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LA THÈSE A ÉTÉ
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THE INFLUENCE OF LINGUISTIC THEORY
ON
LANGUAGE TEACHING THEORY
by Robert J. Courchêne

Thesis presented to the School of
Graduate Studies of the University
of Ottawa as partial fulfillment
of the requirements for the degree
of Master of Arts

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Abstract

In this thesis we examine the influence of linguistic theory on language teaching theory. The period studied spans the two linguistic revolutions on the North American continent: The Bloomfieldian and The Chomskian.

The first chapter focuses on the role of theory in the scientific enterprise. The two approaches to doing science, the rationalist and the empirical, define and use theory in different ways. Their conception of theory and science influences what they will accept as evidence, the way they define the object of science, and their view of the role of methodology. In addition to these two approaches, a third is suggested as being appropriate for activities such as language teaching. In this case the theory is described as being professional in nature; i.e., a blend of the empirical and the humanistic.

In the second chapter, we trace the history of the linguistic movement in the North American context. Bloomfield and his colleagues reacted to the historico-comparative approach to linguistics. They wanted to establish linguistics as a science with the same status as mathematics and physics; i.e., publically verifiable evidence, scientific methodology. This new school, namely, the descriptive or structuralist, was also closely associated with the behavioral school of psychology. It dominated the linguistic arena till the arrival of Chomsky.

Chomsky challenged the structuralists' approach to carrying out

the scientific enterprise maintaining that it could not account for language, and how it functioned; i.e., creativity, acquisition. In addition to publically verifiable evidence, he also accepted intuition as being important for science. This is closely related to his rationalist position, and his belief that linguistics is part of cognitive psychology.

Recently, others, most specifically the semanticists and the sociolinguists, have been trying to effect certain changes and make additions to Chomsky's theory. At present, however, the field of linguistics is still undergoing constant change and re-evaluation.

In the third chapter, we trace the influence that linguistic theory has had, and continues to have on language teaching theory by examining the birth, growth and evolution of applied linguistics. In the precursor period, theorists such as Jespersen, Sweet and Palmer, discussed the relationship between linguistic theory and language teaching methodology. They also talked about the role of psychology in such a relationship. Although their ideas would resurface later in the century, historical, geographic and linguistic reasons militated against their acceptance in the United States in the early 1900's.

In the 'linguistic' period (circa 1940-1965), the heyday of structural linguistics, applied linguistics was born. The major historical event of this period was World War II. This permitted the structural linguists to influence language teaching theory for

they were called upon to elaborate a teaching methodology, to train teachers, and to write textbooks. Since prior to 1960 there were no precise definitions of applied linguistics, many presumed that all linguistic principles could be applied to language teaching. The former's influence on the latter in this period was direct and unidirectional. Finally, applied linguistics was really more applied linguistics and psychology. The term, as used in the linguistic, and even the contemporary period, remained plagued with this ambiguity.

In the contemporary period(1965 to the present), there was a "prise de conscience". The new trends in linguistics, the research being carried out in psychology, sociology and education, the critical examination of the meaning of the term "applied linguistics", all these factors led applied linguists to re-examine the relationship between linguistic and language teaching theory. As a result of this examination of conscience, the applied linguists began to realize that while linguistic theory had something to contribute to language teaching theory, it was not the only factor. Many new models in applied linguistics appeared in reaction to these events. In the 'Convergent', the dominant model of the period, however, linguistics becomes only one of the source disciplines along with psychology, sociology and education that contributes to language teaching theory. In addition, in the 'Convergent', as opposed to the 'Application' model of the linguistic period, there is feedback between language teaching and the source disciplines. Language teaching(theory and practice) is recognized as a legitimate

field of research with its own object of study.

The thesis concludes that applied linguistics should be reserved for those cases in which what is actually being applied is linguistics and not something else. To represent the relationship between language teaching and its source disciplines, it would be better to employ the expression language teaching theory. The latter term is free from the ambiguity that has long been associated with the former. Only by using such an expression, can the true relationship that should exist between language teaching and its source disciplines, a relationship characterized by interdisciplinarity, mutual interaction and feedback, be adequately expressed.

INTRODUCTION

Before 1900 the descriptions of language provided by synchronic linguistics were for language teaching; often the language teacher and the linguistics were the same person. In the 1940's however, linguistics separated from language teaching, choosing as its proper object the synchronic study of la langue (Saussure). It began to look at the patterned regularities of language, at language as a self-contained system. This meant that the descriptions of language furnished by linguistics could no longer meet the needs of language teaching since the object of the latter is language as a system of communication. This change of outlook in linguistics was related to the emergence of a new paradigm in science.

At the turn of this century, the historico-comparative approach to linguistics based on the rational-deductive method of doing science was still the leading school. It was speculative in nature and therefore did not limit its area of inquiry to that which could be publicly verified. In opposition to this appeared the empirico-inductive approach based on the logical positivism of the French Philosopher Auguste Comte. The logical positivists believed that the world could and should be described without having recourse to mentalistic terms of a priorisms. The object of science was the observable regularities in the universe. In such a framework, all previous methods of doing science were classified as pre-scientific. It was into this intellectual climate that structural or descriptive linguistics was born and flourished.

Structural linguistics was based in the work of Boas, Sapir and Saussure, theorists who all shared the same goal: to make linguistics a science. Bloomfield, who crystalized the thought of this movement, took this aim one step further: he wanted to make linguistics an exact science (Bloomfield, 1939: p.13) capable of accounting for the observable manifestations of human behaviour. Developments in behavioral psychology paralleled this new change of direction in linguistics. It adopted a very mechanistic-physicalist view of man based on the same conception of science. Its sphere of operations, like that in linguistics, was the observable manifestations of behavior. To achieve their goal of scientific credibility, both disciplines adopted the theory and method of logical positivism.

In America, language teaching before 1940 was dominated by the grammar-translation method. There was, however, a growing interest in, and experimentation with the "Eclectic" and "Direct Method" based on the methodological theories of the Germans, English and French, (Coleman: 1931). Certain other theorists, such as Jespersen, Sweet and Palmer had also developed elaborated teaching methodologies. Unfortunately, their work was either neglected because of teacher apathy and resistance to the new ideas, or incorporated (without credit) in some future scientific method. The use of the Direct Method as a means of propaganda for the National Socialist regime in Germany also militated against its use.

The outbreak of World War II created a new social and political climate that called for a different type of language teaching courses. This need brought linguists to again take an interest in language teaching. These theorists believed that the scientific nature of their science enabled them to establish a more scientific theory of language teaching; they also believed that research and method on the linguistic level (a nomathetic science) could be transferred to the level of language teaching (a complex activity). Such beliefs allowed them to influence not only the content (the "what") - traditionally the recognized contribution of linguistics - but also the method (the "how") of language teaching theory. This gave birth to the "linguistic method" and resulted in the domination of language teaching theory by linguistic theory.

Linguistics did not achieve this singlehandedly. Behavioral psychology contributed its method and teaching/learning theory. In addition, linguistics and psychology created a handmaiden, applied linguistics, which subsequently became identified with language teaching. Such applied sciences however, are often based on two questionable premises: first, that the parent sciences can and should be applied; and second, that research can be judiciously transferred from one discipline to another. As a result of its identification with the field of applied linguistics, language teaching lost its autonomy as a discipline.

The social and intellectual climate began to change in the 1960's. As science is a cultural artifact (Kelly, 1969), this produced a new scientific paradigm. It was speculative as opposed to descriptive. It accepted intuition and non-observable data (cf. nuclear physics) as evidence for it claimed that science based on the principles of logical positivism could not account for all the facts. The resurgence of cognitive psychology and Chomsky's revolution in linguistics (for him, a branch of cognitive psychology) are both product and characteristic of this period. Further, this climate forced linguistics, applied linguistics and language teaching to redefine their object, method and goals. Linguistics again returned to universals and the search for a universal grammar. Along with psychology, it stated that it lacked the theoretical sophistication to establish a theory of language teaching; applied linguistics realized that it should never have been equated with language teaching as its interests were more encompassing.

Finally, language teaching emerges as an independent discipline with a nascent theory in harmony with its own object and goals: to help people acquire and instrument (language) with which they might communicate with other people. Even though this embryonic theory is tenuous in nature and based on unobservable realities (i.e. LAD), it will enable language teaching theory to be that fruitful meeting ground between pure research and classroom practice.

CHAPTER I

The meanest of men has his theory, and
to think at all is to theorize.
(Coleridge: 1865).

To ask the question "What is theory?" is not the same as
asking "What is a rational number?" or "What is a nectarine?"

Suppes (1957) in his preamble to scientific theory explains why:

Scientific theories are not like rational
numbers or nectarines. Certainly they are
not like nectarines, for they are not simple
objects. They are like rational numbers in
not being physical objects, but they are
totally unlike rational numbers in that
scientific theories cannot be defined in any
simple or direct way in terms of other non-
physical, abstract objects. (p. 55).

He sees the question "What is a theory?" as being akin to questions
such as "What is philosophy?" or "What is science?"

Words like theory, good, bad and science are in such
frequent use that the once evident distinctions between the
scientific and lay definitions of these terms have almost disappeared.
In the case of theory, the proliferation of new sciences, each
employing the word in its own way, has only contributed to the
confusion.

Before continuing this discussion of theory, it should be
pointed out that we have no intention of delving into the episte-
mological problems (involved in transferring theories from the
exact sciences to the social sciences. We are, on the other hand,
acutely interested in the type, definition and use of theory in
linguistics, applied linguistics and language teaching. What is
unique in the above disciplines "is not the way they use theory
but rather what theories they use and what they use them for."

(Halliday, McIntosh and Stevens: 1964, p. 211).

In trying to arrive at a general definition of theory, we first consulted Webster's New World Dictionary (1970). It furnished the following definitions:

1. a mental viewing; contemplation.
2. a speculative idea or plan as to how something might be done.
3. a systematic statement of principles involved.
4. a formulation of apparent relationships or underlying principles of certain observed phenomena which has been verified to some degree.
5. that branch of an art or science consisting in a knowledge of its principles and methods rather than in its practice; pure, as opposed to applied, science, etc.
6. popularly, a mere conjecture, or guess.

Further research into the field showed that theorists in the exact and social sciences such as Hempel (1965), Popper (1963), Nagel (1961), Bloomfield (1933), Hjemlev (1943), Joos (1957) and Chomsky (1957) differed not so much in their use of theory but rather in their conception of theory depending on whether they were members of the empirical (inductive) or rational (deductive) school.

From the survey of the literature in the field, several different characteristics of theories emerge:

1. Theories organize the universe or scientific fields of study.
2. Theories help us to explain what goes on in the world. They establish relations among the data and make predictions in the light of these relations.

3. Each theory has an object. There may be several theories, however, that try to account for the same object.
4. Each theory in relation to its object of study states which data is significant, and which is non-significant, or if you wish, which traits are distinctive and which are non-distinctive.
5. The theory may define the object or the object may define the theory.
6. Theories should be empirical.
7. Each theory has a distinctive method associated with it.

We would like to elaborate on three of the above characteristics, namely 4, 5 and 7, as they will have important consequences for the following chapters of this thesis.

Object and Theory

A theorist's view concerning the scientific enterprise influences how (s)he approaches and circumscribes the object of study. In the social sciences today there are two dominant positions, the empirical and the rationalist. The above statement is however an oversimplification as far as is pointed out in Method and Theory in Linguistics (Garvin, 1970). There are very few pure empiricists or rationalists. Complete objectivity, -the non-prejudicial examination of the data- is an ideal to be strived for, but not the reality of scientific investigation. In the following discussions we must never lose sight of this point.

The empirical point of view finds its best representation in the descriptive school of linguistics that encompasses such linguists as Bloomfield, Harris and Joos.

For the inductive approach, as exemplified by Joos and Bloomfield, the scientific process starts with the observation of data; i.e. a set of utterances produced by an informant or group of speakers from the same language community. It assumes a priori that this body of data has a structure, that is, that there is a system of categories and relations inherent in the data. These are the linguistic facts and it is the linguist's task to discover them and make generalizations about them, leading to an exhaustive and economical statement about them. (Allen and Corder: 1973, p. 185).

The linguist does not approach the object of study with any pre-conceived theory but rather, as Verhaar (1966) points out, a frame of reference that shapes his investigations in an important manner.

A frame of reference is what makes a metaphysician, or an Oxonian linguistic analyst, or a behaviorist, or a phenomenologist. To the extent that a frame of reference becomes explicit it will be a theory. It is here assumed that no theory is altogether explicit in the sense that it has exhaustively organized the underlying frame of reference. A frame of reference is largely intuitionistic, profoundly influences the selection of heuristic principles, and is 'introspectionistic' not only in the case of those who favor introspection methodologically, but also in the case of those who do not.

A theory is to a certain extent a prioristic in that it is influenced by the underlying frame of reference, and in that respect it shows similarity with a hypothesis, or a set of hypotheses. (pp. 42-43).

In examining the data, the inherent structure will reveal itself to the observer. The theorist progresses from the collection of

facts, to the description of facts, to the formulation of a theory based on steps one and two. The choice of a frame of reference was the first step in the evolving of a theory. In this approach the object can be said to define the theory and not vice versa. The theory is the product and not the initiator of the research.

In the other approach, linguists such as Lyons (1965), Hjelmslev (1943) and Chomsky (1957, 1964) assume with Allen (1957) that:

...linguistics assumes no categories in rebus, no system inherent in the material and awaiting discovery. Linguistics, as I have already suggested, is a creative and not an observational activity; it creates its elements out of the continuum of human speech; it does not observe units unfolding themselves in time, but selects from the continuum such data as are relevant to the characterization of the elements it has established. (p. 155)

Here, the scientist in question evolves a theory on the basis of experience, reflection and intuition, a theory (s)he believes can explain the object of study. In the light of this theory (s)he constructs a model and formulates hypotheses. As Chomsky points out (1964), the data is there to confirm, revise or reject the theory but not to be the basis of the theory itself. Before rejecting the theory, the scientist will probably formulate other hypotheses or try to re-arrange the data. Before the theory organizes the data, there is chaos, a heap of facts with no apparent relationship or structure. The theory infuses the data with

form and meaning; the latter are not inherent in the data itself.

In addition to the two major schools of theory there is a third type that we might call professional theory. It differs from the other in that it comprises both scientific and humanistic components. As a result, it does not have either the descriptive adequacy or the degree of sophistication found in theories in the pure sciences. Professional theories are usually associated with activities, also called arts; i.e. language teaching. Activities are more complex than sciences in that they encompass more factors. The theories, too, must therefore, be more complex as they must account for all these factors, some of which are not quantifiable in a scientific way. This explains the humanistic input into professional theories.

From this it follows that the type, use and definition of theory espoused by the different schools will be closely linked to their conception of what it means to do science.

Significant vs. Non-Significant Parameters

Ferdinand de Saussure in his Cours de Linguistique Générale made an observation that has been of extreme importance in the development of linguistic science.

D'autres sciences opèrent sur ces objets donnés d'avance et qu'on peut considérer ensuite à différents points du vue; dans notre domaine, rien de semblable. Quelqu'un prononce le mot français nu: un observateur superficiel sera tenté d'y voir un objet linguistique concret; mais un examen plus attentif y fera trouver successivement trois ou quatre choses parfaitement différentes, selon la manière dont on le considère: comme son, comme expression d'une idée, comme correspondant du latin nūdum, etc. Bien loin que l'objet précède le point de vue, on dirait que c'est le point de vue qui crée l'objet, et d'ailleurs rien ne nous dit d'avance que l'une de ces manières de considérer le fait en question soit antérieure ou supérieure aux autres.

A theorist in elaborating a theory or description has an object in mind. The theory is constructed to explain the significant data, the data the theory must explain if it is to adequately account for the object of study. If several theorists look at the same object, i.e. language, what each designates as significant or non-significant will depend on the goal he has in mind. Any analysis of the material involves a selection. If the linguist, in describing or explaining language, does so in its own light and for its own sake, he does not have to take into consideration what the language teaching theorist must in elaborating his theory. Attitude and motivation do not enter into a linguistic analysis of language but they are important in a language teaching theory. Given the fact, then, that in most cases the object of study is different, or at least explored from a different point of view, and that the order or priorities as regards what is significant and non-significant is also different,

theories cannot be transferred directly from one science to another. Van Laer (1956) in discussing the above problems drew conclusions that would seem to confirm our position.

In the formulation of an explanatory hypothesis with the aid of analogy difficulties are likely to occur. It has even happened repeatedly in the past that such difficulties led to deplorable results. The reason for these difficulties is as follows. The model which is taken as the starting point of analogous considerations will usually exhibit various aspects and qualities. Possibly only a few of these aspects have any importance with respect to the object investigated, while the others find no analogical counterpart in this object. In the case of a mechanical model, for instance, one can distinguish form, dimensions, velocities, forces, etc. If such a model is used in the formulation of a hypothesis, care has to be taken not to incorporate indiscriminately into the hypothesis all aspects of the model as constituent elements, but only those which are necessary for the explanation of the investigated phenomena. (p. 121)

The Method

Sciences are characterized by a well-defined object of study and a distinct method. While in their infancy the method chosen is always in harmony with their particular scientific approach, sciences often borrow a method from another well-established science and then adapt it to their own needs, remake it in their own image. Under normal conditions, theory and method work in close co-ordination for the mutual benefit of both.

...both a theoretical framework and a methodology are essential and nourish each other, it's not an either/or situation, and I don't think either of them can be dispensed with, except at a very high cost to linguistics and the more general study of man. (Pickin: 1970, p. 33).

There is, however, as Allen (1957) points out, a danger that a theory may become too closely tied to its method so that it nearly becomes identified with it. In such cases, characteristics which belong only to the method become part of the theory, and in so doing, affect both the way of doing science and the selection of significant and non-significant data. Let us look at what happens when this occurs. The theory elaborates a model involving certain procedural or operational techniques (a methodology). As method and theory are nearly wed, science in turn becomes restricted to (defined by) what can be dealt with by the methodology. Thus what was created to be at the disposition of the scientific enterprise, has come to define the scientific enterprise itself. Concrete examples of this phenomenon will appear in the following chapters.

Theory, model, object of science, method and significant parameters are all very important components of the scientific enterprise. Different conceptions of science result from different views which theorists hold of these components. Their importance for this thesis will become apparent when we begin to discuss the "what", "how" and "why" of the influence of linguistic theory on language teaching theory in Chapter III.

CHAPTER II

The question "What is linguistics?" is no easier to answer than "What is theory?". As a science, it is very young in relationship to physics and mathematics. While at the turn of the century phonetics had already been recognized as a science, it was only with the publication of Bloomfield's Language in 1933 that linguistics became an accepted discipline of study in the U.S.A. In Europe, its recognition dates to the posthumous publication of de Saussure's Cours de linguistique générale in 1913.

The fact that the scientific community only recognized it in this century does not imply that there were no ideas or theories prior to this time. As Kelly (1969) indicated in his book Twenty Five Centuries of Language Teaching, ideas about language, what it is, how it functions and how it should be taught have existed since 500 B.C. What was lacking, though, was an integrated theory explaining in a scientific manner how language functioned. There was no well defined object, no precise point of view and, therefore, no sophisticated linguistic theory.

It is precisely this problem of sophistication or scientificity of theory that concerns us in this chapter. The two major American linguistic revolutions of this century have been reactions to the inadequacy of linguistic theory. Both leaders, Bloomfield and Chomsky, considered the previous way of doing linguistics was either non-scientific and/or incapable of explaining the significant data. They both attacked the existing theory from the point of view of:

- a) the methodology being used;
- b) the evidence considered as acceptable;
- c) the object of study as defined by the ruling paradigm;
- d) the goals established by linguistics.

Let us now turn to the first of these revolutions.

The Bloomfieldian Revolution

To call the first revolution "Bloomfieldian" is somewhat of a misnomer. Many eminent linguists such as de Saussure, Boas, Sapir, Palmer, Sweet and Jespersen, most contemporaries of Bloomfield, contributed in an important way to it. These people were interested in developing theories, techniques, methodologies that would lead to the scientific description of language. What Bloomfield did was to crystalize their thought into a unified theory of linguistics.

In the early twentieth century historical and comparative linguistics was still the dominant school. Bloomfield (1960: p.13) under the influence of de Saussure (1913) Boas (1911) Sapir (1921) and the logical positivists (cf. Auguste Comte) began to attack this way of doing linguistics. He contended that the previous approach was not scientific in either theory or method. This was understandable given the logical positivist stance (see p.15) which only accepts what is publically observable and measurable as belonging to the domain of science.

Bloomfield claimed that the previous methods of doing research used mentalistic concepts which were beyond the range of observation (Bloch: 1949, p. 94). In "Linguistic Aspects of Science", Bloomfield (1939) outlined the weakness of this approach.

In the prescientific view of these matters, a term such as 'reasoning' covers, on the one hand, observations which cost no great labour and, on the other hand, utterances of speech which are not recognized for what they are. Thus there arises the notion that knowledge may be obtained by a process of 'reasoning a priori'. Everyday observations, generally human or systematized by tribal tradition, are viewed as innate data of reason, and the ensuing deductions are clothed in a mystic validity. If the deductions are correctly made, the 'a priori' procedure differs from an ordinary act of science only that in the basic observations are unsystematic and remain untested. (p. 10)

The recourse to mentalistic concepts in the deductive method of science was seen as a stumbling block to the carrying out of acceptable scientific research. He was not attacking the method as such, rather he was protesting against its unscientific departure.

Evidence

This leads to Bloomfield's (1960) second criticism: the criteria for the admissibility of evidence.

...we can distinguish science from other phases of human activity by agreeing that science shall deal only with events that are accessible in their time and place to any and all observers (strict behaviorism) or only with events that are placed in coordinates of time and space (mechanism), or that science shall employ only such initial statements and predictions as lead to definite handling operations (operationalism), or only terms such as are derivable by rigid definition (physicalism).

... These several formulations (behaviorism, mechanism, operationalism, and physicalism), independently reached by different scientists, all lead to the same delimitation, and this delimitation does not restrict the subject matter of science but rather characterizes its method. (p. 13)

Taking inspiration from the physical sciences as well as the new behavioral approach in psychology (Watson and Weiss), he wants to reject all evidence that is not verifiable in a public manner. The scientist cannot assume anything that he cannot prove. Here Bloomfield is not so much condemning previous linguists for the results they obtained, but rather for what they used (mentalistic constructs such as 'mind') in obtaining these results. The recourse to such evidence, he is convinced, invalidates the scientific endeavour. The linguist is interested in the way people talk, the observable regularities of the language, and not in the underlying mental process (Sapir, 1922). The latter do not fall into the category of significant data as defined by the point of view and specified by the theory.

The Object of Linguistic Science

Bloomfield et al. also objected to the limiting of linguistic science to the study of historical and comparative linguistics.

We are coming to believe that restriction to historical work is unreasonable and, in the long run, methodically impossible. One is glad to see, therefore, that Dr. Sapir deals with synchronic matters (to use de Saussure's terminology) before he deals with diachronic, and gives to the former as much space as to the latter. (1927, pp. 444-45).

While Bloomfield is not saying that we cannot and should not do diachronic linguistics, he is contending that the results of such an enterprise would be unscientific because of the nature of the evidence used. Writing in The Journal of English and Germanic Philology (1927), he explains why this is the case.

For Jespersen language is a mode of expression; its forms express the thoughts and feelings of speakers, and communicate them to hearers, and this process goes on as an immediate part of human life and is, to a great extent, subject to the requirements and vicissitudes of human life. For me, as for de Saussure (Cours de linguistique générale, Paris, 1922) and, in a sense, for Sapir (Language, New York, 1921), all this, de Saussure's la parole, lies beyond the power of our science... Our science can deal only with those features of language, de Saussure's la langue, which are common to all speakers of a community, - the phonemes, grammatical categories, lexicon, and so on. (pp. 444-445).

Bloomfield would like to see the object of linguistic study as being la langue, the features of language common to all members of the community.

The criticisms levelled by Bloomfield and his contemporaries against the previous way of doing linguistics amount to an attack on the rationalist-deductive approach, or, to use Katz's expression, the mentalistic approach. They wanted to replace this, and in fact did, with an empirical-inductive approach which would make linguistics a full-fledged science, equal in status to physics and mathematics.

The New Linguistics

As mentioned above, it would be unfair to linguists such as Saussure, Boas and Sapir to equate the new linguists uniquely with Bloomfield. It is, however, in him that we find its clearest and most complete description in the USA. As in the preceeding section, we will look at this new linguistics from the point of view of method, evidence and object.

Method and Evidence

Bach (1966) provides an accurate analysis of this new orientation.

La première (la baconienne)... l'objet de la science est de nous donner une connaissance objective du monde. La seule base sur laquelle puisse s'édifier sûrement une telle connaissance est l'observation associée à l'expérience. Le chercheur rassemble un nombre considérable d'assertions concernant un certain type de phénomènes observés dans le monde, ou reproduits dans le laboratoire. Partant des affirmations véritables ainsi recueillies, sur des événements réels, il procède selon la méthode inductive à des généralisations prudentes, il s'élève par degrés à des propositions plus générales. Une proposition générale n'est valable que dans la mesure où elle s'appuie sur cette démarche inductive méthodique. Donc, il est de la plus haute importance de fournir toutes les preuves à l'appui d'un énoncé général. Et la théorie - si l'on peut encore employer ce terme - qui mérite le plus notre créance, c'est celle qui offre pour base la meilleure garantie d'un appareil de preuves solides et qui a donc le plus de chances d'être vraie. Toute spéculation hasardeuse, toute proposition de caractère métaphysique, toute affirmation a priori concernant le monde extérieur se trouvent ainsi exclues de la science. (p. 118)

What is being advocated here is the empirical-inductive approach of doing science. Whether it goes by the name behaviorism, mechanism, physicalism or operationalism, it is characterized by:

- a) accepting only observable and verifiable data as evidence;
- b) accepting only rigidly defined terms as initial statements;
- c) proceeding only by the inductive method.

These qualities, as Bloomfield points aptly out (1933) do not restrict the subject matter of science but rather characterize its method.

Bloomfield adopted the same approach and method as was being used in the exact sciences of his day. In the light of our discussion on theory in the first chapter, this means that

he has chosen the empirical-inductive point of view which affects his stance vis-à-vis the object of study; i.e. it says both what kind of language data is significant and non-significant and how it is to be investigated. In Bloomfield's case, only that which was publicly observable and verifiable was acceptable. Furthermore, the linguist, in approaching his object of study, could not make any assumptions about the data (corpus), he could not come with a ready made theory, nor could he impose a structure on the data, as the data was in the structure itself (Allen and Corder: 1973). We can conclude, therefore, that the object defined the theory and not vice versa. Theory resulted from an exhaustive investigation of the data with the aid of the inductive method. It was this process that would assure that the linguist's results would be scientific.

The Object of Linguistic Science

The object of linguistic science is la langue, the common features of language possessed by all native speakers. Linguists, even though they may concern themselves with other phenomena, cannot as yet account for them in a scientific way and, therefore, are best to exclude them from the significant data until they can be scientifically investigated. De Saussure's la parole lies beyond the scope of linguistic science. Such a decision regarding evidence criteria limited the scope of linguistics and resulted in a more restricted but better defined object of study.

Harris defines the object of linguistic science in the following manner:

Descriptive linguistics, as the term has come to be used, is a particular field of inquiry which deals not with the whole of speech activities, but with the regularities in certain features of speech. These regularities are in the distributional relations among the features of speech in question, i.e. the occurrence of these features relatively to each other within utterances.... the only relation which will be accepted as relevant in the present survey is the distribution or arrangement within the flow of speech of some parts or features relative to each other. (1951, p. 5)

The object of linguistic science is closely connected with the Bloomfieldian concept of language. Bloomfield describes language as follows:

1. language is speech and not writing;
2. language is a set of habits: we learn by repetition, analogy and generalization;
3. language is what native speakers say (descriptive) and not what they should say (prescriptive);
4. languages are different; there are no Chomskyan universals;
5. we should teach language and not about language.

The concept of language is closely related to the conception of methodology. There is no room for idle speculation, for theorizing about metaphysical matters. The truly observable, the truly analyzable, is the truly scientific.

This new school of linguistics based on empirical science and strengthened by behaviorist psychology was taken to its logical conclusion by Bloch and Harris. While Bloomfield regarded meaning as the weak point of linguistic science, he did not exclude it completely, as many commentators have maintained.

It is important to remember that practical phonetics and phonology presuppose a knowledge of meaning; without this knowledge we could not ascertain the phonemic features.

It has been painfully common to say that I, or rather a whole group of language students of whom I am one, pay no attention to meaning or neglect it, or even that we undertake to study language without meaning, simply as meaningless sound... It is not just a personal affair that is involved in the statements to which I have referred, but something which, if allowed to develop, will injure the progress of our science by setting up a fictitious contrast between students who consider meaning and students who neglect or ignore it. The latter class, so far as I know, does not exist. (1966, p. 215)

Harris (1951) in his Structural Linguistics claims that we should be able to carry out the linguistic task independent of meaning, completely on distributional grounds. The only assumption we have to make is that discourse itself is meaningful. After this, the linguistic description of any language, hence, the name descriptive linguistics, proceeds in a very regular fashion.

The whole schedule of procedures... which is designed to begin with the raw data of speech and end with a statement of grammatical structure is essentially a twice application of two major steps: the setting up of elements and the statement of distribution of these elements relative to each other. First the distinct phonologic elements are determined and the relations among them are investigated. Then, the distinct morphologic elements are determined and the relations among them are investigated. (p. 6)

The overall purpose of work in descriptive linguistics is to obtain a compact one-to-one representation of the stack of utterances in the corpus. (p. 366)

With Harris the circle is completed, the approach, the method, the techniques, the results, all are scientific in nature. Linguistics has finally attained the stature of a true science.

To the question "What is Linguistics?", the descriptive linguists would answer, it is the scientific investigation of regularity in the language system 'in itself and for its own sake', the synchronic investigation of la langue.

This new school with its new definition of linguistics dominated the linguistic arena in America until the middle sixties. An extremely important factor in this domination was the belief in the scientificness of the method used. People were convinced that if linguistics was carried out using a scientific method, the end result would automatically be science. The resulting theories as well as scientific pronouncements and predictions based on such research were considered as having scientific validity. So convinced were they of the efficaciousness

of their new science that they predicted that they would be able to provide not only evaluation and decision procedures, but also discovery procedures for the development of grammars.

In the descriptive linguist's way of conducting research, theory and method were closely related. The methodological procedures elaborated by Harris (1951) were developed to aid the linguist in his scientific endeavour; they were, as mentioned above, not to restrict the subject matter of science but to characterize its method. (1933). This, however, was not what happened for what could not be handled by these procedures, i.e. what was not observable and verifiable, was excluded as being non-significant for linguistic science. As meaning could not be handled by the methodology, it was excluded in most cases. Thus in the end, it was the methodology that came to define science. This would seem to be just the opposite of Bloomfield's intentions.

We are insisting on this point as the marriage of theory and method influenced language theory. We will return to it in more detail in Chapter III.

The Interlude

Between the two linguistic revolutions of this century, there was a type of quiet revolution. As Crystal (1971) points out, Chomsky was not the first to challenge the descriptive approach to linguistics. Others, such as Pike, Lamb, Halliday and Firth began to speak out against the classificatory predilection of the structural school, the arbitrary separation of class and function.

Firth and Halliday were greatly influenced by the work of Malinowski, an anthropologist, who placed an important emphasis on the social and semantic nature of language. He saw social context as critical for the explanation of meaning in language.

It might seem that the simplest task in any linguistic enquiry would be the translation of individual terms. In reality, the problem of defining the meaning of a single word... is as difficult a task as any which will face us. It is, moreover, in methodological order, not the first to be tackled. It will be obvious to anyone who has followed my argument so far that isolated words are in fact only a linguistic figment, the product of advanced linguistic analysis. The sentence is at times a self-contained linguistic unit, but not even a sentence can be regarded as a full linguistic datum. To us, the real linguistic fact is the full utterance within its content of situation (Malinowski: 1935, p. 62)

Firth took over the Malinowskian idea of "context in situation" / and developed a linguistic theory of meaning which maintained that the meaning of utterances depended on the contexts in which they were used. This was in contrast to the linear approach of the Bloomfieldians with their emphasis on phonemics to the exclusion of function. Firth proposed a linguistics of la langue and la parole together, of language in use in its social context. This emphasis on function and semantics challenged the Bloomfieldian school's emphasis on the form, its conception of language as a self-contained system.

Halliday (1961), who drew heavily on the work of Firth and Malinowski, also challenged the Bloomfieldian school's position.

He developed, along with McIntosh and Stevens (1964), a scale and grammar approach to language. For them, as for Firth, language was functional in nature.

Linguistics... is concerned with patterns of relationship between events. These events are pieces of socially determined human activity; the link here is with the social sciences, psychology, sociology and social anthropology. The patterning of these events is, as we have seen, both internal and external. The internal patterning is what is known as linguistic 'form'; the study of the form of language follows the general principles governing the study of systematically related properties and events, being in essence logical and potentially statistical. The external patterning is what we here call 'context'; this is the patterned relation between linguistic events and non-linguistic phenomena. The study of context, best known under the name 'semantics', is difficult to classify; 'semantics' has usually implied a specifically conceptual approach and one which has tended to be somewhat separate from other linguistic studies. The approach through language and 'situation', which owes much to anthropology, is still at an early stage of development. (pp. 12-13).

Lamb with his stratificational grammar continued the attack on the linear approach of the American structural school. He saw language as a system of complex relationships that relates sound to meaning. He pointed out the different types of structural relation involved in linguistic analysis. He demonstrated the different ways in which a structure on one level could be realized in a structure at another level. Contrary to Harris (1951), Lamb saw no one-to-one relationship between sound and meaning.

This very brief summary certainly does not do justice to the work of these three linguists. It does demonstrate, however, that there was a growing current of opposition to the descriptivist's over-emphasis on classification to the neglect of the complexities of linguistic structure. Classifying the data does not tell the whole linguistic story.

The Second Revolution

To insist, however, that the descriptive approach represents the only 'science' of language, or that content may not be studied legitimately as well, is similar to denying the possibility of psychology because it is not part of physiology. The disunity of linguistics has arisen from an unduly narrow conception of the nature of science in relation to its object. Defined with reference to postulates which are more or less arbitrary, the object occasions interpretations which are **evaluated** in relation to the axiomatic method being followed, rather than in relation to the natural phenomena being studied. (Juillard and Elliot: 1967, p. 193)

Chomsky's two major works, Aspects (1957) and Syntactic Structures (1965) are thorough going elaborations of the above statement. In them, he criticizes the descriptive approach for its inability to account for the linguistic data and the relationships that exist among the data. Reshuffling the results does not lead to any new theories; all it does is to produce a new classification. He does not want to restrict linguistic science to the limits of observable data, to what is analyzable by a specific method.

In presenting Chomsky's new conception of linguistics, we will follow the same method as was employed to discuss the Bloomfieldian one.

Methodology and Evidence

Chomsky proposes a new way of doing science, what Bach (1966) calls the Keplerian approach.

A l'autre conception... la démarche képlérienne voit surtout dans l'invention scientifique la manifestation d'une activité créatrice, qui s'élève d'un bond jusqu'aux hypothèses générales - souvent de caractère mathématique - dont la valeur se mesure à leur fécondité, à leur simplicité, à leur élégance. (pp. 118-119).

This approach is deductive. The observable data in such an approach is used to evaluate the strength of a theory, to confirm or reject its hypotheses. Such data, as Popper (1969) points out, is not capable of completely validating a theory; rather, it can only falsify it. Chomsky's view of the scientific endeavour is a product of his rationalism, of his conviction that we cannot account for the linguistic data on strictly empirical grounds. The form or the structure is not found in the data; it is imposed on the data; it informs it; it makes sense out of it. The raw data does not display any intelligible or law-governed relationship. The scientist imposes structure and order on the flux or chaos (Allen: 1975). In this approach, the theory defines the object and is not defined by it as was the case in the descriptive approach.

Chomsky, in promoting a conception of science in which theoretical hypotheses and intuition hold a central position, opened the door to new types of acceptable evidence, i.e. intuition,

mental constructs, meaning, observation as well as concrete data. This is understandable when we realize that for Chomsky the goal of linguists is to construct a universal theory of language. The linguist will formulate hypotheses on the basis of non-observable data in order to confirm, revise or refute the existing theory. On the basis of the raw data alone, we cannot formulate theories that will account for all the data. This position is not without its critics. Botha (1969) claims that we do not have any techniques available for the validation of such mentalistic constructs. In addition, just because a given theory works, it has explanatory power, does not mean that its characterization of language is correct. Chomsky (1971) contends that even renowned empiricists such as Quine and Russell admit that we need principles arrived at independent of experience to conduct scientific research. As Russell says:

Either we know something independently of experience, or science is moonshine - as are the beliefs of common sense.
(Chomsky: 1971, p. 8)

Despite the criticism of his detractors, Chomsky insists that it is only by admitting such evidence that we can explain the phenomenon called language. It is what is called the how-else argument: the burden of proof lies with those who do not accept this reasoning.

The Object of Science

Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance. (Chomsky, 1965, p. 3)

The object of linguistic study is the ideal speaker-hearer's competence. Linguistics has to study and expose this underlying mental reality that explains a speaker's linguistic behavior.

It has to account for what Chomsky calls 'creativity' in language.

It has to answer the following three questions:

1. What does a speaker fluent in the language know?
2. How does a speaker activate this knowledge?
3. How does a speaker acquire this ability?

The object of linguistic study, as outlined by Chomsky, is related to his conception of language. For him, language is rule-governed behavior and not a series of habits. We can summarize his view of language as follows:

1. A living language is characterized by rule-governed creativity.
2. The rules of grammar are psychologically real.
3. Man is uniquely built to learn languages (LAD).
4. A living language is a language we can think.

Chomsky contends that the empiricist conception of language cannot explain how a child can understand and produce in creative

ways, how he can evolve an adult grammar even though he has been exposed to false starts, ungrammatical sentences, etc. No amount of analogy, generalization or habit can explain this creative aspect of language.

This new approach to linguistics based on the Chomskian revolution is called transformational-generative grammar. Although it has gained ascendancy over the previous way of doing linguistics, no unified paradigm has, as yet, emerged in linguistics. The conflict between these two schools can probably be best explained by looking briefly at the goals of TGG.

Chomsky outlines the goals of linguistic theory as follows:

1. to determine the form of particular grammars;
2. to construct a general model for the acquisition of languages, an LAD device.

Linguists must be able to explain what he calls the universals of linguistics: competence, performance, etc. In elaborating on the first point, he subdivides this goal into four aspects:

1. to provide a general theory of phonetics;
2. to provide a general theory of semantics;
3. to provide structural descriptions;
4. to determine which grammar is best suited to accomplish the three above-mentioned tasks.

To all this, Chomsky adds one more point. A general theory must also be able to provide a justification for grammars, a method for choosing the most general and the simplest grammar.

In Syntactic Structures (1957), Chomsky states three possible claims we might make for a theory:

1. that it provide us with a discovery procedure for grammars;
2. that it provide us with a decision procedure for grammars ;
3. that it provide an evaluation procedure for grammars.

Chomsky says, that given the state of linguistics, we can only hope for the third goal, i.e. that given two or more possible grammars for a particular language, the general theory could say which one was the best. He finds the two first just too ambitious. Chomsky says that the structuralists have not developed successful and effective discovery procedures. They have failed because we cannot base theories on experience and observation alone. Theory precedes these two phenomena. All the structuralists are doing is to re-organize the data. While he admits that they have certainly developed valuable techniques in this area, he remains convinced that they have not and cannot explain the linguistic 'fact'.

Before discussing the new trends, we would like to say a word about Chomsky's attitude toward the scientificness of his pronouncements. Chomsky is convinced that his theory explains in the most complete manner the phenomenon we know as language. He does not, however, believe that his theory has the status of theories in physics and mathematics. As he pointed out at the Northeast Conference in 1965, the sciences of linguistics and psychology are in too great a flux, are in too great a state of uncertainty to take their pronouncements as being scientific. Only time and further research

will show if transformational grammar is right.

New Trends

Since the late sixties, two major schools of linguistic thought have been challenging the Chomskian position. They are the generative semanticists and the socio-linguists. While we do not have the space to discuss them in depth, we would like to mention some of their more important contributions.

The generative semanticists (McCauley, Lakoff and Ross) claim that the base component, in the Chomskian sense, should be semantic and not syntactic. The deep structure component becomes deeper and resembles more closely the sentence's meaning. The generative semanticists maintain that the power of the grammar is in the semantic component, the rules of which operate prior to the operation of the interpretive rules. This means that sentences, which on the surface structure are lexically and syntactically different, may still be related on the semantic level. The generative semanticists are endeavouring to analyze the complex relationships that exist between syntax and semantics. They have realized that a linguistic theory that either divorces these two elements or neglects one of them will always remain inadequate.

Sociolinguistics is also responsible for certain new trends in linguistics. It sees language as a social phenomenon. It attacks Chomsky's ideal speaker-hearer, for it claims that it does not represent the true linguistic reality. People live in real communities and speak real languages; they make errors; they use

many social registers. For them language is an instrument of communication. The following quotations from Labov (1971) will illustrate the tenor of this approach.

It is difficult to avoid the common sense conclusion, that the object of linguistics must ultimately be the instrument of communication used by the speech community; and if we are not talking about that language, there is something trivial in our proceeding. (p. 156)

Linguistic theory can no more ignore the social behavior of speakers of a language than chemical theory can ignore the observed properties of the elements. (p. 213)

From the socio-linguistic point of view, it is extremely difficult to separate linguistic from social facts. In such an approach, therefore, what the theory designates as the significant data (the object of study) will certainly be different than it was for Chomsky who did not pay attention to such facts.

Conclusion

We have at present several competing theories of linguistics each claiming to give the best description of the object of linguistic research, language. Each claims to be scientific in its own way. Each claims to account for the data at hand. How do we choose among them? How do we judge the validity of a theory? We might do so by choosing some external criteria of observation to see how each theory accounts for the data. While this is an excellent solution, there is a problem. How do we get the two parties to agree on the external criteria of observation? Will

these external criteria be based on the ability to explain language behavior? If so, this would seem to involve us in a vicious circle for how are we to define language behaviour.

A second suggestion, one made by Juillard and Elliot (1967), seems to be more promising.

There are, of course, no ready-made answers to these problems and, as often happens, it is easier to say what not to do than to make constructive proposals. If the study of language is to reach full development and fulfill its great promises in our pursuit of knowledge, all possibilities must be investigated and alternate systems made available for studies of a broader nature. To this extent, the progress of our discipline lies in disunity. But we may still seek a kind of unity founded upon understanding and mutual respect, through which the historical perspective and the structural principle, the substantial tradition and the formal approach, may collaborate for the general advancement of the study of language and related fields. The broad reasons for misunderstanding have been pointed out, in the material conditions which give rise to specific approaches hastily generalized as valid for all situations, and in the misconceptions of the nature of science. (p. 196)

There is no prevailing paradigm in linguistic science today, and there probably will not be one in the near future. This, however, does not preclude the possibility of ongoing research in the field in order to reach an even deeper understanding of the object of linguistic science, of continuing the search for a synthesis of existing theories.

To summarize what has been discussed in this chapter, we will present in chart form how the major schools of linguistic thought regard method, evidence and object.

<u>School of Linguistics</u>	<u>Method</u>	<u>Evidence</u>	<u>Object</u>	<u>Scientificness</u>
Descriptive Linguistics	Inductive (Empirical)	Publically Observable and verifiable data	La langue the regularities of the language	Claim scientific validity for their statements
Transformational Generative Grammar	Deductive (Rationalist)	Intuition, mental constructs and observable data	Native speaker's competence	Claim explanatory power for their statements

CHAPTER III

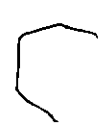
SECTION I

Any study that pretends to examine in a critical way the influence of linguistic theory on language teaching theory in the period 1935 to the present must analyze the role applied linguistics played in this phenomenon. The latter is a rather new area of study as the first models appeared only in the early sixties. All definitions prior to this date were very fluid and based on unchallenged premises. Here, again, however, as was the case with structural linguistics, what people believed was more important than what actually was. If the theorists concerned and the public at large were convinced that applied linguistics was a science with a legitimate area of study, a well-developed theory and a sound method, this overrode any shortcomings it might have had on the scientific level.

Since its birth, applied linguistics like linguistics and language teaching has gone through several revolutions. As these revolutions have been closely linked to similar phenomena in the linguistic sciences, we can divide the period to be studied as follows: (cf. Wardhaugh: 1968).

1. the 'pre-scientific' period;
2. the linguistic period (Bloomfieldian revolution);
3. the contemporary period (Chomskian revolution).

In order to group and discuss the models of applied linguistics, we will use a slightly reversed categorization of that proposed by Stern, Weinrib and Harley (1976).



The 'Pre-Scientific' Precursor Period

The American Structuralists' use of 'pre-scientific' (cf. Wardhaugh: 1968) must be seen within the context of the logical-positivism. It classied all attempts at science before it as lacking scientificness for their acceptance of non-vefiable evidence and the lack of a scientific method.

In his book, Teaching Foreign Languages: An Historical Sketch, Titone (1948) suggests that Henry Sweet (1845-1912) could be called the father of applied linguistics in the modern sense of the expression. Sweet along with his contemporaries, Jespersen and Palmer, elaborated theories of language teaching based on linguistics, psychology and pedagogy. In the United States, we could add Leonard Bloomfield to this list with the first edition of his book Language in 1914. The former group of scholars, almost completely forgotten or unheeded in the United States in their lifetime, contributed many ideas that resurfaced during the linguistic period, ideas which were subsequently incorporated into existing theories.

Sweet and Palmer (England) and Jespersen (Denmark) were convinced that language could and should be a scientific discipline. What was lacking was a scientific description of language on which to establish a scientific teaching methodology, a language teaching theory. The goal of their investigations was to provide such a description.

Sweet and Jespersen, both primarily linguists, believed that the principles of both linguistics and psychology could be directly applied to language teaching without any mediating science, i.e. applied linguistics acting as an intermediary.

A good method must, before all, be comprehensive and eclectic. It must be based on a thorough knowledge of the science of language - phonetics, sound-notation, the grammatical structure of a variety of representative languages, and linguistic problems generally. In utilizing this knowledge it must be constantly guided by the psychological laws on which memory and the association of ideas depend.

(Sweet: 1964, p. 3)

Applied linguistics for Sweet and Jespersen is equated with language teaching.

At the turn of the century phonetics but not linguistics was recognized as a science. Oxford in 1901 created a chair of phonetics especially for Sweet. This emphasis on phonetics affected not only the content but also the "how", the method of ordering and presenting the data to be taught in the language methodologies of Sweet and Jespersen.

The main axiom of living philology is that all study of language must be based on phonetics. (Sweet: 1964, p. 4)

We want to have some phonetics introduced into our schools because theory has convinced us, and experiment has proved to us, that by means of this science we can, with decidedly greater certainty, and in an essentially easier way, give an absolutely better pronunciation in a much shorter space of time than would be possible without phonetics. (Jespersen: 1947, p. 143)

The use of phonetics and phonetical transcription in the teaching of modern languages must be considered as one of the most important advances in modern pedagogy, because it ensures both considerable facilitation and an exceedingly large gain in exactness. (Jespersen: 1947, p. 176).

This emphasis on phonetics was also reflected in the primacy given the oral over the written. For both Sweet and Jespersen, language was seen as an instrument of communication. They were opposed to the over-emphasis on form and grammar in methodologies that derived from the teaching of Latin and Greek. Jespersen's (1947) two major principles were that the language taught must be living and that language should be taught in the appropriate situation and context.

Modern languages... want to be treated as living, and a method of teaching them must be as elastic and adaptable as life is restless and variable. (p. 4)

Sweet, for his part, also stressed the presentation of language in meaningful contexts. The psychological foundation of the practical study of languages is the great law of associations. Language is learned by an association of words and sentences with thoughts, ideas, actions and events. The teacher begins with the oral and proceeds little by little towards the written, with special emphasis being placed on pronunciation. Grammar, lexicon, context, all play an important part in this holistic approach to language teaching methodology. Jespersen and Sweet believed that language teaching methodology like any other discipline could be established on a scientific basis. They both adopted an eclectic approach selecting what was best in the different fields (i.e. grammar, psychology, phonetics, philology) that influenced language teaching theory (methodology). These different fields

affected language teaching methodology in a direct way. Phonetics, for example, contributed to both the "what" and the "how" of language teaching theory. There was no third science to vehicle this influence. It is an example of what Stern ~~et al~~ (henceforth used to represent Stern, Weinrib and Harley; 1976) call the "Application Model". It is a model in which

...linguistics and psychology provide scientific concepts, theories, and attested information which can and should be applied to language teaching. (p. 108)

The influence is only one way, and it is direct. Their language teaching methodology represents a type of applied linguistics without the mediation of a third party. Language teaching methodology equals applied linguistics. The teaching methodology is a direct result of their conception of phonetics, psychology, linguistics, a conception they felt was founded on scientific principles.

Palmer, as a result of his two books, The Scientific Study and Teaching of Language (1917, 1968) and The Principles of Language Study (1921, 1964), is considered as one of the greatest theorists of language teaching methodology of our century. The difference between Palmer and Sweet and Jespersen is one of emphasis and of linguistic conception.

Palmer (1964) sees the study of language as a complex activity.

Language study is such a complex thing, with so many aspects, and it requires to be looked at from so many points of view, that we must enlist all our capacities when striving to obtain the mastery we desire; we must not neglect our spontaneous powers, nor should we despise our intellectual powers; both are of service to us, both have their place in a well-conceived programme of study, each will to a certain extent balance the other and be complementary to it. An excess on either side may be prejudicial to the student, and one of the more important problems before the speech-psychologist is to determine in what circumstances and on what occasions each should be used. (p. 22)

There are, according to him, three disciplines that contribute in an important way to the founding of a scientific study of language teaching methodology: linguistics (philology), psychology and pedagogy. Linguistics, or more precisely philology and phonetics, was to serve as the scientific foundation of the method. This would furnish the teacher, not only the necessary data but the basis upon which to select it. Linguistics supplied lexical, morphologic, semantic and ergonic data. The last one is a much broader term than syntax, for it tries to encompass not only form but also function on many levels from the sentence down to the insecable. This idea was in contrast to the linear approach of the time.

Psychology contributed knowledge about language acquisition. The learning of a mother tongue is the result of special innate capacities.

We are all endowed by nature with certain capacities which enable us, without the exercise of our powers of study, to assimilate and to use the spoken form of any colloquial language, whether native or foreign. (Palmer, 1964, p. 11)

This idea is very close to Chomsky's LAD. Older people, however, must use what he calls "studial capacities" to learn languages. As these are different in each person, the language teaching must be adapted to the needs of the student.

The third important factor in a language teaching methodology is of a pedagogical nature. The latter, says Palmer (1968), must take into consideration four elements.

A complete and ideal language method has a fourfold object, and this is to enable the student, in the shortest possible time and with the least effort, so to assimilate the materials of which the foreign language is composed that he is thereby enabled to understand what he hears and reads, and also to express himself correctly both by the oral and written mediums. (p. 24)

In order to determine the best programme for a given student we must take into consideration four subjective factors: the student; his previous study of the language; his preliminary equipment; and his incentive. (p. 25)

Using these three principles, Palmer evolved an efficacious language teaching methodology based on the same eclectic approach as Sweet and Jespersen had used. While Titone (1968) calls this an interdisciplinary approach, we believe this is a misinterpretation for the latter implies that the three areas contribute equally to the language teaching theory. Palmer never says that this is the

case.. He calls his approach 'multi-line'.

The term 'multiple line of approach' implies that we are to proceed simultaneously from many different starting-points towards one and the same end; we use each and every method, process, exercise, drill, or device which may further us in our immediate purpose and bring us nearer to our ultimate goal; we adopt every good idea and leave the door open for all future developments; we reject nothing except useless and harmful forms of work. The multiple line approach embodies the eclectic principle (using the term in its general and favourable sense), for it enjoins us to select judiciously and without prejudice all that is likely to help us in our work. Whether our purpose is the complete mastery of the language in all its aspects and branches, or whether our purpose is a more special one, the principle holds good: we adopt the best and most appropriate means towards the required end. (1964, p. 141)

The best is chosen from each field but not necessarily on an equal basis. Finally, Palmer also believed that language was an instrument of communication. The teaching methodology had to take this into account. Palmer, like his contemporaries, emphasized the role of phonetics for he believed it could ensure a more scientific teaching of languages. The following extract from Palmer (1964) illustrates this very well.

- a) To learn to speak and to understand what is said before learning to read and write.
- b) To start a language-course with systematic ear-training and articulation exercises.
- c) To make most extensive use of phonemic transcription, especially in the early stages.
- d) To teach intonation at a very early stage.

- e) To memorize sentences and to learn how to construct them, before memorizing words and learning how to build either inflected forms or derivatives.
- f) To include irregular and idiomatic forms even in the earlier stages.
- g) To teach from the outset a rapid and fluent style of pronunciation, reserving more distinct utterance to a later stage.
(pp. 104-105).

To achieve the above, Palmer advised having recourse to repetition, drill and memorization, techniques which would resurface in the 1940's.

Palmer, as precursor, as forerunner of modern theories of language teaching/methodology, made an impressive contribution. He saw linguistics, psychology and pedagogy as having a direct and unidirectional impact on language teaching methodology. For him, as for Sweet and Jespersen, applied linguistics equaled language teaching methodology. There was no intermediary between the two. Second, Palmer laid the groundwork for the interdisciplinary approach with his multi-line idea. Finally, his linguistic concept of ergonomics with its attention to form, meaning and function prepared the way for linguistic theories in the late 50's and early 60's.

The ideas put forth by Sweet, Jespersen and Palmer bore little fruit in America in their lifetime due to the U.S.'s isolationist policy and reigning theory of language teaching. Rather, they prepared the way for future conceptions of linguistics, applied linguistics and language teaching.

In the 'pre-scientific-precursor' period, then, linguistics had a direct one-way effect on language teaching methodology. No third science had yet evolved to act as intermediary between linguistics and language teaching theory. Applied linguistics, inasmuch as we can really talk about it, was equated with language teaching methodology/theory.

CHAPTER III

SECTION 2

THE LINGUISTIC PERIOD

The attack on Pearl Harbour in 1941 jolted the Americans out of their isolationist position in foreign policy. Little did they realize that this would also lead to the dawning of a new age in linguistics and language teaching on the North American continent. All the ingredients had been there since the early thirties. The re-publication of Language in 1933 by Bloomfield crystallized the theory of the new linguistics. Behaviorism had gained ascendancy as the dominant psychological theory. In language teaching there was a certain distrust and malaise concerning the grammar translation approach. All that was needed was a spark, and World War II provided just that.

In looking at the influence of linguistics on language teaching in this period we will examine the role that social, historical and psychological factors had in vehicling it. We will then describe the reasons for, and the nature of, this influence.

We believe the consideration of the above factors to be important if we are to completely understand the "why" and the "how" of the influence exercised by linguistics in the period 1935 to circa 1965.

Social and Historical Factors

It was the American Council of Learned Societies and not the Armed Forces that foresaw the need for specialized forms of language courses to meet the wartime crisis. In 1941, this Council

founded the Intensive Language Program (henceforth, ILP) and named as its director, J. Milton Cowan, the secretary of the Linguistic Society. Cowan and the other members of the ILP, all primarily linguists, believed that language teaching should be founded on sound linguistic theory.

The program, as it developed, emphasized principles that had been enunciated by Bloomfield with the first publication of Language in 1914.

- (1) the actual teaching must be done by a trained linguist,
- (2) informants were to serve as drillmasters for small sections of students (not more than ten per section),
- (3) the number of class hours per week should be around fifteen to eighteen,
- (4) the ultimate goal of the student was to acquire accurate pronunciation, a good speaking knowledge, and good auditory comprehension of the language.

(Haas: 1953, pp. 812-813)

The ILP provided intensive courses for the American personnel who would be active in foreign countries. The ILP was only one of the major historical events in this period that enabled descriptive linguistics, the dominant theory at the outbreak of the war, to have such a profound impact on language teaching. While it would be impossible to enumerate all the events we would like to mention some of the most important ones in the period from 1940-1965.

The ILP was soon followed by the Army Specialized Training Program (ASTP) in 1943-1944. Inspired by the work of the ILP, the ASTP brought out a series of Spoken Language Texts. The authors read like a litany of the descriptive school of linguistics:

Bloch, Hall, Hockett, Bloomfield, Haugen. These texts, as Politzer (1958, 1964) and Fries (1949) mentioned, were audio-lingual in character, based on situational teaching, and made extensive of mimicry and memorization. They were not, as later texts and courses would be, based on a scientific analysis of the language. The graduation was not the result of strictly linguistic criteria. The ASTP and the ILP, because of their size and status, affected second language teaching, and most specifically English as a second language in many ways:

- 1) They enrolled the help of all the major linguists to write and plan language textbooks.

- 2) They created a need for linguistics and language teachers. To fill this gap the Linguistic Society of America had commissioned two books that have subsequently had a strong impact on linguistics and language teaching in North America. These books are Bloomfield's (1942) Outline Guide for the Practical Study of Foreign Languages, and Bloch and Trager's (1942) Outline of Linguistic Analysis. Although these two books did not completely meet the challenge, they publicized the descriptive way of doing science and, therefore, the principles upon which future language teaching theory would be based.

- 3) It created a need for new texts based on the oral as opposed to the grammar-translation approach. By implication, it also downplayed the latter as a valid method

for the teaching of languages.

While the war created an instant need for new methods of language teaching, the actual origins of the linguistic method that appeared in the late 1940's dated from the early 1930's. While the ILP and the ASTP are similar in nature to the linguistic method, there are some important differences.

In the 1930's two important institutes were established, the English Language Institute at Ann Arbor, Michigan (Lado and Fries) and the Summer Institute in 1934 under the direction of Pike. The latter was founded for the training of teachers - missionaries - in the new method. The professors at the Institute used the field method techniques of Boas and Sapir to analyze the different languages that the missionaries would have to teach. The informant technique, with its emphasis on the aural-oral, the comparing of the two languages, the scientific description of the language to be learned, all these methodological principles gave respectability and prominence to the descriptive linguist's approach.

The aims of the English Language Institute were:

- (1) to make thorough scientific analyses of the English language with a view to improving methods of teaching English to those of foreign speech;
- (2) to prepare textbooks for this purpose; and
- (3) to teach the English language to foreigners and check and improve their textbooks against this classroom experience. The over-all ideal is to interpret, in a practical way for teaching, the

principles of modern linguistic science and to use the results of scientific linguistic research. (Fries: 1945).

These two institutions, based on the methods and theory of descriptive linguistics, were the force behind what Fries calls the 'linguistic' method of language teaching (1949).

In 1948, the English Language Institute founded Language Learning: A Quarterly Journal of Applied Linguistics. As the title implies, the authors had no doubt that the insights of linguistics could and should be applied to language learning and, by implication, language teaching, for theories concerning both were not clearly distinguished. What was unclear in the 1940's was exactly 'what' could be applied, if anything, and 'how', the manner in which it should be applied. This problem will be dealt with later on in this section.

Between 1946 and 1960 linguistics and language teaching were drawn closer together through the organization and formation of special conferences, organizations and institutes. In 1946, the Foreign Service Institute (FSI) under the direction of the linguist Henry Lee Smith embarked on a program of language teaching for American diplomats. It served not only as a source of materials but also as a training ground for young linguists. Needless to say, they were trained in the descriptive school.

The new approach was also adopted at different universities, i.e. Texas, Purdue. The Cornell Program of Language Teaching, under the guidance of Cowan, the former director of ILP, was,

however, the most renowned. Cowan, in preparing the curriculum, retained the basic principle of the wartime programs.

Three other events remain to be mentioned. In 1949, Georgetown University began its Roundtable Meetings on Linguistics and Language Teaching. These conferences have, throughout the years, provided a public forum for promoting a closer relationship between these two disciplines (1949 to mid-sixties) and, most recently, have been involved in trying to re-define the field of applied linguistics in order to determine what connection it should have with the two former areas of study. In the early years of the conferences the position taken, as earlier defined by Stern et al and supported by the work of Jespersen, Sweet and Palmer, was that linguistics had a direct role to play in language teaching. Applied linguistics was often equated with language teaching rather than serving as an intermediary between linguistics and language teaching theories. Given the success of the ILP and ASTP, such a direct application approach was to be expected under the circumstances.

The major historical happening of the 1950's was the enacting of the National Defence Education Act (NDEA). Its aim was to improve the quality of instruction in the arts, foreign languages, mathematics and sciences. The NDEA funded several important projects such as:

- 1) The Summer Institute for the training and education of language teachers using the new system of linguistic analysis.

- 2) The making available of funds to both individuals and organizations for the pursuance of research in linguistics and language teaching.
- 3) It worked in combination with ACLS and MLA and the Center for Applied Linguistics in carrying out research, educating teachers and providing materials.

It is difficult to measure the total impact of the NDEA, but it was certainly a key factor in fostering the application of linguistic science to language teaching.

Finally, in 1959, there was the foundation of the Center for Applied Linguistics. Moulton (1966) outlines its functions as follows:

The Center for Applied Linguistics mentioned (above was another example of the growing cooperation between language teachers and linguists. It was established to meet a number of needs: the tremendously increasing demand for the teaching of English in foreign countries, among other things via the Fulbright Program; the training of Americans in the major languages of Asia, so long neglected in this country; and the improvement of cooperation and communication among linguists, psychologists, and language teachers. The Center was also intended to serve as a clearing house for universities, government agencies, and other institutions or individuals concerned with the application of linguistic science to practical language problems. (pp. 101-102).

This Center, with its organ The Linguistic Reporter, provided a place where research involving linguistics and language teaching could be undertaken on a long term basis. It also gave public

witness to the existence of applied linguistics as an area of study, and to the belief in the minds of some of its status as a science. The importance of historical and social events in encouraging, nourishing and spreading the influence of descriptive linguistics cannot be overestimated. These events created the circumstances and the needs that permitted descriptive linguistics and its most competent spokesmen to fashion a new language teaching theory in its, and their own, image and likeness. These events as Wardhaugh (1968) points out helped lay the groundwork for a new language teaching theory based on a unified theory of structural linguistics, behavioral psychology and pedagogy.

The Psychological Climate

Behaviorism did not just happen on the scene in the 1940's. Its origins can be traced back to the work of Thorndike in the late 1800's. Since the publication of his Animal Intelligence in 1898, it has been an important force in psychological theory to the present day. As a learning theory, it is based on the mechanistic model as outlined below.

The mechanistic model represents the universe as a machine composed of discrete pieces operating in a spatio-temporal field. These pieces - elementary particles in motion - and their relations form the basic reality to which all other more complex phenomena are ultimately reducible. When forces are applied in the operation of the machine a chain-like sequence of events results, and, since these forces are the only immediate efficient or immediate causes of the events, complete prediction is possible - in principle. As Reese and Overton point out, 'A further characteristic of the machine, and consequently of the universe represented in this way, is that it is eminently susceptible to quantification.' (Knowles: 1973, p. 17)

We all recognize in this model such basic concepts as reinforcement, conditioning, stimulus-response and graded progression. These concepts have been elaborated in different ways by behaviorists such as Thorndike (connectionism), Pavlov (classical conditioning), Guthrie (contiguous conditioning) and Skinner (operant conditioning). Rather than treating all the theorists individually, we will present a synthesis of their ideas and methodology and then demonstrate how these ideas were influential in shaping language teaching/learning theory.

First, human learning is similar to animal learning. We can extrapolate from laboratory theory developed for animals to the human situation. (Skinner: 1968). Morton and Lane (1961) contend that the tasks associated with second language learning are "indistinguishable" from those involved in conditioning learning in the language laboratory. In fact Lane (1964) has stated that

there is nothing extrapolative in the application of laboratory techniques, and nothing metaphorical in the use of concepts gained from a functional analysis of behaviour in the laboratory. (p. 250)

Second, learning, including language learning, is a mechanical and not an intellectual process. The mind does not play an active role in learning.

Third, learning is basically a process of conditioning, as Chastain (1969) describes it:

"The command of a language is a matter of practice," and "LANGUAGE LEARNING IS OVERLEARNING; ANYTHING ELSE IS OF NO USE" prepared the way for a new methodology based on language acquisition through a process of habit formation consistent with behavioristic principles of learning.

...language is a mechanical, not an intellectual, process. In order for behavior to be conditioned the student must be led through a series of stimulus-response situations in which his active response is followed by immediate reinforcement. (p. 99)

Four, all learning must be immediately followed by reinforcement.

Five, the learning situation should be so constructed as to eliminate error as much as possible. The learner is not given an opportunity to hypothesize.

Six, one always begins with simple discrete units and proceeds to more difficult ones only after the learning has become automatic as a result of repetition, analogy and generalization. The goal of learning is the formation of habits.

The most important spokesman of this group is B.F. Skinner. While his most important work in the area of language behavior, Verbal Behavior, only appeared in 1957, he had been writing on the subject of learning and teaching for many years. His particular form of behaviorism, operant conditioning, sees the aim of psychology

as being to predict and control the behavior of individual organisms.

Although Skinner spent most of his time working with animals, he believes the same results can be achieved with human beings for the factors involved are not radically different.

Comparable results have been obtained with pigeons, rats, dogs, monkeys, human children and psychotics. In spite of the phylo-genetic differences, all these organisms show amazingly similar properties of the learning process. (Skinner: 1968, p. 14).

In such a perspective, teachers are architects and builders of students' behavior. As Bigge (1976) points out, operant conditioning is a shaping approach to behavior.

Operant conditioning is the learning process whereby a response is made more probable or more frequent; an operant is strengthened - reinforced. ... An operant is a set of acts that constitutes an organism's doing something - raising its head, pushing a lever, saying 'horse'. It is so called because behavior operates upon the environment and generates consequences. In the process of operant conditioning, operant responses are modified or changed. Reinforcement means that the probability of the repetition of certain classes of responses is increased. (p. 113)

The implications of Skinner's position for learning, in general, and more specifically language learning, were, as we shall see shortly, far reaching.

In addition to the behaviorist theory, there was also its methodology that resembled in many ways that subscribed to by descriptive linguistics. All experiments were performed under tightly controlled conditions. The only data admissible was that which could be publically observed and handled by the methodology.

The method proceeded in a lock-step manner, working on one item at a time, and going from simple to complex. Each task to be learned was worked upon until it was raised to the level of automatism, to the level of habit.

In spite of all the attempts to liberate linguistics from psychological influences. (see Bloomfield's introduction to Language, 1933), linguistics still remained associated with the dominant psychological theory of its day. In reality, in behaviorism, descriptive linguistics found a faithful handmaiden, similar in theoretical outlook and methodology with which to found a scientific theory of language teaching. Politzer says in one of his articles that behaviorism was the descriptive linguists' gift to the 1940's. It was through linguistics and language teaching that it was spread.

In the war and immediate post-war periods, then, linguistics and behavioral psychology developed side by side in a mutually reinforcing manner. The latter, with its explicit methodology and stringent scientific criteria readily gained public acceptability and credence. It lent to all enterprises with which it was associated, language teaching theory included, a quality of scientificness. It is in the light of this psychological climate, and the previously mentioned historical and social factors, that we will examine the influence of descriptive linguistics on language teaching theory.

The Influence of Linguistics on Language Teaching Theory: 1940-1965

Language teaching theory is different from both linguistic and psychological theory. The latter claim to be scientific in possession of a sophisticated theory based on observable and verifiable data. They both have a precisely defined object of study and a well-defined methodology. Teaching theories in general, and second language teaching theories in particular, can make no such claims. While most theorists today would agree that teaching is not a science, they are not at all in agreement on what it actually is.

Discussion among language teachers concerning theories often includes talk about

...common sense experiences, personal anecdotes, technics, politics, relevancy and sloganeering. Contributions from history, philosophy, psychology and sociology will be second class - if present at all. (McKenna: 1976, p. 406).

As McKenna points out (language) teaching theory has been dominated by the tyranny of how-to-do-ity to the neglect of such fundamental questions as the "who-why-what-whether-where-how-when" dimensions of teaching/learning. Blame for this can be placed on the shoulders of both the educators (linguists included) and the educated (language teachers). The former are often convinced that the nature of pedagogy precludes the development of any scientific theory. In addition, they have a disdain for language teaching and teachers. The educated often feel that they cannot agree with or understand all the new theories being spouted by the experts in the field. They have, therefore, often remained loyal

to the formulas that have worked in the past. Dean TheodoreSizer of the Harvard Graduate School of Education poignantly describes the reigning attitudes.

...In 1972 Dean Theodore Sizer of the Harvard Graduate School of Education complained in the Phi Delta Kappan that professional educators are loath to use theoretical evidence and philosophical concepts, and they denigrate both. As a group, he said, educationists are 'anti-conceptual', asserting practices from personal experience rather than from theory and systematic evidence. Few teachers can explain why they are doing what they are doing, what are its roots in some theory of learning or of culture or of pedagogy. 'It is appalling to have to pound the table to get professional colleagues even to look at evidence', Sizer wrote, 'and when that evidence seems to fly in the face of conventional wisdom, to keep those colleagues honest, even unto themselves.' People interested in basic research are accused of irrelevancy and of wasting time.

(McKenna: 1976, p. 407)

Today, as Sizer emphasizes, neither language teaching practice nor the theory upon which it is based is scientific in nature. Language teaching theory is a mixture of art and science, a mixture of practical wisdom gleaned from experience, and of scientific evidence based on empirical studies. It does for language teaching practice what medical science does for the general practitioner; it synthesizes the insights of all the related fields into a type of working theory. We cannot, however, claim that the source disciplines for language teaching have reached the same level of sophistication as those of medicine. Lastly, it must be emphasized that in actual practice, both medicine and language teaching are

activities, and therefore, are more complex than scientific research in a specific area, i.e. physics, chemistry. They have to take into account data that may or not be amenable to scientific measurement and verification.

Given this situation, we would like to propose with McKenna and Piaget, that language teaching theory should be of a professional rather than of a scientific nature.

...Professional theory is a tested body of correlated knowledge and skills focusing upon a single topic (and sometimes arising from several disciplines), which enables practitioners who have mastered it to perform more efficiently than practitioners who have not mastered it. All else, professional ethics, certification, is subservient and contributory to the profession's multidisciplinary theory. Although no professional theory or conjunction of theories can guarantee 100% efficiency, it can guarantee more efficiency than if theory were absent.

... When reliable theory for education materializes, it will come from both scientific and humanistic disciplines. Therefore, the expression 'science of education' simply voices the need for rigorously scientific inquiry culminating in theories related by professional purposes. (McKenna: 1976, p. 407).

McKenna's use of theory here, while not completely alien to that expressed in Chapter I, is different. First, the theory will be based on both scientific and humanistic criteria. It will never be able to achieve, therefore, the objectivity and precision of say a mathematical theory. Second, and we would like to insist on this point, it is a theory that serves as the foundation for an activity rather than the investigation of a single discipline. This is

important for it is related to the possibility of the transfer of theoretical results from one domain (a science) to another domain (an activity); i.e. can we transfer the result based on research in psychology directly to language teaching theory?

McKenna's proposal resembles what the French call a "discipline-carrefour" or "charnière". In formulating a theory, language teaching has to consult research done in linguistics, psychology, sociology, pedagogy, biology, etc. It has to take all this knowledge and weave it into a unified theory. The object of linguistic study, for those who consider linguistics to be a self-contained system, is language in and for itself. The object of language teaching theory, however, is language as a system of communication, how it is acquired and used. In terms of what was said in Chapter I, language teaching theory is interested in more than just linguistic input. It must also consider

- 1) attitude and motivation,
- 2) language aptitude,
- 3) strategies of learning,
- 4) student needs and interests,
- 5) sociological data (registers and dialects),
- 6) political and institutional needs and requirements.

In such a perspective, it is evident that while the description of language furnished by linguistics is important, a theory of language teaching cannot be built on it alone.

Before terminating this preamble, one further distinction should be made; the difference between learning theory and teaching theory.

A distinction can be made between theories of learning and theories of teaching. While theories of learning deal with the ways in which an organism learns, theories of teaching deal with the ways in which a person influences an organism to learn.. (Gage: 1972, p. 56).

Failure to distinguish between the two implies

- 1) that there is no difference between a learning theory and a teaching theory;
- 2) that a change in one will automatically produce a change in the other;
- 3) that the identification and analysis of the different factors in these two processes, as well as the relationship among them, becomes very difficult .

This has serious implications for, if linguistics and psychology were able to dictate the "how" of teaching, they would also dictate the "how" of learning. Further, it implies that teaching and learning are the same type of processes and are influenced by the same factors.

The origin of the impact of linguistic theory on language teaching theory in the period circa 1940-1965 lies with the new conception of language proposed by descriptive linguistics. Given the importance of this view of language, we will enumerate its main points again.

- 1) language is speech and not writing;
- 2) language is a set of habits;
- 3) language is what native speakers say (descriptive) and not what they should say (prescriptive);
- 4) languages are different; there are no Chomskian universals.

It was a complete repudiation of the traditional view based on a universal and logical grammar. Politzer (1964) has described the theoretical foundations of the latter admirably well.

...the idea of a universal and at the same time logical grammar had for centuries provided not only the method but perhaps even the ultimate justification of foreign language instruction. The grammar-translation approach was based on the principle that the method of expressing thought and ideas in a foreign language started with the grammatical analysis of the parallel statement in the native language...

... the categories employed in the analysis were meant to be universal and logical. They served not merely as the stepping stone from one language to the other; they were, in the minds of some language teachers and educators, perhaps more important than the languages involved. Being universal and logical they were in a sense the real goal of language instruction. The purpose of foreign language teaching was to make the student aware of "grammar" in order to teach him "how to think". (p. 147)

Historical and social factors as well as the prestige of the new school of descriptive linguistics helped this new conception of language gain ascendancy. It became the basis for the new audio-oral (audio-lingual) theory of language teaching. The descriptive linguists and/or language teachers influenced by their informant methodology and personal bias, believed in and promoted

the primacy of the audio-oral aspects of language.

A language is first and foremost a spoken phenomenon, and only secondarily a written one. The high literacy of our society tends to make us forget this. Therefore, the logical approach to the study is through the spoken form. (Meyer and Obrecht: 1955, p. 32)

The description of language espoused by language teachers was based on a linguistic analysis of the language. This presumes, as Mackey (1966) points out, that the unit of analysis is also the unit of instruction and learning. In accepting a linguistic description, language teaching theory acknowledges that if we want to learn a language, we must follow the same steps as the linguist does in analyzing a new language in order to obtain its constituent elements; i.e. phonemes, morphemes (see Politzer: 1960, p. 2). This analytical technique for language analysis, developed by Harris (1951) and others, was transferred to the level of language teaching theory and became a methodological principle.

From this discussion it should be evident that not only descriptive linguistic theory but also its methodology influenced language teaching theory. This is understandable when we realize that at certain moments during its evolution theory and method in the descriptive school almost became identified (Allen: 1957).

Under such a state of affairs, method becomes part of theory and, therefore, influences all that theory alone would ordinarily influence. This does not negate the possibility that methodology in its own right could exert an independent influence. In the

case of language teaching theory, we believe that methodology exerted its influence in both of the above mentioned ways.

Other aspects of linguistic methodology, in addition to the one mentioned above, influenced language teaching. In the soliciting and analyzing of information the interviewer often had recourse to repetition, contrasts and substitution. By using such techniques the linguist was able to obtain the constituent units of the corpus, prepare a linguistic description and write a grammatical theory. These steps had to be repeated for each language as the descriptive linguists believed that there were no universals as defined by the traditional grammar-translation approach.

On the level of language teaching theory, these methodological techniques helped to fashion the "how", the methodology, and presentation of the "what". Pattern drills, imitation, repetition and systematization are not the inventions of linguistic theory. They are not even the creations of behaviorist psychology. Their use, however, was inspired both by the linguistic concepts of language and methodology and the psychological theory of learning and methodology. Linguistics and psychology, in telling language teachers how to teach, claim expertise not only in the area of content but also in methods. The very fact the linguistic theory and methodology were able to shape language teaching theory implies that research and methodological principles can be transferred from one domain to another. Such an unquestioning acceptance of such a transfer explains why linguistics had a major impact on language

teaching theory.

It is important to realize that linguistics alone did not affect the "how" of language teaching theory. As a result of the analysis of a corpus, the linguist ended up with the basic units of the language. These units constituted the "what", the content. Certain of the methodological techniques suggested how this content should be organized and taught, i.e. using repetition, presenting oral before written. It was behavioral psychology, though, that provided the theoretical framework for learning and teaching theories.

Behavioral psychology provided a scientific learning and teaching theory for the presentation of the linguistic data. Learning, for the behaviorist, is looked upon as a mechanical process, the students have to be conditioned like rats.

The whole process of becoming competent in any field must be divided into a very large number of very small steps, and reinforcement must be contingent upon the accomplishment of each step... By making each successive step as small as possible, the frequency of reinforcement can be raised to a maximum, while the possibly aversive consequences of being wrong are reduced to a minimum.

This is the purpose of programmed instruction. According to operant conditioning, learning a subject like fundamentals of electricity is largely a matter of learning (or giving) a large number of correct responses to logically related sequences of questions that constitute the subject... Once a subject has been carefully divided ("programmed") into a series of many small bits of information ("steps") a student has only to learn by repetition and reward ("rapid and frequent reinforcement") the correct answer to a series of questions about the small bits of information.
(Skinner: 1968, p. 136)

Each element, each structure to be learned must be presented in such a way that the student will acquire complete mastery of it, hence the use of pattern drill, imitation, the mim-mem method. In the behaviorist approach of teaching/learning, as in linguistic analysis, we begin with the most simple elements (the phonemes) and progress to more difficult units or groups of units. At each step along the way, the learning is reinforced positively or negatively. Le Ruzzo (1974) points up the importance of the reinforcement aspect of learning.

.. Dans l'application du conditionnement à l'instruction le statut accordé à la réponse est primordial. Le fait d'informer l'élève sur la valeur de ses réponses correctes constitue le renforcement dans la mesure où l'on accroit ainsi sa motivation au travail. Cette définition du renforcement aboutit à trois conséquences tant sur le plan de la technique pédagogique que sur le plan de la méthode de présentation du contenu: la réponse doit être construite, le programme doit fractionner la matière à enseigner et en hiérarchiser les difficultés. (p. 40)

This learning theory is transferred in the case of second language learning/teaching from the laboratory to real life and from first language to second language learning/teaching.

Behavioral psychology proposed a very mechanistic model of teaching based on its model of learning theory. As Politzer (1964b) mentions, their model took into account three major factors in learning.

First, and perhaps most important, is that the native language interferes with the acquisition of the new one; second that language is a habit (or a complex of habits); and third, that language is an elaborate system. (p. 20)

To do this the teaching strategy must make certain that it shapes the student's learning such that: (1) a response can be learned only if it is performed; (2) a response is learned if it is rewarded; (3) rewarding of desired responses is by far more effective than the punishing of wrong ones; the rewarding of desired responses is usually only effective if the reward is immediate rather than delayed.

(p. 21)

This teaching strategy, according to the authors, would lead to positive transfer through analogy and generalization, and reduce negative transfer (interference) and error through the strict control of the learning situation. If the situation was so engineered that only one possible answer was correct, the student would be conditioned from the beginning to do the right thing.

This teaching/learning theory provides the psychological framework for the audio-lingual habit theory. Carroll (1965) describes it as follows:

The audio-lingual habit theory, which is more or less the "official" theory of the reform movement in foreign language teaching in the United States of America has the following principal ideas: (1) that since speech is primary and writing is secondary, the habits to be learned must be learned first of all as auditory discrimination responses and speech responses; (2) that habits must be automatized as much as possible so that they can be called forth without conscious attention; (3) that the automatization of habits occurs chiefly by practice, that is, by repetition. The audio-lingual habit theory has given rise to a great many practices in language teaching: the language laboratory, the structural drill, the mimicry-memorization technique and so forth. (p. 278)

Carroll, in the above text, demonstrates how descriptive linguistic theory through the mediation of audio-lingual theory affected actual language teaching practice. Audio-lingual theory is the basis for what Politzer calls the "linguistic method"; it is founded on the tenets of both descriptive linguistics and behavioral psychology. It reigned as the dominant language teaching theory till the arrival of the TG revolution. Through it, descriptive linguistics shaped and controlled language teaching on both the content and methodological levels in a profound way.

In both theories, the psychological and the linguistic, there is little or no mention of meaning. The mind was ruled out of bounds in behavioral psychology. This rejection of meaning in either field had a profound influence on language teaching theory. If no talk about meaning was permitted for fear that this would lead to interference between L_1 and L_2 , i.e. the use of translation, this meant that the form had to be drilled until the student could use the structure automatically. This led to an overabundance of exercises of the simple substitution type, the insistence on drill and repetition in non-contextualized exercises, resulting in boredom and frustration on the part of the student.

Further, by not taking meaning into account, the structuralists were able to give their linguistics more scientific credibility. As meaning could not be handled by their procedural techniques it was excluded. Analysis was carried out on the distributional criteria. The structuralists were convinced that taking

such radical steps was necessary, that what was lost in content was more than compensated for by gains in scientific status. By implication, then, if language teaching theory was also to be scientific in nature, it too would have to be based on observable and verifiable data. This explains the stress on form at the cost of function in language teaching methods based on the structuralist theory. The fact that the linguists themselves and the consuming public in general believed descriptive linguistics to be a science did much to increase its influence over language teaching theory. The findings of descriptive linguists became axioms on the level of language theory. The language teachers, and this is important, also believed, especially after the wartime experience, that the 'linguistic' method would produce miraculous results. In some cases, in contrast to the traditional method, it actually did, especially at the elementary level. Before concluding this, one more question must be answered? Did people such as Bloomfield, Fries, Hockett and Cowan influence language teaching theory in their capacity as linguists, as language teachers, or as both? The above-mentioned people were all involved in linguistic research, language teaching and textbook writing. Most of them were first asked, in their role as linguists, to lay down principles for a sound language teaching theory. These included such things as the oral-aural approach above all, the avoidance of the mother tongue (i.e. no translation). While their influence here was quite evident, in other areas it was not. An example should make this

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clear. Was the decision to present the present before the past tense, or the feminine before the masculine form of the adjective based on linguistic theory, on language teaching practice or a mixture of the two. It is our opinion that the answers to such questions were initially provided on the basis of classroom practice, and that theoretical justification was later sought in the existing linguistic theory.

This position does not imply that when these linguists wrote textbooks or answered questions concerning language teaching, they were not guided by linguistic theory. They certainly were. It maintains, however, that there were many a posteriori attempts to justify decisions that were originally made on the basis of classroom practice. To the extent that one could prove that such decisions actually became part of language teaching theory, one would have to admit that these people influenced language teaching theory as both linguists and language teachers. While we believe that these people had their greatest influence as descriptive linguists, we also believe that they had an impact as language teachers and textbook writers (cf. ILP and ASTP). Let us examine the following example. A technique based on classroom practice - present tense before past - that becomes part of a textbook and is later justified on the basis of linguistic and psychological theory - simple units before complex units - can easily become a principle on the level of language teaching theory - the mastery of simple items must precede the mastery of more complex ones. Given the complicated

nature of such processes, it is very difficult to state precisely what effect these people had as language teachers. Finally, even while admitting that they did have an impact, we must also raise the question whether they would have had any effect at all had they not been members of the descriptive school of linguistics.

In concluding, we can state that linguistic theory influenced both the "what" and the "how" of language teaching theory. It was able to achieve this because it transferred both the results of linguistic research and its principles of methodology to the level of language teaching theory. The former determined what was to be taught; the latter, along with behavioral psychology, determined how it was to be taught. In some cases methodological principles became pedagogical prescriptions. The transfer of such research and principles intimates that the object of study, the method and the goals of linguistics and psychology are the same as those of language teaching theory. This, as was demonstrated earlier, is not the case. Linguistics and psychology would never have had the impact they did if language teaching theory had questioned their right to determine not only the "what" but the "how".

Finally, it should be mentioned that psychology helped linguistics influence language teaching theory by

- 1) providing a theoretical framework similar in methodology and outlook to descriptive linguistics which helped to vehicle the latter's major postulates concerning language;

- 2) providing a mechanistic view of learning/teaching to go along with the mechanistic view of language, thus strengthening the empirical-inductive approach;
- 3) conferring, through scientific investigation, acceptability and scientificness on many of the linguistic hypotheses concerning language.

Models in Applied Linguistics: The Linguistic Period

Was there any correlation in the linguistic period between the models of applied linguistics that appeared and the relationship that existed between linguistic and language teaching theory? This is the question to which we will address our attention in this section.

In the post-war period no precise definitions or models of applied linguistics surfaced. The writers on the subject, as Mackey pointed out (1966), did not have transparent ideas about what could and should be applied, how to apply it, and to what it should be applied. Each author defined for himself the contents of applied linguistics.

As quoting from all the authors of this period would be too lengthy, we will present two representative quotations. Fries (1949), who was intricately bound to the new theory of language that developed, described its originality as follows:

If this is to be taken as the "basic assumption" of the "new approach" to language learning - i.e. the basic assumption of what has been often characterized as the application of the more recent developments of linguistic science to the practical problems of teaching foreign language - then it points to a fundamental misunderstanding. For at least ten years some of us have been trying to explain that the fundamental feature of the "new approach" to language learning is not a greater allotment of time, is not smaller classes, is not even a greater emphasis on oral practice, although many of us believe these to be highly desirable. The fundamental feature of this new approach consists in a scientific descriptive analysis as the basis upon which to build the teaching materials.
(pp. 89-90)

Politzer (1958) in the following extract presents an historical appreciation of the linguistic-language teaching relationship during that period.

The method of linguistic analysis may be converted into teaching methods, since linguistic analysis is basically a way of learning a language. It is perfectly true that 'linguistic analysis is not a method of instruction. Linguistic analysis merely has something to say about what is to be taught'. Nevertheless, the most profound influence of linguistics on language teaching has been precisely in the area of methodology of teaching. (p. 67)

To claim, as did Fries (1949), Haugen (1955) Graves and Cowan (1942) that the uniqueness of the new linguistic method lay with foundation on the principles of descriptive linguistics did nothing to clarify exactly what part of that theory could be applied. No parameters or guidelines were immediately established explicating the "how", "what" and "why" of the relationship that should exist between linguistics and language teaching theory.

Such a fluid description of the content of "applied" in applied linguistics promoted the blanket application of theoretical linguistic principles to language teaching theory in this period. Linguistics became the victim of what Mitchell (1964) called the utility trap. The linguists who had been asked to set up courses for the wartime programs were spurred on by their initial success. If some principles had yielded promising results, why not all? As no one examined the validity of this assumption, some presumed that everything in fact could be applied. The poorly-defined conception of applied linguistics that existed prior to 1960 resembled closely that of Sweet, Jespersen and Palmer. Applied linguistics was identified with language teaching theory (methodology). This equation was the by-product of a need for language courses created by World War II. Further between linguistic and language teaching theory then, there was no third mediating discipline. The influence of linguistics was direct and one way. Neither language teaching theory or practice influenced the former's research. We can say, therefore, that applied linguistics in the 1940's and 1950's was based only on untested assumptions. It still hadn't been recognized as a science with a well-defined object of study.

In 1960, with the publication of Politzer's definition, we had for the first time a precise description of applied linguistics. He believed that there should be an intimate relationship between linguistic research and language teaching. The former, according to Politzer (1960), could make important contributions to language

teaching in the areas of preparation and presentation of teaching materials. As a result of this relationship he defines applied linguistics in the following manner.

Applied Linguistics is then that part of linguistic science which has a direct bearing on the planning and presentation of teaching material. This means that Applied Linguistics is primarily connected with that branch of linguistic science which deals with the description and analysis of current contemporary languages, synchronic or descriptive linguistics. (pp. 2-3)

Linguistics contributes to both the "what" and the "how" of language teaching theory. It claims to have competence in the materials preparation, methodology and learning theory. Politzer (1960) goes even so far as to maintain that there is a 'linguistic method'.

Some linguists have taken the point of view that there is no such thing as a linguistic teaching method; linguistics as the study of language deals with the subject matter to be taught in a language course, not with the teaching method to be employed. Strictly speaking, this is true yet at the same time, the very basic facts concerning the very nature of language seem to endorse some and contradict others of the currently employed methods of teaching (p.5)

In adopting such a position he is claiming that learning a language involves the same steps as analyzing a language on the linguistic level.

In Politzer's definition of applied linguistics, the latter is that part of linguistic science that concerns itself with language teaching theory (methodology). It is therefore not an independent science that acts as a mediator between linguistics

and language teaching. To the contrary, in talking about language teaching, he often uses linguistics and applied linguistics interchangeably as can be seen from the following excerpt.

...Linguistics or Applied Linguistics as such has no answer to many of the problems which are still confronting the language teacher; in other words Applied Linguistics will not help us in designing "the method" with which we can achieve fluency in a language after two years of High School work. Applied Linguistics does not tell us how to teach effectively in over-crowded classrooms nor will it lead to the preparation of teaching materials which can be used efficiently on students of widely varying intelligence and ability in the same classroom. Linguistic science as such has no direct answer when it comes to some of the purely psychological factors in language learning, such as motivation and attitudes on the part of the student. (p. 3)
(emphasis mine)

The use of terminology in such an imprecise manner instead of clarifying the nature of applied linguistics just adds to the confusion.

From our reading of Politzer we believe him to be saying that applied linguistics though not part of linguistic science, can be generally equated with language teaching theory. (methodology).

Before terminating our discussion of Politzer, two further remarks are in order. First, from his definition, he would lead us to believe that what is being applied in applied linguistics is linguistics itself and nothing else. The implication here is that all methodological decisions can be decided upon linguistic criteria alone. However, if we penetrate deeper into his thought, it soon becomes evident that psychology also plays an important role.

Linguists have realized that language is behaviour and that behavior can only be learned by inducing the student to behave - in other words to perform the language. (1960, p. 2)

The analyses and teaching ... are to a large extent the application of linguistic rather than psychological principles to the language learning area; but they are more than that, for linguistics does make certain psychological assumptions about languages, which in turn lead to psychological principles of language learning. Some of the more recent experiments and studies in the area of learning in general, and in language learning in particular, seem to bear out the validity of the principles of pattern drill, repetitions, et cetera, involved in the linguistic teaching approach. (1960, p. 16)

If linguistics and, therefore, applied linguistics has recourse to psychological principles, and even sees language as behavior, then, applied linguistics is really applied psychology and linguistics. As a result, the term is ambiguous for more than linguistics is being applied.

To be fair to Politzer, it should be recognized that the point of departure for his applied linguistics is linguistic in nature. Linguistics, using contrastive analysis, compares L_1 and L_2 to select the elements that should be taught, i.e. the "what". This selection is generally recognized as being within the competence of linguistics. Politzer, however, pushes the process a step further and states how the material should be organized and taught. Here, we will maintain, linguistics oversteps its competence, for it is not qualified to make such judgments on strictly linguistic grounds. This involves psychology, sociology and educational

theory. And in such a case, the term applied linguistics is really a misnomer. We can conclude, then, that while the starting point for applied linguistics is linguistic in nature, it ends up by making decisions that include much more than this alone.

Finally, in Politzer's conception of applied linguistics, the influence of linguistics on language teaching theory (methodology) is unidirectional and direct. He assumes that linguistics not only can but should apply its theoretical findings to the field of language teaching. Such a transfer presumes a similarity of object, goals, and significant parameters. Such a similarity has never been proven. In fact, Politzer (1960) himself admits that linguistics (applied linguistics) has no answers to such questions as motivation and attitude.

Politzer made an important contribution to the history of applied linguistics by precisely defining what part of linguistics could and should be applied to language teaching theory (methodology). He did, however, also contribute to the terminological confusion by insisting that it was linguistics that was being applied when, in effect, it was really linguistics and psychology.

The most sophisticated model of applied linguistics in the 1960's was developed by Rondeau. Although the actual model only appeared in 1966 the work on it began in 1963. Through his associations with organizations in both North America and Europe, he realized that the expression "applied linguistics" not only had different meanings in different countries but that it was also

ambiguous. Rondeau (1966) isolated three different definitions.

- 1) la linguistique appliquée à l'enseignement des langues;
- 2) d'autres disciplines qu'on applique à la linguistique (linguistique mathématique ou 'computational linguistics')
- 3) la linguistique appliquée au sens étroit où ce qu'on applique est vraiment la linguistique

Rondeau is aware that the first two definitions "constitue une ambiguïté fondamentale". While in number 1 it is not only linguistics that is applied but many other disciplines, in number 2 it is really other disciplines which are being applied to linguistics. This leaves number 3 as being the only exact definition.

In elaborating his model of applied linguistics (see Figure I below) Rondeau is only concerned with "la linguistique appliquée à l'enseignement des langues". He uses the expression despite its ambiguity for reasons of convenience. He defines it as follows:

On peut décrire essentiellement la linguistique appliquée à l'enseignement des langues comme une discipline-carrefour qui puise des renseignements et des postulats dans des sciences théoriques: linguistique descriptive, mathématique, psychologie, et pédagogie, qui opère, parmi les données ainsi recueillies, un choix basé sur des critères d'ordre pédagogique et qui, enfin, produit (ce qui justifie l'emploi du terme "appliquée") des ensembles pédagogiques destinés à l'enseignement des langues. (1967, p. 10)

What is applied, then, is not only linguistics, though this certainly has the biggest impact, but rather all the sciences that could contribute in some way to a second language teaching theory (methodology).

The model reproduced below was constructed on the above conception of applied linguistics.

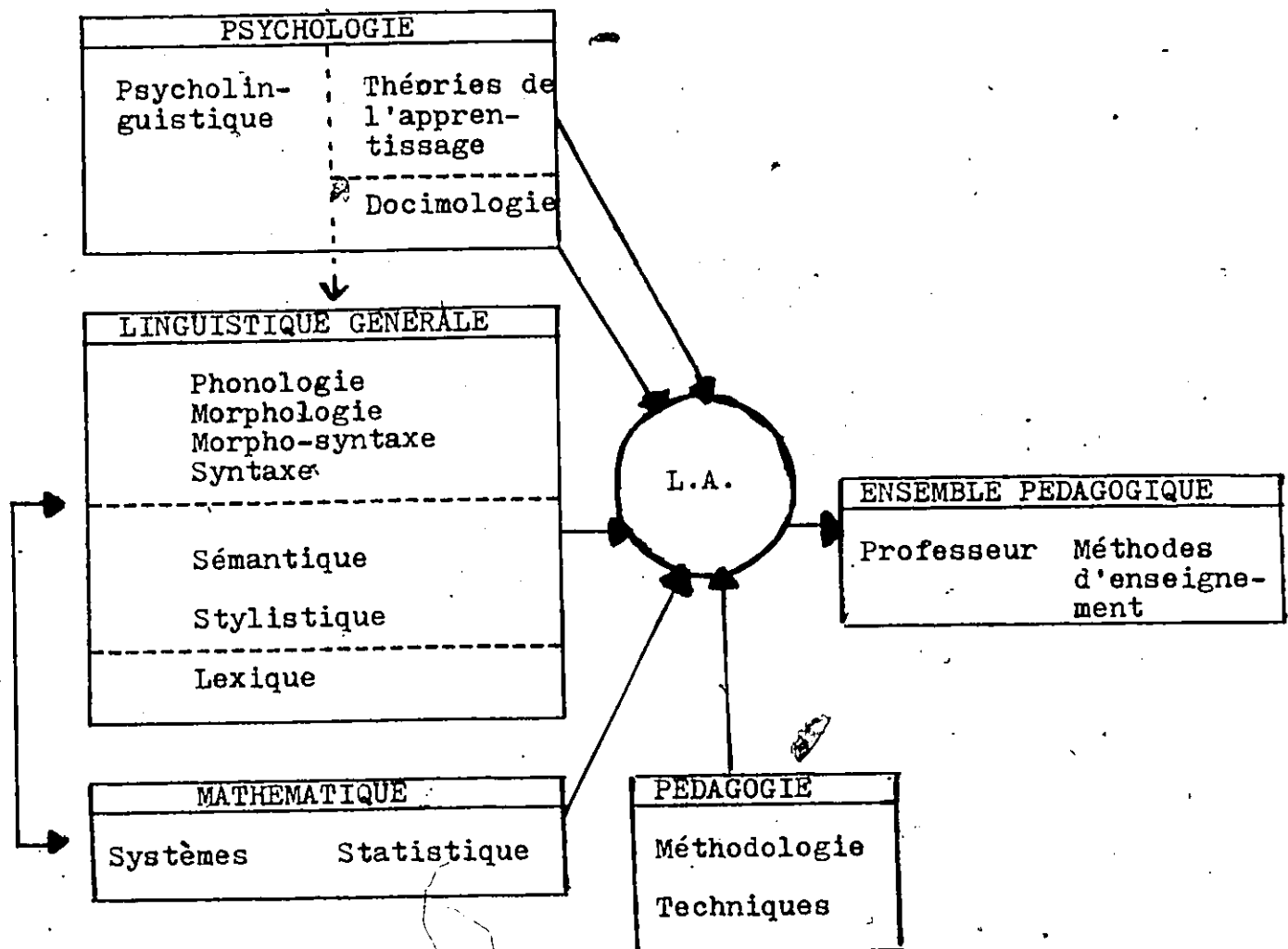


Figure 1

(Rondeau, 1967, p. 10)

This model, an example of what Stern et al (1976) call the "Application Model", has many important characteristics.

First, Rondeau sees applied linguistics as an autonomous science that has its own object, goal and, possibly, method.

La linguistique appliquée apparaît donc, ainsi que nous l'avons indiqué au début de cet exposé, comme un carrefour qui réunit des spécialistes de disciplines variées, et dont le but est essentiellement de produire des ensembles pédagogiques professeurs/méthodes modernes qui grâce à leurs fondements scientifiques possèdent des chances accrues d'efficacité dans l'enseignement des langues.

Il faut noter, cependant, que, loin de jouer le rôle de simple intermédiaire, la linguistique appliquée possède l'autonomie d'une discipline qui opère un choix parmi les données qu'on lui fournit, qui les interprète et les adapte aux besoins de son produit fini. (1967, p. 280)

He is the first to confer on applied linguistics the status of a science. It has an important role to play for it must choose only those elements that are relevant for language teaching theory. Second, the contributions of linguistics to language teaching theory lean heavily on contrastive analysis. The applied linguist in making his choice of elements for the syllabus does so in light of a comparison of L_1 and L_2 . Third, Rondeau believes that linguistics can contribute to language teaching theory in two ways:

L'apport de la linguistique à l'enseignement moderne des langues est extrêmement riche, aussi bien du point de vue de la méthode (postulats de la linguistique générale) que des données (résultats de l'analyse linguistique) qui contribueront puissamment à renouveler l'enseignement des langues, pourvu qu'on en fasse un usage judicieux. (1967, p.111)

In stating how linguistics can contribute to the actual methodology of teaching, Rondeau is more cautious than Politzer. In constructing

a method the applied linguist must take into account the "postulates" of linguistics; i.e.. introduce oral before written, present the language as a new code to be acquired.

Fourth, he is aware that the findings of research cannot be directly and indiscriminately applied to language teaching theory (methodology).

...Combien de professeurs de langues ont cédé à la tentation d'exposer à leurs élèves, à l'aide d'un tableau d'aspect très savant, les symétries et dissymétries du système phonologique de la langue-cible, ou encore les secrets de la phonétique articulatoire! Ce type de démarche abuse à la fois l'élève et le professeur, car si le linguiste et le professeur de langues ont en commun un même objet, la langue, les buts qu'ils poursuivent diffèrent entièrement l'un de l'autre. Le premier analyse un système linguistique en vue de l'exposer; son intention est de parler de la langue; le second enseigne: il désire que ses élèves arrivent à parler la langue.
(1967, p. 28)

This is a very important advance for it takes into consideration the fact that

- 1) linguistics and language teaching have different objects, goals and methods, and
- 2) it points up the non-transferability of research from one domain to another.

Last, Rondeau's model is both interdisciplinary and eclectic. As mentioned in his definition, language teaching draws upon many source disciplines. Further, within each discipline it is up to the applied linguist to make a judicious choice or synthesis from among the theories available.

On the negative side, some problems still remain. While Rondeau is aware of the ambiguities inherent in the term applied linguistics, his decision to utilize it anyway has contributed to the terminological confusion surrounding it. Since, in his definition and model he is interested in "la linguistique appliquée à l'enseignement des langues", we feel he should have chosen another name such as language teaching theory or methodology.

Rondeau, like Politzer, also ascribes to the unidirectional-oneway-street relationship between linguistics and language teaching theory. While he is definitely more prudent about how linguistic or other research can affect language teaching theory, he provides no mechanism for feedback between the latter and the former. This leaves language teaching, both theory and practice, still dependent on other disciplines.

At the same time that Rondeau was elaborating his model (1963-66) others were beginning to raise questions about the role of linguistics in language teaching, the audio-lingual habit theory and applied linguistics. As early as 1963, Van Teslaar realized that linguistics and language teaching were different operations.

La première observation à faire sur les rapports entre la linguistique et l'enseignement des langues est que les résultats de l'analyse linguistique formelle ne peuvent pas être simplement groupés en unités pratiques et être transposés globalement dans un cours de langues. Il ne faut jamais oublier que la linguistique, dans sa forme actuelle, n'embrasse point la totalité des phénomènes du langage. Par choix, parfois par nécessité, l'analyse linguistique se voit contrainte de négliger de nombreux aspects du langage qui sont au premier plan des préoccupations de l'étudiant ou même du simple utilisateur de la langue. (p. 59)

He sees linguistics as playing an important role in providing descriptions of the language to be taught. These descriptions, however, are not for direct consumption by the language teacher. They have to be studied, and if they contain insights, must be presented in pedagogical form for language teaching. Furthermore, linguistics is just "un de ces nombreux vecteurs" that can make a contribution to language teaching theory. Van Teslaar sees methodology, pedagogy, psychology and neurology as also being essential to language teaching theory.

Van Teslaar's distinction between linguistics and language teaching and his concept of inter-disciplinarity were certainly reflected in Rondeau's model. The two were friends and collaborated closely at l'Association Internationale de Linguistique Appliquée held at Nancy in 1964.

Rivers (1964) in her book The Psychologist and the Foreign Language Teacher mentioned four assumptions of the audio-lingual approach that cognitive psychology was beginning to question:

- (1) foreign-language learning is a process of habit formation; (2) speech should precede writing; (3) learning should be through analogy rather than analysis; and (4) meaning should be taught in a cultural context (i.e. without English) (p.)

Even Nelson Brooks (1966), one of the most outspoken proponents of the audio-lingual method concurred with Rivers' remarks.

Up to the present, what is called the new approach is largely an act of faith; research to prove the validity of its basic principles is scanty. It is, however, an act of faith of vast dimensions... If research data are in short supply, it is mainly because the scientific measurement of what is sought is extremely difficult and because the needed instruments have, up to now, not been available... (p. 359)

It was in such an atmosphere of confusion and self-questioning that the "linguistic period" ended. Politzer's and Rondeau's models in applied linguistics were representative of the period. Both reflected the importance of linguistic theory for language teaching theory (methodology). Both emphasized that the role of linguistics was direct and one way. Rondeau, however, went further than Politzer in declaring that applied linguistics was an independent science with its own object and goals and not just a simple mediator between linguistic and language teaching theory. We can conclude this section on the linguistic period by saying that linguistics, in the post-war years (circa 1940-1966), had a profound impact on language teaching. Whether you agree with Lado (1964) and say that what happened was really haphazard, or whether you adopt the position that it was the result of a well-engineered scientific enterprise, the impact was still there. Descriptive linguistics exercised this influence because of

- 1) historical factors,
- 2) its prestige as a discipline (the scientificness of its method and research),

3) the equally celebrated reputation of behavioral psychology, and finally,

4) the reputation of its linguists.

Its influence effected changes in

1) the conception of language,

2) the "what", the content of language teaching,

3) the "how", the method of language teaching, and lastly,

4) the teaching/learning theories upon which language teaching theory was based.

This resulted in a profound and thorough going revolution in the area of language teaching theory (methodology).

The Contemporary Period

Introduction

In the 1940's the coming of the war was the critical event contributing to the appearance of the new method in language teaching. In the 1960's, there was no one single event or date that we can designate as a watershed. Rather there was a plethora of factors, i.e. historical, psychological, sociological, linguistic, educational that contributed to the eroding of the relationship between linguistics and language teaching that had been forged in the preceeding quarter century.

The challenge to the status quo grew out of an atmosphere of discontent generated by a "falling short", an inadequacy, an inability of the existing theories in the above mentioned

disciplines to adequately account for their individual objects of study, and as a group, their inability to explain why language teaching had not produced the results the theorists said it was capable of. The origins, and effects of this discontent on the relationship between linguistics and language teaching in the period circa 1965 to the present will be discussed in the following and final section of Chapter III.

Linguistic Factors

Structural linguistics in the two decades after the war continued to perfect its techniques. Harris' book, Structural Linguistics published in 1951, represented a type of summa linguistica. Linguistic inquiry, he proclaimed, could be carried out on completely scientific grounds (i.e. distributionalist) without reference to mind, meaning, will, etc. Subsequent to this work, Harris (1952, 1958) began his work on transformations involving immediate constituents. This work in the hands of one of his students, Noam Chomsky, was re-thought and re-worked into a new form that became Syntactic Structures (1957), and the beginning of the transformational-generative revolution.

The new TG theory of linguistics with its accompanying conception of language represented a major break with the structuralist tradition in the United States, even though the major emphasis remained syntax. This was not the case, however, for the European school, as the latter had not been so profoundly affected by

the American structuralist movement. In Europe, also, prior to the 1950's, new conceptions of linguistics and language had emerged that emphasized both the form and the function of language (Troubetzkoy, Hjelmslev, Tesnière), getting away from the American structuralist overemphasis on form. Finally, there was a strong semantic tradition, especially in Britain, that ran countercurrent to the structuralist position through its acceptance of data that the latter considered non-quantifiable, incapable of being handled in a scientific way.

It should be evident, therefore, that prior to the work of Chomsky, other linguists (Pike, Lamb, Halliday) were beginning to question the tenets of the descriptive linguistic position. In saying this, we are not trying to minimize the role Chomsky played; rather, we are endeavouring to place his work in a historical perspective.

Chomsky's two major works, Syntactic Structures (1957) and its sequel, Aspects (1965), established TGG as the new school of linguistics in North America. In the same way that descriptive linguistics had overthrown the previous conception of language, TG theory overthrew the structuralist view. Language was no longer seen as a system of habits, learned through pattern practice, analogy and generalization. Language according to Chomsky was rule-governed behavior, a creative enterprise, that could be defined as follows:

- 1) a living language is characterized by rule-governed creativity;
- 2) the rules of grammar are psychologically real;
- 3) man is uniquely built to learn languages (LAD);
- 4) a living language is a language we can think.

Armed then with a new theory of linguistics and a new conception of language, one would have expected that the new TG theorists would have zealously applied their knowledge to language teaching as had done the structuralists. This, fortunately or unfortunately, did not happen. The reasons for this, while not readily evident, were certainly there.

TGG is concerned with universals; it wants to develop a universal theory of grammar. It is consequently less interested in individual languages, in developing individual grammars. Its work on individual languages is related to its concern to verify, revise, and if necessary, to reject its universal grammar. Given this outlook, TGG is not oriented to applying its theories to language for the purposes of evolving some new theory of language teaching. The important linguistic data is to be found in the mind and not in the observable data as is claimed by the structuralists. The latter data is there to confirm or reject the hypotheses generated by theory.

Next, in the practical order, the abstract mathematical formulations used by the transformational-generativists make any form of application more difficult. The road from linguistic

theory to classroom practice (if it is possible) is strewn with innumerable obstacles. How could the classroom teacher not capable of handling the mathematical and logical formulations translate them in a meaningful way for his or her students? (Lamendella, 1969). The abstract nature of TGG simply discouraged application.

It is with Chomsky himself, however, that we find the most cogent reasons for not applying linguistic and psychological research to language teaching in a unidirectional, unilateral manner. At the Northeast Conference  1966, Chomsky surprised everyone by his remarks.

I am frankly, rather sceptical about the significance, for the teaching of languages, of such insights and understanding as have been attained in linguistics and psychology... It is difficult to believe that either linguistics or psychology has achieved a level of theoretical understanding that might enable it to support a 'technology' of language teaching...

My point simply is that the relevance of psychological theory to acquisition of language is a highly dubious and questionable matter, subject to much controversy and plagued with uncertainties of all sorts. The applied psychologist and the teacher must certainly draw what suggestions and hints they can from psychological research, but they would be well-advised to do so with the constant realization of how fragile and tentative are the principles of the underlying discipline. (pp. 234-235).

Chomsky is not saying that linguistics and psychology have nothing to contribute to language teaching theory (see Chomsky, 1968) but rather that any insights and implications that might be forthcoming will be based on fragile and tentative research. Linguistics and

psychology, in his opinion, are not sophisticated enough to support a language teaching theory. This position is in direct contrast to the descriptive linguists' talk of a "linguistic method".

Further, from Chomsky's other writings and his basic distinction between competence and performance, it is evident that he is aware that the goals and objects of study of linguistic and psychological research are not those of language teaching theory. Therefore, in addition to the fragility of the research argument, we have another reason for the non-applicability of such research to language teaching theory; i.e. different sets of significant parameters.

Chomsky was not alone in his challenging of the role or value of linguistics in language teaching theory. Other linguists and applied linguists in the period 1965-1968 also critically examined the contributions of linguistics; i.e. Mackey (1966), Halliday (1966), Rosenbaum (1965), Saporta (1966), Corder (1968), Hanzeli (1968) and Bolinger (1968).

Rosenbaum (1965) adopts Chomsky's position. After criticizing the structuralists' position, he points out that the constructs used by TGG in the description of language cannot automatically provide any educational insight for the language teacher. If insights are forthcoming, it will be the people in the field, linguists, educators, teachers, who will be responsible for discovering them.

Rosenbaum (1965) makes an interesting analogy between pedagogy, as it applies to the teaching of language, and the teaching of

the forward pass in physical education.

...consider an analogy from physical education, in particular the pedagogy of the forward pass. Any instance of the physical event identified as a forward pass has certain mechanical properties which are characterized by the Newtonian theory of mechanics. The descriptive apparatus of this theory, consisting of such constructs as mass, acceleration, velocity, time, distance, and so forth, is a consequence of the theoretical constraints imposed upon a description seeking to account for the mechanics of physical events. To teach a potential quarterback the mechanics of the forward pass is to teach him how this type of event works. It is not to teach him how to make it work. The Newtonian theory itself gives us no reason to believe that instruction in the mechanics of the forward pass will affect the quarterback's becoming a good passer one way or the other. Similarly, to study and practice the constructs of a transformational grammar may result in an understanding of how the student's language works, but not necessarily in an understanding of how to make it work. (p. 264)

Knowledge about something does not confer ability to do something (i.e. speak a language). Therefore, a transformational description of language in the hands of a language teacher and drilled into the head of the language learner will not guarantee the ability to use the language.

Halliday, the author of the scale-and-grammar-category approach to linguistic theory (Chapter II) states that while linguistics cannot tell the teacher how to teach, it could possibly prepare a grammar for pedagogical purposes (1966). This is another way of saying that linguistic descriptions are prepared with different goals in mind than those for language teaching

theory; this can only happen, however, if in carrying out its research and constructing its models, linguistics has language teachers in mind.

Saporta (1966) in an article entitled "Scientific Grammars and Pedagogical Grammars" makes the point that we cannot pass from scientific description to pedagogical application. He sees the role of linguistics as the furnishing of sound scientific descriptions upon which we can base our pedagogical grammars. The very fact that Saporta distinguishes between the two attests to the impossibility of the direct application of insights from the first to the second. He further limits the role of linguistics to the "what" of language teaching theory. It cannot tell a teacher how to teach a language.

The most influential article written in the middle sixties was that by William Mackey (1966) entitled "Applied Linguistics". This short publication examines what exactly is meant by "the science of applied linguistics" and, then, discusses the relationship linguistic theory should have to language teaching theory. So influential has this article been that most applied linguists today (i.e. Stern, Corder, Allen, Spolsky, Wilkins, Coste) consider it as the basic reference in talking about and constructing new models in applied linguistics and language teaching theory.

Mackey (1966) claims that applied linguistics was created to meet the linguist's need to apply his/her scientific principles. The fallacy, according to him, in this argument is that although

linguistics is a science, applied science does not necessarily include linguistics. In addition, the equation of applied science with language teaching is also an error, for the latter encompasses much more than linguistics. In reality, Mackey would like to dispose of the term applied linguistics and replace it with language didactics, a more comprehensive term.

His most searing analysis comes when he discusses the relationship that should exist between linguistic and language teaching theory. He begins by making the distinction between learning a language and analyzing one. These two operations are not mutually inclusive for we can learn a language without being able to analyze it and vice versa. Analysis is the task of linguistics.

It is the production of methods of analysis that is the business of the linguist. But if the linguist claims that such and such a method is the best way to learn the language, he is speaking outside his competence. For it is not learning, but language, that is the object of linguistics. Language learning cannot therefore be the purpose of linguistics - pure or applied. Applied linguistics is not language learning.

Therefore the units used for analysing a language are not necessarily those needed for learning it. (Mackey, 1966, p. 249)

Neither language learning nor language teaching fall within the ken of pure linguistics; its contribution to these processes is an adequate description of the language to be used. Mackey condemns the errors of the past that were perpetrated in the name of science by linguists who claimed competence in telling teachers how languages were learned and should be taught.

Mackey sees language teaching as an art as opposed to a science; an area where "tested recipes are often better than untested formulas", the latter representing the latest linguistic descriptions of language.

In talking about the utility of linguistics for the teaching of languages, he is convinced that training in practical linguistics would prevent teachers from becoming petulant trinkets. Language teaching theory based on sound linguistics would enable him/her to analyze the new trends, to prevent language teaching from having "to swallow a man's philosophy with his linguistics" (p. 253).

It would help the teacher separate fact from fiction, to discriminate between well-documented research and pseudo-scientific predictions. What Mackey is saying here is that the language teacher needs linguistics to protect himself/herself from the false doctrines of certain linguists.

Mackey ends his article by stating that neither linguistics nor psychological theory can solve all the problems of language teaching theory. The latter discipline is not to be equated with either applied linguistics or psychology or a blend of the two. Language teaching has for too long been a child of fashion of the two above disciplines.

It is likely that language teaching will continue to be a child of fashion in linguistics and psychology until the time it becomes an autonomous discipline which uses these related sciences instead of being used by them. To become autonomous it will, like any science, have to weave its own net, so as to fish out from the oceans of human experience and natural phenomena only the elements it needs, and, ignoring the rest, be able to say with the ichthyologist of Sir Arthur Eddington, "What my net can't catch isn't fish". (1966, p. 255)

Mackey makes a plea for the establishment of language teaching as a discipline based on solid research and practical knowledge. Until this comes about, he is rather pessimistic about its future success. Up to now, we would have to agree that history has born him out.

Other important research on the relationship of linguistics and language teaching theory has also appeared; i.e. Bolinger (1968), Hanzeli (1968), the Georgetown Conferences. The essence of this work can be summed up in the following statement: Linguistics does have a role to play in language teaching theory, but its role must be re-defined. Language teaching cannot presume that the findings of linguistics will have either pedagogical applications implications. It is the task of the applied linguist to determine the contribution linguistics can make to the theory of teaching.

This serious, and even brutal examination of the linguistic-applied linguistic - language teaching theory - syndrome that started in the early sixties still continues today (Gottwald: 1977) Roulet: 1977), and has resulted in a radical re-thinking of the

whole relationship. Nothing can be taken for granted, nothing can be assumed.

This new attitude is reflected in a series of new models of applied linguistics that have appeared since 1969. These models show a diminished influence on the part of linguistics and a greater contribution from other disciplines. Prior to presenting the models, we will examine how the other sciences through their research into language teaching have helped to forge the new relationship that exists today.

Psychology and Psycholinguistics

Structural linguistics was closely associated with the behaviorist school of psychology. The latter, as was shown earlier, increased the impact of the former on language teaching theory. In the 1960's an old current in psychological thought began to re-assert itself again, namely, cognitive psychology. Its theorists began to attack the view that both learning and teaching were processes involving shaping, moulding or controlling of behavior. They conceived of learning as a growing, a developing of intellectual capacities, as a nurturing of an innate potential.

Jerome Bruner (1966), one of the major theorists in cognitive psychology, outlines their position as follows:

1. Growth is characterized by increasing independence of response from the immediate nature of the stimulus.
2. Growth depends upon internalizing events into a "storage system" that corresponds to the environment.
3. Intellectual growth involves an increasing capacity to say to oneself and other, by means of words or symbols, what one has done or what one will do.
4. Intellectual development depends upon a systematic and contingent interaction between a tutor and a learner.
5. Teaching is vastly facilitated by the medium of language, which ends by being not only the medium for exchange but the instrument that the learner can then use himself in bringing order into the environment.
6. Intellectual development is marked by increasing capacity to deal with several alternatives simultaneously, to tend to several sequences during the same period of time, and to allocate time and attention in a manner appropriate to these multiple demands. (pp. 4-6)

Cognitivists, as opposed to behaviorists, posit an important role for both the teacher and the learner. The learner is active, i.e. encoding and decoding, storing and retrieving, and not just absorbing knowledge as a sponge does water.

The cognitivist approach with its emphasis on growth and active participation was enriched and further expanded by the humanist tradition in psychology (Rogers, Maslow, May, Frankl, Jakobovits (in language teaching)). These psychologists are also called the "third-force" or existential psychologists. Rogers (1969) in Freedom to Learn summarizes the tenets of this school.

Let me define a bit more precisely the elements which are involved in such significant or experiential learning. It has a quality of personal involvement, - the whole person in both his feeling and cognitive aspects being in the learning event. It is self-initiated. Even when the impetus or stimulus comes from the outside, the sense of discovery, of reaching out, of grasping and comprehending, - comes from within. It is pervasive. It makes a difference in the behavior, attitudes, perhaps even the personality of the learner. It is evaluated by the learner. He knows whether it is meeting his need, whether it leads toward what he wants to know, whether it illuminates the dark area of ignorance he is experiencing. The locus of evaluation, we might say, resides definitely in the learner. Its essence is meaning. When such learning takes place, the element of meaning to the learner is built into the whole experience. (p. 5).

This school with its emphasis on self-initiation and development, the discovery of truth through experimentation, the involvement of the total human personality challenged the tenets of the behaviorist school. We insist on the word challenge for the new theorists like their predecessors could not conclusively prove their position.

Other psychologists of the cognitive school who are interested in teaching and learning see these processes as being much more complicated than the behaviorists had maintained. Gagné (1972) sees learning as being multi-faceted. He lists five domains involved in the learning process.

- (1) Motor skills, which are developed through practice.
- (2) Verbal information, the major requirement for learning being its presentation within an organized, meaningful context.
- (3) Intellectual skills, the learning of which appears to require prior learning of prerequisite skills.
- (4) Cognitive strategies, the learning of which requires repeated occasions in which challenges to thinking are presented.
- (5) Attitudes, which are learned most effectively through the use of human models and "vicarious reinforcement". (pp. 3-4)

Piaget (1970) sees behavior as evolutionary in nature. We begin with the sensory motor reactions and move towards conceptual thought. With the development of language, thinking becomes possible. It also leads to a new system of mental organization. In this evolution, Piaget (1970) sees three distinct plateaus:

- 1) the formation of symbolic or semiotic functions;
- 2) the formation of concrete mental operations;
- 3) the formation of conceptual thought.

(pp. 30-33)

All these developments questioned totally, or, in part, the behaviorist position in general, and more specifically, its views on teaching and learning theory. These new tendencies in psychology paralleled what was happening in linguistics. This should not be surprising considering that Chomsky believed that linguistics was a branch of cognitive psychology. Furthermore, he has stated that the study of language acquisition would reveal much about cognitive processes in general.

... On the basis of the best information now available, it seems reasonable to suppose that a child cannot help constructing a particular kind of transformational grammar to account for the data presented to him, any more than he can control his perception of solid objects of his attention to line and angle. Thus it may well be that the general features of language structure reflect, not much the course of one's experience, but rather the general character of one's capacity to acquire knowledge in the traditional sense, one's innate ideas and innate principles.
(1965, p. 59)

Chomsky's work in linguistics has pushed psychologists to examine many of the previously accepted tenets. In the area of language teaching, learning and acquisition, this has had a significant effect on language teaching theory.

In a research we did for Dr. Hauptman (1973) we compiled a list of affirmations that contradicted the audio-lingual theory of language teaching/learning.

- 1) Language is rule-governed activity.
- 2) Language involves an LAD device: a) abstraction, b) generalization, c) reasoning.
- 3) There are deep to surface structure transformations in language learning.
- 4) Cognition is a developmental process.
- 5) The learning subject plays a major role in cognitive learning.
- 6) Concept formation is an important end product in cognitive learning.

7) Learning is influenced by environmental and psychological motivational conditions.

8) Learning involves creativity.

We will examine some of the above affirmations (assumptions) in detail.

Before beginning it should be stated that much of the work done in cognitive psychology is in first language acquisition with extrapolations being made for second language learning. As it has never been shown that the learning of a second language is similar to the acquiring of a first, cognitivists too, are making a "leap" in assuming that it can be done.

First, language is rule-governed activity vs. language is a system of habits. This proposition is related to two others: 1) the nativist theory which states that the structures of language are innate, and 2) that language learning/acquisition involves creativity. The behaviorist's claims about habits and analogy were challenged on the basis of research done by McNeil, Slobin, Chomsky, Lenneberg, Menyuk and Carroll. Lenneberg (1967, 1969) says that language is biologically controlled, it unfolds according to a time-clock. At any given stage in acquisition, the child will be able to perform specific activities. His cognitive development and linguistic competence, then, are closely tied together and develop in a predictable fashion. No amount of repetition or imitation can alter this process. By the time the child arrives at school, he will have acquired a grammar that resembles very closely

that of an adult.

Slobin, McNeil and Chomsky do not ascribe to this strong biological position. Mc Neil (1966) maintains that the child is born with an innate set of universals that organize his language and grammar. Slobin (1971) talks more in terms of a child's innate ability to acquire language. It is this capacity that develops as the child grows. Furthermore, it is related to cognitive development and sensitive to environmental influences. Chomsky (1972) says that the child has an innate faculty for language (LAD) which means that he/she develops a system of rules that govern how sentences are formed, used, etc. Language is rule-governed. Language acquisition, then, occurs because of innate predispositions. Can we say the same thing for second language learning?

It is further argued that behaviorist theory can not explain the creative aspect of language, what Chomsky and McNeil call competence. Lenneberg (1969) and Menyuk (1971) show that in acquiring a language:

- a) a child hears a scrambled set of cues involving false starts, broken sentences, grammatical errors and still ends up with an adult grammar (during this period he seldom repeats things adults tell him);
- b) a child can at any given time understand sentences he has never heard before and produce completely new ones; such creativity they say could not be the result of imitation or repetition;

- c) a child is capable of carrying out complicated processes of abstraction in order to arrive at the abstract network we call a grammar or competence; this all implies an input and active role on the part of the learner in the acquisition of language;
- d) a child learning his language progresses by hypothesizing. As Smith (1976) points out, when the child experiments with his language, i.e. he formulates a hypothesis, the parents confirm the truth value of the situation rather correct the grammar. Thus, when the child says, "See plane", the father answers, "No, it's a bird". He is confirming or rejecting the hypothesis. Also, even if the child does repeat, he very seldom, if ever, repeats exactly what was said. (McNeil: 1966).

This research on the acquisition of language, it was claimed, undermined the behaviorist position seriously. It placed an emphasis on the productive aspect of language learning based on an inner competence. As early as 1964, Miller maintained that:

... syntactic and semantic habits must have a character that linguists call productive. It is their productivity that distinguishes our linguistic rules from our other, simpler habits. On the basis of a finite exposure to grammatical and meaningful utterances, we are able to deal with an infinite variety of different and novel utterances. (p. 99)

In their application of this first-language research to second language learning, the cognitivists are much more guarded in their

pronouncements than their predecessors. Chastain (1971) in his book The Development of Modern Language Skills: Theory to Practice states the TG (cognitive) view of second language learning.

1. Competence must be developed first.
2. Language usage is based on the acquisition of rules.
3. Language usage is productive, i.e. the speaker can produce language appropriate to a given situation.
4. First-language learning proceeds from base structure to surface structure. Second-language learning reverses this process. Might it be possible to provide insights into base structure for the adult learner prior to presenting him with surface structures of the language? McNeil mentions the possibility of teaching child grammar to adults in order that they first learn the base structure.
5. The adult learner of a second language needs assistance in formulating the appropriate hypotheses about language. The proper choice of explanation and exercises might assist him to internalize the necessary language competence.
6. Typically, the surface structure of the second language is imposed upon the base structure of the native language. The teacher should expect this native language influence and not be upset by it. (p. 118)

After stating this, Chastain adds a note of caution. He says that modern language teachers should not and cannot duplicate the conditions for the acquisition of the first language. They can, however, gain new insights, find new areas for research that could later have possible application to second language learning.

In the area of acquisition and learning, then, the new psycholinguists proposed guidelines, talked about conditions that should be created for learning, suggested possible applications for second language learning but did not lay down a step by step

methodology that had to be followed. They admitted that their knowledge of individual processes in the area was sketchy. The only certainty, according to them, was the nature of the activity involved in learning; i.e. it was a cognitive and not a behaviorist one.

Psycholinguistic investigations in other area such as motivation, attitude, aptitude and student learning strategies also revealed interesting results. Lambert and Gardner (1972), in their now celebrated studies conducted in Montreal, demonstrate how a student's attitude towards the culture of the language he was learning greatly affected his/her ability to learn that language. They found two basic attitudes relating to motivation. The integrative in which the learner

...is psychologically prepared to adopt various aspects of behavior which characterize members of another linguistic-cultural group. (p. 3)

Here the student saw the other culture in a positive light; he was motivated to take on the other culture, to become a cultural schizophrenic. In the second case, what they call "instrumental motivation", the learner's point of view was utilitarian. He learned only because it would help him carry out his job or bring him more money.

In February 1976, the CMRL/RCLV published a special issue on "Attitude and Motivation in Language Learning". The results of these studies confirmed what Lambert and Gardner had found in the 1960's.

The results of our studies indicate that integratively motivated students were more active in class than non-integratively motivated students. Therefore, if non-integratively motivated students could be encouraged to behave in a manner inconsistent with their attitudes, their beliefs and attitudes would undergo a change. Specifically, if teachers were to use positive verbal reinforcement to encourage participation in class of non-integratively motivated students, these students would of necessity modify their attitudes to be consistent with their more active behaviour in the classroom. This change in attitudes should be accompanied by an increase in their level of motivation, and subsequently an improvement in their level of achievement. Future research will hopefully focus on this model and implement it in a setting to test its utility. (p. 209)

In the "linguistic period" little attention was paid to such factors as attitude and motivation. Reinforcement of the student's response was supposed to be motivation enough to make him want to continue his language studies. It should not be surprising, then, that in a short time teachers discovered their students were becoming bored with the endless drills and imitations. Both teacher and student found it debilitating.

The neglect of attitudinal and motivational factors as regards the teacher was also striking. Even today little is known about how the teacher's attitude toward the language (s)he is teaching, his/her conceptions concerning language learning, his/her aptitude concerning language, how all these factors affect his/her success as a teacher.

Two other areas of psycholinguistic research have also had an effect on the relationship between linguistics and language

teaching theory. In 1974, ACTFL, in conjunction with the Britannica Review of Foreign Language, published a series of articles on the Individualization of Instruction.¹ The major contribution of this book was to point out that different students have different learning strategies, and, that such strategies have to be taken into account in teaching. In the audio-lingual methods the authors presumed that everyone learned in the same way, that everyone had the same background, and that everyone had the same goals in taking the course. Strasheim and Steiner (1974) based on a review of the research in the field conclude that:

- a) there is no single method of instruction;
- b) there is no single strategy of learning;
- c) there are no universal needs.

Jakobovits (1970) gives a more detailed outline of the implications resulting from the role the diversity of individual strategies of learning plays in language teaching/learning.

- a) There is no one single proper goal for FL study which can logically be demonstrated.
- b) The goals of a particular course in an FL program must be clearly defined in specific terms that specify the terminal knowledge and skills to be reached.
- c) Not only must we recognize variable goals and interests in FL study but also variable abilities and FL aptitude.
- d) The question of when FL's are to be taught within our educational system is a complex problem that involves political, social, philosophical, and psychological considerations and should not be reduced to a matter of neurophysiology...
- e) More serious consideration must be given to the socio-psychological ramifications of FL study.
- f) It is necessary to take seriously the oft-quoted distinction between competence and performance, between knowledge and behavior.
- g) Global comparisons between methods of instruction are unrealistic.
- h) The instructional process involved in the teaching of a FL must take proper account of the existence of a "folk linguistics", a term used here to refer to the assumptions which individuals hold about language and language acquisition. (pp. 72-77)

Stern (1975) and Paulston (1974) in their studies on what the good learner can teach us came up with similar conclusions concerning the strategies of learning. They discovered that each student evolved his own learning strategy and that the strategy used in language learning was not unlike that used in all his/her other subjects. These investigations brought language teaching theorists to the realization that learning and teaching strategies can no longer be dictated by a single school of linguistics or psychology, or for that matter, by any school of linguistics. These findings further reduced the grip of linguistics on language

teaching theory by making the latter more dependent on other factors, beyond the control of linguistics. Language teaching theory was recognized for what it was, a multi-faceted activity.

A very important part of the teaching strategy in the audio-lingual school was the emphasis on the avoidance of error. Error was to be avoided, for once reinforced, it became very difficult to eradicate. As a result, all teaching/learning situations were so set up as to eliminate error as frequently as possible. Recently, however, the work of Selinker (1974), Richards (1974) and Corder (1974) has shown that error is a natural part of learning. It is based on hypothesizing, on the trial-and-error approach. Students pass through several stages of grammatical competence, what Selinker (1974) calls inter-language, before arriving at an adult grammar. Rather than trying to eliminate such errors, we should accept them as being part of the natural process of second language learning. While the authors suggest that syllabuses should try to take such errors into consideration when choosing, organizing and presenting content, too little formal study has been done, as yet, to actually write such a syllabus.

These new attitudes vis-à-vis error, if and when they are adopted, will certainly affect language teaching theory. Instead of trying to create error-free situations, teachers will try to create situations in which trial and error will have free reign. The student will be encouraged to hypothesize, to try out his language; to pass through the different stages of language learning

till he acquires a grammar similar to that of a native speaker.

For the present, this attitude has discouraged the lock-step-stimulus-controlled approach of the behaviorist teaching/learning strategy. Consequently, it has also loosened the hold of linguistics and psychology on the theory of teaching.

What can we conclude from this research into language acquisition and learning? Probably the most sobering and, in many ways, the most accurate conclusion was that written by Jakobovits (1970) at the end of a chapter dealing with psychology and language learning.

It might be well to end this chapter by reminding the reader that teaching is an art and that there are no sure methods of extrapolating scientific knowledge to the classroom. This review represents the point of view of its author, which is one possible vantage point, and it is safe to say that for every argument presented here one can probably find one or more counterarguments. This is the nature of the beast. But some arguments are more convincing than others, not, hopefully, because of their authoritativeness, but because they may be more rational and their assumptions more likely correct in the light of existing knowledge. As long as decisions about educational matters must be made and ineffective practices corrected, it behooves us to be self-critical about our activities as teachers and researchers and to continually strive for the best possible solutions which available knowledge and logical reasoning can provide. (p. 76)

Psychology and linguistics as well as their daughter discipline are not well established sciences. The knowledge they have does not allow us to establish language teaching theory on a scientific basis. These sciences have insights to offer but the

latter must be closely examined and weighed if they can be integrated into language teaching theory. These sciences can help the language teacher but they cannot tell him exactly how to teach.

Sociolinguistic Factors

Another hyphenated science that has altered the relationship between linguistics and language teaching theory is sociolinguistics. While extensive research has not been conducted in this area, the initial results have been promising. We will examine briefly some of the preliminary investigations.

The sociolinguist attacks the position held by linguists from de Saussure to Chomsky that language is a self-contained system. (There have been exceptions; i.e. Martinet). The latter position claims that we can account for all the significant parameters of language on the basis of linguistic criteria. Sociolinguists such as Labov, Hymes, Fishmann, and Gumperz claim that the phenomenon of language cannot be totally and adequately explained on simply linguistic grounds. Chomsky's competence, his ideal speaker-hearer, is too divorced from the way we use language, a speaker's performance. There is a poor fit between a speaker's competence and his actual languaging in social contexts. Furthermore, what linguistics calls haphazard or unpredictable behavior, is not really the case, when sociolinguistic factors are introduced.

Labov (1966) analyzed the New York speakers' use of "r". In trying to account for it with TGG, he found it to be random; however,

when he added such factors as social class, it became very predictable. Labov maintains, therefore, that a sociolinguistic approach that keeps TGG as part of its core has more explanatory value than just TGG alone. Recently, sociolinguistics has been investigating the speech event. Hymes (1974) in his ethnology of communication analyzes speech events in the following way:

- (1) the 'participants' in the event, the senders and receivers of a message and others involved;
 - (2) the 'channels' of communication and how they are used, for example, in speaking, writing, and body movements;
 - (3) the 'codes' shared by the participants, such as the language, dialect or variety;
 - (4) the 'situation' in which the communication takes place;
 - (5) the 'message form' and its 'genre' this term being used in a broader sense than the literary one to include conventional constraints beyond those of the grammar; and
 - (6) the 'contents' and attitudes conveyed by the message.
- Particularly important in a sociolinguistic analysis of the speech event are the immediate social roles and the relative status of the participants involved, where subtle distinctions may be made by means of 'keys' (Stern et al., 1976, p.52)

Such an analysis is aimed at developing in the learner not only a grammatical competence but also a communicative one. The learner must know both the formation and speaking rules of the language. (Corder, 1973). The learner must realize that speech acts (see chart below) can perform many different functions, and that one function can be realized by many speech acts.



<u>function</u>	<u>sentence forms</u>	<u>realisation</u>
ordering	(a) imperative	Please finish that letter, Miss Jones.
	(b) conditional	Perhaps it would be best if you finished that letter.
	(c) infinitive	We do expect you to finish that letter.
	(d) modal	You must finish that letter, I'm afraid.
	(e) participial	You should have no difficulty in finishing that letter.

<u>sentence form</u>	<u>functions</u>	<u>realisation</u>
imperative	(a) ordering	Give that to me.
	(b) requesting	Pass the marmalade.
	(c) instructing	Turn right at the lights.
	(d) advising	Try the smoked salmon.
	(e) appealing	Forgive me for not writing.
	(f) inviting	Come round for a drink tonight.

(Allen: 1977, pp. 9, 10)

This type of information can be very useful in language teaching. It helps the teacher in preparing courses for different groups; i.e. secretaries will need a different register than vice-presidents. It also enumerates the most common speech acts found in certain situations thus enabling the teacher to better prepare material for restricted as opposed to elaborated codes.

Criper and Widdowson (1975) in their article "Sociolinguistic and Language Teaching" point out that we can no longer rely on the grammarians' or linguists' description of language as an abstract system to guide us in preparing our teaching materials. We have to go beyond a strict grammatical idealization and provide the learner with a strategy for matching linguistic forms with communicative functions. They feel that only by taking into consideration sociological data can we accomplish this.

In conclusion, recent research in sociolinguistics, like that in psycholinguistics, has also demonstrated that many factors other than just the linguistic affect language teaching. The latter is a complex process, and to reduce it to a strictly linguistic base leads to serious oversimplifications. Sociolinguists such as Labov, Fishmann and Hymes are not saying that linguistics is not important but, rather, that language is a sociolinguistic phenomenon and to neglect the sociolinguistic data is to neglect an important part of language. Even though no elaborate syllabuses have been developed with the exception of The Threshold Level (1975) and the two role playing booklets by Paulston et al. (1975) and Kettering (1975), research in sociolinguistics has made teachers more aware of the gap between linguistic and communicative competence. It has broadened the frame of reference to include both competence and performance. It has, thus, lessened the direct impact of linguistics on language teaching theory.

Teaching Factors

In the course of the 1960's, four major research projects were inaugurated in the U.S.A. to determine the best method of language instruction. These reports produced startling and somewhat unwanted results.

The first investigation was undertaken in New York and is known as the Keating Report (1963). It tried to measure the efficacy of teaching in the classroom situation as compared with that in the language laboratory. The author looked at the student's ability in reading and listening comprehension and speech production. The results ran countercurrent to the existing audio-lingual position which relied extensively on language laboratory type drills. Keating's major conclusion was that while the language laboratory helped the average and below average student, it contributed little, if anything, to the above average student after the initial stages of language learning. Keating even discovered that it could be harmful to the latter group of students on the more advanced levels.

Freedman (1971) in commenting on the Keating Report isolated certain weaknesses that would plague all four reports. The directors and researchers in question failed to either tightly control or precisely define the major variables:

- a) the method variable,
- b) the materials variable,
- c) the teacher variable,
- d) the student variable.

Such a lack of control, while not completely invalidating the results, certainly lessens their scientific acceptability.

The second major project was that conducted by Scherer and Wertheimer (1964) at Colorado University. In their study, A Psycholinguistic Experiment in Foreign Language Teaching, the authors attempted to assess the value of the audio-lingual and traditional methods. At the end of two semesters of work, the audio-lingual group was significantly superior in listening and speaking and the traditionals in reading and translation. In the second year, the two groups were mixed. Tests at the end showed no significant difference in listening and reading, but the audio-linguals still retained their superior ability in speaking and the traditionals in translating. Two conclusions were drawn from this:

- 1) the students learned what they were taught;
- 2) the research variables, as with the Keating report were almost impossible to control.

In a third study, Chastain and Woerdhoff (1968) conducted research on students studying Spanish at Purdue University. They had two groups; the audio-lingual habit theory and the cognitive code learning theory. The aim of the experiment was to ascertain the success of the two teaching strategies. Chastain summarizes the results of the experiment as follows:

At the end of the first year, the audio-lingual students received significantly higher scores in repeating sentences after a native speaker; the cognitive students received significantly higher scores in reading. There was no difference in the students' ability to answer questions and describe pictures. Achievement scores in listening and writing favored the cognitive students, although the differences were not significant. The authors concluded that the results favored cognitive teaching procedures.
(Chastain: 1971, pp. 128-129)

The author's conclusion as to the superiority of the cognitive code learning theory seems rather tenuous given:

- 1) the statistical differences were not significant;
- 2) their conception of cognitive code was not well defined;
- 3) the lack of control over the Freedman variables.

Despite these difficulties, the report did have a sobering effect on the audio-linguists and the linguistic method. This approach could no longer be accepted as the panacea for all language teaching situations.

The most prestigious and thorough study was carried out by Smith in Pennsylvania from 1965-1969. This pilot project was conceived to study 1) language teaching strategies, 2) the utility of different laboratory systems, as well as 3) the role of attitudinal factors. The subjects were French and German high school students in Pennsylvania.

The teaching strategies and laboratory programs were as follows:

- ILM - Traditional grammar-translation method
- FSG - Functional skills + grammar, i.e. audio-lingual method + supplementary grammatical explanations
- FSM - Functional skills method, i.e. the usual audiolingual method. (Smith: 1970, p. 16)

The program used three types of tape and language laboratory systems:

- TR - Tape recorder used in a classroom
- LL A-A - Audio-active language laboratory, i.e. booths with headsets, but no facilities for the student to record.
- LL A-R - Audio-record language laboratory, i.e. booths with headsets and facilities for the student to record. (Smith: 1970, p. 35)

The ILM used only the tape recorder in the classroom while the other two methods had access to all three systems.

Smith was surprised by the results of the study. He found that:

- 1) in the early years of the project the audiolingual group showed a definite superiority in listening and speaking and the traditional group in reading;
- 2) at the end of the four years there were no statistically significant differences in student achievement as regards listening and writing and speaking in the three; the traditional group remained superior in reading;
- 3) the different tape or language laboratory systems used produced no significant difference in the student's ability to understand;
- 4) there was no significant difference in the two functional groups (FSG, FSM) despite their different methods of presentation.

As a result of the experiment, Smith, a confirmed audio-linguist abandoned the latter school and embraced the cognitive code learning theory.

The Pennsylvania project, together with the three preceding ones, had an important collective impact on language teaching theory in North America. They demonstrated that no single teaching method could claim to be the most efficacious. Each had been successful at what it had taught. As Freedman (1971) so aptly pointed out:

Perhaps it is time to stop looking for the elusive "universal method" for teaching foreign languages, and instead to begin thinking in terms of different techniques for different aspects of language teaching. It may well be that it is only possible to hope for a large number of different techniques, each one appropriate to a particular type of learner and a particular type of teacher in a particular language learning situation, where particular problems arise from the conjunction of particular native and target languages. (p. 38)

Second, these projects sparked new research. People began to investigate other factors such as attitude, motivation and the role of the teacher and the student in the learning process. This was a welcome change from the previous over-emphasis on method.

Finally, these projects left the language teacher confused. He/she no longer knew where to turn to find the best method. The field fell into disarray as there was no longer a unified theory of language teaching upon which to base classroom practice. In such an atmosphere no linguistic school could claim that it had the necessary scientific knowledge upon which to found a theory of

language teaching. Therefore, as a result of these investigations into teaching methodology, the influence linguistics once had on the latter was considerably lessened.

Applied Linguistics

In the late 1960's the specialists within the field of applied linguistics came to the startling conclusion that they had never clearly defined their own field. Applied Linguistics had existed as a vague field of study, an area where linguistics applied its theoretical research. The applied linguists realized that, if they were to continue to exist and to perform a valuable function, they would have to be more explicit about their goals, methods and object of study.

In the light of the new research being done in psychology, sociology, linguistics and pedagogy, applied linguists laid down some preliminary guidelines:

- 1) applied linguistics was not language teaching;
- 2) language teaching was a more complex activity than originally thought;
- 3) theoretical research from a theoretical area of study could not be directly transferred to the domain of practice.

Although these insights did not in themselves provide answers to many of the questions raised by Mackey (1966), they did lead to a serious questioning of many of the previously accepted conclusions. They also led, as will be soon evident, to the

formulation of several new models as responses to this new crisis, as attempts to reformulate the relationship that should exist between linguistic and language teaching theory.

In order to present and discuss the new models that were developed in the field of applied linguistics we will use, with minor modifications, Stern et al.'s (1976) classification of models. They place them into four categories:

- 1) the Separation or "Hands-Off" Model,
- 2) the Application Model,
- 3) the Research Model,
- 4) the Common-Ground or Convergent Model.

The Separation or "Hands-Off" Model

To begin with, it should be pointed out that there are few, if any, pure examples of the different models mentioned by Stern et al. What we have are varying degrees of approximation.

As the name suggests, there is an evident and nearly complete divorce between language and pedagogical sciences (Stern et al.'s terminology) in the "Hands-Off" mode. In such a model, language teaching theory is not dictated by linguistic concerns but, rather, by both the learner's needs and pedagogical considerations. We believe that in the field today a close approximation of this is to be found in the work of people such as Galyean (1977), Smith and Wolfe (1972), Jakobovits and Gordon (1974) and Grittner and Lipton (1972). For these authors, language sciences are ancillary

to pedagogical sciences in the language teaching enterprise.

Jakobovits and Gordon (1974), whom Stern et al. place in the resource model, have a theory of language teaching based on the humanistic-transactional model patterned on the research of Carl Rogers. They claim that language teaching theory and teachers have for too long been the victims of the experts in research.

...At this level of consciousness, the teacher sees himself at the mercy of others, the expert, the supervisor, the evaluator, the mandarins of teacher training programs. This deference to an all-powerful research divinity is entirely misplaced. It stems from a total lack of understanding of the nature of research in the social disciplines. It confuses academic research with the application of its findings to particular, concrete situations. It confuses the application of academic research with applied research. Much of the success of our technology is directly attributable to applied research, and only indirectly to basic research. But we have no counterpart in the social and humanistic spheres to the applied research techniques of engineering.
(pp. 86-87).

They want to replace the previous view of teaching with what they call compensatory education. The teacher is a facilitator. It is an education based on the needs and interests of the students and only has recourse to research in as much as it might help an individual student solve a problem.

(Assume that every utterance is overtly verbalized.)

A₁: I undertake to interact with you in an authentic fashion. I hope it will work. I hope you'll agree too.

A₂: I am excited and scared.

B₁: Me, too, I agree to interact with you in an authentic fashion. I accept your proposal. Don't be scared. I've done it before with someone, and it works.

B₂: I'm filled with anticipations. I've got butterflies in my stomach. I am wondering what it will be like with you.

AB: (said by spokesman B) We have taken the first step. We are departing together.

A₁: Can you teach me how to do it? I am willing to be the pupil. I'll follow your instructions not knowing where you lead me. I trust you not to hurt me. I trust you to put my feelings above the task, above all else. I trust you to relinquish your role as teacher when I want to tell you something about me.

(Jakobovits and Gordon: 1974, pp. 146-147)

This approach is not controlled by any linguistic gradation. It responds to the here-and-now needs of the student and can lead anywhere. The teacher's role is to enable the student to experience these authentic needs and emotions. They call their new approach the ethno-methodological or educational linguistics. They define it as follows:

1. Teaching as conversation.
 2. Conversation as transactions.
 3. Transactions as moves and reply moves.
 4. Transactional moves as generated by a register.
 5. Register as a subsystem of rules appropriate for specialized functions.
 6. Classroom interactions as governed by the instructional register.
 7. Analysis of the instructional register through observation of ongoing classroom activities.
- (Jakobovits and Gordon: 1974, p. 250)

For Jakobovits and Gordon, the emphasis is to be placed on the self-fulfillment of the students. To the extent that research in the language science can throw light on the subject, it is consulted.

Beverly Galyean (1977) in her article, "A Confluent Design for Language Teaching" presents a similar picture. Her model is based on the work of Rogers, Smith and Wolfe, and Coombs, people who are all of the humanistic persuasion. She sees the goals of language teaching as being threefold:

- 1) to help the student along the road of self-reflection as a human being;
- 2) to help the student enter into interpersonal dialogue with the people and the world around him;
- 3) to acquire language skills in order to carry out the above tasks.

In the language classroom we have four key processes:

- (1) Language practice immersed in the "here and now" reality of class interaction.
- (2) Content of language practice based upon student offered material, both cognitive (ideas, thoughts, facts) and affective (feelings personal images, values, interests).
- (3) Closed relationships established among class members.
- (4) Self-reflection and self-disclosure encouraged as a means to self knowledge. (Galyean 1977, p. 143)

In her perspective, language is just an instrument to human growth and exploration. It is secondary to humanistic concerns.

Smith and Wolfe (1972), in "Teacher Education for New Goals", describe the type of training program necessary to prepare teachers for this new humanistic approach. They agree with Maslow (1950)

when he says that humanistic teacher training must help the teacher discover who he is. If he is to help others, he must know himself, he must be able to become a self-actualized person. Instead of imparting a certain knowledge to teachers, the vaccination approach, they want the teachers themselves to experience learning, growth, pain, self-respect etc. The teacher must be taught to individualize courses, to meet the needs and learning strategies of his/her students. There should be no indoctrination into a method based on the lock-step formula of dispensing knowledge. Teachers are no longer to be looked upon as dispensers of information but rather as facilitators of the learning process.

In such a "model" of applied linguistics or, to use Jakobovits' term, educational linguistics, there is very little influence exerted by the linguistic sciences on the pedagogical ones; linguistic theory on language teaching theory or vice versa. Linguistic sciences determine little of the content; this comes from the students; and, it has even less to say about its organization and presentation. The "Hands-Off" model is the antithesis of the dominant model in the heyday of descriptive linguistics, when the latter determined the "what" and the "how". While this model, as Stern et al. (1976) point out, recognizes language teaching as a legitimate object of study, it neglects the fact that linguistic and pedagogical sciences have mutual interests. The complete divorce of these two disciplines would be unfortunate just as the divorce of

medical practice from its basic research sciences would eventually lead to anarchy and charlatanism. To maintain this position does not mean that the new found emphasis on humanism and individualization in language teaching is to be rejected. It is not, provided it does not exclude input from linguistics and other related sciences.

To conclude, in the "Hands-Off" model, it is really begging the question to talk about applied linguistics. With the near separation of linguistics and language teaching theory, the links between the two are not sufficiently well defined to merit the name science. There is no real objet which might be studied by applied linguistics. It does not exist as an independent science (Rondeau's model), nor is it even equated with language teaching theory or practice as it was in the linguistic period. In such a perspective, linguistic and language teaching theory develop independently of each other. The former does not influence the latter in any systematic way. As well, applied linguistics, as previously defined, would simply disappear as a discipline.

We believe that such a model would lead to even greater abuses in language teaching than those that resulted from a too extensive an input from linguistic science. It would also leave the language teacher disarmed; (s)he would have no well defined language teaching theory upon which to base classroom practice. Finally, such a model based on humanistic and transactional assumptions implies that all learners are really interested in discovering

themselves, in exploring their emotions. This assumes that all teachers are capable of helping people do that; and, even more important, that all people would want to do this rather than acquire specific language skills. Language teaching theory based on strictly humanistic and transactional premises, and, therefore, devoid of a solid linguistic content, is not an improvement over a language teaching theory overly influenced by linguistic criteria.

The Resource Model

Another response to the turmoil and new research in the field of applied linguistics is the Resource Model. It implies a closer cooperation between the fields of theoretical research and practice. The practitioners, in our case, the language teachers, believe that theoretical research has valuable insights to offer but that these insights cannot be translated directly into pedagogical principles. Between the area of research and practice is a synthesizing discipline, namely applied linguistics. In this model, as opposed to the "application model", it is the teacher who assumes the role of applied linguist. He must study the various sciences that contribute to language teaching theory, synthesize the research and, then, check if it has any possible applications to teaching. The major proponent of this model is Allen (1974). In a discussion of scientific and pedagogic grammars (the product of applied linguistics), he outlines the different goals and objects of linguistics and language teaching.

A scientific grammar is concerned with a specification of the formal properties of language, with the 'code' rather than the 'use of the code'. The writer of a scientific grammar aims to give a systematic account of the idealized linguistic knowledge, or competence, which underlies the actual use of language in concrete social situations. A scientific grammar is based on a formal theory of language and it is expected to attain certain standards of descriptive adequacy.

A pedagogic grammar is typically eclectic in the sense that the applied linguist must pick and choose among formal statements in the light of his experience as a teacher, and decide what are pedagogically the most appropriate ways of arranging the information that he derives from scientific grammars:

A pedagogic grammar is a collection of material extracted from one or more scientific grammars and used as the basis for language teaching. It is possible to distinguish three states in the conversion of scientific grammars into practical teaching material. (pp. 59-60)

Allen realizes that the pedagogic grammar has to take many factors into consideration that the scientific one can disregard, i.e. age of student, learning strategies, aim of the course. Consequently, pedagogic grammars have neither the kind of descriptive adequacy nor the adherence to a single theory that characterizes scientific grammars. They are eclectic in nature. The pedagogic grammar must contain the best information available for the learner, regardless of the source.

Allen envisions three steps in the conversion of scientific grammars (if applicable) into materials that can be used in the classroom. In this conversion process, he insists on the fact that the influence of linguistics on language teaching theory is indirect

but important.

The first step involves the evaluation of grammars according to their terms of reference (theoretical) to determine what in them could be useful for language teaching theory. Allen adopts a multiline approach similar to that of Palmer. It is the applied linguist who selects the best theoretical insights from all the grammars to include in his pedagogic grammar.

At this stage it may be convenient to establish an inter-level between scientific grammars and language teaching textbooks, an area of applied linguistics where we aim to establish a pedagogically oriented statement of the linguistic facts as a preliminary to the actual construction of teaching materials. (Allen, 1974, p. 61)

Allen therefore makes room for a mediating science, namely, applied linguistics, which assumes the task of constructing pedagogical grammars. The evaluation of the grammars together with the choice of items is based on pedagogic criteria, "in the light of his experience as a teacher". The language teacher/applied linguist acts at both levels, i.e. theory and practice. To do so, he/she must have an adequate knowledge of both linguistics and pedagogy in order to effect such an evaluation and selection. In the field of language teaching, and more particularly, second language teaching, however, very few teachers would possess the qualifications and ability to carry out this task. It, therefore, raises the question whether or not such a model would be functional, given the present standards of teacher-education.

This same doubt about teacher capability re-appears on the second and third levels. Here, the teacher/applied linguist uses the "pedagogically oriented statements" from level one to form a structural syllabus (II) and, finally, textbooks(III). Steps II and III also imply a sound knowledge of linguistics, psycho- and sociolinguistics and pedagogy, for the organization of the syllabus and textbooks is guided by methodological criteria. The end product of this three-tiered conversion is a pedagogical grammar.

Allen's model reflects some of the new research that had been going in the field but, also, retains some of the drawbacks of previous models. First, the influence of linguistics, though indirect, is unidirectional. Language teaching theory does not affect linguistic theory, or for that matter, psychology or pedagogy. It is a consumer.

Second, in retaining the name applied linguistics Allen is perpetuating the myth that it is linguistics that is being applied. His insistence on pedagogic grammars based on methodological as opposed to formal linguistic criteria demonstrates that he realizes that there is more involved than just linguistics. Also, in saying that the language teacher is also the applied linguist, he could easily give the impression that applied linguistics is equated with language teaching. While he does not believe this, the possibility for misunderstanding remains.

Third, Allen's model is based on enlightened eclecticism. He does not believe that the best scientific description will necessarily furnish the best pedagogical description. Even though he generally supports the TG approach, he says that we have no guarantee that a pedagogic grammar based on it would be the most effective.

...we shall be asserting the independence of methodological decisions from formal linguistic constraints, whether deriving from transformational grammar or any other model. It does not follow from this that transformational grammar is irrelevant for language teaching purposes; it does follow, however, that claims as to the relevance of transformational grammar must be based on pedagogic rather than formal linguistic arguments.
(Allen: 1974, p. 68)

The language teacher/applied linguist chooses only those elements he/she is convinced will contribute to the efficacy of the pedagogic grammar.

Fourth, Allen realizes that we cannot transfer knowledge directly from one domain of research to another. There must be an intervening process of selection, synthesis and conversion. This is the role he assigns to the applied linguist/language teacher. This runs countercurrent to the claims of the linguists in the 40's and 50's and the definition espoused by Politzer. It marks an important step forward.

Finally, this model places a heavy responsibility on the shoulders of the teacher. It implies that he has an expertise in several fields that enables him/her to both construct a theory

of language teaching, and glean the most relevant material for classroom practice. History has shown, however, that most teachers do not have the time to acquire such knowledge. Stern et al. (1976) fear that such a model will lead to the "tidbit-picking" approach to language teaching.

The Application Model

A third response to the upheaval came in the form of the Application Model. In the period from 1940-1965, we had many examples of this type of model (Politzer, Rondeau). They all assumed that linguistics and psychology would provide information and theories that could and should be applied to language teaching. This position is still prominent today for language teachers still look to the experts in the related field for answers about how and what to teach.

Those who espouse this position today, i.e. Corder and Politzer, have refined the term "applied" as it occurs in applied linguistics. They refrain from any blanket application of linguistic and psychological research to language teaching. They also realize that only certain areas of research of the two former sciences are applicable to language teaching, and only to certain aspects of it.

We will look at two models of applied linguistics, those of Corder and Politzer. The former represents the most elaborate contemporary model of the Application type. Politzer, whose 1964

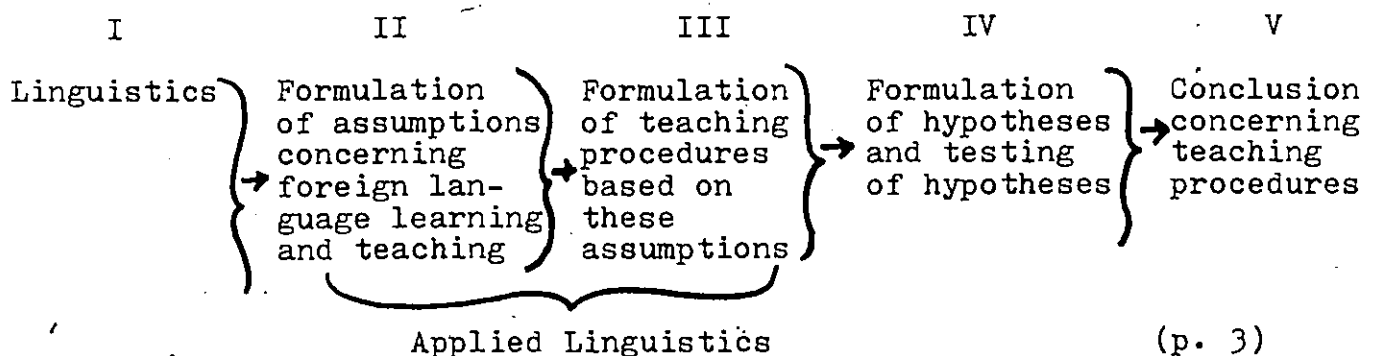
model was examined earlier in this chapter, was chosen in order to help trace the evolution in thinking that has taken place over the last few decades. It also presents a different point of view than Corder.

In 1960, Politzer defined applied linguistics as

...that part of linguistic science bearing on the planning and presentation of teaching material. (p.2-3)

This first conception was really applied psychology and linguistics, the latter disciplines, through the mediation of applied linguistics, being able to decree the "what" and the "how" of language teaching theory.

His 1972 model is very different.



In discussing his model, Politzer brings out some important distinctions. First, he maintains that linguistics is relevant for language teaching. He would be willing to concede, however, that it might be only indirectly so. In his opinion, linguistics in the past had too great an influence on language teaching, for it jumped from I to IV without the mediating influence of applied linguistics.

It went from linguistic assumptions to conclusion concerning pedagogy. The intervening stages in the new model are intended to prevent such direct interventions.

Applied linguistics, for Politzer (1972), is still considered a branch of psycholinguistics, however, because

... the verification of the hypotheses concerning second language teaching or learning has almost inevitably some implications concerning the psychological reality of the linguistic concepts which are utilized in the formation of these hypotheses. (pp. 2-4)

As it is involved in the formulation of hypotheses, he sees it as a "how" science and not a "what" science.

It is a habit, a way of using linguistic conceptualization to solve pedagogical problems. (p. 3)

This represents a change for the aim of applied linguistics is no longer the production of didactic materials but rather the generation of hypotheses related to the "how" of teaching. Linguistics supplies the insights upon which the applied linguist forms his hypotheses about language learning (II). The assumptions and procedures formulated by the applied linguist are evaluated on their ability to explain language teaching and improve the quality of instruction. Politzer, in his model, says very little about the criteria the applied linguist uses in generating these hypotheses. It raises the problem discussed in Chapter I. If linguistics and language teaching theory have different objects of study, language in itself, and language as an instrument of communication, how can linguistics provide the basis for the formulation of hypotheses about a domain

that includes such diverse elements as motivation, attitude and age?

Politzer (1972) in commenting on the role of linguistics makes an interesting statement.

The interpolation of steps II, III, IV between I and ~~V~~ puts the importance of linguistics into reasonable perspective. Linguistics is the source of assumptions rather than the source of conclusions. The very fact that linguistics can be used to formulate hypotheses emphasizes that linguistics plays an important role in language teaching. The interpolation of steps II, III, IV between linguistics and teaching procedures obviates the necessity of changing methods of language teaching whenever the field of linguistics undergoes new developments. New developments in linguistics will simply lead to new hypotheses concerning procedures in foreign-language teaching.
(p. 5)

This seems to be a contradiction. If we change linguistics, if there is a revolution in the view of language, this will obviously lead to the formulation of procedures that are opposed to the previous ones. If so, how can we keep the same method if the latter, according to Anthony (1964), is not supposed to contradict the basic assumptions of the approach. The arrival of TGG certainly ushered in a new conception of language. Teaching philosophy based on TGG is radically different from that based on structural linguistics. If this is so, we fail to see how Politzer can insist that there would be no change in the methods of language teaching. Finally, he wants to restrict the term applied (psycho) linguistics to the formulation of hypotheses concerning second language teaching and learning. To extend the term, he claims, would lead to impreciseness and an overemphasis on the importance of linguistic

science.

His model assigns linguistics an important role in language teaching theory. Its influence is direct and unidirectional. Language theory does not influence the former. At most, it brings problems to the applied linguist about which he would form hypotheses. In our opinion it assigns an overly important role to linguistics and psychology to the neglect of insight from fields such as sociology and pedagogy. It would seem to be based on a conception of linguistics that sees language as behavior. Therefore, the linguist in formulating assumptions about language learning and language teaching theory is, in reality, formulating hypotheses about behavior. If we accept the basic premise to be true, the hypotheses, to the extent that they logically follow, are also true. The last two decades in linguistic science, however, read like requiem for this position. Few linguists today would agree that linguistics is capable of explaining how a language should be taught.

In conclusion, Politzer's 1972 model does not reflect the new research going on in the field. He did not include the new findings in either sociology or educational research. The new movements in TGG and semantics were also neglected. It also maintains the weaknesses of the previous "Application models"; i.e. ambiguity of the term applied linguistics, the one-way direct influence of linguistics and psychology. The 1972 model represents more a personal evolution in Politzer's own thinking than an

evolution in the field of applied linguistics itself.

S. Pit Corder is one of the leading applied linguists in the world today. His conception of the field, however, is rather traditional in that he would like to use applied linguistics in the narrow strict sense of the word. For him, applied linguistics is a science with a well-defined object of study. In this science, linguistics has a very important but indirect role to play.

Linguistics gives us a framework for describing what we mean by skill in, and knowledge of, a language and consequently makes it possible in principle to show that one way of teaching or one set of teaching materials is more effective than another for achieving a particular aim with a particular group of learners. There can be no systematic improvement in language teaching without reference to the knowledge about language which linguistics gives us.

(1973, pp. 14-15)

Further, Corder sees both applied linguistics and language teaching as problem based activities. The application of knowledge to an object, be it linguistic or pedagogic, is an activity, and not a theoretical study. Language teaching theory then will not have the same degree of scientific sophistication as mathematics and physics. While it is doubtful whether Corder would see language teaching theory capable of reaching the status of even a professional theory, his recognition of it as an activity is important. In doing so, he admits that there is a fundamental distinction to be made between theoretical and applied sciences and the nature of the research carried out in the two.

These preliminary remarks are important for they provide the backdrop against which Corder constructed his model. Equally important is the fact that he regards the applied linguist as a consumer and not a producer of theories, the implication being that it is linguistics or, possibly, psycho or social linguistics, that supplies the necessary theories, and, further, that these theories can and should be applied to language teaching theory.

Before presenting his model, Corder defines the object of applied linguistics by stating in exactly what areas it has a contribution to make to language teaching. He sees the total language teaching operation as being composed of three levels.

Hierarchy of planning functions in the total
language-teaching operations

Level 1	Political	Government	Whether, what language, whom to teach
Level 2	Linguistic, Sociolinguistic	Applied linguist	What to teach, when to teach, how much to teach
Level 3	Psycholinguistic Pedagogic	Classroom teacher	How to teach

(1973, p. 13)

Applied linguistics, which is concerned with Level 2, is charged with the task of devising syllabuses and materials for language teaching. In short, it is concerned with the "what" of language teaching and not the "how" as in Politzer's model. We see the applied linguist as a contributor to, and a controller of, the language teaching process.

The Model

APPLICATION	THEORY	PROCESS	DATA
First order	linguistic and sociolinguistic	description	language utterance ↓
Second order	linguistic and sociolinguistic	comparison and selection	descriptions of languages ↓
Third order	linguistic sociolinguistic and psycholinguistic	organization and presentation	content of syllabus ↓ teaching materials

(Corder, 1973, p. 156)

Two preliminary remarks are in order. First, Corder makes a distinction between what to teach and how to teach. The "what to teach" of the syllabus may be defined in linguistic, psycholinguistic or sociolinguistic terms and is as varied as the nature of language. Even though linguistics has nothing to say about how to teach, Corder feels that how we organize the syllabus, i.e. on linguistic terms, contains within it a certain inkling, a certain inner logic, about how to teach it. This, however, is as far as he will go.

Second, Corder, with Chomsky (1966) and Thorne (1971), believes that the influence of linguistics is indirect. It is the applied linguist who decides the relevance of linguistic theory, and not the linguist himself.

Are there any points of view from which you think your study may have guidance to offer to human beings in their practical concerns? To take just one possible example, are there any lessons to be learnt about the teaching of languages?

This is the kind of question you should ask an applied linguist not a theoretical linguist. As a theoretical linguist I would have thought no - not directly. All scientific advances always have, to use the fashionable word, spin-off, but it's usually the case that those engaged in work in the field never see what this is. I myself would be very surprised if this work had any immediate practical applications in language teaching.

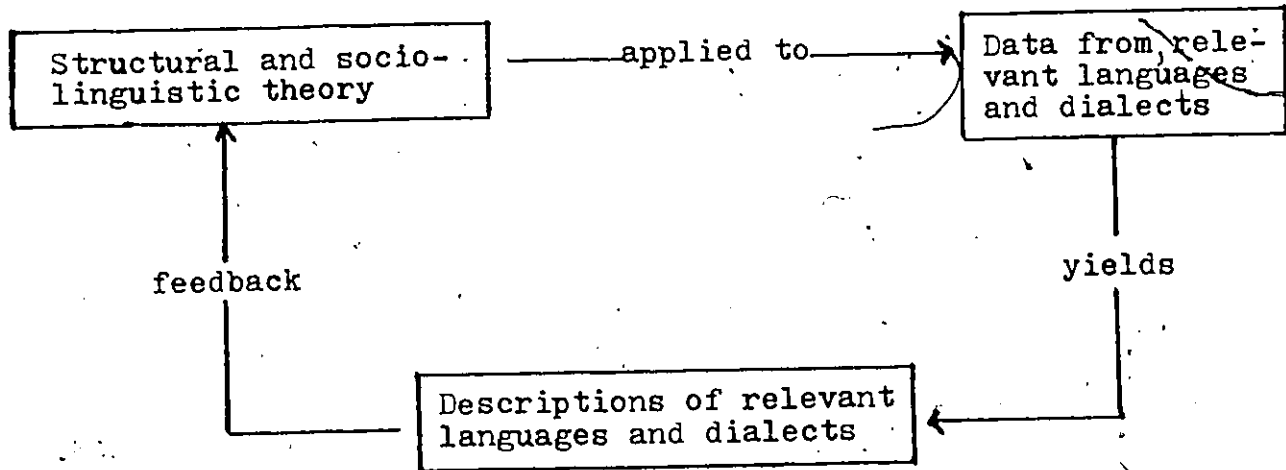
(Thorne: 1971, p. 144).

On the first level of application Corder bases his description of language mainly on linguistics. While admitting that we could base a description of language on socio or psycholinguistic criteria, at present, only linguistics is sufficiently developed to provide an adequate description. In order to obtain the data to be described, however, he must use some sociolinguistic criteria for such decisions cannot be made on structural grounds alone.

The descriptions of language which are the output of the first level of application differ in form, and not, in kind, from those of the theoretical linguist. The above language description answers to the question, "What is the nature of the language to be taught?" and not, "What is to be taught?" (II), or, "How is it to be organized?" (III).

What is not apparent when we look at Corder's model is the concept of feedback. He sees the necessity for communication between the description of language and the principles it is based on.

The diagram below illustrates this very well.



(Corder, 1973, p. 145)

Corder is the first person in the Application type model to introduce the principle of feedback. It was lacking in the work of Politzer, Rondeau and Vinay. It provides for mutual communication and revision at all levels of the language teaching operation.

Second Order Applications

The next stage in the application of linguistics to language teaching comes in the specification of what is to go into the syllabus. It is this series of applications that explains why the effect of linguistics is indirect.

The selection of the content of the syllabus is based on:
a) utility for the learner, b) difference, c) difficulty.

In order to select the items the applied linguist has recourse to comparative techniques:

- a) intralingual comparison,
- b) interlingual comparison,
- c) error analysis.

The syllabus answers the question "what is to be taught?".

To do so however, both linguistic and sociolinguistic criteria must be used for the applied linguist has to examine all types of codes, dialects and varieties of language. To do this, linguistic data alone would not suffice. Once the items for the syllabus have been selected, the linguist (applied) has still to decide which ones are appropriate for the different language teaching situations.

Third Order Application

As we cannot or do not want to present the whole syllabus to the student it has to be structured. Structuring a syllabus is a more complex activity than describing language.

...the principles upon which each activity is based become more complex as we move down the scale. Thus, the problem of structuring a syllabus is not solvable by reference to any one linguistic approach. At this level many different variables are involved, sociolinguistic, structural linguistic and, at this point even more importantly, psycholinguistic. The structure of a syllabus is very much influenced by what we believe to be the psychological processes which take place in language learning. (Corder: 1973, p. 151)

The logical organization of the syllabus can be based on deductive or inductive basis criteria or some mix of the two. On the other hand, if we look at language from the point of view of activities or functions it can perform, we can organize it

on socio or psycholinguistic principles; i.e. the ordering of the four skills in terms of speech acts, general situations, and role playing. Corder realizes that this ordering and presentation has to be done in terms of linguistics, psycholinguistics and sociolinguistics, as many factors must be considered. The products of the third level of application are the structuring of the syllabus and the producing of teaching materials. These are different but related processes. The teaching materials produced are what Corder calls a pedagogical grammar. He is partial to this term even though many people dislike it for historical and linguistic reasons. Its function is to present the items to be learned in

... such a form that they will be more readily learned. This is a psychological problem. (p. 154).

Corder's model represents a sophisticated attempt at a solution to the problem of the relationship between linguistic and language teaching theory. His answer is the creation of a mediating discipline whose task is the devising of syllabuses and the writing of pedagogical grammars. It is therefore not concerned with all aspects of language teaching but only

... those parts of the total language teaching operation in which decisions are made in the light of a knowledge of the nature of human language, how it is learned, and its role in society. It deals with those parts of the operation which are potentially susceptible to some sort of systematization based on scientifically acquired knowledge.

(1973, p. 11)

His model is a marked improvement over the earlier application models in that he explicitly states how, where and why linguistic theory should influence language teaching theory. The influence is there, but it is indirect and filtered. He recognizes that we cannot go directly from theory to practice as was done in the 'linguistic method'. In spite of these corrective measures though, certain problems remain.

Applied linguistics is not really applied linguistics but rather applied psycho and sociolinguistics. While only linguistics or possibly sociolinguistics is sufficiently developed to provide a description of language (I), psychology and psycho and sociolinguistics play an important role on levels II and III. The term applied linguistics, as in the previous models, remains ambiguous.

There is also the question of feedback. Corder includes this on the first and second levels of application but not on the third. This means that the gap between actual classroom practice and the research basis remains, though in his case, to a lesser degree.

Next, in the production of pedagogical grammars, one would expect certain contributions from educational theory. Unless Corder subsumes all this under psychology and psycholinguistics, this would seem to be a shortcoming in his model. This problem is related to another one. Corder gives a strong definition of applied linguistics which ties the teacher to the expertise of the latter science. The teacher is a consumer, (s)he is being told

what to teach. On what basis does the applied linguist make such decisions? What are his reference criteria? Unless he is aware of the problems involved in teaching and learning languages, how can (s)he prepare materials to meet these difficulties?

In conclusion, Corder's new generation 'Application Model' continues to attribute to linguistics an indirect and mitigated, but still unidirectional influence on language teaching. The goal of applied linguistics is to produce pedagogical grammars that can be used by the language teacher. In such a perspective, language teaching is not seen as an independent discipline. It is a consumer, an art, an activity that applies previous research. Applied linguistics, therefore, is not interested in constructing a language teaching theory upon which to base classroom practice, unless, that is, we can equate a language teaching theory with a pedagogical grammar. Nor can it be equated, as it was for Politzer (1960) exclusively with language teaching. Applied linguistics for Corder has a much broader definition and includes such areas as translation. Corder sees it as an independent science with its own object, method and goal.

The Common Ground or Convergent Model

The last type of model to emerge in the contemporary period was the 'Common Ground' or 'Convergent Model'. While from a strictly historical point of view it did not appear after the three previously mentioned models, it is a synthesis of their best characteristics along with the addition of some new principles. In

1976, Stern et al. described the characteristics of the 'Convergent Model' as follows:

Linguistics and psychology are recognized as activities in their own right following the impetus of their own theories and research traditions. Language teaching also exists in its own right and has its own traditions. But the language sciences have something in common with language teaching; they are both concerned with language, language acquisition and language use. The language sciences provide theories, develop concepts, collect and order information. Language teaching as a practical activity for its part has its own theories, concepts and data. But it requires information and it reveals problems which can stimulate research and theory. Research, theory, and practical activity can support each other. The relationship is most productive if it leads to interchange between theoreticians, researchers and practitioners.

We would like to add sociology to the list of disciplines for, in our opinion, it plays an important role in both the language and the educational or pedagogical sciences. Stern (1972) in his own model includes sociology as one of the basic sciences.

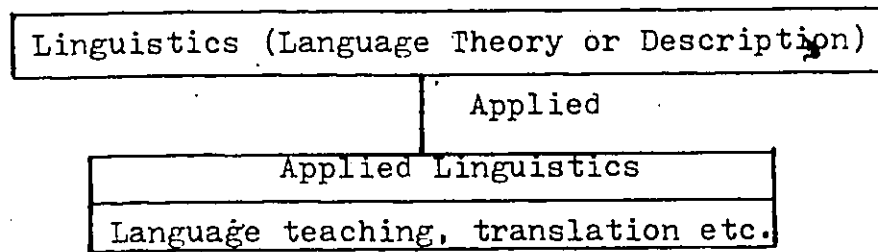
This new type of model emerged because of a breakdown between theory and practice. The language teaching enterprise, as described and outlined by the theorists, was not working out that way in practice. As there was no bi-directional communication, the theorists did not take into consideration the problems that occurred in the practical order. Kurt Gottwald (1977) has analyzed this problem very well.

At least some identity between the theoretical field of cognition and the practical field of action is found to be a first necessary condition for a reasonable transposition of theoretical knowledge into practical measures. The degree to which results of scientific theories are directly applicable in the areas of practice must depend on the number of phenomena which belong at the same time to the two fields of cognition and action. Thus, the relevance of chemistry to medical therapeutics explains itself by virtue of a shared interest in chemical processes which also occur in living organisms. The relevance of sociology to practical politics is based on a common target for investigation and action, which is to be found in certain forms of organisation and interaction within human societies. (pp. 55-56)

Between the pure scientific research and the level of practice, he sees a role for a mediating science that will investigate the application and utility of scientific research and also act as a means of feedback between the two areas.

The applied linguists working in the field soon became aware of the problem and began to look for new solutions. The first model of the 'Convergent' type was constructed by Spolsky (1969). It first appeared in an article entitled "Linguistics and Language Pedagogy: Applications or Implications?": He has subsequently revised it and re-published under the title of "Educational Linguistics". We will examine the evolution of Spolsky's model in some detail as other convergent models are modifications of his.

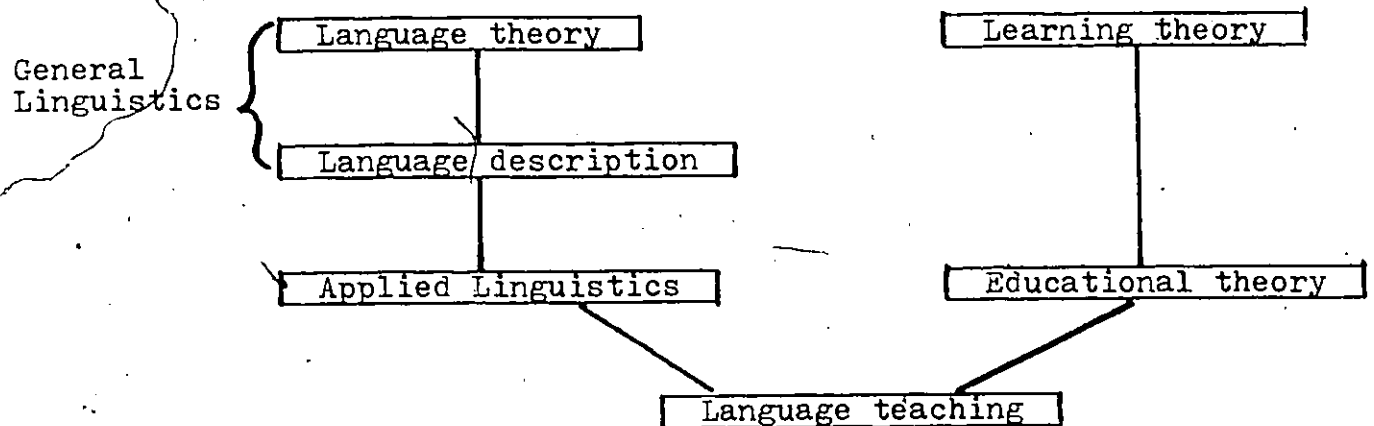
In the following chart we have the relationship of linguistics and language teaching as presented in the traditional model (oversimplified).



(Spolsky, 1969, p. 145, 1976, p. 5)

Spolsky rejects this model for he believes, and rightly so, that linguistic research cannot adequately explain how to teach language or to write materials.

In the following chart he presents his first attempt at a 'Convergent' model including information from learning and educational theory.



(Spolsky, 1969, p. 146, 1976, p. 6)

While realizing that this is an improvement on the traditional models, he still sees some problems. First, he questions the function of applied linguistics. If the type of description made by the applied linguist is not qualitatively different from that made by the pure linguist, what role does it serve? Corder (1973), in justifying his

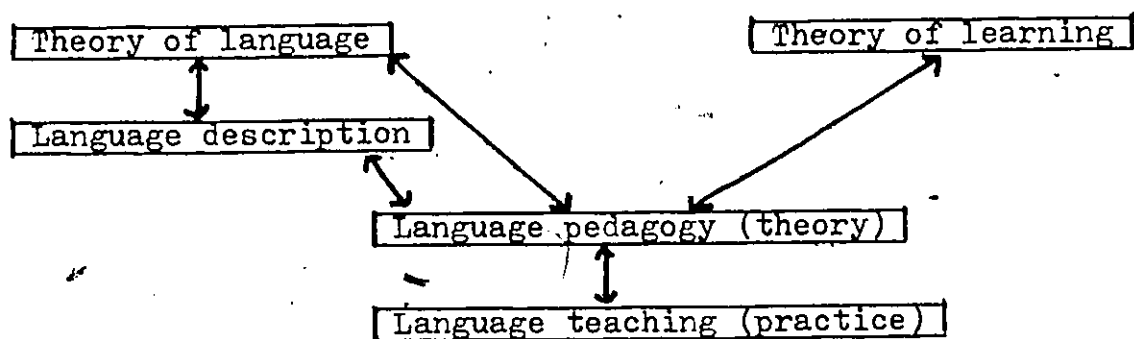
use of applied linguistics, said the description was not different in kind, but in form, intended for a different audience, for different uses. Spolsky does not accept this, nor does he see the role of applied linguistics in contrastive analysis.

Now, we must ask, how does a contrastive analysis differ from a normal description? If it is simply in the fact that it sets out the two descriptions side by side, then we have defined the applied linguist's function as to provide an indexing system. If, on the other hand, in order to achieve the contrast he is forced to change one or both descriptions so that they are in comparable terms, he is then acting as a descriptive linguist, setting up his own model of grammatical description. The first weakness of the model then is that it provides no meaningful place for the bridge between linguistic knowledge and language teaching.

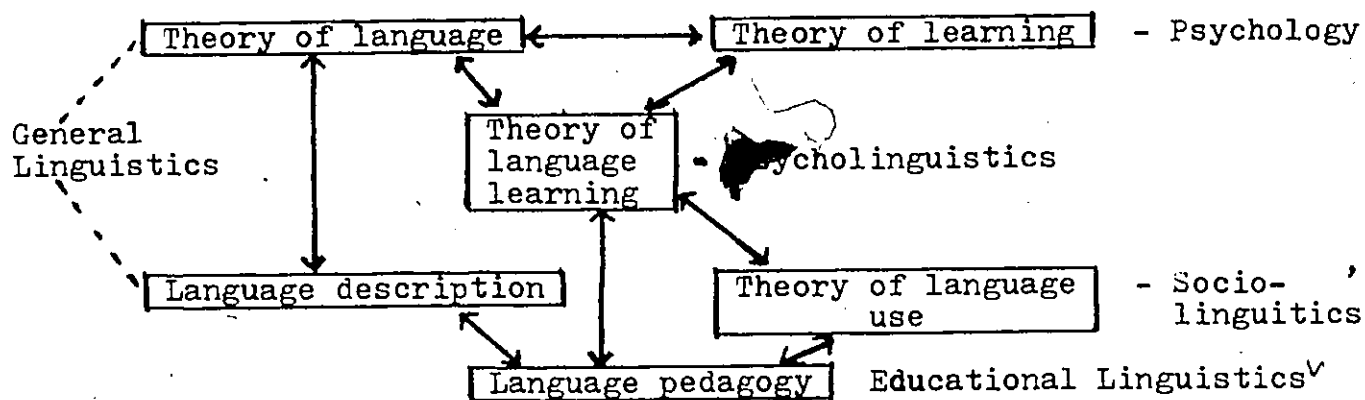
(Spolsky: 1969, p. 146, 1976, p. 7)

As Spolsky believes that applied linguistics does not serve a useful function in the model, he decides to drop it completely. Second, there is no communication between language theory and learning theory in general, and the theory of language learning, in particular. These three have to interact, to take each other into consideration, if the end product is to be of any use to language teaching.

Third, Spolsky (1976 but not 1969) criticizes the omitting of the sociolinguistic data, the theory of language in use. This should also be a contributor to language teaching theory. To trace Spolsky's evolution from 1969 to 1976 we have included both convergent models.



(Spolsky: 1969, p. 147)



(Spolsky: 1976, p. 9)

The basic elements were present in the 1969 model but Spolsky has since refined them and added the sociolinguistic component. It was the 1969 model that served as inspiration for the convergent model that appeared in the early 1970's.

The dominant trait of both models is the principle of bi-directionality. There is an interchange, a constant communication among all the areas of educational linguistics that affect language teaching, a subfield of the latter discipline. This model recognizes that practice has something important to contribute to

theory. As Roulet points out,

... the risk run is that of approaching the problem from the wrong end and of believing, as did American structuralists, that linguistics controlled all conceivable inputs to language teaching. It is only when one begins from the circumstances and aims of language learning that linguistics takes its proper place among those disciplines concerned with renewing language teaching methodology, i.e. sociolinguistics, psycholinguistics, the psychology of language learning, pedagogy, etc. and we can make a choice of the most adequate among the available theories and descriptions. (Roulet: 1972 pp. 72-73)

This principle of bidirectionality is Spolsky's most important contribution to the field of applied linguistics. All the previous models in the period 1940-1969 had disregarded it completely. This confers on language teaching, both theory and practice, an important role to play. Language teaching becomes the meeting ground of theory and practice. The language teacher will henceforth formulate hypotheses about his practice. (S)He will test them and, also, consult the language teaching, linguistic, psychological, sociological and educational theorists as to why things function they way they do. In doing so, (s)he can influence, and contribute to the research being done on the theoretical levels. The language teacher becomes hypothesis-maker and tester (his own and those of the theorists).

Conspicuous by its absence is applied linguistics. In addition to the reason previously cited, Spolsky has found others for eliminating it. He believes that educational linguistics is more

suitable given the nature of educational and language sciences, for applied linguistics includes things such as lexicography, translation etc. Second, it gives the impression that there is something that is to be applied. It gives the theoretical linguist the idea that his research can be directly transferred to the domain of practice. On the other hand, educational linguistics, in the same vein as educational psychology, places more emphasis on the practical, the problem solving nature of language teaching. Educational linguistics will do for language teaching, a subfield, what medical sciences does for the general practitioner; provide an integrated theory on which the practitioner can base his day-to-day activities.

Spolsky's model is interdisciplinary in nature. In such a framework, language teaching looks for implications from linguistics and its hyphenated disciplines rather, than direct applications, as did language teachers in the audio-lingual era.

That a linguist describes a language in a given way, in a given order, or proposing a given sequence of rules, is not directly applicable; for it says nothing at all about the type of sequencing that might be used (Mackey 1965), or indeed whether linguistic sequencing is needed at all (Reibel 1968). That a linguist explains a phenomenon in a specific way does not tell a teacher how much he should use explanation in his class, or how this explanation should be given. These are questions to which language pedagogy must develop its own answers whether on the basis of linguistic theory, or from other sources.

(Spolsky: 1969, p. 150)

Spolsky is convinced that through the mediation of educational linguistics based on a bi-directional-interdisciplinary model, that language teaching and all its related sciences will find their most fruitful and just relationship, a relationship in which each area is recognized as an independent discipline (language pedagogy still being classified as an art), a relationship which will produce a better understanding of language in general, and language teaching in particular.

Before commenting on Spolsky's models, we would like to present that of Roulet. In his book Théories grammaticales, descriptions et enseignement des langues (1972) he begins with Spolsky's model as a jumping off point. Though the model in his book is that of 1969, and not that of "Educational Linguistics", which includes a reference to sociolinguistic theory, some of his criticisms and additions merit our consideration.

Roulet (1972) claims that all linguistic theories from de Saussure to Chomsky have failed to provide information on the use of language as an instrument of communication. These theories have:

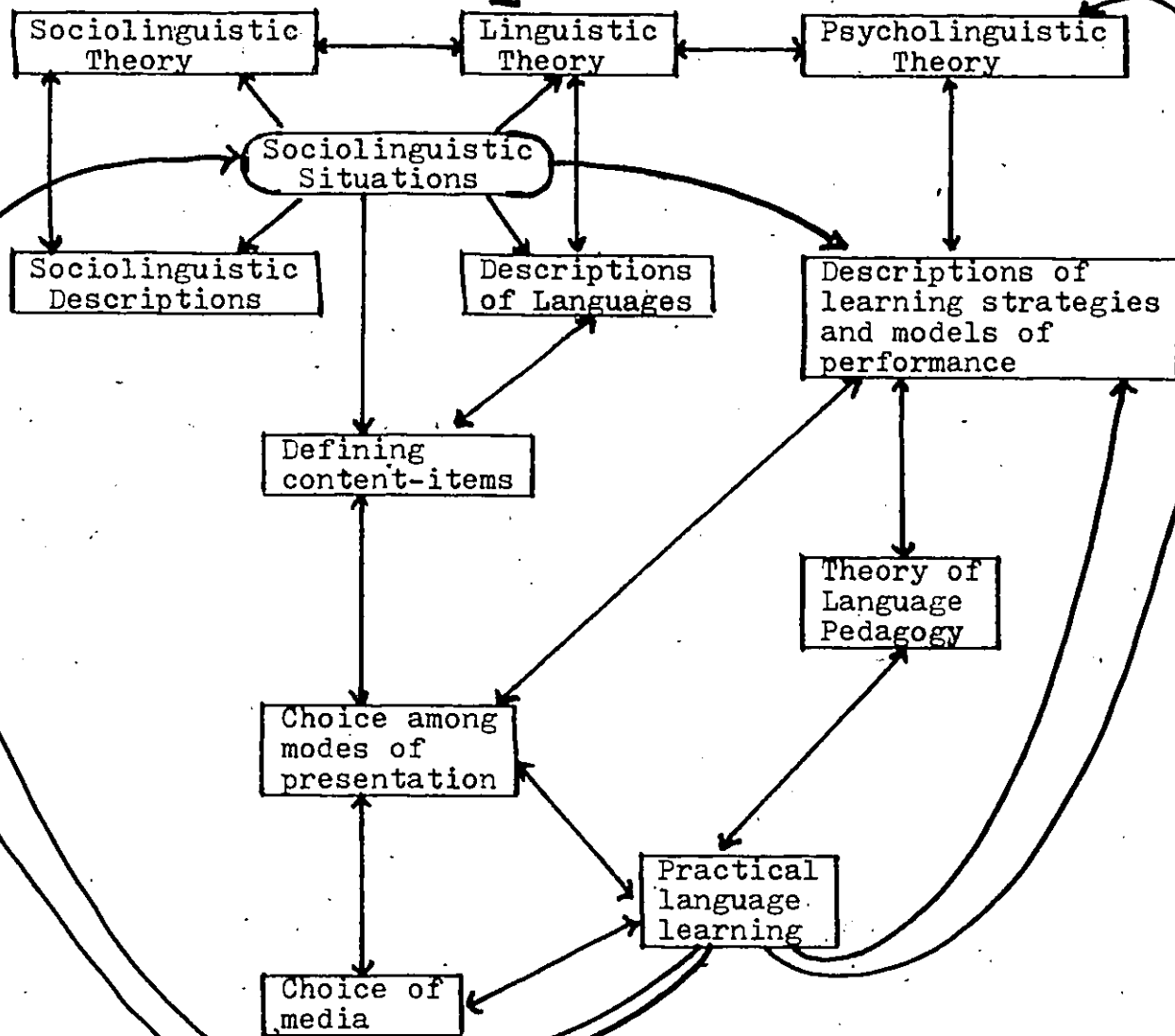
- 1) described only the system and not the use of the language;
- 2) treated only the structure of the sentence and have neglected communicative units such as text and dialogue;
- 3) studied systematically only the referential function of language neglecting other functions such as phatic, poetic;
- 4) studied only one variety of language itself considered

as homogeneous and representative and paid no attention to other varieties which are part of the verbal repertoire of the linguistic community.

The result of this has been a "monolithic, pure and rather homogeneous view of language. It is a linguistics of la langue and not la parole. Roulet, after Firth, wants a linguistics of language in its social context, he wants to put an end to the false distinction between langue et parole. Further, language teaching theory, if it is to be successful, must be based on such a theory of language. Roulet (1972) cites Gumperz, a sociolinguist in support of his position.

It seems necessary, at least for the purpose of applied linguistics, to reopen the question of the relationship between linguistics and social facts. More specifically, the question arises given a grammatical analysis of the languages involved of what additional information the sociolinguist can provide in order to enable the language teacher to give his students the skills they need to communicate effectively in a new society. (p. 77)

Using Spolsky's model as a starting point, and in light of recent sociolinguistic research by Hymes, Gumperz and Gorosh, Roulet developed the following model.



(Roulet: 1972, p. 83)

From Hymes (1964) and Gorosh (1972) he obtained data about the ethnology of communication and the analysis of sociolinguistic situations. Hymes (1964) defines the ethnology of communication as follows:

This is question of what a child internalizes about speaking beyond rules of grammar and a dictionary while becoming a full fledged member of its speech community. Or it is a question of what a foreigner must learn about a group's verbal behaviour in order to participate appropriately and effectively in its activities. The ethnography of speaking is concerned with situations and uses, the patterns and functions of speaking as an activity in its own right. (p.101)

Roulet sees this work as representing an important contribution to meeting the needs of language teachers in the field. It will enable us to have a more formal description of language in use.

Speech or communicative acts would be analyzed according to the following criteria:

Each speech act or communicative act is analysed in its turn into a certain number of component elements; labelled by present research as: form and content of the message, setting (either geographical), temporal or psychological), participants (speaker, hearer, addressee), verbal purposes, modalities (i.e. tone and mode in which the act is performed), channel of communication (oral, written, telegraphic), variety of language used (dialects, registers, etc.), norms of interaction (expression in a deep voice, silent listening, etc.), norms of interpretation (as a function of the belief system of the community) and genres (poems, stories, proverbs, etc.).

(Roulet: 1972, p. 78)

Gorosch took this research in the ethnology of communication and developed the content of a language teaching course under the heading of:

- a) analysis of sociolinguistic situations,
- b) definition of language teaching objectives,
- d) definition of the contexts of the language teaching course.

As is evident from the above model, Roulet has included this research in his conception of the relationship between language and pedagogical sciences. It is unfortunate though, that the written description of Gorosh's research is not reflected by its graphic representation in the model. The starting point for his bi-directional interdisciplinary model is an analysis of the most common sociolinguistic situations. Roulet, however, as opposed to Gorosch, wants to establish ties between descriptions of learning strategies and models of performance, and all this in light of sociolinguistic situations. What is needed is a pupil centered pedagogy that allows each person to learn and evolve his own strategy of learning

...towards the mastery of this or that area of language use. It is for this reason that instead of imposing on all those who learn a language a single globally valid content and method of learning it would be better to allow each individual spontaneously to lean towards the control of this or that sociolinguistic situation using the particular learning strategies and media best appropriate to him. (Roulet: 1972, p. 82)

This is a contradiction of the position espoused by the theorists of the 'linguistic method' who maintained that everyone learned in the same way using the same materials.

Roulet, while realizing that this is not a complete list of all the factors related to language teaching, is convinced that the interdisciplinary approach aided by solid research in all areas, is the only sensible stance. It entails a feedback between theory and practice in order to avoid the errors committed by

linguistic descriptions of language from de Saussure to Chomsky. Finally, it emphasizes the need for close cooperation between language teaching theory, linguistics and its hyphenated sciences, a cooperation that includes the possibility for practice to influence theory.

Spolsky's (1969, 1976) and Roulet's models, though more adequate than the first models are not without their problems. In Roulet's model some cases of bi-directionality or, lack thereof, are questionable. Let us take the case of linguistic theory and sociolinguistic situations. While it is true that society is the origin of these situations, linguistic theory must be applied to them in order to furnish descriptions. It would make more sense to have a bi-directional arrow here. The same could also be said for psycholinguistics and sociolinguistics. These theories have to be applied to the situations in order to give them their respective descriptions.

In the same vein, the resulting sociolinguistic descriptions should also play a role in defining content items. We get the impression they are not applied to anything. After all, is not this the whole thrust of Roulet's changes in Spolsky's model?

Roulet and Spolsky's models are plagued by one other problem, the tenuous nature of research being conducted in the source disciplines for language teaching theory. The studies undertaken in the 1960's (Pennsylvania, Purdue, etc.) showed how little we know about learning theory. To the question what are the most

important factors in learning, no definite answer can be given. As Jakobovits has pointed out, our investigations are not yet sophisticated enough to identify and/or analyze all the problems involved in learning (1973).

Chomsky himself in 1966 stated rather bluntly the very tentativeness of the conclusions in linguistics and psychology. Linguistic theory contains so very little that can be scientifically verified. Even something so basic as the phoneme is no longer universally accepted. If language teaching is too closely tied to these disciplines, revolutions in the latter will radically affect language teaching theory.

... But it must be recognized that well-established theory, in fields like psychology and linguistics, is extremely limited in scope. The applications of physics to engineering may not be seriously affected by even the most deep-seated revolution in the foundations of physics, but the applications of psychology or linguistics to language teaching, such as they are, may be gravely affected by changing conceptions in these fields, since the body of theory that resists substantial modification is fairly small. (Chomsky: 1966: p. 236)

Le Goffic (1974) in talking about the situation in France echoes the same refrain.

Mais l'examen montre que cet espoir est tout à fait illusoire: il n'existe pas à l'heure actuelle de théorie linguistique qui puisse prendre la relève du distributionnalisme comme fondement direct d'une méthodologie des langues, il n'existe pas de modèle des langues ou du langage qui puisse fournir un cadre de référence unifié et cohérent à une didactique des langues.

... il n'y a pas de théorie linguistique susceptible de fonder une didactique des langues, au sens où elle donnerait un modèle de référence unificateur. Cette situation ne doit pas être dramatisée, car elle n'empêche pas dans la pratique les méthodologies existantes de continuer à être utilisées (avec ce que leurs résultats ont de positif), voire de se développer (en particulier l'audio-visuel deuxième manière, basé sur l'utilisation du film animé). On peut se rassurer de surcroît en songeant à tout ce que la linguistique ne sait pas décrire adéquatement et que des élèves réussissent cependant à apprendre (par exemple le système de l'article en français), par des voies qu'on aimerait comprendre.

... un effort de réflexion radical s'impose; une véritable linguistique appliquée à l'enseignement des langues reste encore à chercher et à construire si l'on ne veut pas abandonner l'idée que la réflexion scientifique sur le langage peut apporter quelque chose à l'enseignement des langues. (pp. 161-162)

The lack of scientific validity that plagues the sciences of linguistics and psychology is also present in sociolinguistics. Stratton (1977) points out some of the difficulties that the new sociolinguistic approach is experiencing.

✓ Although one wishes the learner to become both linguistically and communicatively competent, the development and use of a communicative syllabus are faced with a number of problems, some of which are the present lack of knowledge about the constituents of communicative competence, speaking rules, and the relation between linguistic form and function; the heavy demands it places on the learner; and the difficulties of providing an effective context for a speech act and of dealing with cultural clashes between the speaking rules of the learner's first language and English.

These problems raise questions concerning the viability of the communicative approach in some language learning situations and point to the fact that each situation must be considered individually. (Stratton: 1977, p. 131)

In spite of the fragility of the research it does not mean that we have to "brûler la linguistique comme on l'adorait naguère" (le Goffic: 1974, p. 162). What we have to remember is that these are working models, and, that until such time as our sciences are able to validate their results, we have to accept them as being provisional, as having possible implications.

Finally, Spolsky in his model decides to eliminate applied linguistics and call the new mediating science between language teaching (practice) and its source disciplines educational linguistics. This new name, while better, than the old, is still laden with ambiguity. Given his model, it would make more sense to call it educational, psycho and sociolinguistics. The problem with applied linguistics was that it implied that linguistics could be applied, and that it was only linguistics that was being applied. Spolsky's new term also implies that it is only linguistics that is being applied. While the "educational" part of the expression is an

improvement, for it includes the teaching aspect, it would have been better in our opinion to have chosen a name such as language teaching theory. This encompasses the research, pedagogical and practical aspects while avoiding the above-mentioned ambiguities. The term applied linguistics would thus be reserved for those situations in which it was really linguistics that was being applied.

The above criticisms concerning research can also be levelled against the last model we are going to present, namely, that of Stern (1972). We believe that this model provides the best framework within which to discuss the relationship of linguistics to language teaching theory.

Stern (1972) defines language teaching theory as follows:

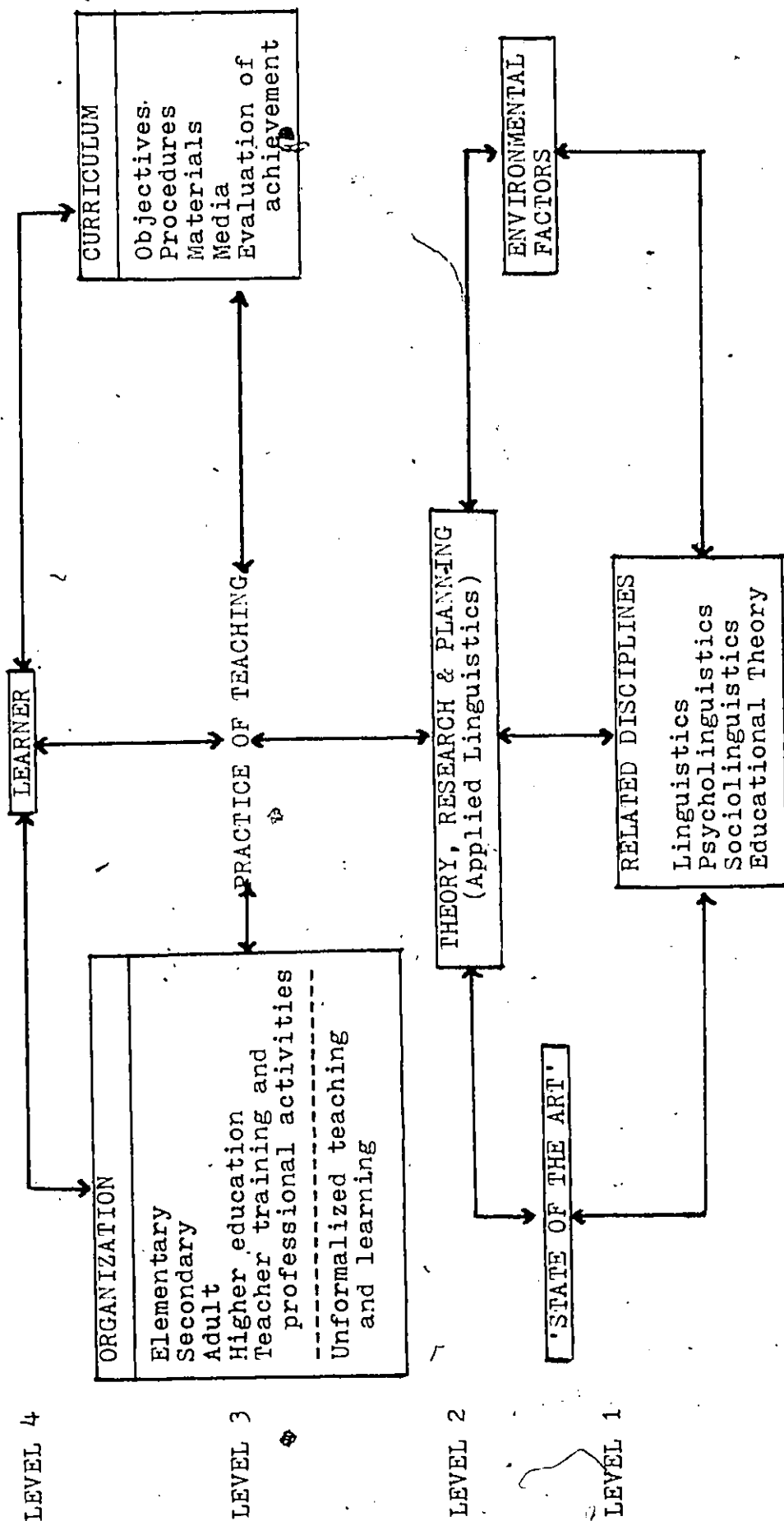
A good theory of language teaching is a statement about teaching a language, or languages in general, and the organization of such teaching in relation to learners in general or specified learners, which is sensitive to the history of language teaching and the findings of linguistics, psychology, sociology and educational theory, and is adjusted to the particular circumstances in which it is to apply. (p. 46)

His model, which we have reproduced below, is a diagrammatic explanation of the above statement.

This model, which Stern admits is not unique in nature, but in that it is the first one that has combined all these elements, was inspired by the models of Mackey (1970) and Spolsky (1969), and is partially based on the work of people such as Carroll, Corder, Trim, Rivers (1972). He states that his model was developed in response to both the new facts and the lack of certainty in the

fields of linguistics, psychology and psycholinguistics, sociology, educational theory and methodology, and to the lack of a unifying philosophy in language teaching. He does not see his model as an attempt at finding a single theory of language teaching, but as a framework that will give language teaching a sense of direction. He has also expressed many of the same concerns mentioned earlier about the quality of the research upon which models are presently being built.

A GENERAL MODEL FOR SECOND LANGUAGE TEACHING



(Stern: 1972, p. 11^a)

His model has four general characteristics:

- 1) It is a comprehensive model, using an interdisciplinary approach.
- 2) It is an interaction model in that it emphasizes the relationship that exists between the different parts. It is, by definition, bi-directional.
- 3) It is a multi-purpose model. It can be used for all kinds of situations, i.e. bilingualism, first language acquisition, etc.
- 4) It is a multi-level model, but not necessarily in terms of persons. One person can fulfill many functions.

As many of these characteristics were also found in the two previous models, we will concentrate on the salient features.

The heart of Stern's model is level two, the theory, research and planning section. This is what he describes as the thought level of practice, that crucial area that makes assumptions, carries out research, and synthesizes all the input from the different fields. Although in his model he calls this applied linguistics, he feels that it is a question of semantics and it could also be named educational linguistics or language teaching theory. For reasons that have already been mentioned, the last name has been favored.

Stern realizes that language teaching theory is built upon shifting sands; its source disciplines are always in a flux. To counteract this, he suggests three principles that should govern

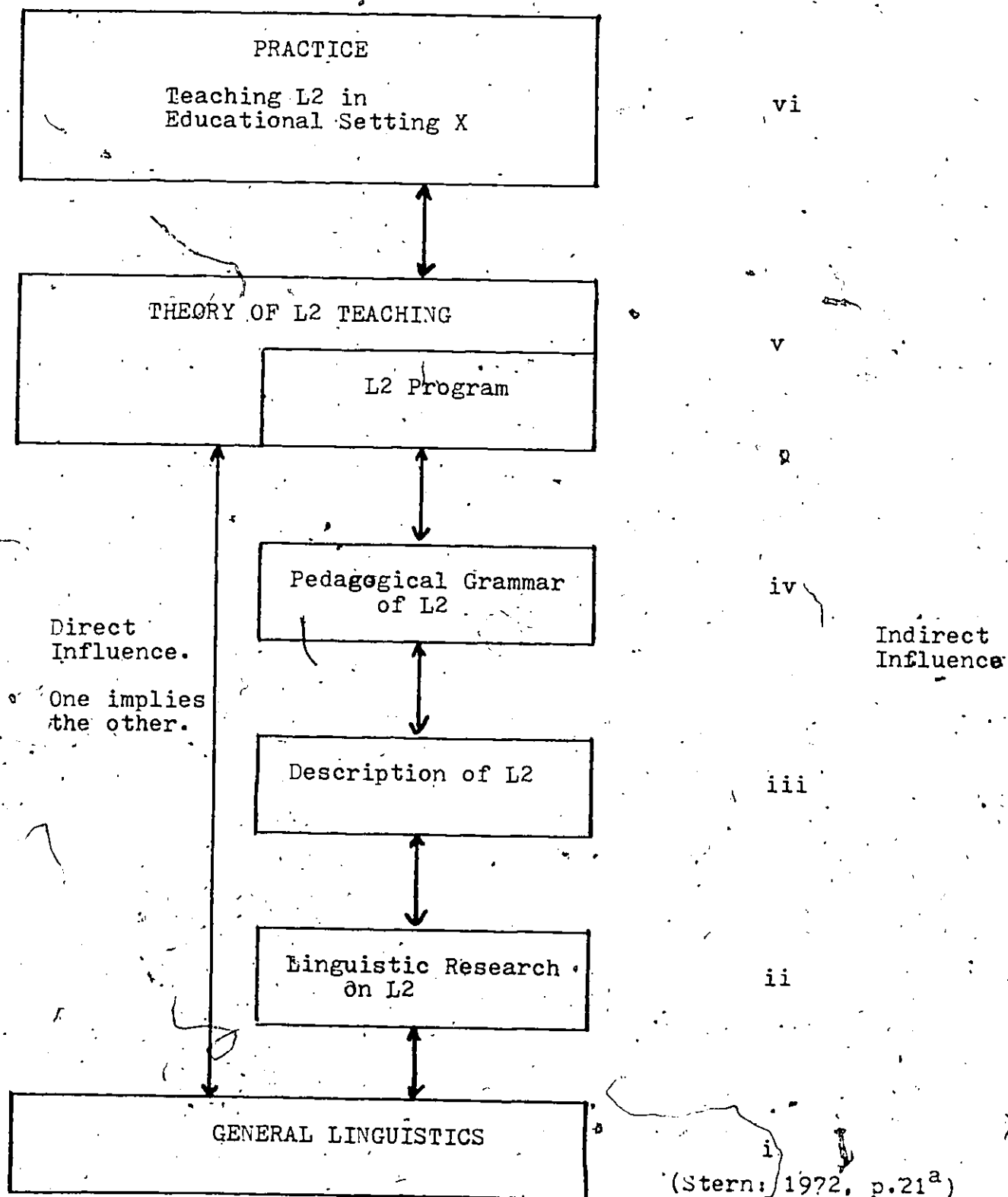
the relationship between them and language teaching theory:

- 1) The principle of a constant review of the related disciplines;
- 2) the principle of interaction, which implies that the language teaching theorist is not merely a recipient of the thought of others, but that he should view himself as an innovator of scientific research;
- 3) the multidisciplinary principle: this places a great burden on the language teaching theorist for he must be able to do or use research in all the related areas.

With these three principles, language teaching theory should not become the victim of either bandwagonism or atrophy. In his model, Stern sees the four related disciplines as being important contributors to language teaching theory. He makes a distinction between the direct and indirect influence that these source disciplines have, a distinction similar to the application-implication one made by Spolsky. In the annotated diagram below we see an example of both types of influence. The final product of this process is a pedagogical grammar. Stern assigns this same double influence to the other related disciplines.

Linguistics And Second Language Teaching Theory

Sublevels



Stern chooses educational as opposed to pedagogical theory as the former is a more comprehensive term. It includes much more than just teaching; i.e. philosophy and sociology of education, curriculum planning, etc. He states that it should be given a more important part to play than it has been assigned in the past. He claims that in the audio-lingual period language teaching theory became divorced from the mainstream of educational thought, and is, only now, beginning to benefit from research in this area.

Three other aspects of the model deserve attention. The first is the State of the Art. Stern, who has a very good historical sense, believes that language teaching theory has and would continue to benefit from historical reviews of the developments in the field. This identifies problems and opens up new avenues for research. It also cautions teachers that they should not mindlessly adopt the newest fad or remain unquestioningly entrenched in some old doctrine.

Second, there are the environmental factors. These include the demographic patterns, the national languages, the economic and political conditions. The history of countries such as Belgium, and most recently the evidence gathered by the Bibeau Report in Canada, has demonstrated that these factors do affect language teaching theory. While their influence on language teaching theory may not be either as direct or apparent as linguistics or psychology, they should not be forgotten for, as Corder (1973) mentions, they form the basis for the political decisions about language teaching, i.e. whether, what language, whom to teach.

Third, the contributions of the learner to language teaching theory are carefully analyzed. In the model, the learner has symbolically been placed at the top, for as Stern (1976) states:

All language teaching efforts culminate in him. His progress provides the pragmatic test for the adequacy of a theory. It is an invitation to look at language learning from his perspective. What is the learner's goal perception? How does he view the teaching to which he is exposed? What theory of language teaching and learning does the learner work with best? In what way do his reactions to language teaching influence theory and practice? (p. 42)

This represents one of the first attempts to actually involve the learner in an active way in language teaching theory. This emphasis on the learner is needed to counteract the passive recipient role he was assigned in the past. He would like to see the learner as hypothesis-maker, an active participant in the language learning/teaching enterprise. Stern's (1975) recent work in this area has proven that the learner can contribute many constructive suggestions especially in the area of strategies of learning.

We believe that Stern's model provides the best framework within which to examine the relationship between linguistics (and all other disciplines) and language teaching theory, for it places all the important factors in proper perspective. In his model, as in the two previous, linguistics is seen to have an important but indirect influence on language teaching theory. The 'Common Ground' or 'Convergent' models by their very nature imply such an indirect impact. The mediating discipline of language teaching

theory acts as a clearing house for ideas, assumptions and research. It talks in terms of implications, instead of direct applications, as in the past. It carries out its own research and mediates between the level of pure theory and practice.

Stern talks about a direct influence of linguistics in the sense that language teaching theory implies a theory of language. These two areas must be in constant contact. There can be no improvement of language teaching if it remains divorced from linguistic (psycholinguistic, sociolinguistic, educational) theory. In the 'Common Ground' model, however, linguistics cannot "lord it over" the other disciplines for its findings have to mesh with the findings in the other fields. It is an equal among equals.

In the 'Convergent/Common Ground' models, applied linguistics is gradually being replaced by other names, i.e. educational linguistics and language teaching theory, to describe the relationship that should exist between language teaching (practice) and its source disciplines. The latter expression indicates in a precise way exactly what is involved in this activity, i.e. language and educational sciences. It also opens up the possibility of establishing language teaching theory on a more scientific basis as a well defined independent discipline (McKenna, 1976), as a professional theory.

With this model we have come almost full circle. Linguistics alone can no longer dictate the "what" let alone the "how" of language teaching theory. It is now one of a group of source disciplines.

As well applied linguistics can no longer be equated with language teaching theory as it was in the 'linguistic period'. In fact, its very existence as an independent science is being questioned.

These new changes and attitudes are the by-product of many factors: linguistic, sociological, psychological, historical, educational. The new research in these fields accompanied by an examination of the role of applied linguistics by the major theorists within the field has resulted in new perspectives concerning the role of linguistics in language teaching theory. In this new perspective, the latter discipline has been released from the vice-grips of linguistic and psychological theory (linguistic period 1940-1965) and a new relationship has been created in which all the sources can benefit from a mutual exchange of expertise. It has also conferred on the actual practice of language teaching a new respect, and has assigned it an important role as contributor to language teaching theory.

CHAPTER IV

CONCLUSION

In this thesis we have examined the influence of linguistic theory on language teaching theory from the 1940's to the present. by tracing the birth, growth and evolution of applied linguistics. The historical era examined was divided into three fairly distinct periods.

In the pre-scientific period, linguistic theory did not influence language teaching methodology (theory) in a systematic way. The influence it had, however, was direct and unidirectional. Applied Linguistics had not as yet come into existence, but in as much as it was prefigured in the work of Jespersen, Sweet and Palmer it would have been equated with language teaching methodology. There was therefore no science to act as mediator between linguistic and language teaching theory. Lastly, as linguistics was only recognized as a science in North America in the 1930's, it did not have the theoretical sophistication or expertise to found a scientific theory of language teaching.

In the linguistic period, which was closely tied to the rise of descriptive in the United States, the impact was direct and systematic. Although historical, sociological, linguistic, educational and psychological factors played an important role, the influence would never have been as significant as it was, it had not been for certain underlying assumptions.

First, descriptive linguistics believed itself to be a science of the order of physics and mathematics. It had a pool

of knowledge, it was convinced could and should be applied to language teaching. Linguistics considered its pronouncements as having scientific validity, and any other science, applied or otherwise, based on them, would by definition also be scientific. A corollary of this was the belief that linguistics could found a science of language teaching.

The second major assumption was that research done in one field of study could be transferred to another field of study having a different object, goals and methods. In the case of our study, research, and even more important, methods of research from linguistics and behavioral psychology were carried over into language teaching theory to influence both the "what", the content, and the "how", the methodology. It was this transfer of expertise and methods that enabled linguistics to have such a profound impact on language teaching theory and practice in this period.

In addition, the science of applied linguistics came into existence. At the outset, it was poorly defined and often equated with language teaching. This science vehicled the influence of linguistics and psychology in a unidirectional manner as was evident in the models of this era (Chapter III). As applied linguistics was so ill-defined, nobody really stopped, till Mackey and Van Teslaar did so, to critically examine just what part of linguistics, if any at all, could and should be applied to language teaching. As Politzer pointed out (Chapter II), it was really more psychology and linguistics that were being applied than just linguistics alone.

Lastly, in this period, applied linguistics emerged for the first time as a mediating discipline between linguistic and language teaching theory.

In the contemporary period, the nature and methods of linguistic science, the assumptions concerning research and practice, as well as the whole concept of applied linguistics were challenged. Many new models appeared in applied linguistics from the 'Hands-Off' to the 'Common-Ground'. We expressed our preference for Stern's convergent model in light of its:

- a) interdisciplinary approach;
- b) bidirectionality (theory $\longleftrightarrow$ practice);
- c) learner component;
- d) historical component.

In models such as Stern's linguistics is seen as one among other important contributors to language teaching theory. Its influence is direct only in that a language teaching theory implies a linguistic theory. In reality, though, its impact is indirect, its influence being restricted to the "what" and not the "how" of language teaching theory.

This change of attitude vis-à-vis linguistics came about, in part, as a result of the work in transformational-generative grammar. Its founder, Noam Chomsky, adopted a skeptical attitude regarding the utility of transformational-generative theory, or of any linguistic theory, for language teaching theory because of the dubious nature of the former science's research. As well.

TGG as opposed to descriptive linguistics has not placed the same emphasis on method; i.e. the **procedural** principles. It was the latter that dictated much of the methodology in the language teaching methods of the linguistic period.

The other reason for the change of attitude towards linguistic theory came from within applied linguistics itself. The theorists in the field began to realize that if their discipline was to gain respectability it would have to become independent, to develop its own theory and method rather than being the child of fashion of linguistics and psychology.

The challenge in the contemporary period to the theory-to-practice point of view and to the previously-held conceptions of applied linguistics raised three important questions, questions that are central to this research. The answers to this will form the major conclusions of this thesis.

- 1) What is the role of linguistic theory in language teaching theory? Does it have a privileged position? Is its influence direct or indirect?
- 2) What is the relationship of theory and practice? Can we go directly from one to the other? Does practice in any way influence theory?
- 3) What is applied linguistics? Does it have a legitimate object of study? Should it be replaced by language teaching theory or some similar term?

Linguistics and Language Teaching Theory

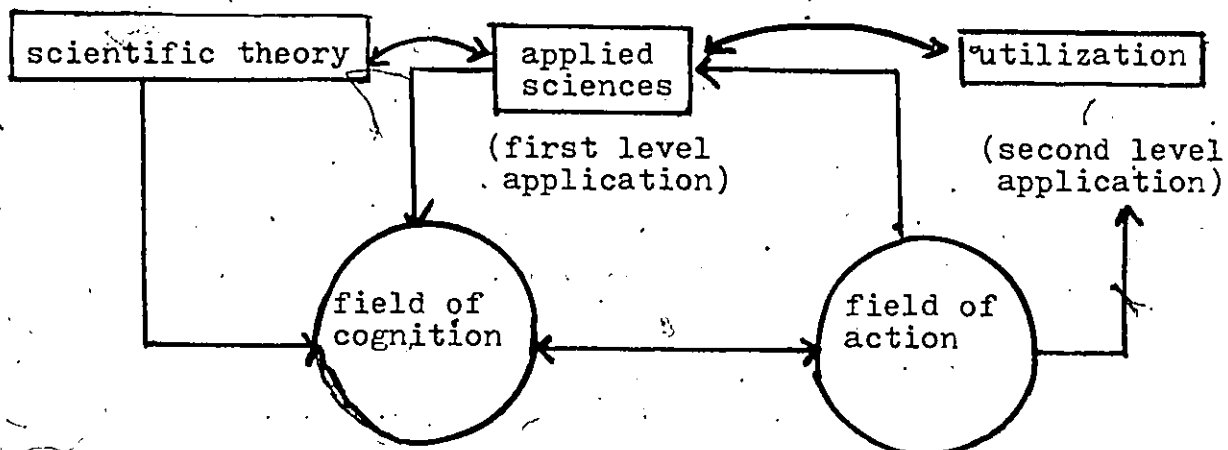
Linguistics and language teaching theory share the same object but look at it from different points of view. Linguistics is interested in studying language per se, en soi, while language teaching is interested in language as a system of communication, in language in use. It ~~is~~ interested in making the language work. Linguistics, most would agree, is a science with its proper object and method. Language teaching is an art, an activity. As Gottwald (1977) pointed out, activities are more complex than sciences as more factors are involved. By implication, then, an activity cannot be based on just one science. The language teaching theorist needs to know something about language acquisition, educational theory, sociolinguistics, etc. Therefore, when linguistics is providing its descriptions of language that will form the basis of future pedagogical grammars, it must take all these factors into consideration. What we need is not a linguistics of competence (la langue) but also of performance (la parole). We need a linguistics of language in use. It was a mistake to have **separated** these two aspects of language. A pedagogical grammar based on such a conception of language would be an invaluable tool for the language teacher.

Linguistics, then, is only one of the contributors to language teaching theory. It influences the "what", the content part of language teaching theory in an indirect way for its research and methods, in the light of different objects and goals.

cannot be transferred directly to the level of practice. There is no thoroughfare that runs from scientific research to pedagogical application.

This leads us to our second question, that dealing with the rapport that should exist between theory and practice. Gottwald (1977) in his article, "Applicational Levels in Applied Linguistics" has some seminal ideas on the relationship between theory and practice. He claims that the previous problems caused by the use of linguistics for didactic and methodological purposes in language teaching have been due to confusion concerning theory and practice.

In order to establish a relationship between scientific theories and fields of action we need applied sciences that can test and evaluate these theories. It is the general non-transferability of scientific theories that necessitates such actions. He proposes a general model that can be used as an operating principle for the application of scientific theories to fields of activity.



(Gottwald: 1977, pp.56-57)

In the box marked "scientific theory" would be placed all the sciences that contribute to language teaching theory. In the box marked "applied sciences" we could have language teaching theory.

In his model Gottwald makes a distinction between application and utility. This is similar to the distinction made by Spolsky, namely, application/implication. Application is a first-level activity and is related to interdisciplinarity. The findings of each of the parent sciences must be checked out one against the other. The language teaching theorist would be responsible for testing and evaluating the first level of applicability in order to eliminate any inconsistencies but not necessarily competing theories. If all the scientific theories pass the first test, the language teaching theorist would then investigate if they have any possible utility on the level of practice. In this model, utility presumes applicability but not vice versa. Finally, there would be feedback between all levels of theory and practice.

With such a model, the abuses of the 'linguistic period' would never have taken place, for applicability and utility would have to have been demonstrated and not just assumed. There would also have been a healthy exchange between practice and theory. In this new perspective, if the language teacher finds something useful, he goes back to the first level of application and demands an explanation. If no answer is forthcoming there, he can then go up to the level of scientific theory. In doing so, practice can not only throw light on theory but actually produce changes

in the scientific theory itself.

As a general principle, then, we suggest that any model of language teaching theory must include such a principle of double application based on feedback. This would permit both theory and practice to evolve in an atmosphere that would be mutually enriching to both. We believe that certain convergent models, i.e. those of Stern, Roulet and Spolsky, already contain such a principle.

The last question, "What is the nature and role of applied linguistics?" is still far from settled. The controversy is wide-ranging, especially in regards to language teaching theory. Some people (Spolsky) think the field would be better named "educational linguistics". Stern says that it is a question of semantics if we call it "applied" or "educational" linguistics or "language teaching theory". Others (Gallisson and Corder) are trying to redefine the field in a more restrictive way in order to keep it as a viable science. Still others (Le Goffic) feel that linguistics and psychology are not advanced enough to found applied sciences on. Le Goffic (1974) as mentioned earlier, says that

...une véritable science appliquée à l'enseignement des langues reste encore à chercher et à constituer. (p. 162)

It is our opinion that applied linguistics needs to be radically redefined if it is to continue as a science. In most of the convergent models of linguistics, what is applied is not only linguistics but also research in education, psychology and psycholinguistics, sociology and sociolinguistics. Unless this is

explicitly stated, the term becomes a misnomer and would be better replaced by "language teaching theory" the term we have adopted in this thesis. The latter term would indicate the activity-oriented nature of language teaching and end the confusion as to what is to be applied.

In any discussion on applied linguistics, it is essential to keep in mind the distinction between applied linguistics as the mediating science of which language teaching practice is usually considered a sub-discipline, and linguistics as having implications for language teaching theory in which linguistics would only be one of the many contributing disciplines. In the first case, there is some confusion because of the ambiguous nature of the term "applied", while in the second case, such confusion would not arise.

Finally, if we reserve the term "language teaching theory" for the discipline that coordinates all the research for language teaching, a move we strongly support, what happens to applied linguistics as a science? While this is not central to our thesis, we believe there are areas in which what is being applied is specifically the result of linguistic theory and not that of several sciences, i.e. lexicography, translation (human and automatic), etc. By so limiting the field of applied linguistics, it would in no way limit the applications of linguistics to other fields or activities. In the latter cases, linguistics would be a contributor among the contributors and not the fundamental science. Moreover, it would provide applied linguistics with a better defined object of study

more precise goals and the opportunity to establish itself as a reputable science.

If in future research in linguistics and language teaching theory we are guided by the above conclusions, we are convinced that it will lead to a richer and more fruitful relationship between these two areas of study.

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