herself to the Devil.
    b. *Mary sold himself to the Devil.
    c. *Mary sold the Devil herself.
    d. *Mary sold the Devil himself. (on the relevant analysis)

Why should (b-d) be ungrammatical? The familiar accounts of reflexives will account for (10a,b), but (c,d) ought to be good, on most accounts. However, if they are analyzed by rule (9), (10c,) become (11a,b), respectively.

11. a. 

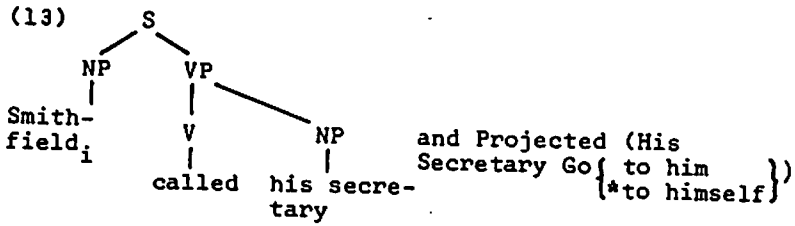
b. 

It is clear that both of these structures (11a,b) contain odd conjuncts which we could rule out on principled grounds: the second conjunct in (11a) "The Devil possess herself", and the first in (11b), "Mary sold himself". If we assume that the conditions on reflexivization in English are at least in part involved at this Thematic level, not at a purely syntactic level, then a condition like "a reflexive NP must be in the same clause as its antecedent" will correctly rule out (10c,d). Note that this assumption that the conditions on reflexivation are sensitive to restructuring on the Thematic level has in fact been floating around the linguistic underground for over ten years, based on such examples as (12) where the non-reflexive form is necessary, because "to him/to

(12) $Smithfield_i$ called his secretary over to himself

himself" is part of a subordinate thematic structure in which "the secretary" is a Theme, whose Goal is "Smithfield". Thus the analysis of (12) minimally contains the structure of (13), and the impossibility of reflexivization in (12) is once again due to the fact that conditions on reflexives are at the Thematic level.

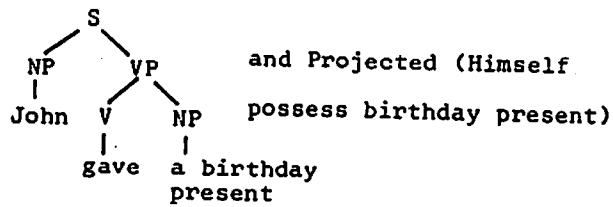
(13)



This analysis leaves open why a sentence like (14) is grammatical.

(14) a. John gave himself a birthday present.

b.



Why can the reflexive appear in the subject position of the projected clause? I will leave the question with the tentative response that all of the relevant cases are treated correctly -- that is, those of (11a,b), (13), and

(14b) -- if we assume not that the "clause-mate" condition is the correct condition on binding of the reflexive, but rather the specified subject condition proposed by Chomsky. This formulation would permit a reflexive to have an antecedent out of its clause in exactly one case: where the reflexive is in subject position, and the clause is not finite, which is precisely what we have in (14b).

A second interesting consequence that appears to bear on the Thematic structure suggested for the double-object construction is the "Accessible Conjuct Constraint" proposed by George Hart in a recent unpublished paper. Hart succeeds in reducing a very large number of constraints on extraction to a single case, developing a principle which requires that a variable -- that is to say, a moved element -- must bind exactly one position in each of what Hart calls "accessible conjuncts" in the semantic representation (which I interpret here to be essentially the Thematic level). An accessible conjunct is one of the various conjuncts in the Thematic or semantic representation that contains the semantic translation of a "main predicate", in this case, the verb itself. Thus Hart's proposal automatically confers on the left conjunct in the Thematic representation

a special status with respect to extraction, since it is the Main Predicate, in Hart's terms. Thus extraction should be possible for elements in the left conjunct -- the Subject and the Direct Object -- but not for the element only in the right conjunct, that is, the Indirect Object (Dative NP). In fact, this is a well-known point, as illustrated in (15).

(15) a. Who gave Bill that book?
b. *?Who did John give the book?
d. What did John give Bill?

Interestingly, it is just this set of facts that Chomsky used to motivate the existence of Dative Movement in his Logical Structure of Linguistic Theory, in conjunction with certain language-particular rule-orderings. Thus the particular formulation of the notion of "projected recipient" suggested in (8) and (9) does indeed have some unexpected merits.

But let us return to the conceptual basis of this analysis of the dative NP. The semantic role of the dative NP as the projected possessor of the direct object NP accounts directly for such contrasts as noted in (16).

(16) a. I owe this example to Joe Smith.
b. I owe five bucks to Joe Smith.

c. *I owe Joe Smith this example.
d. I owe Joe Smith five bucks.

Only in (16b,d) is Joe Smith going to end up possessing the direct object, here, five dollars; hence only this sense of "owing" is compatible with the dative NP found in the double object construction.

Based on what we have considered up to this point, to repeat, only verbs which present the dative NP as the prospective possessor of the direct object will be compatible with the double-object construction. This criterion distinguishes, then, between (17a) and (17b), permitting the first but not the second.

(17) a. A stupid mistake cost Bill his chance to become President.
b. A stupid mistake lost Bill his chance to become President.

Now, in fact, I think this is a correct distinction: (17b), though accepted and discussed by Oehrle, seems to me to be from somebody else's dialect, perhaps parallel to "We bought us a new car." Such sentences with lose in the double object construction seem even worse when not in the past tense; in the past tense, as in (17b), perhaps they sound slightly better by their closeness

to "cost" phonologically.

(18) a. *?One bad mistake, son, is going to lose you your chance to become President.

Thus cost, but not lose, appears in the double object construction, as does deny, as in (19).

(19) a. The judge denied the defendants a chance to explain their actions.
b. The IRS denied us an extension.
c. I offered John the chance of a lifetime, and he turned me down flat.

Thus there are, we observe, quite sharp limits to the class of verbs which might be called "negative dative" verbs, that is, verbs in which the dative NP is not encouraged to receive the direct object NP. But even in the more familiar case of "positive" dative verbs, such as offer (cf. (19c), there need be no expected "uptake" on the part of the dative NP (to use Oehrle's term). The "negative dative movement" verbs cost and deny go slightly further than, say, offer; we may rightly infer from (19b) that we did not end up with the extension in question. Nonetheless, cost and deny do involve the notion of projected receiving by the dative NP of the direct object; in particular, they say of it that the

projected receiving is not carried through. They differ most strikingly in that while the subject of both verbs is the causer of this non-state of affairs, the causer is willful when deny is used, and not willful when cost is used. Note that if this line of reasoning is correct, then the class of constructions that Oehrle discusses (as in (20)) involving the verb forgive do not fall within the double-object construction of the dialect under discussion; I think this is correct.

(20) a. ??God will forgive you your sins.
b. *A just society will forgive its less fortunate members their actions motivated only by desperation.

There are many other things of interest that could be said about the various classes of verbs whose dative NP revolves around the concept of projected recipient that we are discussing. A broader analysis of this construction in English, however, should also say something about two related subjects: the notion of recipient (or possessor) extended to receiving "knowledge", as in (21), and the syntactic use of the double-object construction with deverbal nouns, as in (22).

(21) The judge read the defendants the decision.

They taught us the fundamentals of karate.

(22) Nixon gave Ron a kick in the pants.

Harry gave Irma a kiss.

Other than to observe the extended use of possession as in (21), I will leave the first topic here. In dealing with the second, however, we will make further use of the Thematic level, a level (a) projected from a syntactic deep structure, (b) composed of both syntactic and semantic elements, and (c) containing semantic elements which may on occasion be not only less fully specified than the ultimate semantic representation, but which may in fact conflict with the semantic representation. Thus we must permit semantic characterizations at the thematic level to in fact conflict in substantive ways from the semantic characterizations at (what we might call) deeper levels.

This point was suggested in a different context by Wallace Chafe, and is certainly entirely natural to anyone who thinks that linguistic semantics is an area with any real content. We only assume that semantics is no less rich than phonology; and the principle that the thematic level may be substantively different from the deeper semantic levels corresponds, in semantics, to the denial of the principle of invariance in phonology.

Let us return to the construction illustrated in (22), in which the direct object is a nominal construction based on a Germanic noun which is homophonous with a verb; that is, the head of the NP in direct object position has the property in (23).

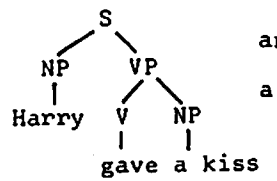
(23) $[_N W] = [_V W]$ i.e phonological material is the same. W describes an act that affects but does not change

(thus, give a slap, tap, kiss,

but not *a kill, *a stab, *?a cut).

Consider what our rules produce for a sentence like (22b).

(24)



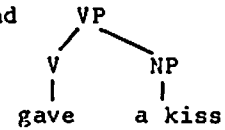
and Projected (Irma Possess a kiss)

This analysis appears to be inadequate on two counts. First, it is not clear what it would mean to "give" a kick, taking the semantics of the verb seriously. That is, a serious analysis of give will make reference to the motion of the direct object, either in literal terms or at least in terms of transfer of possession, or what has been aptly termed motion in ownership-space.

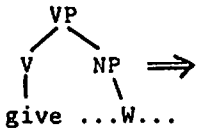
Suppose we allow the further decomposition of the

verb give into the structure in (26), however:

(26) Agent: $[_{NP}$Harry] and



(27)



$\Rightarrow$ ∅ where $[_{N}W]$ describes an affecting but not changing predicate...

The indication that the subject of give is the agent is surely minimally necessary even in the standard, non-"metaphorical" uses of give: I would suggest that the right conjunct in (26), the part that is difficult to interpret, is simply deleted, ignored, as in (27). There is no semantic interpretation for it. (In its "lexical" specificity, (27) may best be thought of as parallel to the word-formation rules that have specific phonological, morphological, and semantic conditions on their base, much as we see in (27), and which 'add on' a prefix or suffix, just as (27) is verb-specific).

It remains to consider the analysis of the right-hand conjunct in (25). The verbal nominals that appear in this construction, apparently "possessed" by the syntactic dative NP, are all nouns which have at least one missing argument. As Oehrle notes, some cases, like

"The Braves gave Aaron a try", may be ambiguous due to the fact that the nominal, try, has two missing arguments. We would be done with the analysis, it is clear, if there were a rule, or principle, that reinterpreted the "possess" predicate in these cases to mean that the subject of Possess is simply an argument of the predicate defined by the object of Possess, as in (28).

(28) NP_i Possess NP_j $(\ldots,x,\ldots) \rightarrow NP_j$ $(\ldots,NP_i,\ldots)$

But this rule is one which is, in all essentials, already needed for English in normal NP possessives, as in (29).

(29) Rome's destruction
Mary's refusal
Bill's trial

Note that the argument roles assigned to the possessives NPs in (29) are assigned on the basis of their being analyzed at an intermediate level as a possessor, not on the basis of a cross-category generalization of the notion of subject, as suggested by the X-bar theory, with the help of rules shuttling NPs to the left and right within the NP cycle. What is relevant, and crucial, on this account, is the ability of our partially mechanical, partially conceptual framework to appeal to the notion

of Possession as grammaticalized in two quite distinct ways: one within the NP, that is, by the case-marking on the noun; the other within the conceptual definition of the dative position as I have argued here.

If we decide that we are indeed interested in the kinds of concepts that can be encoded linguistically, then among other things we will be concerned with the range and variation of possible concepts. English, we may observe, is considerably simpler than a language such as Igbo, a Kwa language spoken in Nigeria, which is poor in prepositions and rich in post-verbal NPs. Three noun phrases may occur after the verb, with the possibility of two dative-like NPs inbetween the verb and the direct object. Given the lack of prepositions, of course, there are no apt paraphrases of the double and triple object constructions in which the verb is followed by only one object. The two dative-like positions are conceptually quite distinct: the first corresponds to the person in whose stead the subject performed the action, someone who was originally supposed to do the action instead, much like the Spanish preposition <u>por</u>, as in <u>Yo lo hice por María</u> (as contrasted with, e.g., <u>para</u>).(In this discussion, I draw on unpublished work by Julie Hengst).

The second dative position roughly, but only roughly, corresponds to the English dative position. The examples (30) illustrate this.

(30) A. <u>NP-V- 1st dative - Direct Object</u>

a. Fa gosiela gi akwukwo
They showed you book
"They showed this book for you"

b. Fa nyeelu gi akwukwo
they gave you book
"they donated the book in your stead"

c. Fa meelu Obi ife.
They did Obi something
"They did something for Obi, i.e., in his place."

B. <u>NP-V-2nd dative- Direct Object</u>

a. Fa gosilu gi akwukwo
they showed you book
"They showed this book to you"

b. Fa nyelu gi akwukwo
they gave you book
"They gave you the book"

c. Fa melu Obi ife.
They did Obi something.
"They did something to Obi."

Unlike the cases in (30), ambiguity can arise as to whether an NP is a first or second dative, as in (31a). In other cases, both dative positions can be filled, as in (31b).

(31) a. Fa deelu Obi akwukwo.
they wrote Obi letter.
"They wrote a letter to Obi", or
"They wrote a letter (to someone) in Obi's stead."

b. Fa koolu gi Obi akiko.
they read you Obi story
"They read a story to Obi in your place."

As such examples suggest, a minimal descriptive understanding of a language such as Igbo requires the development of a clear specification of the semantic roles indicated by the two dative positions.
That kind of study represents one of the developments that would naturally grow out of the type of analysis I am suggesting here. In another direction, we would like to study the real characteristics that affect the possibilities of passivization in English, which are in many interesting ways governed by semantic principles. Why are some dative NPs more resistant to passivization

than others, as Fillmore noted? The passivized dative may be slightly worse if the sentence describes the creation of the direct object (this restates in semantic terms the classical observation that to-dative passives are better than for-dative passives, or, worse yet, that passive is ordered inbetween to-dative movement and for-dative movement). Still, I must admit that I have little intuitive feeling for a difference between, say, (32a and b).

(32) a. John was baked a big chocolate birthday cake for his 10th birthday.

b. John was sent a big chocolate birthday cake in the mail!

There may be a subset of cases that illustrate a difference; after all, a small subliterature has arisen concerning the phenomenon. To the extent that the data are significant, though, it should be clear by now that the phenomenon has nothing to do with syntactic source or with rule-ordering. If, however, some sharply unacceptable passives or dative NPs can be analyzed, this will help us in the analysis of the semantic basis of the passive alternation, an area which has, curiously, been said to be essentially free of semantic conditioning.

In this discussion of certain issues related to the dative position, in English and in Igbo, one point remains central, as I see it: we are at a point now in grammatical study where we must decide first what questions we would like to study and only then do we define and discover what tools and theories are adequate and appropriate for such research. In our case, speaking as linguist, I would agree with Benjamin Lee Whorf's words, written over forty years ago:

> The very essence of linguistics is the quest for meaning, and, as the science refines its procedure, it inevitably becomes, as a matter of this quest, more psychological and cultural, while retaining that almost mathematical precision of statement which it gets from the highly systematic nature of the linguistic realm of fact.

In another context, Whorf called for the empirical study of linguistic concepts:

> Previously when ideas have been distributed among a set of categories, these categories have been the result of some philosopher's introspection, but not so this idea-map of a language -- we come upon it as we do upon the facts of nature, and its as yet dimly seen configuration challenges us to investigate it by experimental and inductive methods.

The same holds true today, and with our deeper and more sophisticated understanding of formal syntax, we can seriously approach the problem which is, as Whorf observed, the very essence of linguistics.

Footnote

*This paper was presented before the Harvard Linguistics Circle on October 23, 1979.