obtained. In this context the term "linguistic theory" will be restricted primarily to diachronic linguistics as viewed by generative grammarians (e.g., King 1969) and as extended by recent suggestions of Labov (1969).

Disregarding the complications introduced by the effects of bilingualism, it is important to ask: what are the changes in the grammar of the immigrants which enable the speakers of various dialects of a single language -- dialects which were often mutually unintelligible in Europe -- to make themselves understood in the new situation? Is it a matter of being forced to learn the complete grammar of a "new language" or only of making relatively minor additions to the grammar which the speakers already possess?

For the purposes of the following discussion, let us set up a generational model in which 0 represents the emigrating generation, 1 the first to be born in the United States, 2 the second to be born in the United States, and so on (figure 1).

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Linguistic Change in the Colonial and Immigrant Languages in the United States[1]

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(manuscript submitted
April 20, 1970)

The non-English European languages still spoken in the United
States have, as a rule, undergone rapid and far-reaching linguistic
change. Of greatest interest are the languages which were introduced
into rural enclaves by immigrants in the seventeenth through
early twentieth centuries and which are now spoken by native-born
Americans of native-born parentage. The enclaves formed in the
seventeenth and eighteenth centuries ~~may be~~ are called primary; those
formed in the nineteenth and twentieth centuries are secondary.
The largest primary enclaves are made up of Spanish speakers in
New Mexico and Colorado, French speakers in Louisiana and Texas,
and German speakers in Pennsylvania. Secondary enclaves include
the French Canadians of the northeast, the Mexicans of the south-
west, and the Germans, Czechs, and Norwegians of the midwest and
Texas. These languages, and perhaps a few others such as Dutch,
Swedish, and Danish in the midwest, are spoken in sufficiently
large, cohesive tracts of territory to justify the use of the
traditional European techniques of ~~topographical~~ linguistic mapping ~~of~~
~~linguistic forms~~ prose as a valuable source of data in the testing

of linguistic theories.

Up to now, there hardly exists what could be called an
established linguistic geography of languages other than English
in the United States. Our knowledge of the primary enclaves, where
immigration was essentially completed by the beginning of the
nineteenth century, is sketchy at best; the situation is still
less favorable for the secondary enclaves, where members of the
first generation born in the United States and even the immigrants
themselves could still be interviewed, if anyone cared to do so.
There are linguistic atlases, as such, only of German in southeastern
Pennsylvania (Reed and Seifert 1954, forthcoming) and in central Texas
(Gilbert, forthcoming). The primary Spanish enclave in New Mexico
and Colorado has been essentially ignored since Aurelio M. Espinosa's
outstanding descriptive study early in this century (Espinosa
1909-1914). Although considerably more effort has been devoted
to the primary French enclave in Louisiana, most investigators
seem to shrink back from areal studies, chiefly because of the
large number of "free variants" which abound in the grammars of
the speakers. Von Wartburg (1942) was so impressed by what he
called the "instability" of the language that he advised the
abandonment of all plans for the preparation of a linguistic atlas.
On the other hand, such excellent studies as those of Conwell and
Juilland (1963) and ~~Morgan (1959, 1960)~~ Guilbeau (1950) succeed in ~~producing~~ giving a systematic
account of evidence gathered from entire parishes. These could

undoubtedly be expanded into a full-scale atlas if such an undertaking
could be justified in view of its expected scientific returns.
were materially [handwritten insertions above the line]

The terms "colonial languages" and "immigrant languages" were
first introduced by Haugen (1956). In general, this distinction
has the effect of dividing Spanish and French, in so far as they
were introduced by their respective colonial powers, from all
other non-English European languages brought to the Thirteen
Colonies or to the later United States. Priority of settlement
seems to be the most decisive factor affecting the longevity or
survival potential of all of these languages (Kloss 1963; Gilbert
1969:221). Generally, their most prominent characteristics are:
1) rapid linguistic change, beginning with the emigrating generation;
2) a combination of archaism and innovation, which differentiates
them from their Old World counterparts; 3) widespread bilingualism
in the mother tongue and in English.

One of their chief attractions has been in the fact that the
great majority of speakers are fluent in two (or more) languages,
with all that this implies (Haugen 1956, forthcoming). They have
been of still greater interest to linguists for purposes of comparison
with/_varieties_ of the language still spoken in Europe (e.g., Hedblom 1969).
Here, however, let us now consider a somewhat different type of problem,
namely, what kinds of information about them will be of value in
evaluating current linguistic theory and how may such information be

obtained. In this context the term "linguistic theory" will be restricted primarily to diachronic linguistics as viewed by generative grammarians (e.g., King 1969) and as extended by recent suggestions of Labov (1969).

Disregarding the complications introduced by the effects of bilingualism, it is important to ask: what are the changes in the grammar of the immigrants which enable the speakers of various dialects of a single language -- dialects which were often mutually unintelligible in Europe -- to make themselves understood in the new situation? Is it a matter of being forced to learn the complete grammar of a "new language" or only of making relatively minor additions to the grammar which the speakers already possess?

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Unless unusual circumstances intervene, those members of generation
$\underline{0}$ who settle in urban or rural areas where different dialects of
their language are spoken are ultimately faced with the choice of
switching to English when dealing with speakers of other dialects or
of finding some kind of linguistic accomodation with them. If they
choose to accomodate (and this is often a conscious choice), it is
clear that various rules in their grammars will have to be optionally
added or deleted (but probably never reordered). At first, such
rule changes are triggered by interlocutory constraints or Partnerzwang.
Later, they may become characteristic of geographical location,
social structure, linguistic style, or may simply be called "free
variation." Even if the presence or absence of a specific change
shows no correlation with (or conditioning by) non-linguistic
factors, it should still be possible to incorporate it in a meaning-
ful way into a performance model containing an adequate generative
grammar by notations of its frequency of occurrence. Such frequency
rules, or variable rules as Labov (1969:728 ff.) calls them, are stated
in terms of the percentage of actual occurrences within the total
number of potential occurrences, for a specified corpus and under
explicit extra-linguistic conditions. This precision is of great
value in the study of rapid linguistic change, since the variations
often serve as indicators of the type and direction of the change.
Note, though, that frequency analysis deserves much careful study
because of its implications for linguistic theory in general.

Figure 2. Schematic Diagram of Rule Changes by Generation
(effects of bilingualism with English disregarded here)

Extra-Linguistic Events	Rule Changes	Generation No.
village life in Europe; relatively little social and geographical mobility	ratio of variable to categorical rules relatively small	- 1
emigration from Europe to the United States within the lifetime of this generation	many variable rules in the grammar introduced due to emigration and attendant social upheaval: determined by interlocutor, later by style, social stratification, etc., or by "free variation"	0
born in the United States	a part of the variable rules of generation 0 becomes categorical; others remain variable [A]	1
born in the United States	ratio of variable to categorical rules decreases	2
born in the United States	ratio of variable to categorical rules continues to decrease, but is still not as small as in generation -1; etc.	3

A) This parallels the explanation in terms of "primary features (categorical

rule changes) and "secondary features" (variable rule changes) advanced

by the Russian linguist, Victor Zhirmunsky, more than forty years ago

(Zhirmunsky 1928-1929).

Now, within generation $\underline{0}$, who accomodates to whom? In other words, if two dialects, $\underline{A}$ and $\underline{B}$, come into contact, what socio-linguistic criteria are relevant for predicting which of the two dialect grammars will undergo the most change? Aside from considerations of internal structure, the most important single factor seems to be <u>dialect prestige</u>, which in turn is chiefly dependent upon the similarity or dissimilarity of the grammar of a given dialect to that of the standard language. If the grammar of dialect $\underline{A}$ is markedly more similar to the standard than is $\underline{B}$, $\underline{A}$ will acquire prestige and be imitated, even if its speakers are in the minority. Indirectly and directly, the standard language acts as a powerful model for the direction of change, bringing about what could be called a "colonial standardization effect." Other important socio-linguistic factors influencing the direction of accomodation are literacy in the standard language, relative numbers and locations of speakers, priority of settlement, marriage patterns, and religion.

Because of these processes, the ratio of variable to categorical rules will be considerably higher for speakers of generation $\underline{0}$ than for speakers of preceding generations. In addition, there is evidence that many of the variable rules revert to categorical status for speakers of generations $\underline{1}$, $\underline{2}$, and following, so that the ratio again declines. (see Figure 2).

How are we to ~~conceive~~ think of these changes? Are they the product of a gradual, incremental process extending over many generations? Or does there occur an abrupt restructuring involving rule reordering

and grammar simplification, as well as rule addition and deletion?
Postal (1968:286-307), King (1969:106-119), and other recent writers
on the subject have presented evidence in favor of the idea of
non-gradual change (in all components of the grammar), and the data
from the colonial and immigrant languages seems to support this view,
although much more work is needed.[2] The childhood grammar for
speakers in generation 1 can only be formed on the basis of what
they hear; and since the input for them is considerably different
than it was for speakers of generation 0, the internalized grammars
of 1 and 0 must vary greatly. Communication between the generations
proceeds relatively unhindered since what is obligatory for
generation 1 is optional for generation 0. This gives rise to the
common observation by laymen and specialists alike, that the speech
of generation 0 is somehow fundamentally different from that of 1, 2,
and following. Speakers in generation 0, because of their options,
seem to have one foot in the old and one in the new, whereas for
their children and grandchildren, many of these options no longer
exist.

In view of what has been postulated here, it is clear that the
approach used by sociolinguists (social variation of language) and
linguistic geographers (geographic variation of language) is well
suited to gather the crucial evidence which bears on the mechanisms
of change. Studies of English from ~~this~~ a similar point of view have been
made by Labov (1963, 1966, 1969), Loflin (1969), Keyser (1963),

DeCamp (1962), Kiparsky (1968), and others. Becker (1967) has
written on three continental German dialects from the standpoint of
generative phonology. King (1969) has supplied much pertinent
data inasmuch as he regards the problems of contemporary dialectology
to be parallel to those of language change in general. Of special
interest is the study by Pulte (forthcoming) of underlying /y/ and
/ø/ in the German dialect spoken at Dayton, Rockingham County, Virginia.
Pulte found that /y/ and /ø/ are not categorically subject
to the low-level phonological rule,

$$
\text{(3)} \quad
\begin{bmatrix}
+\,\text{syllabic} \\
-\,\text{consonantal} \\
-\,\text{back} \\
-\,\text{low} \\
+\,\text{round}
\end{bmatrix}
\longrightarrow
\begin{bmatrix}
-\text{round}
\end{bmatrix}
\qquad ,\,^3
$$

which is usually present in Pennsylvania German and in its secondary
settlement areas in Maryland, Virginia, and elsewhere (Reed and Seifert
1954, forthcoming; Buffington and Barba 1954). Since Dayton was
originally populated by German speakers from Lancaster County, Penn-
sylvania (which today shows only unrounding), it seems likely that
the unrounding rule was once variable in Pennsylvania German.[4]
Independent evidence (Pulte, forthcoming) suggests that unrounding
had become obligatory for almost all Pennsylvania German speakers
by 1850 at the latest. The settlement at Dayton, Virginia, however,
had been established some seventy-five years earlier; in its sub-
sequent linguistic isolation it apparently escaped this particular
phonological innovation. Among the three generations of speakers

which Pulte studied, the rule seems to be variable (or does not apply?) for the oldest generation and is categorical for the youngest generation. Furthermore, his data point to an abrupt change, thus lending support to the general position of Postal and King.

The generative approach to linguistic change in "transplanted" languages raises many problems concerning the nature of the absolute and relative alterations of rules which make up the various interacting, often closely related, dialect grammars. We are left with such unresolved questions as: does the grammar of adults change in a more superficial way (i.e., at a lower level) than that of children? Are rule addition and deletion more common than rule reordering and grammar simplification? Are high-level rules generally immune to change? Are the phrase structure rules in the base ever changed? What is the relationship between the order of the rules in a synchronic grammar and their historical ordering? And so on.

No matter how elaborate a linguistic questionnaire may be, it still remains subject to the limitations of the theory upon which it is based. Since, for example, Kurath and McDavid's voluminous study of English pronunciation in the Atlantic states (Kurath and McDavid 1961) is couched in terms of autonomous phonemes, many questions about systematic phonemic structure and rule ordering remain unanswered, as Keyser (1963) has pointed out. If it is

suspected, as some evidence indicates, that rules become more general as they spread out from a focal point and encompass increasingly large tracts of territory,[5] questions must be devised to test specifically for this phenomenon. A simple accumulation of data, no matter how elaborate, is not sufficient; an explicit theory of language must stand behind the plan and execution of field work so that the attention of the investigator may be directed toward certain crucial cases. Numerous grammatical and ungrammatical examples should be elicited and arranged in revealing arrays (Loflin 1969) to provide empirical data bearing on the claims or theories to be tested.

One of our chief concerns should be with underlying representations. It is desirable to find some way to structure linguistic interviews so as to maximize the value of the responses in revealing underlying forms. For the phonological component, this could mean, for example, a sequence of questions designed firstly to elicit paradigmatic alternations and secondly syntagmatic alternations, with a view toward the relationships of the surface structure to the underlying morphophonemic representations. For the syntactic component, we might want to include questions bearing directly on certain key transformations such as equi-noun deletion, negation, interrogation, relativization, and case. Very important are apparent or real violations of the phonological and syntactic constraints which are thought to form a part of universal grammar,

e.g., the presence of four or more tongue heights for non-back vowels,
or word orders not listed among Greenberg's universals (Greenberg 1966),
and the like.

It should be evident that the conceptual framework of
transformational-generative grammar (Chomsky 1965; Chomsky and
Halle 1968; etc.) has much to offer in the formulation of research
methods concerning geographical and social variation in language.
In return, the colonial and immigrant languages spoken in our midst
can and will ~~provide~~ yield much data on crucial questions of linguistics,
if only the investigators knew what was needed.

FOOTNOTES

1. A preliminary version of this paper was read at the December 1969
meeting of the Linguistic Society of America in San Francisco.

2. A recent statement of the "gradualist hypothesis" can be found in
Hockett (1958:439-445). King expressly states that he is not denying
that changes may spread gradually throughout a speech community; it
is only the implementation of the change in the grammar of each
speaker which is abrupt (King 1969:117). Although his discussion
only deals with phonology, he posits the same process for the syn-
tactic and semantic components (personal communication).

3. i.e., underlying non-back, non-low, rounded vowels become unround.
The process of Entrundung is characteristic of a great number of Ger-
man dialects as well as of central and southern varieties of
colloquial German.

4. This could be confirmed independently if it were shown that a
significant proportion of the immigrants of generation 0 in Lancaster
County came from dialectal areas in Europe which lacked the unrounding
rule, as for example Switzerland. Carroll E. Reed, on the other hand,
believes that unrounding has been an obligatory rule in Pennsylvania
German from the earliest times (personal communication).

5. A classic example is the process that operated in Germany from
approximately 600 to 1000 AD. which converted tense, non-continuant,
non-strident segments into their strident, non-continuant or continuant
counterparts; and lax, non-continuant, non-strident segments into
their tense counterparts (hochdeutsche Lautverschiebung). Contrary to
prevailing opinion, Schützeichel (1961, 1964, etc.) has suggested that
the new rules arose in Franconian territory in west-central Germany and
spread to the south. "Angesichts der 'viel größeren Bedeutung und
Macht der Franken' nimmt Schützeichel an, daß der Anstoß zur Laut-
verschiebung den südlichen Völkerschaften nur von den Franken her
übermittelt sein könne. (Er nimmt also eine nord → südliche Ent-
wicklung an im Gegensatz zu Frings, der sich die II Lautverschiebung
in umgekehrter Richtung im deutschen Raum vollziehen läßt.) Im
Süden habe sie sich (so meint Schützeichel) entsprechend den artikulator-
ischen Anlagen und Gewohnheiten der dortigen Stämme nur kräftiger
entwickelt." (Bach 1965:111). Unfortunately, the hypothesis of
generative grammarians that rules are borrowed (i.e., "spread") "with
the same or greater generality, but not with lessened generality"
(King 1969:90 ff.) cannot help us directly in this important case,
since we would then fall into the logical pitfall of allowing the
two hypotheses to demonstrate each other's validity. More evidence
from other, clear-cut cases with independent historical confirmation
is needed.

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    enteramente por el autor, en volumen aparte de nuestra Biblioteca."

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