THE DEFINITE AND INDEFINITE DETERMINERS AND THEIR
RELATIONSHIPS TO MODIFYING CLAUSE STRUCTURES IN ENGLISH AND
MANDARIN CHINESE ARE STUDIED WITHIN THE GENERAL FRAMEWORK OF
TRANSFORMATIONAL GRAMMAR, AS PRESENTED BY KATZ AND POSTAL. A
BRIEF SURVEY OF THE FORM-CLASS AND EARLIER TRANSFORMATIONAL
APPROACHES TO THE PROBLEM IS MADE WITH THE CONCLUSION THAT
THEY ARE INADEQUATE, WHEREAS THE REVISED MODEL OF KATZ AND
POSTAL, IN CLARIFYING THE CONCEPTION OF THE SEMANTIC
COMPONENT AND ITS ROLE IN RELATIONSHIP TO THE SYNTACTIC AND
THE PHONOLOGICAL COMPONENTS IN AN INTEGRATED LINGUISTIC
DESCRIPTION, CAN BEST EXPLAIN THE NATIVE SPEAKER'S USE OF THE
DETERMINERS OF HIS LANGUAGE AND HIS COMPREHENSION OF THE
MODIFYING CLAUSE SENTENCES. A FORMAL UNIVERSAL IN WHICH THE
DETERMINERS IN THE SHARED NOMINALS OF TWO STRINGS IN A
MODIFYING CLAUSE STRUCTURE NEED NOT BE IDENTICAL IS CLAIMED
AND ILLUSTRATED WITH ENGLISH AND MANDARIN CHINESE. (IT)

# ENGLISH AND MANDARIN CHINESE:
## DEFINITE AND INDEFINITE DETERMINERS AND MODIFYING CLAUSE STRUCTURES

S. S. Annear

CONTENTS

# I. APPROACHES TO THE DETERMINER IN ENGLISH

## A. The Form-class Approach

Attempts have been made to define the definite and in-definite determiners (the, a/some) in purely formal terms as members of classes which have formal properties.

According to Bloomfield, for example, as a subgroup of the class of limiting adjectives,

> the determiners are defined by the fact that certain types of noun expressions are always accompanied by a determiner.

Further:

> A definite determiner can be preceded by the numerative all, but the indefinite determiner cannot. (pp. 202-203)

Gleason asserts that:

> articles . . . serve to signal the presence of a nominal

and that:

> the differences [between a, the and some] mark either the sub-class of the nominal phrase or the position of the nominal in the discourse. (pp. 156-7)

Fries' formal analysis is carried to the extreme:

> Group A consists of all the words that can occupy the position of the in a particular test frame:
>
> The concert was good. (p. 89)

This point of view, the direction in which it leads, and the definitions which it supports must be rejected, however, if

we are interested in a linguistic theory which will contribute
toward an understanding of how fluent speakers produce and
understand novel sentences. Not only does a formal analysis of
this sort fail to enlighten us in this respect, but it precludes
investigation toward this explanation. That this is the case is
indicated by additional remarks of Bloomfield and Gleason, each
of whom apparently recognized and attempted to justify an incom-
pleteness in the proposed analysis. From Bloomfield:

> The class meaning of definite determiners is "identi-
> fied specimens." A precise statement of how the
> specimens are identified is a practical matter out-
> side the linguist's control. (p. 203)

From Gleason:

> In rare cases the occurrence of one rather than another
> [of the determiners] may signal a meaning difference.
> But the pair of contrasting sentences commonly advanced
> to illustrate the difference in meaning are, for the
> most part, either artificial or cited out of context.
> Much of the grammatical control over the articles
> operates within stretches larger than single sentences
> and so easily escapes the notice of grammarians.
> (p. 157)

In fact, as we shall point out below, neither the notion of "how
the specimens are identified," nor the notions "artificial,"
"cited out of context," or "grammatical control over the articles"
are outside the scope of an "explanatorily adequate theory"
(Chomsky, 1964), insofar as these notions indicate something
about the way these determiners are used and understood.

B. Transformational Approaches

Until recently, writings in transformational analysis have
been characteristically concerned with the presentation and jus-

tification of a set of rules to produce well-formed sentences.  In
early grammarettes[1], the determiner was recognized as a constit-
uent of a well-formed noun phrase and PS rules were written
accordingly:

```
S    → Nom + VP
Nom  → NP + No
NP   → T (or Det) + N
T    → the, some, a . . .
```

Some later writings show attempts to provide rules to
account for certain supposedly syntactic restrictions on the
occurrence of various determiners.  For example, in a recent
presentation of rules, Lees (1963) introduces a distinction
between definite and non-definite determiners on the basis of
their relationships with relative clauses.  The PS rules provide
for the obligatory choice of a relative clause marker if the
definite determiner has been chosen.  Provided that the N is
preceded by the definite determiner, the relative clause marker
may then be deleted, without ever having been expanded, by a
"relative clause ellipsis" rule.  In addition to objections to
be raised below, we may point out one here.  The obligatory
choosing, then optional deletion, of a relative clause marker
which has not been expanded, while it reveals something of the
anaphoric nature of the definite determiner, seems to me to rob
the concept of dummy symbol of its essential function in a grammar
of this type.  That is, it is meaningless to first base the
selection of the definite determiner on the selection of a symbol
whose raison d'être is that it must be expanded as a mutation of
some pre-sentence, and to then delete this symbol before the

expansion has taken place. Lees' rules also provide for a distinction between the indefinite and the generic determiners according to a restriction involving the main verb BE.

Also in 1963 appeared two papers dealing specifically with the relationship between determiners and relative clauses. Beverly Robbins, while not excluding the possibility of a "kernel sentence" containing "the N," does not allow the occurrence of the in relative clause sentences:

The girl who smiled recognized you

or right conjuncts of conjoined sentences:

A vase was dropped and the vase broke

except as "part of the operations which adjoin the wh- clause to the noun." In conjunctions, "the wh- clause, being simply a repetition in adjunct form of the first conjunction, can be deleted." (pp. 3-4, 62-64)

It can be seen that this position is different from that taken by Lees. Whereas he asserts that a definite determiner cannot be chosen unless a relative clause is chosen, Mrs. Robbins suggests that the in a relative clause sentence is the result of applying the relative clause transformation.

A relationship between definite determiners and relative clauses was also noticed by Carlota Smith, though her unfounded conclusion that "definiteness is associated with A [appositive] relative clauses, indefiniteness with R [restrictive] relative clauses" (p. 38) appears to be a direct contradiction to the assumption from which both of the preceding analyses start, that

definite determiners are associated with _restrictive_ relative
clauses. Her next step, though it does not support the con-
clusion above, is to categorize determiners as "specified" or
"unspecified," the latter being _the_, _a_, and _Ø_, which may take
either restrictive or appositive relative clauses. Distinctions
between them appear only in restrictions on embedding predicate
sentences (those with BE as the main verb) as relative clauses.
Carlota Smith ends her article with a suggestion that the
distinction between anaphoric and generic determiners be handled,
not in a manner similar to that proposed by Lees, but in the
following way:

> Since anaphoric _the_ cannot always be established syntac-
> tically, an interpretive rule based on the grammar must
> classify many occurrences of _the_ as ambiguous —— that
> is, it must allow either a generic or an anaphoric in-
> terpretation. An interpretive rule can apparently do
> no more than exclude (as definitely not generic) in-
> stances where the grammar points to an anaphoric inter-
> pretation of _the_. (p. 51)

Thus, while she recognizes that the generic determiner is not
grammatically distinguishable from the definite determiner, she
maintains that the anaphoric nature of the definite determiner is
grammatically discoverable.

Though the decisions made as to how to account for the
observations differ considerably, two assumptions are inherent
in the approach of these three transformational analyses. The
first is that there is a distinction among definite, indefinite,
and generic determiners which can be traced in part to this
anaphoric nature of the definite determiner, which prompts the

positing of a grammatical relationship between it and the
relative clause. The second is that the differences among
these determiners and the restrictions on their occurrence are
syntactic in nature.

We shall attempt to show that within the framework outlined
below the first assumption seems to be justified, but that the
second does not.

## C. A New Approach

According to Katz and Postal,

> a linguistic description of a natural language is an
> attempt to reveal the nature of a fluent speaker's
> mastery of that language. . . [It] must reconstruct
> the principles underlying the ability of speakers to
> communicate with one another. Such a reconstruction
> is a scientific theory whose statements represent the
> linguistic structure characteristic of the language
> and whose deductive consequences enable the linguist to
> explain sentence use and comprehension in terms of
> features of this structure. (p. 1)

Since determiners play a large role in sentence use and compre-
hension, and since we accept the goal of explaining these in
terms of features of the linguistic structure, we are led to
inquire what features of the linguistic structure can provide
the basis for this explanation.

In order to clarify our task, let us take a closer look at
some of the observations about determiners which must be accounted
for in an explanation of how we use and understand sentences in
English. Specifically, what are some of the differences between
determiners and what are some of the restrictions on their occur-
rence?

1. The Anaphoric Nature of the Definite Determiner

As mentioned above, the fact that the definite determiner seems to "refer back to something" is not a new observation. None of the proposed attempts to deal with this fact in a linguistic description seem adequate, however, when we consider, for example, the use of the in the following sentences:

A. Did you feed the dog?

B. While I was doing the dishes, the phone rang.

C. The moon is full tonight.

D. Give it to the girl who's wearing a red dress.

E. The man hit the ball.

It has often been noticed that there is something "incomplete" about the use of the in such sentences as E. Relating the to a relative clause would be an ad hoc solution, however, to all occurrences except D and E; in fact, relative clauses play no role in the way we normally use and understand sentences like A, B, and C. Insisting that the be related to some previous sentence would be superfluous in A, B, and C as well, since these are used and can be perfectly understood without any "previous mention." In other words, the concept of "grammatical previous mention" will lead to an incomplete account of how the is used and understood.

2. Distinction between Anaphoric and Generic the

It is equally clear that syntactic features cannot define the distinction between the in its generic and anaphoric occurrences, as numerous examples of ambiguity indicate:

The cat is a ferocious animal.

The college professor is highly respected.

Not only do sentences taken as generic not have a characteristic structure, as was pointed out by Carlota Smith (p. 51), but, as we have shown, the notion of anaphoric is not syntactically definable.

3. The Indefinite

An attempt to explain the way we use the indefinite in English must take into account such sentences as the following:

      A. I have a dog.

      B. I want a dog.

      C. A man is outside.

      D. A man eats rice for lunch.

      E. A man is tall.

To my knowledge, attempts to account for these sentences have been restricted to disallowing structures like E and possibly D. D and E are usually interpreted as deviant in some little-understood way, C seems to be existential, but B does not, while the noun phrase in A may refer to something not "indefinite" at all.

One plausible means of handling these observations would be in terms of some kind of theory of usage. This, I believe, is misleading, first, because there is much about the way determiners are used and understood which is consistent and systematic, and second, because statements can be made about the

way determiners are used and understood without referring to the
real-world context or to the truth value of the sentences in
which they appear. For example, a theory of usage could not
describe the difference between these two sentences, since this
difference has nothing to do with the truth of either or the
existence of the object named by the noun phrase:

The Easter Rabbit came this morning.

An Easter Rabbit came this morning.

In other words, part of the fluent speaker's mastery of English
is his knowledge of how to use the and a, and this should be
revealed in the linguistic description itself.

Two related recent developments in linguistic theory now
make it desirable and possible to discuss some of these ob-
servations made regarding determiners in a more revealing and
satisfying way. The first of these is the revised model of
grammar recently outlined by Chomsky (1964). The concept of a
base component with no context-restricted rewriting rules raises
doubts as to whether the differences and restrictions discussed
above are indeed syntactic in nature; it certainly excludes an
account such as that given by Lees (1963) in which the choice of
a REL clause marker depends on the choice of the definite deter-
miner. In addition, the concept of the "deep structure" of a

sentence as being the input to the semantic component suggests
that many sentences which have been thought to be ungrammatical
may now be considered grammatical, their deviance attributable

to semantically explainable features. Finally, as we shall see
below, the fact that a semantic interpretation is to be placed
on a deep structure in which two related sentences are involved
(as in a relative clause structure) justifies prior consideration
of what the semantic rules must indicate about how each of these
is understood.

The implications of this revised model have led directly to
the second development, the clarification of the conception of
the semantic component itself and the role it must play in
relationship to the other two components, the syntactic and the
phonological, in an integrated linguistic description. Because
of the unrestricted nature of the rewriting rules whose output is
the deep structure of a sentence, and because of the nature of
the goals of a linguistic description, it can be seen that the
semantic component plays an extremely important role in enabling
the linguist to explain sentence use and comprehension.

A further clarification has been the introduction of the
concept of entailment rule in a semantic theory, as outlined by
Fillmore (1964). The claim being made here is that certain
modifications of this concept will provide the basis for ex-
plaining a great part of the way determiners are used and under-
stood. According to Fillmore,

> Entailment rules can be described, roughly, as operating
> in the following way: There is a sentence X which
> cannot by itself be interpreted by the ordinary seman-
> tic rules. Based on the grammatical structure of X,
> the entailment rules will convert X into a set of sen-
> tences $Y^1$ such that each of these sentences can be
> interpreted by the ordinary semantic rules. The seman-
> tic interpretation of the set of sentences Y, then,

> is provided as the semantic interpretation of the
> sentence X.

where footnote 1 reads:

> Perhaps the word "proposition" should be used instead
> of "sentence." It is not necessary to an understanding
> of entailment rules that the elements of Y be realiz-
> able as sentences. (p. 6)

In discussing entailed propositions introduced by "One would

expect that . . .", it is suggested that:

> The entailed proposition can be represented more ab-
> stractly if "expectation" can be presented as a
> modality on an entire sentence. (p. 12)

In a similar way, it appears that the use of the determiner

entails certain assumptions about the ability of the hearer to

discover what is being referred to in the noun phrase containing

that determiner, and that 'assumption' can also be represented

as a modality, not on an entire sentence, but on a noun phrase.

In this respect, these assumptions differ from the examples of

entailment given by Fillmore, since the latter concern the

interpretation of a complete sentence. This modification seems

to be a reasonable one, nevertheless, and the assumptions seem

to fall naturally within the domain of entailment, since, as we

have seen, they are not explainable in syntactic terms, nor do

they refer to the context, either situational or linguistic. In

addition, just as the contribution of the word 'even' in:

> She _even_ reads Sanskrit

cannot be explained by assigning it semantic features of the

usual kind, it appears that the native speaker's understanding

of the determiners cannot be explained in terms of semantic

features which might be assigned to it, since there is no pro-
vision, within the framework of semantic markers as presented by
Katz and Fodor, for the type of contribution made by the deter-
miner to the interpretation of a sentence in which it is found.
Thus, this point of view seems to reveal in the most natural way
the essence of the way we understand determiners, and allows
us to make more precise the notions of "definite" and "indefinite"
noun phrases in English as well as in   language like Mandarin.

Let us examine each of these notions in greater detail.
Considering the definite determiner, we may review the five
examples given above.

A. Did you feed <u>the</u> dog?

B. While I was doing <u>the</u> dishes, <u>the</u> phone rang.

C. <u>The</u> moon is full tonight.

D. Give it to <u>the</u> girl who's wearing a red dress.

E. <u>The</u> man hit <u>the</u> ball.

The assumption being made by the speaker when he uses the defi-
nite determiner is that the hearer has some basis for discovering
which item of the set named by the noun is being referred to,
and that it is necessary to be able to do so. The assumption
holds as well for <u>the</u> with plural nouns, where the hearer is
able to select a certain subset from the set named by the noun,
as in:

F. <u>The</u> boys that we saw yesterday will be here today

and with mass nouns, where the hearer is able to select a certain
"part" of the mass named by the noun:

G. <u>The</u> water in the sink is too hot.

The difficulty in articulating this kind of assumption is evident from the looseness with which we use the term <u>item</u> to include such nouns as <u>concert</u>, <u>dance</u>, <u>crash</u>, <u>theory</u>, <u>answer</u>, etc. Yet the concept is intuitively sufficiently clear to justify this somewhat inadequate formulation. The differences among the occurrences of <u>the</u> in the above examples can be accounted for by the fact that there are different ways in which the basis for this discovery may be provided.

The hearer may know which of the set is being referred to by <u>convention</u>, an agreement as to the limits of the universe in which the item referred to is the only ( ) of its kind. This agreement may be between just the speaker and the hearer, as in A, where, for example, both may know that there is only one dog in the household; or it may be agreed upon by larger groups, as in B or C. The similarity between this kind of convention and proper names, which are also agreements about what to call something, may be seen from their use with relative clauses. A relative clause added to the noun phrases in A, B, or C, or to the noun phrase in:

John is coming over tonight

as:

John who lives next door is coming over tonight

means that the sentence is no longer understood in this "conventional" sense.

Accordingly, another means, illustrated by D, F, and G,

by which the hearer can discover what is being referred to is
by the use of a <u>relative clause</u> which performs the function of
picking out for the hearer from the set named by the noun the
particular item which the speaker has in mind.

The speaker may assume that the hearer has a way of dis-
covering what is being referred to on the basis of knowledge
derived from <u>previous conversation</u>, or from the <u>immediate
environment</u>, either of which would be a reasonable account of
how sentence E is understood.

A sentence containing a definite determiner, then, may be
said to entail, among other things, this assumption regarding
the hearer's ability to discover what the referent of the noun
phrase is. In terms of this entailment, statements about some
previously vague notions concerning the definite determiner may
perhaps be clarified. First, we can describe the definite
determiner as being anaphoric in those cases in which the speaker
assumes that the hearer must glean his knowledge of the referent
in some way other than by convention or extra-linguistic know-
ledge. Thus, in D, <u>the</u> is related to another part of the sen-
tence, while in E, it is related to something outside the sen-
tence, which accounts for our judging E to be "incomplete" as
it stands. In addition, the distinction between the definite and
the generic <u>the</u> depends on the presence of the assumption dis-
cussed above with the use of the former, its absence with the
latter. We see, then, that a <u>definite</u> determiner may be either
<u>anaphoric</u> or <u>conventional</u>, but that this is a semantic and not

a syntactic distinction. Likewise, we may distinguish a
definite and a generic determiner semantically but not syntac-
tically.[2] Finally, a definite determiner can be said to be
"misused" if this assumption is not borne out, in which case
the characteristic response would be a question demanding that
more information be provided. For example, if the hearer of
the sentence:

Give it to the girl

actually had no basis for discovering which girl was being
referred to, he would ask:

Which girl?

We may consider a definite noun phrase in English, then,
as one which entails the same assumption as the "marker" of
definiteness, the definite determiner. This would include at
least proper nouns, pronouns, and noun phrases containing de-
monstratives and genitives.

As an example, considering the sentence:

She even reads the textbook

we might add to the proposition entailed by the presence of the
word 'even':

One would expect that she does not read the textbook
(Fillmore, p. 8)

the proposition entailed by the definite noun phrase as marked
by the:

It is assumed that you have a way of discovering what
the referent of the noun textbook is, and that it is
necessary that you be able to do so,

where you represents the fact that the assumption concerns the hearer.

Turning to the indefinite determiner, the examples which were given above were:

A. I have a dog.

B. I want a dog.

C. A ma_ is outside.

D. A man eats rice for lunch.

E. A man is tall.

The assumption entailed by the indefinite is that it is not necessary that the hearer be able to select one item from the set of items named by the noun (where the same extensions as given for the definite determiner for plural nouns and mass nouns apply). The speaker may or may not know what item is being referred to, and the hearer himself may or may not know; the assumption is that this is irrelevant. For example, in a situation in which the sentence:

Here is a cookie

might be heard, both the speaker and the hearer may know which item from the set of all cookies is being referred to; the use of a indicates that there is no necessity to distinguish this particular one. It can be seen that the use of the definite determiner would be inappropriate:

Here is the cookie

unless there were some reason to distinguish this cookie from others like it.

In terms of this assumption we may informally explain why
we judge sentences D and E to be somewhat deviant. We may con-
sider them to be examples of sentences which are grammatically
well-formed and semantically interpretable, but infrequently
used because of the nature of the assumptions entailed and of
the purposes to which we put language. If the use of a entails
the assumption that the "referent" need not be distinguished
from others of its kind, then to make an assertion or a pro-
position of the kind which is made when we use the simple present
tense in English is tautologous; as has been often pointed out,
sentences which are patently true or false are not very useful
in ordinary discourse. The "usefulness" of this particular type
of indefinite sentence will be demonstrated below in the section
dealing with relative clauses.

These indefinite noun phrases must be distinguished from
the alternate form of the generic determiner, which is a, as in:

A lion has a mane.

A dog is a man's best friend.

As with the the form, there is no syntactic difference between
the generic and the indefinite. The dictionary component of the
semantic rules will reveal this ambiguity by giving two readings
for the and two for a. The fact that one interpretation rather
than the other comes to the hearer's mind first seems to be a
result of his knowledge of facts about the world and of his
appraisal of the situation at hand, rather than a result of the
presence or absence of other syntactic elements in the sentence,

since a careful choice of lexical items can provide counter-
examples to any proposal to define generic or definite noun
phrases on the basis of syntactic features. Entailed by a
generic noun phrase is the assumption that there is no "item"
being referred to; the noun phrase refers to the entire class
named by the noun. Because of this there is no semantic dif-
ference between the singular and the plural:

> An apple is a fruit.
>
> The apple is a fruit.
>
> Apples are a fruit.[3]

A structure very closely related to sentences with indefi-
nites as subjects is the existential sentence:

> A thread is on your coat.
>
> There is a thread on your coat.

It appears that the rule by which existential sentences are formed
is a late stylistic rule which takes sentences of the shape

$$\text{(a)} \quad \text{Indef + Noun + Be} + \left\{ \begin{array}{l} \text{LOC} \\ \text{ING + V + X} \end{array} \right\}$$

moves the Be to the sentence-initial position and precedes it
with a There. It will be noticed that with the first option
Be is a main verb, with the second it is part of the Aux complex.
The main verb Be must be followed by a locative phrase if the
sentence is to be transformed into an existential one:

> *There's a girl tall
>
> *There's a girl my sister
>
> There's a girl in the kitchen.[4]

We can define an indefinite noun phrase, then, as being
one which entails the same assumption as does the indefinite
marker; thus the use of numerals as determiners would provide
another example of an indefinite noun phrase:

    <u>Three books</u> are on the table.

    There are <u>three books</u> on the table.

## II. THE ROLE OF DETERMINERS IN RELATIVE
## CLAUSE STRUCTURES IN ENGLISH

A noun with a definite or indefinite determiner may be
followed by a restrictive relative (REL) clause[5] in English.[6]
The fact that there appear to be various ways of understanding
REL clauses leads us to inquire, first, what kinds of differ-
ences in the deep structures would account for this ambiguity,
and second, whether REL clause formation might be a slightly
more involved process than simply matching identical nouns in
the two parts of a REL clause structure, and then pronominal-
izing one of them, and in fact, whether the identity condition
itself might need to be modified.[7]

At this point, we may make several remarks about the
analysis given here. First, though the argument is presented in
terms of examples whose noun phrases are singular, the claims
made would not be modified if plural noun phrases had been con-
sidered instead. Second, the stress pattern associated with
these examples is a neutral one; relative clause sentences with
special emphasis on any constituent may have different deep
structures than those with neutral stress. Third, though this
analysis is not a formal one, it is felt that the rules of the
syntactic and semantic components must take into account the

points to be presented here. Finally, consideration will not

be given here to the sources of generic nouns with relative

clauses; the the and a mentioned in the following pages will be

the definite and indefinite determiners respectively.

An example of a sentence with the and a REL clause which

we would understand in two different ways would be:

I heard the symphony that Smith wrote.

This sentence can mean either that Smith wrote only one symphony

or that the symphony which the speaker heard was one that had

been previously referred to. The same sentence with a sub-

stituted for the:

I heard a symphony that Smith wrote

can be understood as indicating either that Smith wrote several

symphonies of which the speaker heard one, or that the symphony

which the speaker heard is being further described by naming

its composer.

Before further discussing the various types of REL clauses,

it will be helpful to introduce the distinction made by Katz and

Postal between a sentence and a sentoid.

> We use the term "sentence" to refer to a fixed string
> of formatives regardless of the structural description
> it receives. We introduce the term sentoid to refer to
> a string of formatives with a unique associated struc-
> tural description. (p. 24)

A sentoid, then, refers to one of the interpretations of an

ambiguous sentence.

One of the motivations for the concept of deep structure is

the fact that the syntactic relationships in each of the underly-

ing strings of a complex sentence must be taken into account in order that the semantic interpretation of the entire structure can be given. The way in which this semantic interpretation is to be given for structures of this type, however, has not been clearly formulated as yet. It was proposed by Katz and Fodor that semantic interpretations for sentences could be provided by two types of projection rules, one to operate on single source sen- tences, one to operate on complex sentences. As Katz and Postal summarize the function of the latter type:

> (a) The P2 were to derive meanings for a sentence so as to reflect the manner in which those meanings were composed from the meanings of the sentence structure(s) used in its transformational derivation as well as the char- acter of this derivation. (p. 23)

Katz and Postal then go on to suggest that since the revised model of grammar provides a single formal object, the generalized P-marker, upon which the semantic rules can operate, the type 2 projection rule may be abolished (p. 67). They claim, then, that in the more recent formulation

> it is evident that the full semantic interpretation of a sentoid can be obtained by the operation of P1 on generalized P-markers exclusively. (p. 67)

It has been argued, however (Fillmore, 1964), that a semantic interpretation of a sentence involves more than what is given by projection rules; it must show what the sentence entails. Adopting this point of view, and replacing Katz and Postal's terms P1 and P2 by this broader notion of semantic interpretation, I would like to claim that two types of inter- pretations are indeed needed, since it is only in terms of what

is entailed by each of the source sentences that we can inter-
pret the generalized structure. Reformulating it in terms of
Chomsky's revision. the position we reassume, then, is the
original one (a) of Katz and Fodor. In other words, it is not
desirable that the rules which interpret a simple P-marker be
the same as those which interpret a complex one, since it will
take a different type of rule to show how the interpretation
of each of the source sentences contributes to the interpre-
tation of the whole.

Specifically this latter type of rule seems to be
necessitated by the fact that the way the determiners in the
underlying sources of a REL clause structure are understood
plays a role in explaining the ways we understand the sentence
as a whole. In fact, only in these terms can we answer the
questions posed above and explain the various ways we interpret
these REL clause sentences.

The role played by the determiners in these underlying
sentences can be said to correspond, in an as yet imprecise way,
to that played by the determiners in the same two sentences
used together in normal discourse. That is, in one of the pair
a appears, in the other, the. In earlier conceptions of trans-
formational grammars, where the relationship between the two
sources of a REL clause sentence was thought to be exhibited
only by means of the transformation by which they were asso-
ciated, this formulation would not be justified.[8] But in
terms of the deep structure of the sentence which unmistakably

reveals the relationship between the sources, this point of view seems to be quite natural. In normal discourse, as we have said, the use of _the_ entails the assumption that the hearer is able to distinguish the item referred to. If a sentence with _a_ plus an identical noun immediately preceding it can be said to provide the basis upon which the hearer can make the distinction, and if this situation is paralleled in the deep structure of a REL clause sentence, then the two noun phrases can be said to be identical in reference, which is what we mean by the "identity condition."

At this point, an important distinction must be made between the following three concepts: the abstract relationship between the determiners in the strings of a complex deep structure, the "order" in which semantic rules operate on these strings, and the temporal order in which the strings would appear in spoken discourse. Clearly, the essence of the way we understand the following two sentences:

Smith wrote _a_ symphony

I heard _the_ symphony

depends on the order in which they are spoken. But this is precisely because of the relationship between the assumptions entailed by the determiners in these two sentences. It is this relationship, then, that must be revealed by the deep structure. But there is no obvious connection between the order in which isolated sentences are spoken and the fact that one or the other of them appears as the matrix string in a complex structure,

and hence appears "above" the constituent sentence in a two-dimensional representation of this structure. The question of whether the semantic rules would read the two parts of the complex structure in the same order in which they are spoken does not arise if we consider there to be two types of semantic rules, one type to operate on simple structures, those containing just one initial symbol S, and one type to operate on complex structures containing more than one initial symbol, where each string is taken account of in assigning an interpretation to the whole.

It might seem more plausible and simple to indicate this identity of reference by noun phrases whose determiners, as well as nouns, were identical. In terms of the claims which have been made here, this proposal must be rejected. First, if we can show identity of referent by the choice of determiners which furthermore corresponds to the way we would show identity of referent were these two subsequent sentences in discourse, this seems to bring us closer to our explanatory goal than would the imposition of an arbitrary condition, that two noun phrases could be considered to be related semantically if they were exactly identical. Second, not only does "matching determiners" remove the possibility of utilizing the normal interpretation of each of the underlying sentences to interpret the sentence as a whole, but it fails to provide a way to explain the differences in the way we understand sentences such as those given above.[9]

REL clauses may be interpreted in various ways. Relevant to the discussion of MOD clauses will be a type of descriptive REL clause which follows a deictic determiner and a noun:
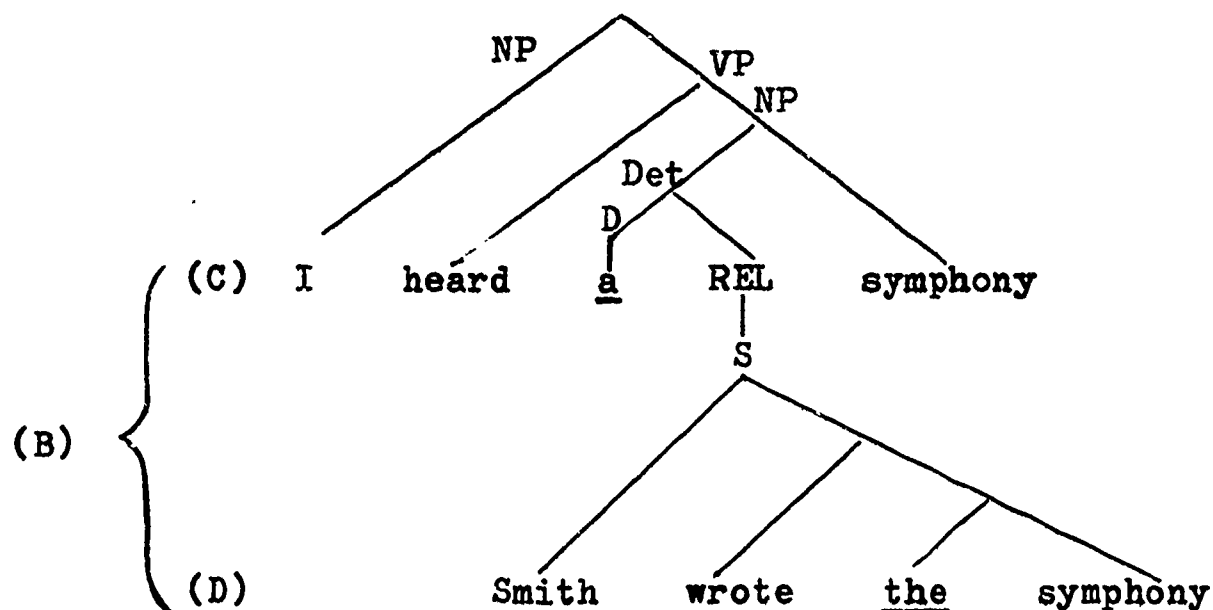
I saw <u>that</u> dog you bought.

The three types with which we will be concerned here, however, will be those associated with the definite and indefinite determiners, the Descriptive, the Restrictive, and the Selective.

1) The Descriptive type can be illustrated by the sentence:

(A) I heard <u>a</u> symphony that Smith wrote

whose deep structure under one interpretation would be:



The Descriptive REL clause follows an indefinite noun and is interpreted as a further description of that noun. It can be seen that this is exactly the way we would understand the sequence (C) (D) in a conversation. (C) refers to any undifferentiated symphony, while (D) provides some additional information about it.[10]

2) The Restrictive REL clause may be illustrated by the sentence:

(E) I heard <u>the</u> symphony that Smith wrote

whose deep structure may be represented by the diagram:
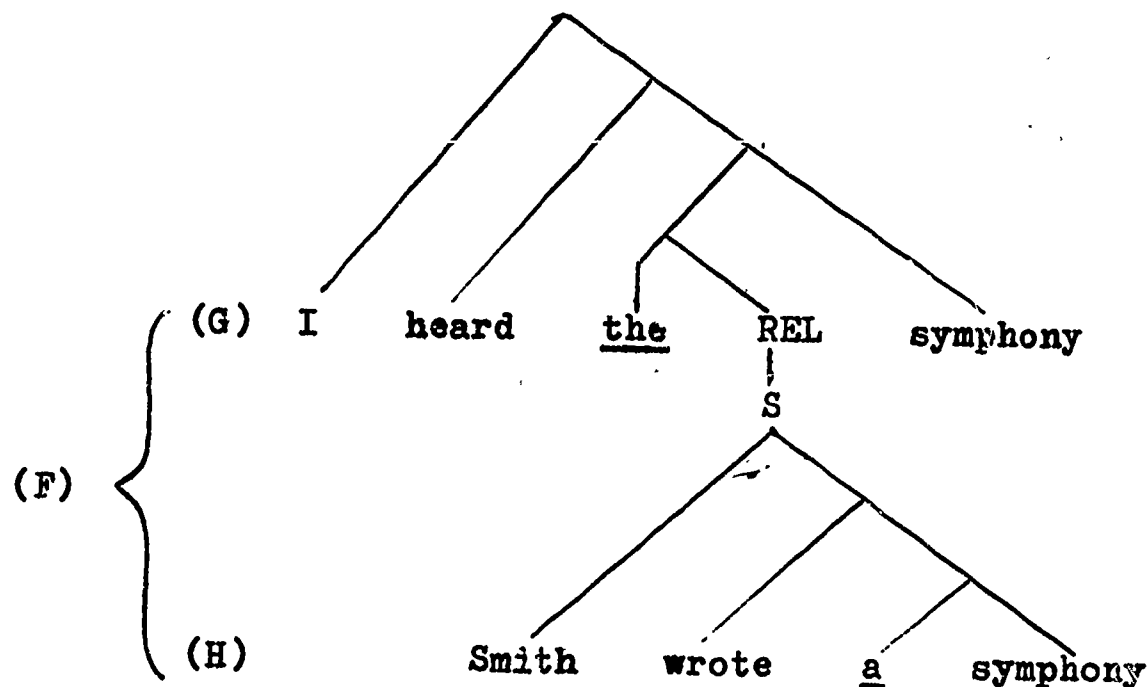


This sequence entails exactly the same assumptions as (E); the
the in the matrix signals to the hearer that he is assumed to
have some way of finding out what is referred to by the noun.
The two ways of understanding (E) which were pointed out above
can be traced to the nature of the way in which (H) is taken
by the hearer to provide the basis for his discovery of what is
being referred to by the use of the in (G). If (H) is equiv-
alent to something established in a previous conversation, then
the hearer interprets (E) as referring to a symphony previously
discussed. If not, or if the hearer knows that th wrote
only one symphony, he may take this fact as the basis for his
selection of referent. It can be seen that (  ) is not ambiguous
in the technical sense of having more than one structural de-
scription, but that it has two interpretations depending on how
the assumptions entailed by (G) and (H) are related to extra-
linguistic factors.

It is here that the constituent sentence may be one of the
"deviant" indefinite subject sentences mentioned above such as:

A man is tall

without the surface structure itself being deviant since it is
the matrix sentence <u>the</u> which appears in the surface structures.
In fact, "deviant" sentences like this underlie many examples of
surface sentences containing pre-nominal modifiers, such as:

<u>The tall man</u> is my brother

from:
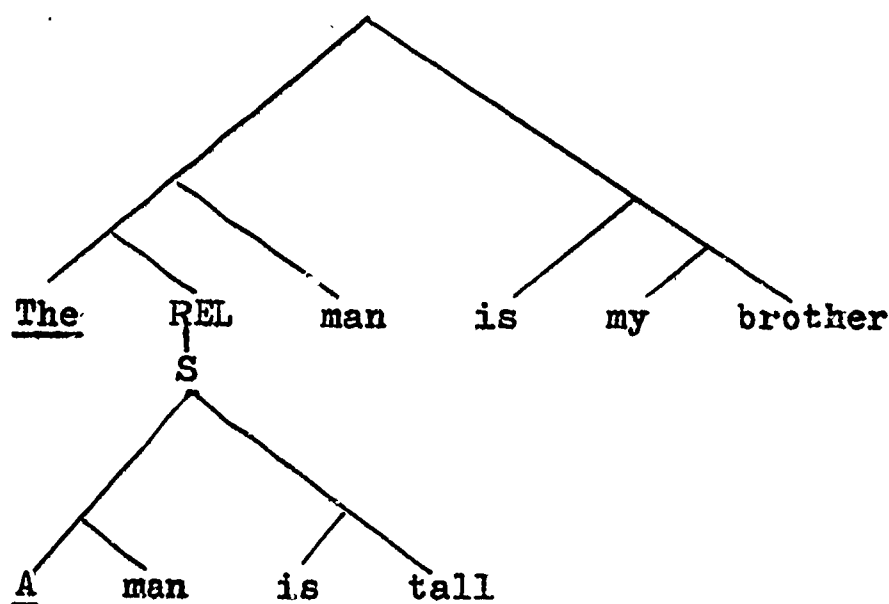


It is precisely this fact that the grammar will generate sen-
tences which are interpretable but not often used in discourse
which lends support to the claim that it is the semantic inter-
pretations, in the technical sense, of the underlying strings
which account for the interpretation of the complex structure.

3) The Selective REL clause may be illustrated by the
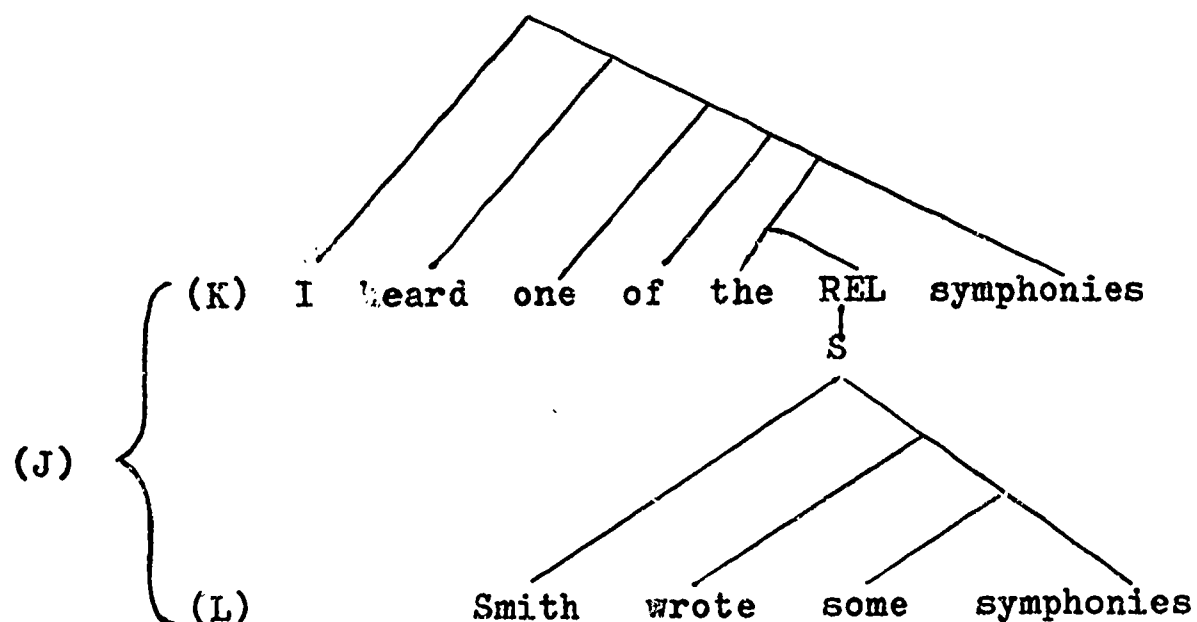other interpretation of the sentence:

(1)   I heard <u>a</u> symphony that Smith wrote.

Under the interpretation that Smith wrote several symphonies of

which the speaker heard one, we do not understand the relative

clause in the descriptive sense as discussed in the analysis

of (A), nor do we understand this a in the same way as we do

the a in:

(C)   I heard a symphony

which would be the matrix in a Descriptive REL clause sentence.

Instead, we understand (I) in the same way as the strings of

its deep structure:

(J)  {
  (K)  I heard   one   of   the   REL   symphonies
                                    S
  (L)             Smith   wrote   some   symphonies
}

It can be seen that this structure differs considerably from

those of the other two types we have presented.  Although it

seems clear that only in terms of a pair of underlying strings

like this can we explain our understanding of (I), the formu-

lation of the rule which will convert (J) into (I) will neces-

sarily be somewhat complicated.

Another example of the Selective REL clause may be provided

by the sentence:

(M)   A man I know speaks 27 languages.

If the REL clause is interpreted as being a Descriptive one, the

sentoid is understood as being deviant in exactly the same way as the matrix sentence of its deep structure:

(N)  A man speaks 27 languages.

If the REL clause is interpreted instead as being a Selective one, the sentoid is not deviant at all, and the way we understand the subject of (M) is reflected not by (N), but by the pair:

I know some men

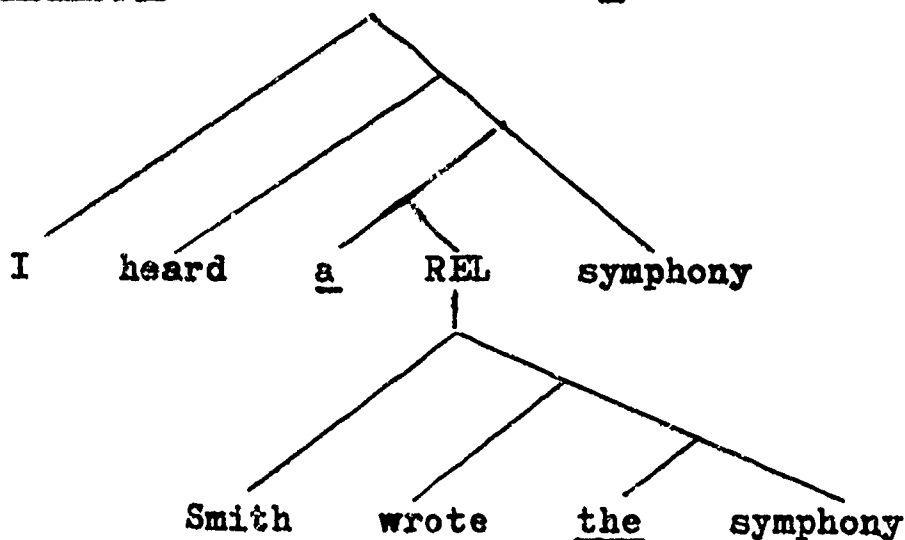One of the men speaks 27 languages.[11]

To recapitulate, then, the differences among these three types of REL clauses may be viewed as a function of the determiners which appear in each of the sentences of their deep structures.
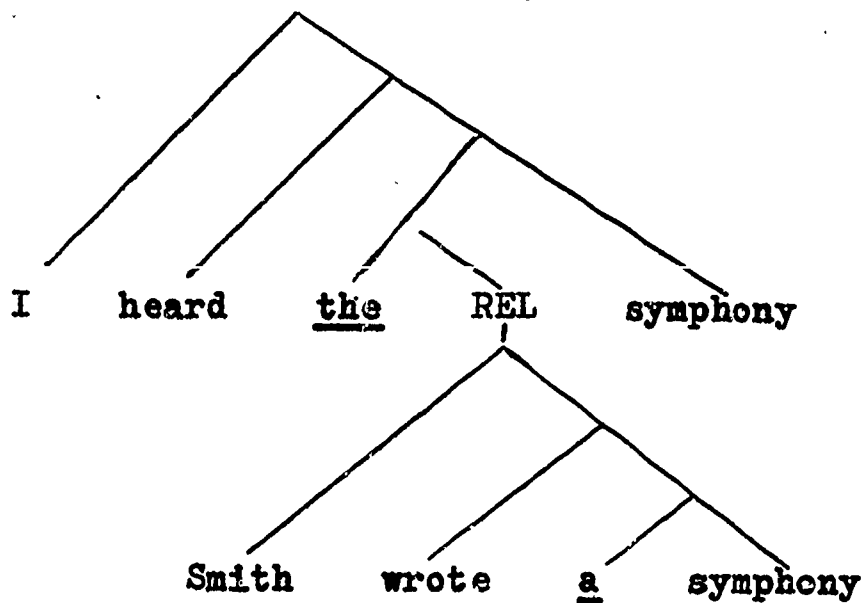
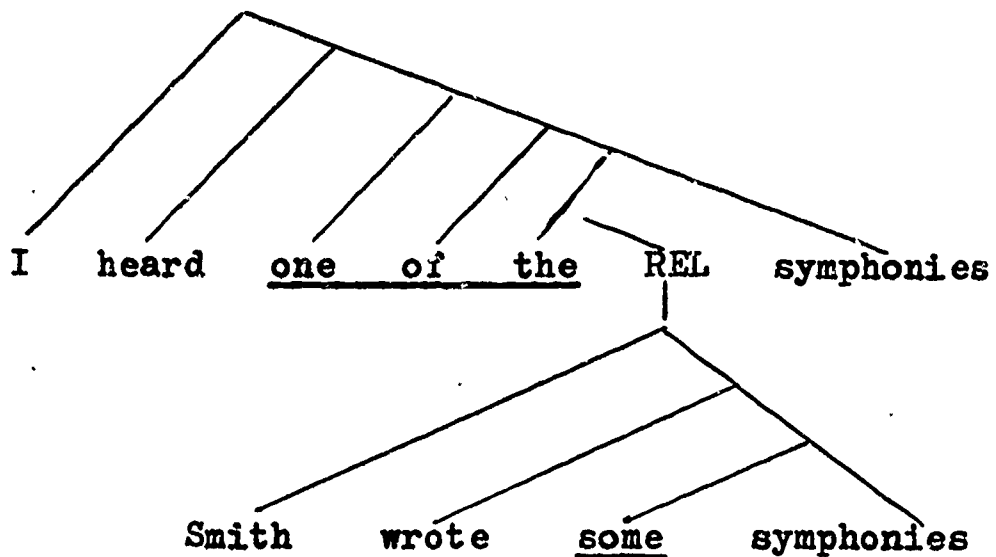1)  <u>Descriptive</u>:                ... <u>a</u> Noun which ...

I       heard      <u>a</u>      REL       symphony

Smith       wrote       <u>the</u>       symphony

2) <u>Restrictive</u>:               ... <u>the</u> Noun which ...

I      heard    <u>the</u>    REL      symphony

Smith      wrote      <u>a</u>      symphony

3) <u>Selective</u>:               ... a Noun which ...

I      heard    <u>one</u>    <u>of</u>    <u>the</u>    REL      symphonies

Smith      wrote      <u>some</u>      symphonies

It can be seen that we have answered the questions raised
at the beginning of this section.  We have shown the different
deep structures which underlie the various ways in which REL
clause sentences are understood, and we have modified the
identity condition to the extent that the determiners of the
identical nouns will not be the same, in order to provide the
basis for a more revealing semantic interpretation.[12]

## III.  THE DETERMINER IN MANDARIN

This investigation may indicate a way to approach deter-
miners and their relationship to definiteness and indefiniteness
in a language like Mandarin.[13]  The difference between the two
languages is that definiteness and indefiniteness are obliga-
torily expressed syntactic categories in English,[14] as well as
in most Indo-European languages, whereas they are optionally
expressed in Mandarin.

The aim of comparative syntax, from the synchronic point of
view, may be considered to be the examination, within a common
theory, of "similar" structures in two languages with an eye
toward the kinds of difficulties which any translation procedure
must face.  From this point of view, we are led to inquire not
only into the means by which Mandarin expresses the same thing
which is expressed by a or the, but also into the concepts of
definiteness and indefiniteness themselves, and to determine
what percentage of the "semantic load" of each of these is
carried by the markers.

We have argued that definite and indefinite noun phrases
may be characterized by referring to the assumptions in the
interpretation of each.  For two reasons, this must be the basis
for a study of the determiner in Mandarin.  The important point,

as we have mentioned, is that definiteness and indefiniteness
need not be overtly marked in Mandarin. Thus, if we are to
study determiners in this language, this optionality must be
recognized and the conditions under which a determiner may appear
must be stated. Secondly, only after this has been done, and
the relationship between these optional determiners and the
categories they express has been made clear, can we proceed to
compare them with the determiners in English, whose relationship
with these categories is relatively straightforward.

One other point should be borne in mind. The use of the
determiner in Mandarin may be likened to the optional use of
the numeral two in English if it is desired that duality, an
obligatory syntactic category in some languages, be expressed.
Within the framework of the description of Mandarin, it would
appear that there is little motivation for pursuing an investi-
gation of this type of problem. However, from the point of view
of comparison with a language in which these markers are ob-
ligatory, with translation procedures providing the point around
which the comparison revolves, it can be seen that this investi-
gation may be quite well motivated. This approach will provide
the basis upon which this analysis will proceed. Without a
formal justification, then, we will assume the universal cate-
gories of definiteness and indefiniteness to be given.

Thus we will begin by noting that, in contrast to English
(see footnote14), a noun in Mandarin may appear without a
determiner. Since the indefinite, however, must be marked,

such a noun without a determiner is not open to the indefinite interpretation.

An indefinite subject must be accompanied by what we may call the existential marker, yǒu (see Appendix for character representations):[15]

(1) Yǒu  rén  zài  wàimian.[16]
Exist person located outside
(Someone is outside)[17]

(2) Yǒu  san  -ge  háizi  zài  chī  fàn.
Exist three-classifier child asp.  eat  rice
(Three children are eating rice)

Accordingly, in the subject position the distinction between indefinite and non-indefinite noun phrases is clear: those accompanied by yǒu are indefinite, those unaccompanied by this marker are not.[18]

In any other position the indefinite must be marker by a numeral-plus-classifier:

yí - ge  one
wǔ - ge  five

or one of the plural indefinite markers:

yí - xie  a group of
jí - ge  several, some.

Thus, an unmarked noun may be definite or generic. If the speaker wishes to specify that the noun is definite, he may choose the definite determiner nèi-plus-classifier. Though this determiner is homophonous with the obviate deictic nèi-plus-classifier (that), there appear to be good reasons for considering them to be two distinct lexical items in the dictionary. First, though the distinction between definiteness and deixis

has not been clearly defined, there are occurrences of n<u>è</u>i- which

are not deictic in any sense, such as:

(3) Zuǒtian wǒ kànjian <u>nèi</u>-ge rén.
  Yesterday I saw <u>the</u>-cl. person
  (Yesterday I saw <u>the</u> person)

An indication that this is not the deictic marker is that the use

of the <u>proximate</u> deictic marker z<u>hè</u>i- (<u>this</u>) which is not homo-

phonous with any other word cannot be understood in any way ex-

cept as a deictic:

(4) Zuǒtian wǒ kànjian <u>zhèi</u>-ge rén.
  Yesterday I saw <u>this</u>-cl. person
  (Yesterday I saw <u>this</u> person)

Second, this distinction appears to be crucial in explaining

certain differences in the way we interpret modifying (MOD)

clause sentences.

   The conditions of definiteness under which <u>the</u> is ob-

ligatorily used in English correspond to those under which

n<u>è</u>i- is optionally chosen in Mandarin except in one instance.

In the discussion of the definite determiner in English, it

was mentioned that one of the ways in which the hearer can

discover what is being referred to is by <u>convention</u>, an agree-

ment as to the limits of the universe in which the item referred

to is the only one of its kind:

  A. Did you feed <u>the</u> dog?

  B. While I was doing <u>the</u> dishes, <u>the</u> phone rang.

  C. <u>The</u> moon is full tonight.

In the translations of such sentences as these, the definite

determiner is prohibited:

(5)  A.  Nǐ    wèi-le    gǒu    méi-yǒu?
         You   feed-asp.  dog    NEG-asp.

(6)  B.  Wǒ  xǐ  wǎn  de shíhòu  diànhuàlíng  xiǎng-le.
         I   wash pans  de time   phone-bell   ring -asp.

(7)  C.  Jīntian   wǎnshàng   yuèliang   hěn   yuǎn.
         Today     evening    moon       very  round

Thus, it is only when <u>anaphoric</u> definiteness is expressed that
the definite determiner may be used.

The deictic marker may be used, in which case it is usually
used to express contempt or impatience, exactly as in English:

(8)  Nǐ    wèi-le    nèi-ge    gǒu    méi yǒu?
     You   feed-asp.  that-cl.   dog    NEG-asp.
     (Did you feed that dog?)

## IV.  THE ROLE OF DETERMINERS IN MODIFYING
## CLAUSE STRUCTURES IN MANDARIN

The surface structure of a MOD clause sentence in
Mandarin may be represented by the formula:

$$X \quad (D) \quad [A \quad B] \quad -de \quad (D) \quad N \quad Y$$

where $\underline{X \, N \, Y}$ represents the matrix string, $\underline{N}$ being the shared
noun, and where [A  B] represents what is "left" of the con-
stituent string after the shared noun has been deleted.  (D) re-
presents the two possible positions of the determiner, either
preceding or following the MOD clause.  For example:

(9)

| X | [A  B]  -de | D | N | Y |
|---|---|---|---|---|
| Wŏ  kàn-le | Grimm  xiĕ-de | nòi-bĕn | shū | ∅ |
| I  read-asp. | Grimm  write-de | that-cl. | book | |

(I read the book that Grimm wrote)

The distinction between these two positions of the determiner
will be discussed below.

In terms of the points made above concerning the role of
determiners in REL clauses, and the behavior of determiners in
Mandarin, we will attempt to show the role of determiners in
MOD clauses in Mandarin.  Specifically, the points to be kept
in mind are two.

First, brought out in Section II was that it is not only
unnecessary but undesirable that the determiners be identical in
the shared Nominals of two strings in a modifying clause struc-

ture.  The arguments were presented in terms of the description
of English, but the claim constitutes a formal universal.  We
will try to show how the normal semantic interpretation of the
underlying strings contributes to the understanding of the MOD
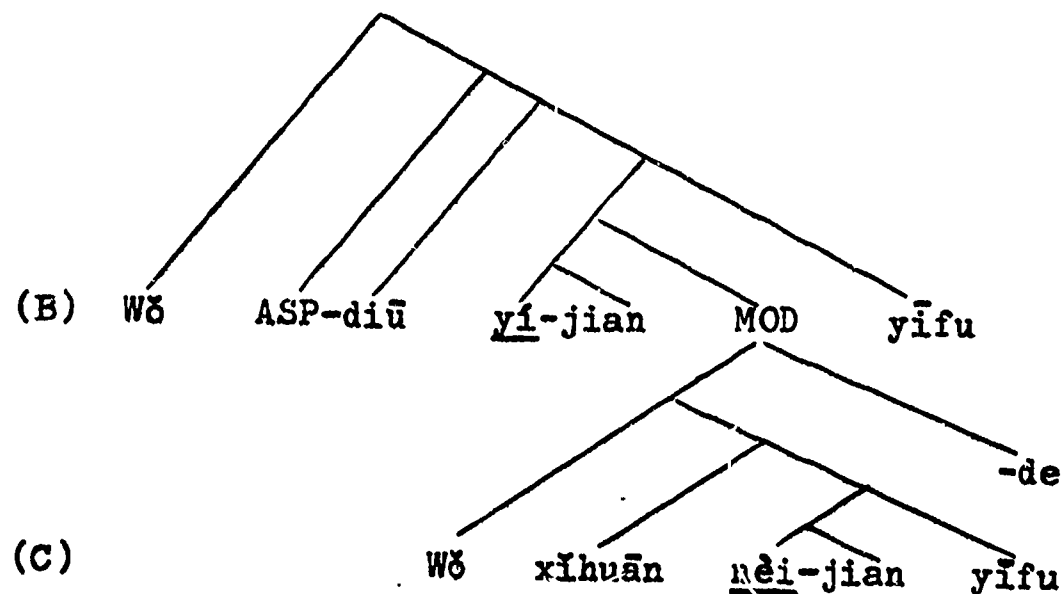clause structure in Mandarin.

Second, it will be recalled that the definite determiner
nèi- is homophonous with the deictic determiner.  The distinction
between the two appears to be significant in the interpretation
of MOD clause structures.

Three types of MOD clause structures may be recognized,
differing in the determiners themselves, their positions, and in
interpretation.  Their correspondences with the REL clause types
will be brought out in the course of the discussion.  We may
call them Descriptive (a) and (b), and Restrictive.

1)  The Descriptive (a) type may be illustrated by the
sentence:

(10)  (A)  Wǒ    diū-le   yí-jian   wǒ  xǐhuān-de   yīfu
           I  lose-asp. one-cl.    I   like   -de   dress
           (I lost a dress that I like)19

whose deep structure would be:

(B)  Wǒ    ASP-diū    yí-jian    MOD    yīfu

                                                   -de

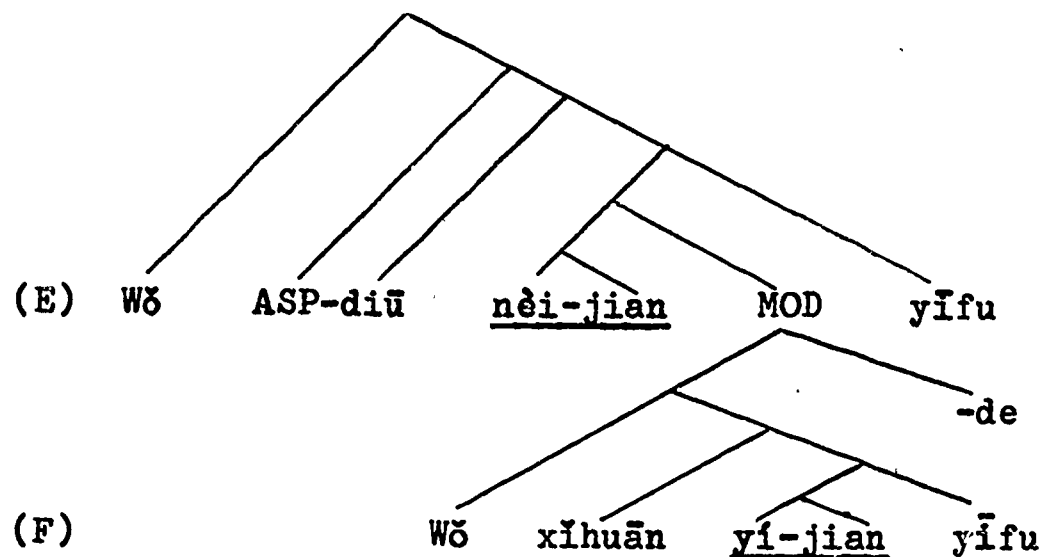(C)              Wǒ   xǐhuān   nèi-jian   yīfu

The characteristics of this type are that the yǐ- of the matrix
sentence (B) appears in the surface structure, and that the
MOD clause in (A) is interpreted as being a Descriptive one,
~~exactly as is the English Descriptive REL clause represented~~
in the translation of (A). Again, (A) exactly represents (B)
(C) as this sequence would be understood in normal discourse.[20]

    2) The Descriptive (b) type may be illustrated by the
sentence:

> (11) (D)  Wǒ  diū-le  <u>nèi-jian</u>  wǒ  xǐhuān-de  yǐfu
>            I  lose-asp.  that-cl.  I   like -de  dress
>            (I lost <u>that</u> dress that I like)

and its underlying structure:



> (E)  Wǒ    ASP-diū  <u>nèi-jian</u>  MOD  yǐfu
>                                           -de
> (F)                  Wǒ  xǐhuān  <u>yǐ-jian</u>  yǐfu

In (D) the determiner <u>nèi</u>- can be seen to precede the MOD clause.
The interpretation of (D) parallels the interpretation of (F)
(E) where the <u>nèi</u>- in (E) is the deictic determiner. The MOD
clause describes the noun <u>yǐfu</u> in the same way that the REL
clause describes the noun <u>dress</u> preceded by the deictic <u>that</u> in
the English translation.

    3) Keeping in mind the characteristics of (D) and its deep
structure, and considering now the Restrictive MOD clause sen-

tence in which the determiner n**èi**- follows the MOD clause:

(G) Wǒ   diū-le   wǒ   xǐhuān-de   <u>nèi-jian</u>   yīfu
I   lose-asp.   I   like -de   the-cl.   dress
(I lost <u>the</u> dress <u>that</u> I <u>like</u>)

from:

(H) Wǒ   ASP-diū   <u>nèi-jian</u>   MOD   yīfu

(I)   Wǒ   xǐhuān   <u>yī-jian</u>   yīfu   -de
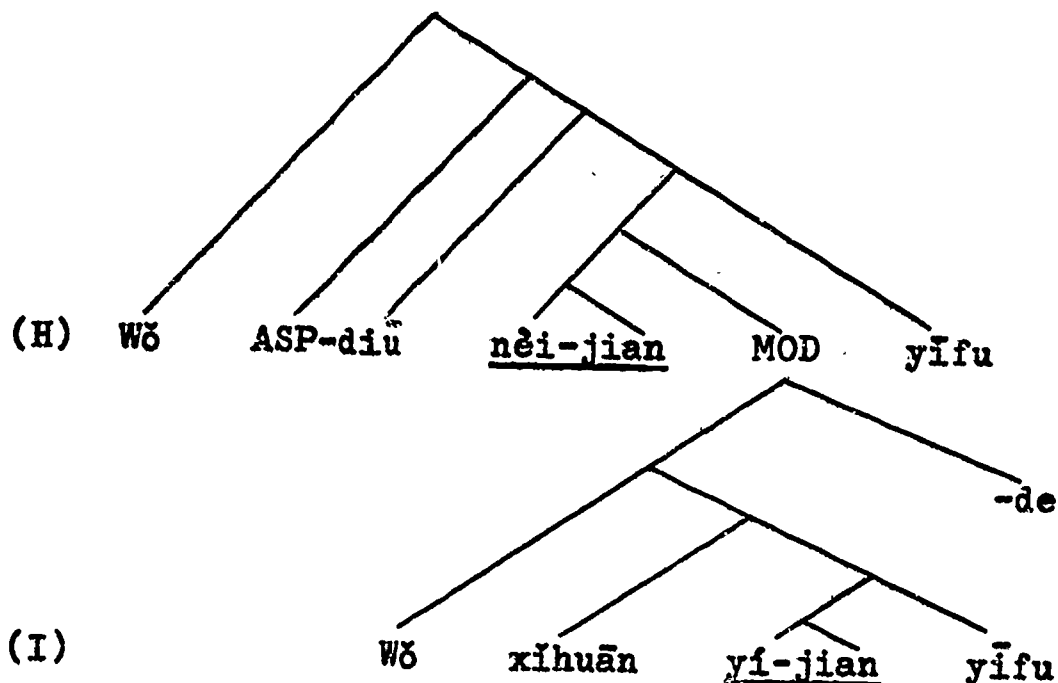
we notice several points of comparison. First, the surface

structures (D) and (G) are identical except for the position

of <u>nèi-jian</u>. Second, their deep structures look exactly identi-

cal. The interpretation of the MOD clause in (G), however, is

not as a Descriptive clause, but as a Restrictive, or contrastive,

one. Whereas the noun in (D) is further described by the MOD

clause, the noun in (G) is restricted, or implicitly contrasted

with another noun phrase, such as:

wǒ   <u>bùxǐhuān-de</u>   nèi-jian   yīfu.
I   not like -de   that-cl.   dress
(the dress that I <u>don't</u> like)

The difference between these two deep structures which accounts

for the difference in surface structure and in interpretation

between (D) and (G) is that the determiner n**èi**- in (H) is the

definite determiner. The fact that (G) is interpreted as

contrastive, then, is a direct result of the fact that the definite nèi- in its matrix string entails the assumption that it is important to be able to distinguish the referent from others like it, which is what contrast means. (G) and its deep structure are equivalent, then, to the Restrictive REL clause type which is represented by the English translation of (G).

It is here that the import of basing the interpretation of a comple. structure on the interpretations of the underlying strings taken together becomes most obvious. Depending on whether nèi- in (D) and (H) is definite or deictic, the effects of the MOD transformation and the interpretation of its re-sulting structure will both be altered.
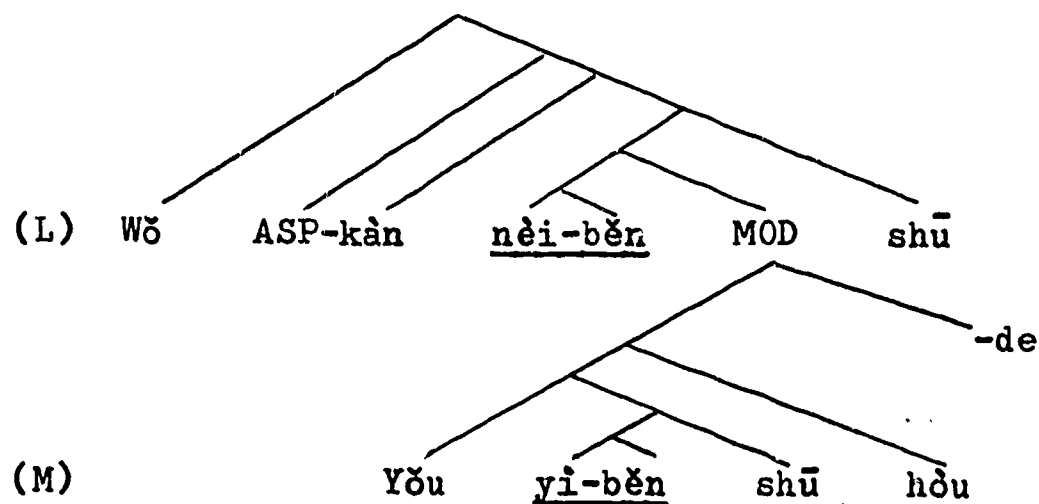
The difference between these two types may perhaps be even more clearly illustrated by the pair:

(12) (J) Wǒ   kàn-le   nèi-běn   hòu-de   shū
         I    see-asp. that-cl. thick-de book
         (I saw that thick book)

and:

(K) Wǒ   kàn-le   hòu-de   nèi-běn   shū.
    I    see-asp. thick-de the-cl.  book
    (I saw the thick book)

The deep structure of both is:

(L) Wǒ   ASP-kàn   nèi-běn   MOD   shū
                                        -de

(M)              Yǒu   yì-běn   shū   hòu

The MOD clause in (J) is interpreted as a Descriptive one, while that in (K) is interpreted as Restrictive, implying a contrast with, perhaps:

báo-de    nèi-bén    shū
thin-de   the-cl.    book
(the thin book)

The distinction between the two results from the fact that the nèi- in the matrix string (L) may be either a deictic or a definite determiner. It can be seen that (M) corresponds to the English sentence discussed above:

A man is tall

in its grammaticality and its degree of usefulness.

It remains to illustrate the MOD clause structure in whose surface representation no determiner appears.
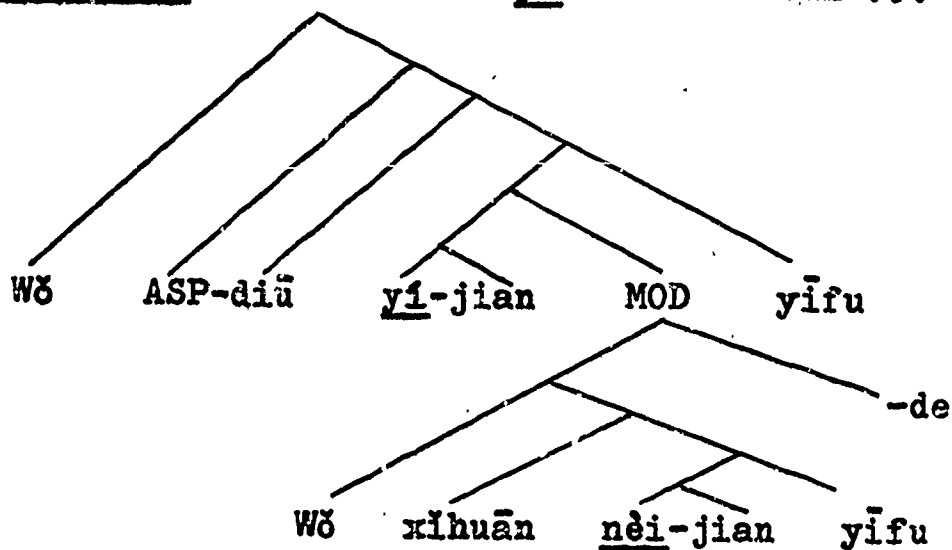
(N) Wó    diū-le    wó    xǐhuān-de    yīfu.
I     lose-asp.  I     like-de      dress
(I lost the dress(es) that I like)

This sentence does not represent a fourth type, however, since its interpretation indicates that it results from the deletion of nèi-plus-classifier from a Restrictive MOD clause containing either the singular or the plural definite determiner:
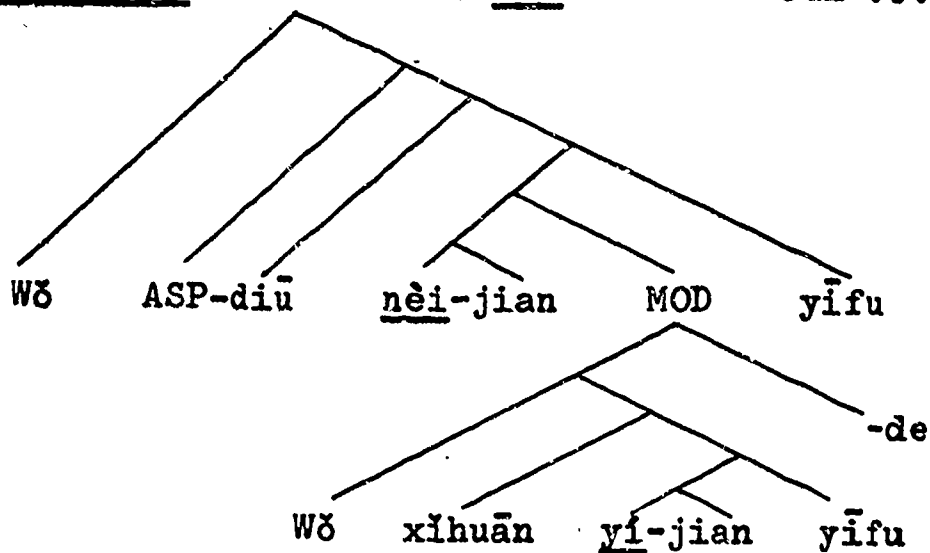
Wó    diū-le    wó    xǐhuān-de    nèi-$\begin{Bmatrix} jiàn \\ xiě \end{Bmatrix}$ yīfu.[21]

Summarizing the three types of MOD clauses we have discussed:

1) <u>Descriptive (a)</u>:          ... <u>yí</u>- X-de Noun ...

    Wǒ    ASP-diǔ    <u>yí</u>-jiān    MOD    yīfu

                          -de

      Wǒ  xǐhuān  <u>nèi</u>-jiān  yīfu

2) <u>Descriptive (b)</u>:          ... <u>nèi</u>- X-de Noun ...

    Wǒ    ASP-diǔ    <u>nèi</u>-jian    MOD    yīfu

                          -de

      Wǒ  xǐhuān  <u>yí</u>-jian  yīfu

3) <u>Restrictive</u>:          ... X-de <u>nèi</u>- Noun ...

    Wǒ    ASP-diǔ    <u>nèi</u>-jian    MOD    yīfu

                          -de

      Wǒ  xǐhuān  <u>yí</u>-jian  yīfu
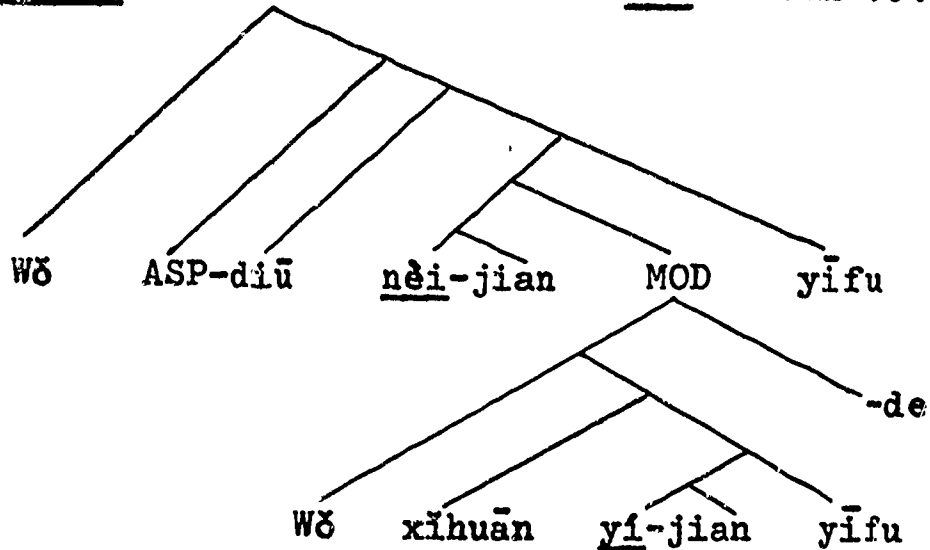
In terms of the relationship between the interpretation
of a MOD clause structure and the position of the determiner
therein, we may informally propose an "explanation" for the
non-occurrence of a MOD clause sentence of the form:

. . . X-de yi- N . . .

where yi- follows the MOD clause. The explanation is that the
indefinite, by the nature of the assumption which is part of
its interpretation, is incompatible with the notion of contrast,
which is the interpretation of a sentence whose determiner is
in this position, the assumption being that it is unnecessary
to distinguish the item referred to by the noun from others
like it.[22] Mandarin type 1), the Descriptive (a), and type 3),
the Restrictive, correspond exactly to their English counter-
parts, while type 2) corresponds to the use of a REL clause
with noun and that. Mandarin has no MOD clause counterpart
of the Selective REL clause.

## V. CONCLUSION

We have tried to show that underlying the fluent speaker's ability to use and understand the determiners of his language are certain assumptions which he has about the necessity that his hearer discover what he is referring to, and about the ability of his hearer to make this discovery. We have shown how these assumptions underlie the speaker's comprehension of a modifying clause sentence, and we have argued that these facts can and should be reflected in the linguistic description.

We have assumed the universal categories of definiteness and indefiniteness, in spite of the fact that they are marked only optionally in some languages. Though this assumption appears to be intuitively sound, strong support could be provided by proving the following hypothesis, which I judge to be a reasonable one: in many languages which do not obligatorily express definiteness and indefiniteness, these categories are optionally marked by "borrowing" elements from two categories which do appear to be universal, the deictic marker and the numeral.[23]

It is hoped that through investigations of this type, comparative syntax may yield new insights into the nature of language universals and their importance to translation from one language to another.

FOOTNOTES

[1]Specifically, Chomsky, 1957, p. 26; Fillmore, 1963, pp. 225-6; Lees, 1960, pp. 14-15, 22.

[2]In English, a plural definite noun can be distinguished from a plural generic noun because of the absence of a determiner with the latter:
> The books are red.
> Books are red.

The fact remains, however, that there seem to be no syntactic conditions on the occurrence of one rather than the other of these.

[3]There are some semantic restrictions on and differences among these generics, but these will not be taken up here.

[4]There are at least three other kinds of existential sentences which do not seem to have structures like (a) as sources. One kind is exemplified by:
> There's somebody I'd like you to meet

which contains a relative clause. Another is exemplified by:
> There's a solution to that problem

which obviously does not come from:
> *A solution is to that problem.

A third can be illustrated by the listing form which can be an answer to a question, such as:
> Who's coming to the party?
> There's Sue, Jane, Bob, and Dick.

[5]In this study, for the purpose of explication, we will refer to a modifying clause in English as a REL clause, and to that in Mandarin as a MOD clause, although they are obviously syntactically (but not translationally) equivalent.

[6]Again, for the purpose of explication, only those structures containing one relative clause symbol will be dealt with here.

[7]For discussion of the identity condition, see Chomsky, 1964, P. 95.

[8]This was precisely the objection raised by Beverly Robbins

(p. 4) to the "kernelization" of a complex sentence into a pair
of simplexes, one containing "a N," the other "the N."

[9]It appears that the following analysis, suggested by
Professor D. T. Langendoen, may provide additional support for
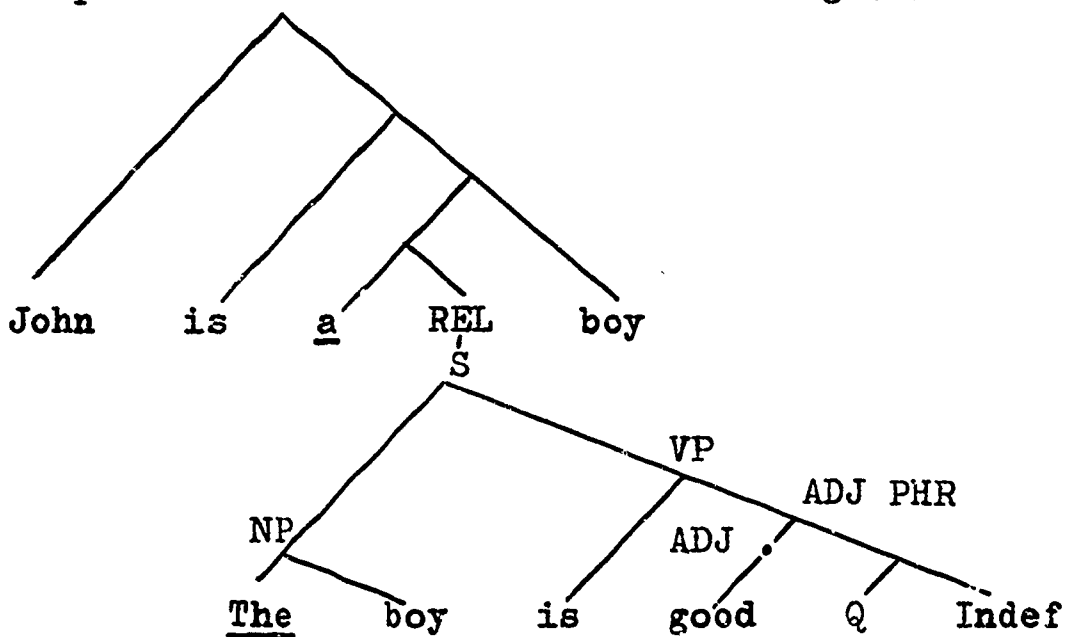this formulation.  The sentence:

How good a boy is John?

comes from:

John is a boy
How good is the boy?

where the deep structure will have the following form:



Support for the hypothesis advanced here is provided by the fact
that the determiners in these strings must be the ones indicated
by this diagram.  It can be seen that the ungrammaticality of:

*How good the boy is John?

precludes the use of the in the matrix string, while to sub-
stitute a for the in the constituent string would result in a
noun phrase which native speakers consistently accept as being
generic:

How good is a boy?

Because the strength of this argument depends in part on the
decision made concerning the means by which speakers are able to
distinguish generic from definite and indefinite determiners,
it appears that this decision will play an important role in
our description of determiners in the grammar.

[10]Surface structures containing certain verbs cannot be
analyzed in this way, but these will not be discussed here.
For example, the sentence:

I would like a dog that doesn't shed

cannot be considered as having the deep structure:

```
                    I    would    like    a    REL    dog
                                                      The   dog   NEG   shed
```
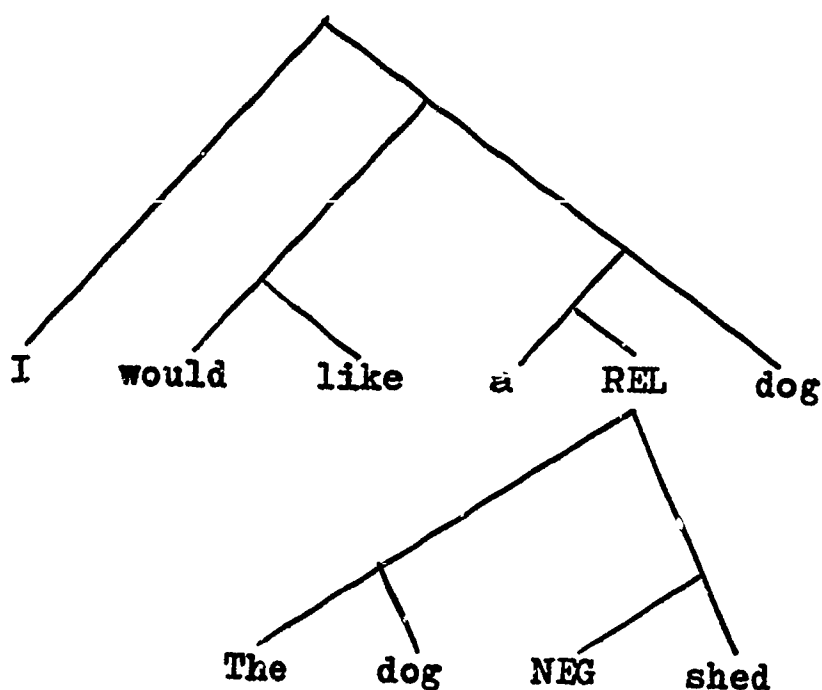
since "The dog does not shed" entails a referent where in fact there is none.

[11]Although the details of the implications of this conception of the sources of Selective REL clauses have not been sufficiently worked out, support for an analysis of this type is provided by an account of the superlative in which a sentence containing a _singular_ noun phrase, as in:

　　　　She was _the prettiest girl_ on the stage

is derived from a sentence containing the same noun phrase in the plural:

　　　　_Some pretty girls_ were on the stage

which is a reasonable account of the derivation of this structure. I am indebted to Professor Charles J. Fillmore for pointing out this relationship to me.

[12]Support for the fact of this relationship between _a_ and _the_ in sentences related in the syntactic component of the grammar is given by the relationship between _a_ and _the_ in phrases as:

　　　　_the_ King of France

and its syntactic source:

　　　　France has _a_ king

where the appropriateness of the former can be seen to depend on the truth of the latter. Though the relationship between the derivation of this type of phrase and that of a modifying clause structure highlights some of the points made here concerning the nature of determiners, we will not pursue it further in this study.

[13]Although many of the claims made here concerning Mandarin are doubtless true of the Chinese languages in general, my lack of familiarity with any of them except Mandarin precludes generalizations of this type. The term _Mandarin_ is used, then,

not to specifically exclude the other Chinese languages, but simply to represent a language capable of being the object of a study of comparative syntax.

[14] This is to say that a non-generic, non-proper noun must appear with a definite or indefinite marker:
     *Book is on the table.

[15] One important difference between this existential marker yǒu and the existential there is in English is that the former appears to be generated by means of rewriting rules in the base component, while the latter seems to be the result of a stylistic transformation. Such differences will be ignored in the present ~nalysis, as will the interesting problem of the relationship ̧etween the indefinite and the existential marker in these two languages.

[16] The transcription system used here will be PINYIN.

[17] It should be kept in mind that a noun in Mandarin is also unspecified as to number, though the examples will be translated with singular English nouns.

[18] This fact was interpreted somewhat differently by Y. R. Chao (1948), p. 51, where he states that "a noun in subject position is usually definite:
    (13)  Shū    zài    nǎr?
            Book located where
            (Where is the book?)
[where the romanization and translations are mine], while a noun in object position usually refers to something indefinite:
    (14)  Nǎr    yǒu    shū?"
            Where exist book
            (Where is a book?)
These examples clearly indicate, however, that definiteness and indefiniteness are a function of the presence of the existential marker.
    An exception to this generalization might be thought to be the occurrence of the existential marker with proper nouns. These can usually be shown, however, to be found in the first clause of a complex conditional, and are usually understood this way even if the second clause is deleted:
    (15)  Yǒu    Zhāng-Sān    zhàogu    tāde    háizi,
            Exist    Zhang-San take care of  his    child

            búyòng    pà.
            NEG use    afraid

            (Since there is Zhang-San to take care of his
            child, you don't need to worry.)

[19]Again, it must be emphasized that these examples are all to be considered as being associated with a normal stress pattern.

[20]With a deep structure involving a different pair of sentences, it could be seen that the constituent string need not appear in the form in which it would be spoken if it were an isolated sentence in normal discourse. For example, the surface structure:

    (O) Wǒ   kàn-le   yì-běn   Grimm   xiě-de   shū
        I   read-asp.   a-cl.   Grimm   write-de   book
        (I read a book that Grimm wrote)

has the deep structure:



(P) Wǒ   ASP-kàn   yí-běn   MOD   shū

                                  -de

(Q)            Grimm   xiě   něi-běn   shū
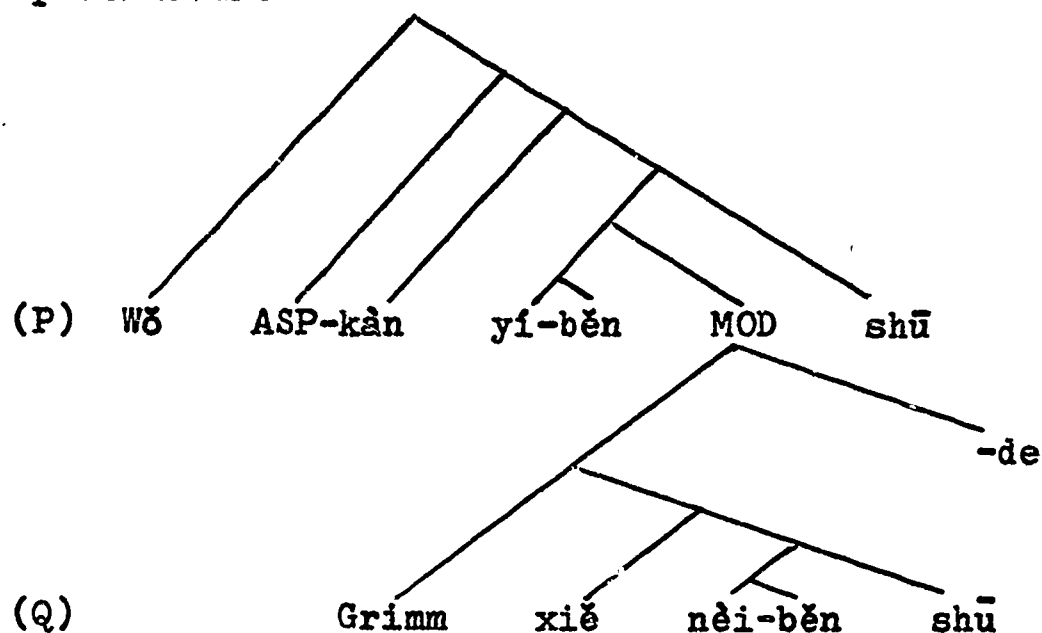
(Q) would normally appear in spoken discourse as:

    (R) Něi-běn shū shì Grimm xiě-de

which is the result of applying an optional transformation to (Q). Since this transformation does not change the meaning of (Q), however, there is no reason to insist that it apply to (Q) before the MOD transformation applies. In fact, a universal restriction that optional transformations may not apply to the strings of a complex deep structure appears to be a reasonable one.

[21]This conception of "determiner-less" surface structures was suggested to me by Anne Hashimoto in personal conversation. It should be emphasized that this is the derivation for the non-generic interpretation of a sentence like (N).

[22]A sentence such as:

    (16) Wǒ   xǐhuān   zuótiān   lái-de   sān-ge   rén
         I   like   yesterday   come-de three-cl. person
        (I like the three people who came yesterday)

in which the indefinite numeral-plus-classifier <u>follows</u> the

MOD clause, appears to be a counterexample to this explanation.
It seems, however, that this is an example of a surface MOD
clause structure which results from a deletion, as discussed
above. Thus, this sentence is semantically equivalent to:

Wǒ xǐhuān zuótian lái-de nèi sān-ge rén.

and is best viewed as its syntactic equivalent as well, with
the nèi deleted.

[23]This hypothesis was suggested to me by Professor D. T.
Langendoen, though I take the responsibility for its inter-
pretation.

## APPENDIX

(1) 有人在外面.

(2) 有三個孩子在吃飯.

(3) 昨天我看見那個人.

(4) 昨天我看見這個人.

(5) 你餵了狗沒有?

(6) 我洗碗的時候電話鈴響了.

(7) 今天晚上月亮很圓.

(8) 你餵了那個狗沒有?

(9) 我看了 Grimm 寫的那本書.

(10) 我丟了一件我喜歡的衣服.

(11) 我丟了那件我喜歡的衣服.

(12) 我看了那本厚的書.

(13) 書在那兒?

(14) 那兒有書?

(15) 有張三照顧他的孩子, 不用怕.

(16) 我喜歡昨天來的三個人.

# BIBLIOGRAPHY

Bloomfield, Leonard. _Language_. New York: Holt, Rinehart and
      Winston, 1933.

Chao, Y. R. _Mandarin Primer_. Cambridge: Harvard University
      Press, 1948.

Chomsky, Noam. _Syntactic Structures_. S'gravenhagen: Mouton,
      1957.

_____. _Aspects of the Theory of Syntax_. Unpublished manu-
      script, 1964.

Fillmore, C. J. "The Position of Embedding Transformations in a
      Grammar," _Word_. 19.209, 1963, pp. 208-31.

_____. "Entailment Rules in a Semantic Theory." Unpublished
      paper read before the Linguistic Circle of Columbus,
      Ohio State University, 1964, version 3.

Fries, C. C. _The Structure of English_. New York: Harcourt,
      Brace, and Co., 1952.

Gleason, H.A. _An Introduction to Descriptive Linguistics_. New
      York: Holt, Rinehart, and Winston, 1961.

Hashimoto, Anne Yue. "Pre-Nominal Modifying Clause in Mandarin."
      Unpublished report, Ohio State University, October, 1964.

Katz, J. J. and Fodor, J. "The Structure of a Semantic Theory,"
      _Language_. 39, 1963, pp. 170-210.

Katz, J. J. and Postal, P. M. _An Integrated Theory of Linguistic
      Description_. Cambridge: Research Monograph, No. 26,
      MIT Press, 1964.

Lees, R. B. "Grammar of English Nominalizations," _International
      Journal of American Linguistics_. 26.3, Part II, 1960.

_____. "A Transformational Grammar of English." Unpublished,
      University of Illinois, 1963.

Robbins, Beverly. "Relative Clause Adjuncts of a Noun."
TDAP #47, University of Pennsylvania, 1963.

Smith, Carlota S. "Determiners and Relative Clauses in a
Generative Grammar of English," Language. 40.1, 1963.