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Stress assignment in Spanish : a study of some linguistic views and their application to pedagogy

Suzanne Aubin-Harvey

The University of Montana

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STRESS ASSIGNMENT IN SPANISH:
A STUDY OF SOME LINGUISTIC VIEWS AND
THEIR APPLICATION TO PEDAGOGY

By
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B.A., University of Montana, 1977

Presented in partial fulfillment of the requirements
for the degree of
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Chairman, Board of Examiners

Dean, Graduate School

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ABSTRACT

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Director: Dr. Anthony F. Beltramo

The object of this thesis is to present two phenomena of the Spanish verb system, in the light of three different schools of thought, namely Structuralism, Transformational Generative Phonology and Natural Generative Phonology, with the goal in mind to discuss these theories and how they might affect the teaching of Spanish.

This study will be divided in two parts. The first part (Chapters 1-2-3) will present the main implications of Structuralism, Natural Generative Phonology and Transformational Generative Phonology as linguistic approaches, followed by their treatment of the chosen phenomena, being stem-vowel changing verbs and the assignment of stress. The purpose of this discussion is to see how the three above-mentioned schools approach the problem and how their insight can influence the language teacher.

The second part (Chapter 4) will explore the practical applications resulting from the considerations presented in Part 1. A review of textbooks as well as suggestions for unit writing will be included, along with pedagogical suggestions and classroom activities related to the teaching of stress.

The main conclusions reached by this study pertain to the unpredictability of stress in Spanish, and the possibilities of efficient teaching of stress-related phenomena by combining the insights of various linguistic approaches.
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INTRODUCTION

Every word in Spanish has a syllable bearing strong stress, whose placement is often the only differentiating factor between otherwise similar forms. Compare, for example:

"termino" (I finish)       "quedara" (he will stay)
"terminó" (he finished)    "quedara" (that he would stay)

This is also a phenomenon of English, as we can observe in the following pairs:

"permit" (noun)           "subject" (noun)
"permit" (verb)           "subject" (verb)

Spanish, however, differs from English in that stress in Spanish often co-occurs with diphthongization, which means that a vowel of given feature specification will diphthongize as the result of receiving a strong stress.

Ex.: "mover" (to move): "muevo" (I move)

On the other hand, the placement of the stress does not always result in diphthongization.

Ex.: "comer" (to eat): "como" (I eat)

This phenomenon has no parallel in English and, therefore, presents a pedagogical problem to any English speaker engaged in the teaching or learning of Spanish.
The main goal of this thesis is to study stress assignment as it has been treated through various linguistic approaches, and then suggest some pedagogical applications.

My task has consisted for a large part in summarizing the basic claims of traditional grammar, structural linguistics, transformational generative phonology (TGP) and natural generative phonology (NGP). Of these last two, I will mostly discuss the views of J. W. Harris and Joan B. Hooper respectively, because of their significant contributions to linguistics and also because of my relative exposure to their work.

The different linguistic approaches will be illustrated through their particular analysis of two interacting problems, namely stress assignment and diphthongization of vowels, as mentioned earlier, confining myself to Spanish verb forms. I have chosen these two problems primarily because of a flagrant lack of analysis presented to the student in the modern textbooks of Spanish, and also because both J. W. Harris and Joan B. Hooper have discussed them at some length.

This thesis will be divided in four parts, in which I intend to present the progression of linguistic analysis, from a historical to a natural generative interpretation.
In Chapter I, I will discuss the notion of stress in Spanish, notes on its evolution from Latin, and its function in the modern language. In a parallel fashion, I will introduce the problem of stem-vowel alternation (limited to stems undergoing diphthongization) as can be observed in modern day Castilian, providing Latin forms to show that diphthongization is a historical process. This chapter uses terminology of historical and traditional grammar only.

In Chapter II, I will provide a point by point contrast of relevant differences between traditional grammar and structuralism, through an analysis of the Spanish verb system.

In Chapter III, I will summarize the contributions of Transformational Generative Phonology and Natural Generative Phonology to linguistic theory, highlighting their respective points of contrast. Then I will present a description of J. W. Harris's and Joan B. Hooper's analysis of stress assignment and stem-vowel diphthongization. I will point out that Hooper's presentation of NGP as developed by Vennemann is more directly applicable to language teaching than Harris's more abstract theory.

Chapter IV will study the possible practical influence of these linguistic insights on foreign language teaching. I will present an overview of the different treatments of stress as encountered in various textbooks.
of Spanish, and elaborate, with concrete illustrations, on how linguistics could improve the teaching of stress assignment in Spanish.
CHAPTER I

Section 1 of this chapter will examine the features and functions of stress in Spanish, as they can be observed on the surface. Section 2 will present their historical interpretation, laying out the related Latin forms and rules and linking them to present day Castilian. Finally, in section 3, we will discuss diphthongization as a historical process as well as a direct consequence of vowel stress assignment.

1. Stress, along with pitch and juncture, is a component of what is technically called "intonation". Intonation indicates the significant levels and variations in pitch sequences within an utterance. Stress is the component that indicates the relative prominence of a syllable in pronunciation. There are two degrees of prominence in Spanish. They are called "strong" and "weak".¹ One-syllable words bear a strong stress when pronounced in isolation. Words of two or more syllables however, present various patterns, one of the most characteristic being the penultimate stress.


*In this work, a strong stress will be represented by an underline and the weak stress left unmarked.

5

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Observe, for example: (the strong stress is represented by a line and the weak is left unmarked)

<table>
<thead>
<tr>
<th>1 syllable</th>
<th>2 syllables</th>
<th>3 syllables</th>
<th>4 syllables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tan</td>
<td>Mucho</td>
<td>Semana</td>
<td>Muchedumbre</td>
</tr>
<tr>
<td>Mí</td>
<td>Sofá</td>
<td>Domino</td>
<td>Contamino</td>
</tr>
<tr>
<td>Los</td>
<td>Sepa</td>
<td>Íntimo</td>
<td>Exámenes</td>
</tr>
</tbody>
</table>

The only difference, then, between the vowels of a word is one of "intensity"; that is, one is pronounced louder than the others. Let us open a parenthesis here to point out the linguistic importance of the stress.

Failure to stress the proper syllable in words usually leads to confusion, as the listener cannot easily recognize the words actually used. If someone addresses an English speaker as follows: "You probably understand the principles of mathematics, but your ideas are impossible," it is very likely that he will be asked to repeat his statement, having caught his interlocutor off guard with a faulty rhythm. This is true of Spanish also; for example, in: "Quiero que el profesor me explique el examen" (I would like the teacher to explain the test to me), the faulty stress in this sentence might not have such a dramatic effect as to convey a different meaning, but it will certainly affect the quality of the communication as the native will struggle to figure out which most logical possibility of meaning these words have.
Stress, then, follows various patterns of assignment. Observe, in the preceding list, that stress in Spanish occurs in variable positions, in words of varying number of syllables. The following chart will supply more examples:

<table>
<thead>
<tr>
<th>1st syll.</th>
<th>2nd syll.</th>
<th>3rd syll.</th>
<th>4th syll.</th>
<th>5th syll.</th>
</tr>
</thead>
<tbody>
<tr>
<td>stressed</td>
<td>stressed</td>
<td>stressed</td>
<td>stressed</td>
<td>stressed</td>
</tr>
</tbody>
</table>

| Das       | -         | -         | -         | -         |
| Mi        | -         | -         | -         | -         |
| Dime      | Perdí     | -         | -         | -         |
| Fácil     | Rincón    | -         | -         | -         |
| Intimo    | Silencio  | Solución  | -         | -         |
| Préstamo  | Martillo  | Continuar | -         | -         |
| Dándomelo | Exámenes | Madrugada | Explicación| -         |
| Préstasela| Catálogo | Marinero  | Calentador | -         |

| 1 Traumatólogo Airosamente Luminosidad |
| - - Idolátrico Ignorantismo Capitulación |

At the word level, most forms have only one possible stress. For example, we say: "mesa" and not

---

1 I have been unable to find examples of five syllable words with the fourth or the fifth syllable from the last stressed, exception made for adverbs in "mente" which are really two words.
"mesa"; "locutor" and not "locutor"; "damelo" and not "damelo" etc. In some cases, however, two different stresses are possible, indicating that the two forms, otherwise similar, have different meanings:

Practico: (I practice)   Termine: (that I finish)
Pracicó: (He practiced)  Termine: (I finished)
Prácticó: (Practical)

Numerous other examples of phonemic stress assignment can be found, mostly in the verb system. Compare further:

Cante: (I sang)  Trabajara: (He will work)
Cante: (That I sing)  Trabajara: (That he worked)
Mando: (I send)
Mándo: (He sent)

Note that in these cases, an accent mark differentiates them in the orthography; in speech, the difference is easily audible.

Due to the variability of the stress, it seems difficult to find a pattern for its assignment on the basis of what we can observe on the surface. Speakers of Spanish generally do not show any difficulty in assigning stress, since each word of the lexicon has been acquired jointly with its proper stress. Some problems

1In some dialects, a few stress assignments are different from those in standard Spanish. They are, however, the result of generalizations in their own dialect.
arise, however, in the writing of the language, when the speaker has to decide whether the stress he uses is indicated by an accent mark or not. Some orthographic rules have been developed to make the decisions easier. The rules take the characteristic of the final syllable as a point of reference. These rules are:

1. Any word ending in a vowel, n, or s, will need an accent mark if the stress is other than penultimate.

   Ex.: atención
   miércoles
   papa
   plátano
   inglés
   cámara

2. Any word ending in a consonant, except n, or s, will need an accent mark if the stress is other than ultimate.

   Ex.: Abenámar
   Azúcar
   Carácter
   Débil
   Lápiz

It should be remembered that these are purely orthographical considerations which in no way affect the way Spanish is acquired.
It also appears that one important aspect of the stress in a paradigm is that it is distinctive in the verb forms. The only apparent difference between the following pairs is the stress:

Descanse: (that he rest)
Descansé (I rested)

yet the tense and the person are different.

We have stated that a different stress assignment can indicate a different tense, mode, and person, simultaneously. An error in stress can therefore convey a distinct meaning, but it should be remembered that this is true of only a number of forms of the -ar verbs. A learner of Spanish who would say: "cantamos" instead of "cantamos" (from "cantar") or "vivio" instead of "vivio" (from "vivir" would only be making an error in performance and not a serious blunder. Since a shift of stress in those forms is not phonemic, the meaning would not be affected.

One of the functions of the stress is also to help in regrouping the verbs morphologically. Many verb tenses are identifiable not only by their form but also by their stress, which is mostly constant throughout. This can be understood better if we look at a few forms

1Verbs ending in -ar form one of the three classes of Spanish verbs.
of the three conjugations of Spanish, namely verbs in -Ar, -Er and -Ir, as differentiated by their respective theme vowel.

<table>
<thead>
<tr>
<th></th>
<th>Cantar</th>
<th>Beber</th>
<th>Vivir</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present Indicative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st. p. sin.</td>
<td>Canto</td>
<td>Bebo</td>
<td>Vivo</td>
</tr>
<tr>
<td>2nd. p. sin.</td>
<td>Cantas</td>
<td>Bebes</td>
<td>Vives</td>
</tr>
<tr>
<td>3rd p. sin.</td>
<td>Canta</td>
<td>Bebe</td>
<td>Vive</td>
</tr>
<tr>
<td>1st. p. pl.</td>
<td>Cantamos</td>
<td>Bebemos</td>
<td>Vivimos</td>
</tr>
<tr>
<td>2nd. p. pl.</td>
<td>Cantásis</td>
<td>Bebésis</td>
<td>Vivís</td>
</tr>
<tr>
<td>3rd. p. pl.</td>
<td>Cantan</td>
<td>Beben</td>
<td>Viven</td>
</tr>
<tr>
<td>Preterite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cante</td>
<td>Bebi</td>
<td>Vivi</td>
</tr>
<tr>
<td></td>
<td>Cantaste</td>
<td>Bebiste</td>
<td>Viviste</td>
</tr>
<tr>
<td></td>
<td>Canto</td>
<td>Bebió</td>
<td>Vivió</td>
</tr>
<tr>
<td></td>
<td>Cantamos</td>
<td>Bebimos</td>
<td>Vivimos</td>
</tr>
<tr>
<td></td>
<td>Cantasteis</td>
<td>Bebisteis</td>
<td>Vivisteis</td>
</tr>
<tr>
<td></td>
<td>Cantaron</td>
<td>Bebieron</td>
<td>Vivieron</td>
</tr>
<tr>
<td>Future</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cantaré</td>
<td>Beberé</td>
<td>Viviré</td>
</tr>
<tr>
<td></td>
<td>Cantarás</td>
<td>Beberás</td>
<td>Vivirás</td>
</tr>
<tr>
<td></td>
<td>Cantaré</td>
<td>Beberá</td>
<td>Vivirá</td>
</tr>
<tr>
<td></td>
<td>Cantaremos</td>
<td>Beberemos</td>
<td>Viviremos</td>
</tr>
<tr>
<td></td>
<td>Cantaréis</td>
<td>Beberéis</td>
<td>Viviréis</td>
</tr>
<tr>
<td></td>
<td>Cantarán</td>
<td>Beberán</td>
<td>Vivirán</td>
</tr>
</tbody>
</table>

It is easier now to recognize the morphological function of the stress. We can see that the Present tense has a stress on the theme vowel (except on the first and second persons plural); the Preterite forms have the stress on the theme vowel and the future form has a stress on the first vowel after the future marker -r.¹

This brief surface examination of the stress in Spanish allows us to isolate two points worth of mention:

¹A more complete discussion of stress in the verb forms appears in Chapter 2.
A. Stress in Spanish is unpredictably assigned, even though some patterns can be observed.

B. Stress has a phonemic as well as a morphological function.

We are faced with the task of trying to determine the reason why, throughout the Spanish lexicon, stress is not assigned uniformly and the nature of the link between stress and the verb forms. The next section will present the explanations proposed by historical linguistic study.

2. Spanish, along with other Romance languages, originated from Latin. Spoken Latin, which is referred to as Vulgar Latin, evolved without interruption into the Spanish forms that we know today; it is therefore possible to derive stress forms and structures from their Latin origin.

Vowel stress was an important feature of the Latin language. It differed from Spanish stress by the very features that determine the prominence of syllables in pronunciation. We noted that Spanish stressed vowels are marked by varying intensity. In Classical Latin, it is the length of time a vowel lasted, or simply its "duration", that determined the difference in the prominence of syllables. Moreover, duration is distinctive, or phonemic; compare, for example:
Long vowels in Latin are then opposed to short ones in forming the stress pattern of the language. These qualities of vowels evolved in Vulgar Latin as "open" and "closed" vowels, where the difference lay in the aperture of the mouth while enunciating, and in the vowel tenseness. For example:

Cor [ɔ]   Color
Cor [ɔ]   Heart

The position of the stress in Latin words is based on the observance of the Latin stress rule, which, roughly, assigns stress to the penultimate syllable of polysyllabic words if that syllable is "strong" (contains a long (−) vowel, or a short (υ) vowel followed by two or more consonants) and to the antepenultimate if the penultimate is "weak" (contains a short vowel followed by at most one consonant).¹

Examples:

Grānu (grain)  Oculos (eye)
Edēre (to eat)  Pēcūnia (money)

As the stress was never assigned to the last syllable, the "weak" penultimate of a two-syllable word was stressed.

Observe, for example:

Latin: Lātus (side)  Nōcē (night)

The interesting fact about Latin stress is that it has remained the same through many centuries of evolution, even though the form of the words underwent various changes. For example, we can observe that the vowels and consonants of Latin words have been subject to many modifications (elision, palatalization, etc.) before becoming Spanish, but, in most cases, the placement of stress has remained essentially the same.

Observe the following derivations:\1

<table>
<thead>
<tr>
<th>Latin</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anni cúlu</td>
<td>Añéjo (ring)</td>
</tr>
<tr>
<td>Añílu</td>
<td></td>
</tr>
<tr>
<td>Añíju</td>
<td></td>
</tr>
<tr>
<td>Añéjo</td>
<td></td>
</tr>
<tr>
<td>Frígídu</td>
<td>Frío (cold)</td>
</tr>
<tr>
<td>Frígiu</td>
<td></td>
</tr>
<tr>
<td>Frílu</td>
<td></td>
</tr>
<tr>
<td>Frío</td>
<td></td>
</tr>
<tr>
<td>Fœdu</td>
<td>Fœo (ugly)</td>
</tr>
<tr>
<td>Fedu</td>
<td></td>
</tr>
<tr>
<td>Feu</td>
<td></td>
</tr>
<tr>
<td>Féo</td>
<td></td>
</tr>
<tr>
<td>Cogitare</td>
<td>Cuidar (to take care of) (here the meaning has expanded)</td>
</tr>
<tr>
<td>Coitare</td>
<td></td>
</tr>
<tr>
<td>Coidare</td>
<td></td>
</tr>
<tr>
<td>Coidar</td>
<td></td>
</tr>
</tbody>
</table>

\1 The derivational rules are not included as they do not seem relevant at this point.
We just saw that going back to the Latin form to identify the stress can help to explain why Spanish lexical items are stressed the way they are. Stress appears indeed as one of the very durable elements of the language. A look at the verb forms will yield a similar observation. For example, in the Preterite of the verb "amar" (To love):

\[
\begin{array}{ll}
\text{Latin} & \text{Spanish} \\
\text{Arbores} & \text{Arbol} \quad \text{(tree)} \\
\text{Arbor} & \text{Arbol} \\
\text{Arbol} & \text{Arbol} \quad \text{(tree)} \\
\text{Aetate} & \text{Edad} \quad \text{(age)} \\
\text{Etate} & \text{Edad} \\
\text{Edade} & \text{Edad} \quad \text{(age)} \\
\text{Edad} & \text{Edad} \\
\end{array}
\]

We find that all but two of the forms obey the Spanish surface rule cited earlier, by which words ending in a vowel, n, or s are stressed on the penultimate syllable. The exceptions here are the first and third person singular: "ame" and "amo". The derivation from the original Latin paradigm reads like this:

\[
\begin{array}{lll}
\text{Classical Latin} & \text{Vulgar Latin} & \text{Spanish} \\
\text{Amavi} & \text{Amai} & \text{Amé} \\
\text{Amaviste} & \text{Amasti} & \text{Amaste} \\
\end{array}
\]

\(^1\text{Class notes "Historia de la lengua".}\)
It would be useful to note here that stress had a definite role to play in the evolution of Latin vowels into Romance. The stressed vowels in Latin evolved differently than the unstressed ones. Stress had a stabilizing influence over the vowel it affected, and at the same time, caused the weakening or complete loss of neighboring vowels.¹ This explains that not all vowels evolved in the same manner. For example, we can see in the paradigm above that the stressed /a/ remained all through the Spanish conjugation; however, the syllable /vi/ disappeared as it contained an unstressed /i/ next to an accentuated /a/. In the first person singular, only the fricative was deleted and the diphthong /ai/ was formed which normally evolved into /e/ in Spanish. It has been suggested that the whole segment /vi/ did not disappear, so as to avoid confusion with too many other forms of "ama" in the Spanish conjugation.²

²Course notes; "Romance Philology".
Similar examples occur repeatedly in the verb system where an apparently irregular stress is traced back to its Latin origin, emphasizing its durability. Many cases of morphemic similarity, like forms presented earlier (ex: tomaran vs tomarán; llego vs llegó), are actually coincidences due to the evolution of the language. It happens that some forms of the -ar verbs ended up identical in their phoneme sequence after evolving from Latin, and stress is the only tool we have to differentiate them; consider the following chart:

<table>
<thead>
<tr>
<th>Classical Latin</th>
<th>Vulgar Latin</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amavi (I loved)</td>
<td>Amai</td>
<td>Ameó</td>
</tr>
<tr>
<td>Amem (that I love)</td>
<td>Ame(m)</td>
<td>Ame</td>
</tr>
<tr>
<td>Amaveram (that I loved)</td>
<td>Ama(ve)ram</td>
<td>Amara</td>
</tr>
<tr>
<td>(The Cl. Latin form was abandoned)</td>
<td>Amar-ha (he will love)</td>
<td>Amara'</td>
</tr>
<tr>
<td>Amaverant (that they loved)</td>
<td>Ama(ve)rant</td>
<td>Amaran</td>
</tr>
<tr>
<td>(The Cl. Latin form was abandoned)</td>
<td>Amar-han (they will love)</td>
<td>Amaran'1</td>
</tr>
</tbody>
</table>

There is no Future form listed under Classical Latin, since the Future, as we know it in Spanish, is an analytical form created by Vulgar Latin. It is composed of an infinitive and an auxiliary. The Classical Latin Future form (amabo, amabis, etc.) has disappeared, appar-

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1Course notes; "Romance Philology".
ently without leaving a trace.

We have seen in this section that stress in its original Latin assignment is still recognizable in contemporary Spanish forms and that apparently irregular stress in Spanish lexical items, as well as in verb forms, is often due to its original Latin assignment. We have also briefly pointed out that stress can help in regrouping verb tenses. Our next area of concern is diphthongization, a phenomenon directly linked to stress assignment.

3. Diphthongs in Spanish are complex vowels made up of:¹

1. A strong vowel (/a/ /o/ /e/) and a weak vowel (/i/ /u/)² as in "peinar", "muerte", OR

2. Two weak vowels which form one syllable, as in: "muy", "ciudad". In this case the second weak vowel receives the stress, if the syllable containing the diphthong is stressed.

We find that many modern Spanish diphthongs were one vowel in Latin and, due to certain factors, they broke into two components. It is a well known fact of the history of the Spanish language that the determining factor


²Stockwell et al. qualify them as glides or semi-vowels /y/ /w/.
of this change in the vowel is the stress.¹

"Fijándonos especialmente en la sílaba acentuada, el romance español diptonga la /e/ en /ie/, así como la /o/ en /uo/, /ue/, y conserva las demás: /a/, /e/, /i/, /u/."²

This movement of the vowels is most readily observable in the verb system, where both vocalic forms (single and diphthong) exist side by side. All through the verb system, we can see forms which alternate from a single vowel in the stem, to a diphthong. Observe, for example:

Poder (to be able to)       Puedo (I can)
Poderemos (we can)

As quoted earlier, the most frequent diphthongizations are from /o/ to /ue/, as in "poder"; and from /e/ to /ie/, as in:

Pensar (to think)            Pienso (I think)
Pensamos (we think)

There is one instance of alternation between /u/ and /ue/ in:

Jugar (to play)              Juego (I play)
Jugamos (we play)

These changes in the stem vowel however, appear somewhat haphazard, since stress and diphthongization do not always co-occur. There are many examples throughout the language of stressed /o/ and /e/ which do not diph-

¹Menendez-Pidal, Manual de gramática histórica de la lengua española, p. 36.
²Ibid.
thongize, for instance:

Corro (I run)
Prestamo (loan)
Gozan (They 'enjoy)

It is difficult to interpret these forms in the light of
the rule cited, since there are many cases in which diph-
thongization does not apply. As an attempt to help dis­
criminating between forms that undergo diphthongization
and others that do not, various texts of Spanish provide
a lexical index with entries such as:

Jugar (ue): to play
Pensar (ie): to think
Perder (ie): to lose
Recordar (ue): to remember
Poder (ue): to be able to etc.¹

thus indicating that diphthongization takes place.

We have shown that many verbs with a stressed /o/
or /e/ in the stem do not diphthongize. For example,
"tomar" (to take) remains "tomá" (he takes) and not
"tuema"; "beber (to drink) conjugates "bebe" (he drinks)
and not "biebe". The list is long.

Our discussion in section 2 pointed out that some
apparently irregular stress assignment in Spanish often
came from the original Latin stress. We will now deter­
mine if Latin stress and vowel quality are linked in any

¹ Mathilde O. Castells and Harold E. Lionetti,
La lengua espanola, Scribner Spanish Series, General ed.
Carlos A. Sole (University of Texas at Austin, 1974), p.152.;
Gary D. Keller et al., Spanish Here and Now (N.Y.: Harcourt,

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way with the diphthongizing and non-diphthongizing qualities of the Spanish verb forms.

As we mentioned briefly earlier, Latin never stressed the last syllable of a word. It was either the penultimate or the antepenultimate vowels which bore the stress, depending on their respective qualities. That is to say, the next-to-the-last syllable was only stressed if it contained a long (\(-\)) vowel; in the event that it contained a short (\(\)) vowel, the stress automatically passed to the antepenultimate. For example:

\[
\begin{array}{lll}
pendēre & \text{was pronounced} & \text{pendere} \\
potēre & " & potere \\
dolōre & " & dolore \\
durītia & " & durītia \\
\end{array}
\]

The evolution of Vulgar Latin into Castilian brought many changes in the language. One of them was diphthongization; and in the light of this information on the Latin stress rule, we can better understand how and where diphthongs appeared. Three conditions have been necessary for a Latin vowel to diphthongize. First, a vowel had to be short, either by nature, or by position (some vowels are long by nature and become short in certain positions, as in an open syllable). Second, the vowel had to be bearing the stress; third, it had to be in an open syllable.\(^1\) However, we must conclude that this last condition was more flexible than the others, since many

\(^1\)Class notes; "Historia de la lengua."
examples can be found of diphthongization in a closed syllable. For example:

Pensare (to think)
Pienso (I think)

Here, the vowel diphthongizes even if it is in a closed syllable; but it also fills the other conditions, as it is short, and stressed. There are many examples of the same phenomenon. Observe, for example:

Compūtare (Cl. Latin) Contar (to count) Cuento (I count)

Contra " " Encontrar (to meet) Encuentro (I meet)

Costa " " Acostar (to lie down) Acuesto (I lay down)

It is apparent that regardless of how similar two present day Spanish forms may look, diphthongization does not necessarily befit both of them, as in the case of "poder" (puedo) and "tomar" (tomo), both bisyllabic verb forms with a stressed /o/ in their conjugated stem; or in the case of "beber" (bebo) and "peder" (pierdo), both with a stressed /e/ in the stem. It is then possible that the differentiating factor lay in the original stress of the word. To find out if this was the case, I made out a list of verbs (not exhaustive) that do diphthongize in Spanish, and retraced their origin.¹ I included the Classical Latin paradigm, in order to be able to see,

¹Corominas, Breve diccionario etimologico de la lengua castellana (Madrid: Gredos, 1961).
first, if the diphthongization was due to the Latin stress assignment in a constant way, and second, to see if the stress shift within the paradigm followed the same pattern in Spanish as it did in Latin.

(A chart of stressed vowel reduction from Classical Latin to Spanish will help to understand the vocalic changes)

<table>
<thead>
<tr>
<th>CLASSICAL LATIN</th>
<th>VULGAR LATIN</th>
<th>SPANISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>e</td>
<td>i</td>
</tr>
<tr>
<td>VULGAR LATIN</td>
<td>a</td>
<td>e</td>
</tr>
<tr>
<td>SPANISH</td>
<td>a</td>
<td>e</td>
</tr>
</tbody>
</table>

LATIN (Pres. Indic.) | SPANISH (Pres. Indic.)

Potere (Cl.L.) | Þóteo | Puedo
Poðer (Sp.) | Þotemus | x Poðemos

x: the /o/ does not diphthon-
gize since it is not stressed in these forms.

Admordere (Cl.L.) | Admórdeo | A(dm)or(dm)(ere) Almuerzo
Almorzar (sp.) | Admôrdêmus | x Almorzamos

Here, /o/ diphthongizes because it is stressed, and in an open syllable (/r/, a liquid, does not count for a consonant)


2The Vulgar Latin changes are included whenever Classical Latin and Spanish show too many differences in their forms.
<table>
<thead>
<tr>
<th>LATIN (Pres. Indic.)</th>
<th>SPANISH (Pres.Indic.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reapénítere (Cl.L.)</td>
<td>Reapéníto</td>
</tr>
<tr>
<td>Arrepentirse (Sp.)</td>
<td>Reapénítemus</td>
</tr>
<tr>
<td>(To regret)</td>
<td>(Ar) Repiento</td>
</tr>
<tr>
<td></td>
<td>(Ar) Repentimos</td>
</tr>
</tbody>
</table>

Here, diphthongization is not due to the normal process; since /ae/ is long, it should not diphthongize. But /ae/ as a Latin diphthong went directly to /ie/ in most cases.

<table>
<thead>
<tr>
<th>LATIN (Pres. Indic.)</th>
<th>SPANISH (Pres.Indic.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computare (Cl.L.)</td>
<td>Computó</td>
</tr>
<tr>
<td>Contar (Sp.)</td>
<td>Computamus</td>
</tr>
<tr>
<td>(To count)</td>
<td>Cuento</td>
</tr>
<tr>
<td></td>
<td>Contamos</td>
</tr>
</tbody>
</table>

**VULGAR LATIN**

<table>
<thead>
<tr>
<th>LATIN (Pres. Indic.)</th>
<th>SPANISH (Pres.Indic.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Séderea (Cl.L.)</td>
<td>Sédéo</td>
</tr>
<tr>
<td>Sentar (Sp.)</td>
<td>Sedemus</td>
</tr>
<tr>
<td>(To count)</td>
<td>Siento</td>
</tr>
<tr>
<td></td>
<td>Sentamos</td>
</tr>
</tbody>
</table>

/ eo/ is automatically short as are two vowels in a row; so, /se/ is stressed; and as it is in an open syllable, and short, it diphthongizes.

<table>
<thead>
<tr>
<th>LATIN (Pres. Indic.)</th>
<th>SPANISH (Pres.Indic.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dormire (Cl.L.)</td>
<td>Dormio</td>
</tr>
<tr>
<td>Dormir (Sp.)</td>
<td>Dormimus</td>
</tr>
<tr>
<td>(To sleep)</td>
<td>Duermo</td>
</tr>
<tr>
<td></td>
<td>Dormimos</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LATIN (Pres. Indic.)</th>
<th>SPANISH (Pres.Indic.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probăre (Cl.L.)</td>
<td>Probo</td>
</tr>
<tr>
<td>Probar (Sp.)</td>
<td>Probămus</td>
</tr>
<tr>
<td>(To prove)</td>
<td>Prueba</td>
</tr>
<tr>
<td></td>
<td>Probados</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LATIN (Pres. Indic.)</th>
<th>SPANISH (Pres.Indic.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quaerere (Cl.L.)</td>
<td>Quaero</td>
</tr>
<tr>
<td>Querer (Sp.)</td>
<td>Quaerimus</td>
</tr>
<tr>
<td>(To prove)</td>
<td>x Queremos</td>
</tr>
</tbody>
</table>

x: In this person, the /i/ being short the 1st syllable should be stressed, and diphthongize. By analogy with the other conjugations, it most likely was not stressed in Vulgar Latin, so it did not diphthongize in Spanish.
The following verbs: quaerēre, vērtēre, dōlēre, intēndēre, have in common that they belong to the third Latin conjugation, which ended in 'ere (short "e") in the Infinitive. They do stand out because of a simple fact: even though their penultimate is short, they passed into Spanish with a stressed penultimate in the first and second person plural. Observe:

- Intēndēre: intendimus entendemos
- Dormīre: dormimus dormemos
- Quāerēre: quaerimus quaremos

This movement of the stress is not so surprising if we remember that Latin had four conjugations, in -are, -ere, and -ire, which were eventually reduced to three in Spanish, in -ar, -er, -ir. In the process of reductions, some third conjugation verbs were conjugated as the second
conjugation, and others as the fourth by force of analogy. This explains why they all ended up with a stressed penultimate on the first and second person of the Indicative, regardless of what their original stress was.

In the list of verbs above, we can see that diphthongization in the Spanish verbs is carefully preceded by proper conditions in Latin. Some explicative notes have been added in dubious cases. To demonstrate the idea further, I have grouped together verbs that, on the surface, have all the requisites to diphthongize in modern Spanish, like a stressed /o/ or /e/ in the stem, but actually fail to do so, as we can see in a verb like:

Correr (To run)          Corro (I run)  
Corres                  Corre  
Corremos             Correis  
Corren

The forms are not "cuerno", "cuerras" etc. as one might expect of a stressed /o/ in the Indicative stem, as it happens in:

Poder (To be able to)      Puedo  
Puedes               Puede  
Podemos             Podeis  
Pueden

Mostrar (To show)          Muestro  
Muestras             Muestra  

What is not visible on the surface is that the vowel /o/ of the stem originates from a short [u] in Latin (Cúrrere)
which never diphthongizes. This, and similar forms are illustrated in the chart of vowel reduction from Classical Latin to Spanish, presented earlier on.

Many other verbs follow the same pattern as "Correr" in that they have a stressed /o/ or /e/ in the stem that does not diphthongize. Some are listed here with the historical explanation for non-diphthongization.

Tūmare (Cl.L.): Tomar (Sp.) Same as "Correr"

Bībēre (Cl.L.): Beber (Sp.) Í E E (not IE)

Cǐrca (Cl.L.): Acercar (Sp.) " "

Optāre (Cl.L.): Adoptar (Sp.) /o/ in a closed syllable, did not diphthongize.

Rotulāre (Cl.L.): Arrojar (Sp.) /o/ as third-to-the-last syllable was not stressed, so it did not diphthongize.

Duplāre (Cl.L.): Doblar (Sp.) Same as "Correr". /u/ did not diphthongize.

Spērāre (Cl.L.): Esperar (Sp.) Ê E E (not IE)

Gaudēre (Cl.L.): Gozar (Sp.) Au O O (not UE)

Promǐttēre (Cl.L.): Prometer (Sp.) Í E E (not IE)

Quemar (Sp.) Of portuguese origin, does not follow the standard patterns.

Robar (Sp.) Of germanic origin, (raubon), does not follow the standard patterns.

Tīmerē (Cl.L.): Temer (Sp.) Í E E (not IE)

Tocar (Sp.) Õ Ő Ő (not UE)
Obviously, this list is not exhaustive. A far greater number of verbs could be involved in the analysis. But it is enough to show that the Latin stress, along with all its own conditions of existence (v.g.: syllable length, position, quality, etc.) is a determiner of diphthongization in today's Spanish. The extent of diphthongization due to stress in Spanish is hard to evaluate here, but the data brought forth indicates that it is very high.

A last area I looked into to find out if other factors than the stress could affect a diphthongized syllable was in certain compound words. In Paul Lloyd's very elaborate list of verb complement compounds in Spanish, I looked up the diphthongized forms.\(^1\) It is generally agreed that the verb form of the compounds is a third person singular of the Indicative, or the singular Imperative\(^2\) (the two forms being identical in the major Romance languages, it is difficult to determine). The complement is generally (but not always) a plural substantive which is the direct object of the verb. Observe, for example:

- **rascacielos** (skyscraper): rasca/cielos
- **rompecabezas** (puzzle): rompe/cabezas

Trying to see if the juxtaposition of another word might in any way affect the diphthongization pattern,


\(^2\)Ibid., Introduction.
I made out a list of some compounds containing either verbs from the list on pp. 18-20, or other similar verbs that do diphthongize, only to find that the latter strictly follow the rules and remain to their expected pattern:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perder</td>
<td>Pierde</td>
<td>Pierdetiempo</td>
<td>(to lose)</td>
</tr>
<tr>
<td>(he loses)</td>
<td></td>
<td>(one who wastes time)</td>
<td></td>
</tr>
<tr>
<td>Poblar</td>
<td>Puebla</td>
<td>Pueblahospitales</td>
<td>(to populate)</td>
</tr>
<tr>
<td>(he populates)</td>
<td></td>
<td>(a good for nothing)</td>
<td></td>
</tr>
<tr>
<td>Mentir</td>
<td>Miente</td>
<td>Mientefuerte</td>
<td>(to tell a lie)</td>
</tr>
<tr>
<td>(he lies)</td>
<td></td>
<td>(a liar)</td>
<td></td>
</tr>
<tr>
<td>Contar</td>
<td>Cuente</td>
<td>Cuentagarbanzos</td>
<td>(to count)</td>
</tr>
<tr>
<td>(he counts)</td>
<td></td>
<td>(a miser)</td>
<td></td>
</tr>
<tr>
<td>Querer</td>
<td>Quiere</td>
<td>Quierelotodo</td>
<td>(to love)</td>
</tr>
<tr>
<td>(he loves)</td>
<td></td>
<td>(a dissipated man)</td>
<td></td>
</tr>
<tr>
<td>Quebrar</td>
<td>Quebra</td>
<td>Quebraojos</td>
<td>(to break)</td>
</tr>
<tr>
<td>(he breaks)</td>
<td></td>
<td>(a bad eye doctor)</td>
<td></td>
</tr>
<tr>
<td>Oler</td>
<td>Huele</td>
<td>Hueleguisos</td>
<td>(to smell)</td>
</tr>
<tr>
<td>(he smells)</td>
<td></td>
<td>(a glutton)</td>
<td></td>
</tr>
<tr>
<td>Trocar</td>
<td>Trueca</td>
<td>Truecaborregas</td>
<td>(to exchange)</td>
</tr>
<tr>
<td>(he exchanges)</td>
<td></td>
<td>(a bohemian)</td>
<td></td>
</tr>
<tr>
<td>Calentar</td>
<td>Caliente</td>
<td>Calientaplatos</td>
<td>(to heat up)</td>
</tr>
<tr>
<td>(he heats up)</td>
<td></td>
<td>(a salt jar)</td>
<td></td>
</tr>
<tr>
<td>Apretar</td>
<td>Aprieta</td>
<td>Aprietarropa</td>
<td>(to press)</td>
</tr>
<tr>
<td>(he presses)</td>
<td></td>
<td>(clothes pin)</td>
<td></td>
</tr>
</tbody>
</table>

***************

Many more examples could be brought in, but as I have not found one case where the verb diphthongized in the Indicative, but did not in the compound, I judged it unnecessary to do so.
We have briefly seen then how important a feature stress is in the Spanish language, and how it has remained constant throughout the evolution of Latin into Spanish. Historical interpretation was given to shed light on diphthongization, a stress-related phenomenon observable in Castilian. We have found that diphthongization is directly due to stress and to the quality of the vowel in the original Latin lexicon. However, many other possibilities of interpretation exist, and we shall present two of them in the next chapter.
CHAPTER II

This chapter will present Traditional Grammar and Structuralism as two different approaches to language analysis. They will be briefly introduced in their historical perspectives in the first section. The second section will offer a point by point contrast of aspects relevant to this study. The third and fourth sections will contain, respectively, the Traditional and Structural analysis of stress assignment in the verb forms, and diphthongization.

1. It is difficult to put a date on Traditional Grammar, since it has been widely used until well into this century but encompasses the findings of the Ancient Greeks and the speculative work of the Mediaevals, as well as the prescriptive approach of the eighteenth century grammarians. Its origins lay with the Greek sophists and later with the Greek philosophers, whose main interest was to discover the relationship between language and the world about them. Some scholars argued that the nature of a thing and the pronunciation of its name had a "natural" link, whereas others thought that the relationship was conventional and arbitrary. As the Greeks only studied their own language, it is easy to conceive of such a controversy. The study of various languages would have declared the "natural link"
theory undefendable. Another area of concern for the Greek philosophers was the issue of regularity of language. Some scholars proposed that language was systematic and demonstrated it by pointing out the regular patterns of the language (as, for example, in word formation). Others maintained that some aspects of the language appeared to be irregular. It is clear to us now that language is essentially systematic and regular. But it is the interest of the Greeks in regularity and irreguality which led grammarians to describe both aspects of their language. Thus they established a form of language description which is still in use today, since modern linguistics set out to describe regularities and account for the absence thereof.¹

Through centuries of evolution, the Greek language changed its forms noticeably, creating a need to investigate the difference between the language of classical literature and the language spoken by the people of the time. To this day, the assumption exists that the language of literature is somehow "better" than the language of every day conversation, and traditional grammar is the main vehicle of this notion.

Roman grammarians followed the Greek tradition but concentrated on Latin literature rather than Greek, the two languages being similar to some extent. The descrip-

tive studies initiated by Roman grammarians went on without much variation until the Modistae, in the thirteenth century. They were a group of philosophers concerned with the study of language in order to explain the rules and systems thereof. They brought up the notion of a core of linguistic universals common to all languages. Traditional grammar has been deeply marked by the Modistae's interest in explanation and linguistic universals, as we will see more in details later. The rationalists of the eighteenth century continued more or less in the same line of thought, until the expansion of anthropological sciences exposed them to other linguistic descriptions. The discovery of totally unknown languages, yet with appearances of similarity to the familiar tongues of the time, shifted the emphasis from philosophical to formal (of form) study and gave rise to the notion of language family. As countries were explored, languages were brought to attention, and it became evident that the Latin-based rules of traditional grammar, along with its prescriptive recommendations, could not adequately apply to all families of languages.

In the United States, linguists became involved in the study of American Indian languages during the nineteenth and twentieth centuries,¹ as European anthropologists were bringing information from Africa and India. It

¹Ibid., p. 10.
became clear that historically-oriented traditional grammar did not help much in studying tongues with relatively little written material. So the trend of linguistics shifted back to description: except that, this time, linguists started their study with the aspect of language that was most readily observable to them: its form; or, in other words, its sounds. Due to its emphasis on the form or structure of languages, modern linguistics was to be recognized as "structural linguistics". For a lot of people, the term is immediately associated with Bloomfieldian American Linguistics, but this association is only partially valid, since the first Structuralists laid the ground rules of their studies as early as late nineteenth century, and they still have many followers to this day.

The structuralists' analysis then, claims to be a scientific one. According to its principles, the linguists segment a spoken language, (the study is based on utterances), emphasizing the classification of the identified items. They approach the language from a purely descriptive point of view. They gradually established a set of procedures aiming at determining the sound system of languages. These techniques are now known as "discovery procedures" and are used in various areas of linguistic studies. So, structural linguistics brought a sizeable contribution to the study of sound systems and word formation. However, the same techniques proved unapplicable
to the much more complex study of meaning, and sentence formation. To compensate for this lack, a new approach was developed, known as transformational linguistics. It will be our concern in the next chapter.

Having depicted the background of traditional grammar and structuralism, we can now proceed to a more detailed observation of their points of difference.

2. Traditional grammarians and structuralists look upon the function of meaning in a very different way. This difference of views led to divergent approaches to the study of language as a whole. As mentioned briefly in section 1, traditionalists based their language observations on the value of meaning. Many of them believed that meaning is an inherent part of a thing named.

Working on sentences, they defined three parts of speech on the basis of the meaning they imparted: noun, interjection and verb. Other important parts of the sentence were identified on the basis of their function. These are adjective, adverb, pronoun and conjunction, which respectively modify (for the two first), replace and link. We are all familiar with the traditional description of a noun as being: "the name of a place, a person or a thing." So the word "dog" expressed the nature of a four-legged domestic animal which barks. Along the same line, an adjec-

---

tive is described as: "the part of a sentence that expresses certain qualities of the noun."¹ A dog can be black, big or tired. A verb is a very important part of a sentence since it "expressed the action." A dog will run, bark or sleep.

In this approach, we see that it is the meaning of a word which guides its analysis. However, there are numerous examples of words which are impossible to classify in one category by their virtue of their meaning alone. A selection of English words chosen at random will illustrate this better:

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th>CLASSIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>New</td>
<td>Adjective</td>
</tr>
<tr>
<td>Man</td>
<td>Noun - Verb</td>
</tr>
<tr>
<td>Woman</td>
<td>Noun</td>
</tr>
<tr>
<td>Pretty</td>
<td>Adjective - Verb</td>
</tr>
<tr>
<td>Burn</td>
<td>Noun - Verb</td>
</tr>
<tr>
<td>Pray</td>
<td>Verb</td>
</tr>
<tr>
<td>Gift</td>
<td>Noun</td>
</tr>
<tr>
<td>Silence</td>
<td>Noun - Verb</td>
</tr>
<tr>
<td>Tidy</td>
<td>Adjective - Verb</td>
</tr>
</tbody>
</table>

It is impossible to tell whether some of these words are adjectives, verbs, or nouns, unless they are in a context. Which leads us to think that it is how a word relates to another, and not the meaning it carries, that determines its grammatical role. Observe, for example, the following sentences:

1. A dog's life

In sentence #2, a "child" can be identified as the owner of the book (if it meant to express a quality, English would have requested it to be "a children's book"); but in sentence #1, is "dog" the "owner of the life" or a modifier of "life"? Yet, traditional grammar would define them both as nouns, maybe specifying, that "dog" as a noun, "takes the place of" an adjective. We see that it is not the shape or the form of a word that enables us to recognize a word, but rather the position it holds in the sentence.  

For example, in an imaginary sentence like: "His blathy kynes will tward," how do we suppose that "kynes" is a noun? Our speaker's intuition tell us that "kynes" cannot be a third person singular verb, even though it ends in -s, because it is followed by a future auxiliary. We also assume that "blathy" is a modifier of "kynes". So "kynes" is a noun. But this "nature" of the word is only as ephemeral as the sentence itself; since one could hear a sentence like: "He kynes by the swep" and immediately assume that "kynes" is a verb, all this without ever having heard this strange word before. Similarly, English has sentences like: "The guards are here" and "He guards my house", where "guards" functions as noun, then as a verb.

So, it becomes evident that the traditional grammarians' tentative to define parts of speech on the basis of meaning led to many logical errors of cross division.

The structuralists therefore decided to ignore the meaning that had been attached to words, and to approach them from a purely descriptive point of view. They started their analysis with the smallest component of a sentence (and of a word): the phoneme. As minimal as they are, phonemes carry the load of meaning as we can see in the following minimal pairs:

Bat/Baet/ Cat/Kaet/ Sat/Saet/
where /b/ /k/ /s/ are the only differentiating factor, and

Bit/Bít/ Bet/Bët/ But/Bát/
where /i/ /ë/ /ʌ/ are the only differentiating factor.

Phonemes, however, do not convey a meaning when standing alone. They have to be combined with others to form a truly meaningful element, one that a speaker can build words with. An example of these would be components like /-is/, /ʌn-/ in /cəjɛdɪs/, /ʌnˈæpɪf/. These "meaningful elements" were labeled "morphemes". They combine to make words, and words are linked to make sentences. It is strictly on the description of how those components are put together and interact, that the structuralists concentrated their efforts. They believe that
meaning is totally arbitrary. Therefore, they set it aside and carefully observed how different parts of an utterance are linked and what governs their relationship to one another.

Traditional grammarians and structuralists show more differences, however, and one of the most important is the concept of grammar. For the former school, grammar was more or less a set of rules that govern the relationship between parts of a sentence - like agreement for example. The rules were mostly used as norms to follow and had for function to harness the language into a certain frame.

Traditionalists divided sentences into parts of speech based on Latin grammar which was based on the Greeks' dismantling of rhetoric speeches.¹ Those norms are hardly applicable to other families of language. For example, traditional grammar uses ancient terminology to explain a contemporary phenomenon. We can observe that in the use of the notion of case in the traditional grammars of English. A sentence like:

"He gave a rose to the girl"

would be analyzed according to its Latin model:

"Rosam dedit puellae"

So, "girl" is traditionally identified as a dative, "rose"

as an accusative, etc. That is true of the Latin, but the reality of English is that:

a) the same sentence used more forms in English, since Latin did not need pronouns or articles;

b) there is only one word-order semantically possible in English, but the order is irrelevant to meaning in Latin.

From this, the structuralists concluded that it just so happens that English can express the same meaning as Latin, but it is not accurate nor necessary to describe one language by the forms of another.

The point of departure for structuralists studies, then, is very different from that of traditional grammar, since the former is based on the language as it is actually spoken at the time of study. Utterances are dissected into phonemes, the latter are then grouped into morphemes and a complete list thereof forms the Lexicon. A string of morphemes does not necessarily convey only one meaning. The lexicon cannot account for all meanings of a language, since there are other features of significance that do not enter into the dictionary list. They are called "features of arrangement". In other words, the dictionaries will list the meanings of all the possible words of a language, the grammar books will explain the rules of agreement, verb tenses etc. but no outside source will explain how to put all those elements together to convey a particular meaning.
in a particular language. For the structuralists, the meaningful arrangement of forms in a language constitutes its grammar, as stated by Bloomfield:

When phonology of a language is established, there remains the task of telling what meanings are attached to the several phonetic forms. This phase of description is semantics. It is ordinarily divided in two parts: grammar and lexicon.¹

One point of contrast which might not have been emphasized enough in the preceding discussion, is the opposition between the normative and descriptive tendencies of the two schools. Briefly, this refers to grammar rules used by the traditionalists to determine the acceptability of forms as being correct or incorrect. For example, sentences like:

1. "I don't have none."
2. "She's bigger than me."

are traditionally ruled ungrammatical, because they fail to comply with certain rules, as, for example, the rule against the insertion of two negatives in the same sentence. Therefore, they are judged unacceptable, regardless of the fact that they are both used regularly in the relaxed speech of many English speakers.

The structuralists, on the other hand, will regard such utterances as being dialectal and will be more interested in the possibility of occurrence of such sentences,

¹Ibid., p. 261.
than in their relative correctness.

We can sum up the structuralists' attitude in this matter by saying that questions of grammatical correctness can only be settled by data intrinsic to a given language and not by Latin rules and standards.¹

In the next section, we will see more specific examples of traditional and structural analysis.

3. Stress assignment and diphthongization in Spanish, as analyzed by traditional grammar, have already been covered in sections #2 and #3 of Chapter I. After the brief historical exposé presented in the second section of this chapter, it should appear plausible that traditional grammarians went back to the Latin forms, in an attempt to explain the features of stress. That is, when investigation was done on the subject, historical justifications were brought up. It has been pointed out that stress has remained on the same syllable of a word, through its evolution from Latin to Spanish. Also, diphthongization, as well as non-diphthongization, in Spanish, is due to stress assignment and vowel quality in Latin. But the interesting fact is that there is barely a trace of investigation or explanation of those phenomena presented in traditional grammar books.

¹Owen Thomas, ed., The Structure of Language (Bobbs Merril Series in Composition and Rhetoric. Indianapolis, 1967).
(Since the verb system contains evidence of stress and also of diphthongization, it was chosen as a good way to illustrate the differences between the grammatical approaches.)

The paradigms are usually accompanied by a few definitions such as:

The verbs are divided in two parts. The stem - which is what is left after removing the ending - and the ending - which is what is added to the stem to alter its meaning.\(^1\)

It is often added that, contrary to the stem, the ending is variable.

The verb paradigms, as printed in a traditional Spanish grammar book written for Spanish speakers, are presented in Insert I. We could, however, add a few explanatory notes.

The Spanish verbs are traditionally divided in three vowel classes, as labeled by their infinitive endings: A (the infinitive is -ar) as in "tomar"; E (the infinitive is -er) as in "beber"; and I (the infinitive is -ir) as in "vivir". The last two categories carry a lot of similarities in their conjugations, due to the fact that Spanish verbs in -er come from Latin verbs in -ēre (long "e"); and Spanish verbs in -ir are derived from Latin verbs in -ēre (short "e") and from verbs in -ire as well. The result of this reduction from four Latin categories to three Spanish ones is the appearance of identical theme vowels

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\(^1\)Fraile, Primer curso de español.

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in more than two-thirds of -er and -ir paradigms, as we can observe in Insert I.

Note that the verbs have been divided in two parts. One is the stem, which contains the lexical meaning; and the other carries information about any other variable of the verb; as, for example, the tense, mode, etc. So each tense or person has a variable ending that is added to the stem of a verb after depleting it of its infinitive (vowel+r) ending. There is no special mention of stress or of diphthongization pattern, except for a definition of "irregular verbs" which reads like this:

"Irregular verbs: those that undergo changes in their stem or their ending, or in both at the same time."

However, a traditional Spanish grammar book, addressed to English speakers, proved to be slightly more explicit. In Hayward Keniston's Learning Spanish, we find that the verb forms are divided according to a stem-ending pattern as in Insert II. But a special category is set for the "verbs which change the last vowel of the stem". Examples are given in this fashion:

<table>
<thead>
<tr>
<th>The stem vowel is -e</th>
<th>The stem vowel is -o</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pensar</td>
<td>Recordar</td>
</tr>
</tbody>
</table>

Present Indicative

Piens o

Recuerd o

1Ibid.

The underlying of the stressed vowel\(^1\) in these forms suggests that a relationship between the stress and the vowel change is implied. No explanations are formally introduced.

To recapitulate, we observed:

a) that traditional grammar justifies stress and diphthongization in Spanish by their Latin origins.

b) that traditional grammar books incorporate very little of the result of their language analysis in the actual presentation of grammar.

From these observations we conclude that traditional grammar has a tendency to separate language analysis from language facts; in other words, the traditional way in which grammar is presented reveals very little of what is "going on" in the language.

As might be expected, the structuralists brought various new insights to the problem of verb form analysis. These insights will be illustrated in the following section.

4. First of all, we should bring back to mind the main claims of the movement. Most relevant to our study were the following:

\(^1\)Plus the pattern of presentation.
a) A language should not be analyzed via the rules of another.

b) Meaning should be discarded as a weak base for analysis.¹

c) A language should be analyzed in terms of its components (phonemes, morphemes, words).

We will concentrate on the verb forms in order to grasp their analysis of stress and diphthongization. Separating the verb forms into meaningful components means re-analyzing the traditional two-part verb division. A close look will reveal that the "second-part" of these verb paradigms contains a lot of different pieces of information that would gain by being separated. For example, if we dislocate the theme vowel from the person marker, we will have a paradigm that reads as such:²

Present Indicative

<table>
<thead>
<tr>
<th>CANTAR (to sing)</th>
<th>BEBER (to drink)</th>
<th>VIVIR (to live)</th>
</tr>
</thead>
<tbody>
<tr>
<td>cant -o</td>
<td>beb -o</td>
<td>viv -o</td>
</tr>
<tr>
<td>cant -a -s</td>
<td>beb -e -s</td>
<td>viv -e -s</td>
</tr>
<tr>
<td>cant -a</td>
<td>beb -e</td>
<td>viv -e</td>
</tr>
<tr>
<td>cant -a -mos</td>
<td>beb -e -mos</td>
<td>viv -i -mos</td>
</tr>
<tr>
<td>cant -a -is</td>
<td>beb -i -is</td>
<td>viv -i -s</td>
</tr>
<tr>
<td>cant -a -n</td>
<td>beb -e -n</td>
<td>viv -e -n</td>
</tr>
</tbody>
</table>

In this chart, the verbs appear divided in three parts;

¹The sound system of a language should be the first thing a linguist examines.

²C. Dixon Anderson, Spanish in Context: a Basic Course.
the first one is the stem; the second, the theme vowel and the third, the person marker.

Generally speaking, a learning problem is much more easily identifiable if it is isolated; and if all the problems are isolated, it is a possibility that a pattern will emerge and there will be less of a problem. In the case of the new paradigm above, the theme vowel becomes very apparent. It is important that this be recognized, because in the position occupied by the theme vowel, the phonemic alternation of vowels is used to signal contrasts in tense and mood. These minimal pairs make evident that each part has a definite function:

- **com -e -n** (they eat)  |  **beb -e -mos** (we drink)
- **com -a -n** (that they eat)  |  **beb -a -mos** (that we drink)
- **part -e -s** (you go)
- **part -a -s** (that you go)

In these examples, the first part carries the lexical meaning, the second indicates the mood (e.g.: "bebemos" is Indicative, "bebamos" is subjunctive) and the third part marks the person and number. Note that we are witnessing a crowding of part #2, since it indicates both the theme vowel and the mood.

Also made apparent by this layout is the person marker. "-s" is identified with a second person singular marker; "-mos" as a first person plural, and "-n" as a
third person plural. We assume that 0 is the marker for the first and third person singular, and it proves to be true in all other tenses. That is to say, 0 cannot be identified as an unambiguous person marker, since it appears both in the first and third persons, but it appears as a constant number marker (singular) through all the conjugation.

A difficulty arises with this three-slot system, however, when we try to identify the markers for the tense, mood and aspect. Tenses are formed of very distinctive markers, which make them readily identifiable. For example, the suffix "-ba" indicates the imperfect; "-r " indicates a future, etc. As almost every tense takes a different marker, it makes it even more obvious that the stems of the verbs are constant, as well as the person markers and the theme vowels, within each class, as we saw above.

Stockwell, Bowen and Martin, who have conducted very extensive research on comparative rules of word and sentence formation in Spanish and English, have pushed further the concept of verb division. They propose a verb form morphemically divided in four slots, each being a particular constituent of the verb:¹

#1: stem  #2: theme vowel  #3 tense-aspect marker  
#4: person-number suffix.

Observe a four-slot division of a full paradigm of three regular verbs: "hablar" (to speak); "comer" (to eat); and "vivir" (to live), representing each of the three theme classes, in Insert II at the end of this chapter.

Of those four slots, it appears that the third one is by and large the most erratic. It goes from Ø in the Present of the Subjunctive and the Indicative to "-r" in the future; to "ria" in the conditional, to "-ra" or "-se" in the Past Subjunctive and to a myriad of different ones in the Preterit. The third slot is also the most significant and should receive a good deal of attention, since its erratic characteristics could be revealing of the underlying form of the verbs. These insights, pedagogically applied, could mean the difference between memorizing and understanding verb forms.

At this point, we can already see that the structuralists have taken a much closer look to the form of a verb than traditional grammar had, and they did it mostly by means of separation of every meaningful component of each form. Once the parts are separated, the observation becomes easier, and the correspondence between morphology

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1"a verb that follows the most general paradigm of stem formation and affixation", Stockwell et al. p. 106.
2Stockwell et al., p. 106.
3This will be expanded in Chapter 4.
and stress becomes clearer. Observe, in Insert II, that
the Imperfect of the Indicative bears its stress on the
theme vowel, or slot #2, all the way down, and therefore
is not an exception within its own paradigm. The Future
has slot #3, the theme-aspect marker, stressed on all per­
sons, and so does the Conditional. The Past Subjunctive
is very constant in stressing its theme vowel, but the
Preterite of the Indicative alternates between the theme
vowel and the tense marker. It is easy then to regroup
the verbs by morphological function of the stress. The
Present tense forms have stress on the stem vowel (except
first and second person plural form of the Present sets);
the past forms have stress on the theme vowel; and the
Future forms have a stress on the first vowel after the
Future marker. It should be noted that in the four-slot
verb division, the Preterite does not appear to be stressed
on the theme vowel, but it is stressed on the vowel that
marks the difference between the "-ar" and "-er" verbs in
this particular tense.

On the subject of diphthongization, structuralist
studies do not contribute much more than an inventory of
the process. Various structurally oriented books¹ present
a careful list of observations on diphthongization, such as:

¹Staff of Modern Languages Materials Development
Center, A-L-M Spanish (N.Y.: Harcourt, Brace & World, 1962);
Stockwell et al.
a) The specific stem-vowel changes are from /o/ to /ue/ (/we/) and /e/ to /ie/ (/ye/).

b) The changes are correlated with position of the stress on each form.

    Ex.: where the stress is on the stem, /we/ or /ye/ appears.

    where the stress is on the ending /o/ or /e/ appears.

c) There is one exception to the /o/ - /we/ alternation. In "jugar" (to play), the alternation is /u/ - /we/.

No suggestions are offered on how to recognize the diphthongizing stems of the verbs from the others. Since the traditional books for Spanish speakers do not even mention them and the structuralists do not offer a very deep analysis of the process, one has to deduce that diphthongization due to stress in certain forms is a fact of the language that has to be memorized.

This chapter has allowed to pinpoint the main differences between traditional grammar and structuralism. Among them, and important to us, was the claim that parts of speech should be identified according to their forms and functions. The structuralists did so, and their analysis of verb forms allows us to reach, among other things, a keener understanding of the movements of stress. However, our other subject of interest, diphthongization, is only superficially analyzed. We will therefore turn to more

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1Stockwell et al., The Grammatical Structures of English and Spanish, p. 109.
recent linguistic studies, namely transformational generative, and present their analysis of stress and diphthongization.
## Modelo de la 1.ª Conjugación

### VERBO AMAR

#### MODO INFINITIVO

<table>
<thead>
<tr>
<th>Modo</th>
<th>Infinitivo</th>
<th>Formas compuestas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presente</td>
<td>amar</td>
<td>haber amado</td>
</tr>
<tr>
<td>Gerundio</td>
<td>amor</td>
<td>amando</td>
</tr>
<tr>
<td>Participio</td>
<td>amando</td>
<td>amado</td>
</tr>
</tbody>
</table>

#### MODO INDICATIVO

<table>
<thead>
<tr>
<th>Modo</th>
<th>Presente</th>
<th>Preterito perfecto</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicativo</td>
<td>Yo amo</td>
<td>he amado</td>
</tr>
<tr>
<td></td>
<td>Tú amas</td>
<td>has amado</td>
</tr>
<tr>
<td></td>
<td>Él ama</td>
<td>ha amado</td>
</tr>
<tr>
<td></td>
<td>Nosotros</td>
<td>hemos amado</td>
</tr>
<tr>
<td></td>
<td>Vosotros</td>
<td>habéis amado</td>
</tr>
<tr>
<td></td>
<td>Otros</td>
<td>han amado</td>
</tr>
</tbody>
</table>

#### MODO IMPERATIVO

<table>
<thead>
<tr>
<th>Modo</th>
<th>Presente</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperativo</td>
<td>amor</td>
</tr>
<tr>
<td></td>
<td>Amad</td>
</tr>
<tr>
<td></td>
<td>Habed</td>
</tr>
</tbody>
</table>

#### MODO SUBJUNTIVO

<table>
<thead>
<tr>
<th>Modo</th>
<th>Presente</th>
<th>Preterito perfecto</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjuntivo</td>
<td>Yo ame</td>
<td>hubiera amado</td>
</tr>
<tr>
<td></td>
<td>Tú ames</td>
<td>hubieras amado</td>
</tr>
<tr>
<td></td>
<td>Él ame</td>
<td>hubiera amado</td>
</tr>
<tr>
<td></td>
<td>Nosotros</td>
<td>hubiéramos amado</td>
</tr>
<tr>
<td></td>
<td>Vosotros</td>
<td>hubierais amado</td>
</tr>
<tr>
<td></td>
<td>Otros</td>
<td>hubieran amado</td>
</tr>
</tbody>
</table>

#### MODO FUTURO

<table>
<thead>
<tr>
<th>Modo</th>
<th>Simple o imperfecto</th>
<th>Compuesto perfecto</th>
</tr>
</thead>
<tbody>
<tr>
<td>Futuro</td>
<td>Yo amar</td>
<td>hubiera amado</td>
</tr>
<tr>
<td></td>
<td>Tú amas</td>
<td>hubieras amado</td>
</tr>
<tr>
<td></td>
<td>Él ame</td>
<td>hubiera amado</td>
</tr>
<tr>
<td></td>
<td>Nosotros</td>
<td>hubiéramos amado</td>
</tr>
<tr>
<td></td>
<td>Vosotros</td>
<td>hubierais amado</td>
</tr>
<tr>
<td></td>
<td>Otros</td>
<td>hubieran amado</td>
</tr>
</tbody>
</table>

---

53
**VERBO TEMER**

### MODEO EXPRESIVO

<table>
<thead>
<tr>
<th>Personas simples</th>
<th>Presente</th>
<th>futuro perfecto</th>
</tr>
</thead>
<tbody>
<tr>
<td>yo temo</td>
<td>temo</td>
<td>temió</td>
</tr>
<tr>
<td>tú temes</td>
<td>temes</td>
<td>temiste</td>
</tr>
<tr>
<td>él teme</td>
<td>teme</td>
<td>temió</td>
</tr>
<tr>
<td>nosotros tememos</td>
<td>tememos</td>
<td>temimos</td>
</tr>
<tr>
<td>vosotros teméis</td>
<td>teméis</td>
<td>temiste</td>
</tr>
<tr>
<td>ellos temen</td>
<td>temen</td>
<td>temieron</td>
</tr>
</tbody>
</table>

### MODEO IMPERATIVO

<table>
<thead>
<tr>
<th>Personas</th>
<th>Pretérito perfecto</th>
</tr>
</thead>
<tbody>
<tr>
<td>yo temas</td>
<td>temas</td>
</tr>
<tr>
<td>tú temas</td>
<td>temas</td>
</tr>
<tr>
<td>él teme</td>
<td>teme</td>
</tr>
<tr>
<td>nosotros tememos</td>
<td>tememos</td>
</tr>
<tr>
<td>vosotros teméis</td>
<td>teméis</td>
</tr>
<tr>
<td>ellos temen</td>
<td>temen</td>
</tr>
</tbody>
</table>

### MODEO SUBJUNTIVO

<table>
<thead>
<tr>
<th>Personas</th>
<th>Pretérito perfecto</th>
</tr>
</thead>
<tbody>
<tr>
<td>yo temiera</td>
<td>temiera</td>
</tr>
<tr>
<td>tú temieras</td>
<td>temieras</td>
</tr>
<tr>
<td>él temiera</td>
<td>temiera</td>
</tr>
<tr>
<td>nosotros temiéramos</td>
<td>temiéramos</td>
</tr>
<tr>
<td>vosotros temiéreis</td>
<td>temiéreis</td>
</tr>
<tr>
<td>ellos temieran</td>
<td>temieran</td>
</tr>
</tbody>
</table>

### MODEO POTENCIAL

<table>
<thead>
<tr>
<th>Personas</th>
<th>Comp. a perfecto</th>
<th>futuro imperfecto</th>
<th>futuro perfecto</th>
</tr>
</thead>
<tbody>
<tr>
<td>yo temería</td>
<td>temería</td>
<td>temería</td>
<td>temería</td>
</tr>
<tr>
<td>tú temieras</td>
<td>temieras</td>
<td>temieras</td>
<td>temieras</td>
</tr>
<tr>
<td>él temiera</td>
<td>temiera</td>
<td>temiera</td>
<td>temiera</td>
</tr>
<tr>
<td>nosotros temiéramos</td>
<td>temiéramos</td>
<td>temiéramos</td>
<td>temiéramos</td>
</tr>
<tr>
<td>vosotros temiéreis</td>
<td>temiéreis</td>
<td>temiéreis</td>
<td>temiéreis</td>
</tr>
<tr>
<td>ellos temieran</td>
<td>temieran</td>
<td>temieran</td>
<td>temieran</td>
</tr>
</tbody>
</table>

---

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### Modelo de la 3.ª conjugación

#### VERBO PARTIR

**MODO INFINITIVO**

<table>
<thead>
<tr>
<th>Formas simples</th>
<th>Formas compactas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infinito</td>
<td>habérselo</td>
</tr>
<tr>
<td>Gerundio</td>
<td>habiéndolo</td>
</tr>
<tr>
<td>Participio</td>
<td>habiéndolo</td>
</tr>
</tbody>
</table>

**MODO INDICATIVO**

<table>
<thead>
<tr>
<th>Pret. perfecto</th>
<th>Presente</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yo parto</td>
<td>habla</td>
</tr>
<tr>
<td>Tú partías</td>
<td>hablas</td>
</tr>
<tr>
<td>Él partió</td>
<td>habló</td>
</tr>
<tr>
<td>Nos partimos</td>
<td>hablamos</td>
</tr>
<tr>
<td>Vos partís</td>
<td>habláis</td>
</tr>
<tr>
<td>Ellos partieron</td>
<td>hablaron</td>
</tr>
</tbody>
</table>

**MODO IMPERATIVO**

<table>
<thead>
<tr>
<th>Pret. perfecto</th>
<th>Presente</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yo pásate</td>
<td>huésped</td>
</tr>
<tr>
<td>Tú pásate</td>
<td>huéspedes</td>
</tr>
<tr>
<td>Él pasó</td>
<td>huésped</td>
</tr>
<tr>
<td>Nos pásate</td>
<td>huésped</td>
</tr>
<tr>
<td>Vos pásate</td>
<td>huésped</td>
</tr>
<tr>
<td>Ellos pásate</td>
<td>huésped</td>
</tr>
</tbody>
</table>

**MODO SUBJUNTIVO**

<table>
<thead>
<tr>
<th>Pret. perfecto</th>
<th>Presente</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yo partiera</td>
<td>hable</td>
</tr>
<tr>
<td>Tú partières</td>
<td>hable</td>
</tr>
<tr>
<td>Él partióra</td>
<td>hable</td>
</tr>
<tr>
<td>Nos partiremos</td>
<td>hablemos</td>
</tr>
<tr>
<td>Vos partiros</td>
<td>hábile</td>
</tr>
<tr>
<td>Ellos partiremos</td>
<td>hablemos</td>
</tr>
</tbody>
</table>

---

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Finite Forms

### Present Indicative

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>4</th>
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<tbody>
<tr>
<td>1</td>
<td>abl</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>kóm</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>bib</td>
<td>o</td>
<td>o</td>
<td>o</td>
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<tr>
<td>2</td>
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<td>a</td>
<td>s</td>
<td>e</td>
<td>s</td>
<td>e</td>
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**Future indicative**

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| 2 | sg | ti | a | ra | s | ra | s | ra | 0 | ra | 0 |
| 3 | n | 0 | ri | 0 | ri | 0 | ri | 0 |
| 1 | n | mos | n | ré | mos | ré | mos | ré | mos |
| 2 | pl | te | ys | ré | ys | ré | ys |

**Conditional indicative**

| 1 | abl | a | ré | 0 | kom | e | ré | 0 | bib | i | ré | 0 |
| 2 | sg | s | s | s | s | s |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | mos | mos | mos | mos |
| 2 | pl | ys | ys | ys | ys |
| 2 | n | n | n | n |

**Perfect indicative**

| 1 | abl | a | 0 | 0 | kom | e | 0 | 0 | bib | 0 | í | 0 |
| 2 | sg | ste | 0 | í | ste | 0 | í | ste | 0 | í | ste | 0 |
| 3 | 0 | 0 | í | 0 | í | 0 | í | 0 | y | 0 | 0 |
| 1 | í | 0 | mos | í | 0 | mos | í | 0 | mos |
| 2 | í | ste | ys | í | ste | ys | í | ste | ys |
| 1 | í | ro | n | yé | ro | n | yé | ro | n |

**Non-finite forms**

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57

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We are now aware that the phenomena of stress and diphthongization in Spanish have been approached, in the past, through the traditional application of Latin rules and later, through a minute observation and classification of the forms of the language. These approaches provided the most familiar accounts of the processes of language, especially in the areas of historical affiliation, sound systems, and word formations. However, theories that deal with the mechanisms of sentence construction, which establish sound-meaning relations in a language, were an almost totally unexplored until the advent of transformational generative grammar in the mid-twentieth century.

This chapter intends, in its first section, to introduce briefly some important claims of transformational generative grammar, for the purpose of clarifying the phonological analysis that will follow. I do not claim the expertise necessary to present my own analysis; however, many prominent linguists have looked extensively into the problem of stress assignment in Spanish and I will endeavor to report their findings as accurately as possible. J. W. Harris's explanation of stress assignment and diphthongization in Spanish will be the object of section 2.

---

1 Saporta, Brame and Bordelois, Harris, etc.
Interesting to study, partly because it evolved from transformational generative phonology (hereafter TGP), is natural generative phonology (hereafter NGP). While the two have many points in common, they differ mostly by the basic claim they make about a native's grammar. In other words, they present different hypotheses concerning the form of linguistic generalizations made by native speakers. Section 3 will summarize NGP's main claims, and illustrate them by means of Joan B. Hooper's analysis of stress and diphthongization in Spanish.

1. Transformational linguistics was developed beginning in the 1950's by some American scholars, led predominantly by Noam Chomsky. The latter recognized the need to create an actual theory of language, to account for the intuitive reality underlying a linguistic behavior, and express the basic regularities of a language.

An important step taken by the Transformationalists, was to make clear the difference between a speaker's "competence" and his "performance". The "competence" refers to the body of knowledge a speaker has of his own language. This knowledge is rarely conscious but it does govern the way a speaker puts words together to form a sentence. For example, most speakers of English would recognize sentence #3 as "ungrammatical", even though very few could explain the reason why it appears wrong to them.
#1. She told John to speak up.
#2. She heard John speak up.
* #3. She wanted John speak up.

The "performance" of a speaker refers to the portion of his knowledge (or "competence") that he actually uses to produce a sentence. The performance is a good indication of competence, but it is not a faithful representation thereof, since many outside factors can alter the quality of speech. When using a language, speakers often leave sentences unfinished, skip some words, substitute a word for another, due to distraction, tiredness or other reasons. The point here is that, by recognizing these facts, linguists allowed themselves to separate the functions of competence and performance. This distinction established, they no longer attempt to base their conclusions about language on the classification of parts of speech alone. Their interest is in the mind, where language competence lies. By studying performance, they hope to make conclusions on how language is conceived in the mind.

The goal of transformational studies is to develop a systematic description of linguistic knowledge. In other words, develop a grammar that accounts for a speaker's knowledge of sound-meaning relationship and that also accounts for the possibility of creating a potentially unlimited number of sentences. Indeed a speaker has a finite number of tools to form an infinite number of sentences. Accord-
ing to these views on grammar, the linguist's task is neither to mold the language to fit the rules nor divide it in so many morphemes and phonemes. Rather, his aim is to describe language

in such way that resulting grammars are in accord with linguistic competence of speakers, and not merely with a few of the observable facts about language use.¹

The task, then, is to write a grammar that will account for all the possible sentences of one given language, and no others. Linguists study performance, set up hypothetical rules that explain how the utterances were derived and from what, and then proceed to restrain, explain and constrain those rules until they are accepted as representative of competence, or rejected.

Grammar is a hypothesis regarding mental reality that serves as the basis for linguistic performance. So it can be disconfirmed anytime.²

Transformational Grammar considers grammar as involving a scientific theory; and each theory of a specific language can then be taken as a particular example of the types of systems predicted by a general linguistic theory. Let us see briefly now what constitutes a transformational grammar.

First of all, the function of a grammar is to generate any number of sentences a speaker wants to utter in

¹Falk, Linguistics and Language.
²Ibid.
a given language. These sentences have a phonetic representation (sounds) and a semantic representation (meaning). How sounds are linked to meaning depends basically on the syntactic component of the language. A syntactic component is the part of a grammar which contains a finite system of rules, whose function is to generate the syntactic descriptions of sentences. Each syntactic description contains a deep and a surface structure. These rules, for example, determine how a sentence should be built.

Ex: Sentence : Noun Phrase + Verb Phrase.

This could be the syntactic component of most all languages. In order to channel it to one language, transformational rules come into play, adapting the syntactic component into forms of a particular language. Transformational rules may delete parts of a "P" (phrase), add new items, or rearrange them.

Ex.:

Transformational rules can be applied indefinitely and in different combinations. They are the part of a grammar which carries its recursive properties (i.e. which allows for an infinite number of sentences to be formed).

The output of transformational rules will be the phonological component, which determines how deep and

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surface structures are expressed in sounds. Phonological rules will assign to each part of the underlying structure a phonological representation, which will ultimately be translated into a meaningful group of sounds.

This concept of grammar, then, involves claims on how the frames of language are set in the mind and on how a speaker unconsciously picks through all the possible forms available to him to produce a meaningful utterance. This is important to remember, in view of the analysis that follows, in section 2. We will now study J. W. Harris' explanation of diphthongization and verb stress, keeping in mind the question of whether or not it truly represents the mental processes used by native speakers.

2. This section will summarize Harris's findings on stem-vowel alternations and diphthongization.

Stem-vowel alternations, as observed in regular verbs of the first and second conjugation (-Ar and Er) appear in the following pattern:

- **Cerrar (to close)**
- **Cierro (I close)**
- **Cerramos (we close)**
- **Cierran (they close)**
- **Mover (to move)**
- **Muevo (I move)**
- **Movemos (we move)**
- **Mueven (they move)**

The alternations are simple enough and Harris accounts for them by this tentative diphthongization rule:
which predicts that a stressed /E/ will become [ye] and a stressed /o/ will become [we] under certain conditions.

The third conjugation (verbs in -Ir) present a pattern of stem-vowel alternation that is slightly more complex, however. For the purpose of analysis, Harris separated the verbs according to the quality of their stem-vowel. Stems with back vowels present the striking characteristic of having just a few verbs with stem "a" (ex.: "partir", "abrir") and only two forms with stem "o" (ex.: "dormir", "morir"). These two forms will be discussed later in this section. Verbs with stem "a" do not show any alternations and will therefore not be mentioned further. All other third-conjugation verbs have a "u" in the stem (ex.: "lucir", "unir", "traducir" etc.) which remains the same throughout regular and irregular verbs. However, there are some non-verbal forms derived from that "u" stem, which show a different stem-vowel.

The first step is then to determine which are the alternants. Since there are adjectival and nominal forms in which certain stems of the 'u' verbs appear with some vowel other than "u", Harris posits /O/ as systematic phonemic representation of the stem-vowel. Observe, for

^Upper case E and O represent the "e" and "o" that diphthongize when stressed.
example, these related forms:

\[
\begin{align*}
\text{Mullir} & \quad \text{(verb)} & \quad \text{Hundir} & \quad \text{(verb)} \\
\text{Muelie} & \quad \text{(adj.)} & \quad \text{Hondo} & \quad \text{(adj.)} \\
\text{Molicie} & \quad \text{(noun)}
\end{align*}
\]

He suggests that /O/ is realized as /o/ in the noun; in the adjective, it is diphthongized under stress to /we/ by rule #1. Harris posits a phonological feature [+D] for diphthongization, in order to distinguish apparently similar vowels which behave differently. In the example of /dOrmir/ the /O/ bears a [+D] feature, since one of its phonetic forms is /dwermo/. In the verbs, /O/ is changed to /u/. As it could hardly be mere coincidence that "u" appears in most third-conjugation verbs, a rule is needed to account for the shift. Harris writes it as:

\[
\begin{align*}
\#2. & \quad \begin{bmatrix} V \\ + \text{ back} \end{bmatrix} \rightarrow "u" / & \begin{bmatrix} \text{3rd conj.} \\ - \text{ low} \end{bmatrix} C_o V \end{align*}
\]

In this rule, the final vowel of the environment is the theme vowel.

The two forms of verbs with stem "o" ("dormir" and "morir") are identical in their alternations and conjugations, so we will only consider one of them here. The forms of "dormir" show an alternation between three stem vowels as we can observe in:

\[
\begin{align*}
\text{Dormir} & \quad \text{(to sleep)} \\
\text{Duermo} & \quad \text{(I sleep)} & \quad \text{Duerma} & \quad \text{(that I sleep)} \\
\text{Dormimos} & \quad \text{(we sleep)} & \quad \text{Dormí́a} & \quad \text{(I was sleeping)} \\
\text{Durmieron} & \quad \text{(they slept)} & \quad \text{Durmíendo} & \quad \text{(sleeping)}
\end{align*}
\]
The alternation is "u", "o", "we" and the distribution can be stated as:

#3. stressed: "we"
unstressed: \[ \{ "o'/\underline{___}C\ i\ \} \]
\[ \{ "u" \text{ elsewhere} \} \]

Notice that rule #3 contains rule #1 and #2 accounting for the presence of "we" and "u" in the verb stems. Since we stated that most third-conjugation verbs had "u" in the stem and /O/ was changed to "u" in verbs, "o" as an unstressed form has to be accounted for. This can be done simply by stating:

#4. "u" $\rightarrow$ "o" /\underline{___}C_o\ i\]

where the stress of the following vowel puts a constraint on the stem-vowel; this however, does not apply to any verb with "u" in the stem.

A complete derivation of the three alternations of "dormir", as devised by Harris will be presented here. The purpose is to show that the derivations, not surprisingly, are solely phonological and synchronic, which is a very different approach from those presented in Chapter I and II.

(The rule numbers refer to their presentation in Harris's Spanish Phonology)
A spell-out of the rules would read as follows:

3:78c. A theme vowel is deleted when in an irregular future stem, and when it is before a non-diphthong vowel.

3:78f. A vowel is stressed on the penultimate syllable of a verb.

3:78i. Rule of final vowel deletion.

3:78k. A stressed vowel diphthongized before the segments "ndo" or "r+vowel"

3:78l. Rule #1 in this chapter.

4. "u" goes to 'o' when in a syllable preceding a stressed "i".

The third-conjugation verbs with front vowel stems have been divided by Harris in four subclasses in order to account for all possible alternations and nominalizations. For example, some verbs have a stem "i" in all the verb forms, but a stem "e" in nominalization; like "recibir" (to receive), "recepción" (receipt). However, we will dwell only on the alternations that interest us.
directly, namely "e", "i" and "ye", as can be observed in verbs like "adherir", "preferir", "sugerir", "requerir", etc. These verbs show forms and alternations similar to "herir", of which we can mention the most representative:

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<th>Verb</th>
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<tr>
<td>Herir</td>
<td>(to wound)</td>
</tr>
<tr>
<td>Hiero</td>
<td>(I wound)</td>
</tr>
<tr>
<td>Heria</td>
<td>(I was wounding)</td>
</tr>
<tr>
<td>Herimos</td>
<td>(we wounded)</td>
</tr>
<tr>
<td>Hieran</td>
<td>(that they wound)</td>
</tr>
<tr>
<td>Heri</td>
<td>(I wounded)</td>
</tr>
<tr>
<td>Hirio</td>
<td>(he wounded)</td>
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</table>

A look at the alternations and their environment will reveal that the distribution of "ye" "e" and "i" is exactly parallel to that of "we" "o" and "u" in the forms of "dormir" and "morir". That is, "ye" occurs where "we" occurred, under stress; "e" appears where "o" did, in the environment _______Ci and "i", just like "u" appears elsewhere. It is important to notice the similarity, since it shows that nothing needs to be added to the grammar to account for the forms that contain the alternations of "ye" "e" and "i". This is one positive quality of a rule, since a statement that is representative of many facts have more chance of being accurate than one that describes only a few. In effect, the forms of "herir" show the same derivational rules that the forms of "dormir" and "morir" presented earlier. Sample derivations will illustrate the point.
Harris's conclusion is that third-conjugation stem-vowel alternations can be accounted for naturally by dividing the verb stems into categories, depending on whether or not they undergo three ordered rules. The first rule is the basis for the vowel alternations and must be in the language. It accounts for the diphthongization of a stressed vowel before "+ndo" or "r+vowel", as encountered in the participle and subjunctive forms of second conjugation verbs that do not diphthongize in other tenses:

\#5. $$\begin{array}{c|c}\text{V} & + \text{stress} \\ \text{[+ high]} & \text{[+D]} \end{array}$$

Ex.: "abriendo" (opening)
"pidierα" (that I would ask)

The second rule is general and applies to all the third-conjugation stems, except idiosyncratic verbs (ex.: H. 1Harris's word. J. W. Harris, Spanish Phonology (Cambridge: Research Monograph #54, M.I.T. Press). Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
concernir), and reads:

\[
\begin{align*}
\text{#6. } & \quad \left[ \begin{array}{c}
V \\
\text{- low}
\end{array} \right] \rightarrow \\
\text{- stress} \\
\text{C}^o
\end{align*}
\]

This rule is actually a combination of rule #2, but it raises "e" to "i" instead of "o" to "u", and of another rule which raises a stem-vowel when in a past form. It accounts for forms like "dormir" (cf. "durmiò"), "pedir" (cf. "pidiò").

A third rule apparently applies only to lexically marked stems. Since it does not apply to the majority of the third-conjugation stems, it is considered a minor rule.

\[
\begin{align*}
\text{#7. } & \quad V \rightarrow \\
\text{- high} \\
\text{C}^o \text{i}
\end{align*}
\]

This rule accounts for forms like "dormi" (cf. "durmiò"), "morimos" (cf. "muramos") Harris suggests to combine this rule with another that already accounts for the lowering of high vowels under certain conditions, and changes U (u+D) and I (i+D) to "o" (as in comio) and to "e" (as in "ame").

The resulting rule is:

\[
\begin{align*}
\text{#8. } & \quad V \rightarrow \\
\text{- high} \\
\text{C}^o \text{D} \text{i}
\end{align*}
\]

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These three rules then account for all the forms of stem-vowel alternations in third conjugation verbs. There is one important thing left to clarify, concerning verbs of the first and second conjugation; that is the description of certain rules as applying only "under certain conditions".

We have used one rule so far that featured this constraint (see rule #1.), but Harris's phonological analysis of Spanish contains several. In order to clarify those rules, he presented the following hypothesis. The number of forms that do not undergo each of the rules marked "under certain conditions" is actually larger than the number of forms where the rule applies. It is then possible to suppose that those rules are "minor" rules and that they apply to a small class of forms. These "minor" rules do not apply to all formatives of the language but to all and only the members of a specially designated subset of formatives. Here are the main points of Harris's explanation of the hypothesis.

#1. All formatives are subcategorized according to a "+S" or "-S" ("S" for special) morphological feature. They are all listed as "+S" or "-S".

#2. The "+S" and "-S" formatives are subject to all the same phonological rules; but "-S" formatives undergo certain subset of rules that do not apply to "+S".
#3. All the items of the Lexicon are marked "+S" or unmarked. Most of the items are unmarked.

#4. The features "+S" and "-S" apply only to formatives, not to words. Inflections, like mood, aspect, etc. are marked "+S", but can be attached to "-S" stems.

So the constraint "under certain conditions" applies to a subset of formatives morphologically marked "+S". In other words, a "+S" feature indicates the applicability of certain rules. An incorrect application of a rule would result, if certain rules were applied to "-S" formatives.

For example, the rule:

\[
\begin{align*}
\left[ V \right] + \text{stress} & \rightarrow \left[ - \text{high} \right] \quad + D \quad \left\{ \begin{array}{c}
\text{ndo} \\
\text{rV}
\end{array} \right. \\
\end{align*}
\]

rewritten in terms of phonetic features as:

\[
\begin{align*}
\left[ V \right] + \text{stress} & \rightarrow \left[ - \text{high} \right] \quad + D \quad \left\{ \begin{array}{c}
\text{rV} \\
\text{[+cons.]} \quad \text{[+ant.]} \quad \text{a(under certain conditions)} \\
\text{[+-obstr.]} \quad \text{[+-voc.]} \quad \text{b}
\end{array} \right.
\end{align*}
\]

will be incorrectly applied if not restricted in the following cases:

\[
\begin{align*}
\text{mpl} \quad (\text{cumplir}) \\
\text{mb} \quad (\_\text{cumbir}) \\
\text{rt} \quad (\text{surtir}) \\
\text{nd} \quad (\text{hundir}) \\
\end{align*}
\]

One point, made by Harris and interesting to us, is the following:
The feature "S" is motivated in a synchronic grammar completely independently of a priori assumptions based on historical data.¹

This deserves further comment. Historical data are not available as such to most language learners. Consequently, it should not justify, or be the base for, a synchronic grammar. Harris notes that it does happen that grammars based solely on synchronic data reflect historical processes, to a certain extent but it is a different thing than having a historically based grammar, since historical processes are not the ones used by a native to learn his own language.

What has motivated the use of the feature "S" in the present study is simply the fact that certain clear synchronic generalizations will be lost if a relatively small set of forms is not distinguished that undergo a relatively small set of rules not applicable to other forms.²

My personal interpretation of Harris's claim is the following. There is no need to look up the origin of a word to justify its morphology. Since historical data is not available to anyone learning a language, it is not accurate to justify synchronic forms by a historical process. TCP proposes to mark with a morphological "+S" feature all the "irregular" forms traditionally attributed to a unique historical evolution. We can use the verbs "poder" (to be able to) and "comer" (to eat) as an example.

¹Harris, Spanish Phonology, p. 129.
²Ibid.
The first one shows the alternation "o"/"we", the second does not. Historically, this difference has been justified by the fact that "poder", in its Classical Latin form, contained a short "o" which became an open (or lax) "o" in Vulgar Latin, which diphthongizes in Spanish. On the other hand, "comer" is a synthetic form (c u m +e(d)er(e)) whose "o" was derived from a "u" which never diphthongized. Synchronously, Harris suggests to mark the form of "poder" as "+S" and of "comer" as "-S", thereby indicating whether or not they undergo the rules. Once again, the point is that, although synchronic data sometimes reflect a historical process, the latter is not necessary to explain the former.

The rule of diphthongization, proposed earlier as:

\[
\begin{align*}
\text{#1} & \quad \{ E \} \rightarrow \{ ye \} \\
& \quad \{ o \} \rightarrow \{ we \} \quad \text{(under certain conditions)}
\end{align*}
\]

could then be written as:

\[
\begin{align*}
\text{#9} & \quad \{ e \} \rightarrow \{ ye \} \\
& \quad \{ o \} \rightarrow \{ we \} \\
& \quad \text{[+stress, - tense, +S]}
\end{align*}
\]

This rule could yet be divided in two steps, in order to account for the insertion of the glide and also the change of vowel in the alternation of "o".
Note, however, that part b. of the rule only applies to the output of part a. since instances of "-wo-" occur in the language (ex.: /kwota/ "cuota"). Harris presents various ways to constrain the application of part b., but only finds the following acceptable:

\[ \emptyset \rightarrow \begin{bmatrix} G \\ \alpha \text{back} \end{bmatrix} \]

as it states both steps of rule #10 as a single transformation.

In conclusion, stem-vowel alternations function differently, depending on the conjugation they belong to. Once subcategorized, alternating stems can be dealt with by such means as diacritics ("S", "D") and minor rules.

3. The following discussion pertains to stress assignment as presented by Harris. The first statement to be made is that, along with Foley\(^2\), he believes that stress in Spanish can be assigned by the Latin Stress Rule (hereafter LSR). As we already have defined the LSR in Chapter I, 1This choice of features is somewhat arbitrary, but it is important to notice that the glide agrees in backness with the vowel.

\(^2\)J. A. Foley, Spanish Morphology (Unpublished

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and also pointed out the similarities between Latin and Spanish stresses, we need not repeat them here. We can however examine the following complementary arguments given on the basis of stress patterns excluded by the LSR.

1. **Latin**: did not assign stress on the final syllable. **Spanish**: shows a relatively small number of forms bearing a final stress. Most of these can be explained by derivation, therefore being no "exception". Foreign loan words would escape that generalization.

At this point, it would be interesting to open a parenthesis, in order to compare the types of derivations suggested by historical linguistics and TGP, in an effort to account for a final syllable stress. The third person singular preterite of "amar" (to love) will be used as an example.

**Historical derivation:** amavit (Latin form)

- amawit ("v" and "w" often confused in the evolution from Classical to Vulgar Latin.
- amawt (i → φ)
- amaut (final "t" is deleted, w=u)
- amo ("au" becomes "o" in Vulgar Latin).

**Spanish form**

**Phonological derivation:** ("Au" is posited as an underlying representation due to other occurrences in the language of "au"-"o").

---


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Rule (36) deletes a theme vowel when it is immediately followed by another vowel.
Rule (25) stresses all forms of the present and the imperfective on the phonetically penultimate vowel.
Rule (39) changes "a" to "o" in the environment "u", "w".
Rule (40) deletes unstressed high vowels when they are after a (mid or high) vowel.

The two approaches have for same concern to point out that the final stress, as it appears in this example of Spanish, is no exception at all and can be assigned by the LSR. Other apparent exceptions like "usted", and "después" are accounted for by Foley and Harris in a similar fashion. The main difference is, of course, that the first derivation is based on historical processes and the second on synchronic data, which is believed to be the base of a native's internalized grammar.

2. Latin: the stress was never assigned to more than three vowels from the end.

   Spanish: there are some forms in Spanish stressed on the fourth syllable from the end.

---

1The numbers refer to Harris's order of rules on stress assignment.
However, they are no exceptions to the LSR since they are either composite words (ex.: "dando#nos#la#" (giving it to us)) or forms with two contiguous vowel segments like "láudano", "ventrílocuo" in which case the segments written "u", "i" are not vowels in the systematic phonemic representation of these words. Since these segments occur phonetically as glides, Harris assumes that they are also represented phonologically as glides. The underlying representations would then be /lawdano/ and /ventríloko/ in which case the stress would occur on the third syllable, which is also in compliance with the LSR.

3. **Latin**: whenever the penultimate syllable of a word is "strong", it, and no other syllable, bears the stress.

**Spanish**: Harris has not found one example of a Spanish word containing a "strong" penultimate that was not stressed.

4. **Latin**: when the penultimate syllable was "lax", it did not bear the stress.

**Spanish**: shows numerous forms with diphthongized penultimates, which means that they show
an underlying lax vowel, followed by only one consonant.

Ex.: Venez(we)la (cf. Venez(o)lano)

Trop(ye)zo (cf. trop(é)zar)

These forms are the only apparent exceptions to the LSR. Historical reasons are known for most of them, but since there is very little residue that would provide a synchronic explanation, Harris points out that it would be illusory to try to explain those forms.

It appears then, that except for the forms in #4 of the list above, the same stress patterns that are excluded by the LSR are also excluded by Spanish. As it is difficult to believe that such similarity is purely coincidental, the LSR must be accepted as a first approximation to Spanish stress assignment rule.

In an interesting investigation Harris notes, however, that some paired words, which presumably have the same stem, show an antepenultimate stress in the noun or adjective, but a penultimate stress occurs in the verb. Compare, for example:

<table>
<thead>
<tr>
<th>NOUN</th>
<th>VERB</th>
</tr>
</thead>
<tbody>
<tr>
<td>continuo</td>
<td>continuo</td>
</tr>
<tr>
<td>integra</td>
<td>integra</td>
</tr>
<tr>
<td>pagina</td>
<td>pagina</td>
</tr>
<tr>
<td>circulo</td>
<td>circulo</td>
</tr>
</tbody>
</table>
This list is far from exhaustive, of course but it illustrates the problem quite well. We know that for stress to be assigned to the antepenultimate vowel of a noun or adjective, the penultimate has to be lax but, somehow, the corresponding verbs show a stress on this same lax penultimate. Harris makes the deduction that verbs cannot be stressed by the same rules as nouns and adjectives. Two rules then are posited.

a) stress is assigned to nouns and adjectives by the LSR

b) stress is assigned to verbs by the following rule:

\[
V \rightarrow \left[ \text{lstress} \right] \quad \left[ \text{[-perf]} \quad C_o \quad VC \right]_{verb}
\]

Harris complements these rules with the following statement:

I see no alternative(...) to assigning verb stress in fixed positions, without regard for the "strong" and the "weak" syllables in terms of which stress is assigned by the LSR.¹

Spanish stress assignment, as he explains it, relies heavily on abstract underlying representation and rules which are both powerful tools of analysis; somewhat

¹Harris, Spanish Phonology, p. 121.
too powerful for NGP, as we will see in the next section.

4. Natural Phonology is essentially a continuous search for the optimal grammar which is consistent not only with language's specific data, but also with known properties of human languages in general.

I believe that this statement, issued by Matthew Chen in *Papers from the Parasession on Natural Phonology*, could have described just as adequately the aim of TGP, since both approaches make essentially the same claims on many points. However, NGP has a very different attitude about what exactly constitutes a linguistic rule and according to which criteria a rule should be accepted as a rule of the language. NGP's main concern is to limit abstractness in the underlying phonological representations in order to prevent establishing a theory of language that does account for surface forms but fails to represent the processes a native goes through in learning his language. An example of such a theory is the well-known analysis by Saporta of the verb "crecer" (to grow) and "coser" (to sew).

In order to explain why /kreser/ becomes /kresko/ (I grow), and /koser/ becomes /kosko/ (I sew) and not */kosko/, he posits /kreθer/ and /koser/ as respective underlying representation. The problem with positing /θ/ as an underlying segment, is that the verb distinction is acquired in dialects in which /θ/ does not exist. It is a phonological abstraction that allows to account for
surface forms. NGP does not believe the account to be accurate, however, because a speaker does not elaborate his utterances on a non-existent abstract segment. NGP's main efforts then, will concentrate on restricting abstractness. Basic procedures have been developed to do so, namely the True Generalization Condition, which does not allow exceptions in the phonological rules; the Alternation Condition, which rejects the use of phonological features as diacritics and the No-Ordering Condition which claims that rules apply to forms in any way that will meet the structural description, instead of in a fixed order. These three principles have the common purpose of describing more accurately the processes of language acquisition.

I see TGP as operating vertically, that is, drawing a surface form from an underlying phonological representation, whereas NGP has more of a horizontal process, meaning that speakers will derive forms from morphological evidence that they already are aware of. This can be observed in children's speech, when they overlook "irregular" forms and make them all regular (ex.: he goed; childs).

We can familiarize ourselves with the claims of NGP by concentrating on Joan B. Hooper's analysis of vowel alternations and stress assignment in Spanish. It would be tempting to elaborate a point by point comparison of Harris's and Hooper's claims, and of the methods used to justify them but the process threatens to be cumbersome
and too theoretical for the scope of this paper. I will then limit myself to presenting the points that broadly differ from Harris's and that are relevant to a concept of grammar that could be applied to language teaching.

We have seen that Harris assigns verb stress by the "penultimate rule". However, some forms have stress on the last syllable on the surface, (ex.: mandó; bebí; etc.). In these cases, the penultimate stress evidently exists only at a more abstract level. Harris has explained the infinitive "amar" (to love) as having an underlying final "e" which is deleted after stress assignment. (Note the importance of rule ordering here. If the final vowel were to be deleted before, stress in this form would be thus marked: "amar", which is a misleading generalization about the language.) Similarly, the forms "ame" and "amo" were derived from "am+a+i" and "am+a+ü", in which case the penultimate vowel was stressed, then altered and ultimately, the final vowel was deleted. In another instance, Harris claims that even though stress in the verbs is for the most part penultimate, the imperfect forms show exceptions in the first and second plural. Observe, for example:

1st.p.s. amaba
3rd.p.s. amaba

1Hooper's term for LSR.
As far as the infinitive "amar" and the first and third person singular of the preterite are concerned, his analysis claims that at some abstract level, even these forms are penultimately stressed.

Hooper does not agree with Harris's stress rule because:

a) it is not a true generalization about the surface forms.

b) the analysis relies on rule order to give a systematic account of apparent exceptions.

Her most original contribution to this problem, in my opinion, has to do with the actual place of the stress. She points out that the most striking fact about stress is not that most forms have a penultimate stress, but rather that in each tense (except the present sets) the stress appears on the same syllable in relation to the stem. If we refer to Insert II at this point, it will become clearer that, for example, all the future forms are stressed on the vowel after the future marker; or all the preterite forms are stressed on the theme vowel, and so on. Seen in this light, the apparently irregular stress pattern of the first and second person plural of the imperfect is precisely what makes the paradigm regular and therefore does not designate it as an exception. The
stress falls on the theme vowel in all the other persons. This is supported also by historical evidence. Latin used to stress the imperfect on the penultimate vowel (ex.: amaban, amabimus). But the stress now shifted back one syllable by analogy with the other person-number forms. The conclusion is then that it is not accurate to assign stress by counting syllables from the end of the word, as the LSR does.

Hooper also finds it an important observation that stress is distinctive in the verb forms, as we have repeatedly illustrated earlier, and that each tense has its own characteristic stress assignment. We already mentioned the stability of stress throughout the future forms; other examples would be the imperfect or the conditional forms (ex: cantaria, cantaríamos).

In the NGP framework, the most important facts concerning the description of stress patterns are the following:

1. Verb stress does not necessarily follow a penultimate rule, since stress cannot be assigned by counting syllables from the end of a word.
2. The regularity of a verb stress is determined within its own paradigm (ex.: imperfect stress is irregular by the LSR, but regular within its own set.)
3. Stress has a morphological function. It can indi-
cate tense and mood (ex.: úme (pres. subjunctive) amé (preterite))

How then does NGP analyze the different stress patterns found in a complete paradigm of Spanish? Stress is assigned to the verb forms as they appear on the surface. The general verb stress rule is actually divided in three main parts, one for each of the different patterns observed. We already noticed that in the past tenses, the first vowel after the stem is stressed; this is also true of all non-finite forms. The stress on these forms can then be accounted for by this rule:

\[
\begin{align*}
\text{#1. } V & \to [ + \text{ stress } ] / \text{stem} \text{ verb} + \begin{cases} + \text{ past} \\ - \text{ finite} \end{cases} \\
\end{align*}
\]

which assigns stress to the vowel after the stem in all past and non-finite forms. \( X \) is a variable which has no (+ syllabic) segments. It is necessary here since some forms have a glide after the stem, which is not considered a part thereof. This variable prevents a faulty stress assignment like: */bebyo/ or */dyo/. In cases where a diphthong follows the stem, as in "pidieron" ("pedir", preterite) and "viviendo" ("vivir" present part.), it is assumed that stress assignment precedes diphthong formation.

Another rule accounts for stress in the future and conditional forms which are similar in their assignment and show no exception.
Subsequent refers to "marker of subsequence" or future and conditional markers. (for example, "-ría-" in "vendríá" (he would come).) 

The only tenses not covered by the two above rules are the present indicative and the subjunctive. In these tenses, stress does not have a stable morphological function, since the stress appears on different syllables of the word, depending on their number. The present tense apparently assigns stress by the LSR. Observe:

- _amo_ (I love)  
- _ama_ (he loves)  
- _amemos_ (we love)  
- _aman_ (they love)  

According to Hooper, there are two possible ways to account for stress on the present forms: a) A rule could be formulated that stresses the penultimate syllable in the present tense. b) or a rule could assign stress to the stem vowel and include an exception feature, for the first and second persons plural.

The comparison between these two rules is interesting, because they suggest concrete claims about the native's internalized understanding of verb stress. A rule as described in a), associates stress with the final syllable of the word; whereas a rule as described in b) associates
stress with the internal composition of the verb form. Also, a) suggests that stress in the present tense behaves differently than in other tenses; whereas b) is of a similar form as the rules of stress in the other paradigms. Only, it adds exceptions, which is not necessarily a positive feature of a rule.

The only way to determine which rule is most representative of a native's grammar is to try to find evidence in the language that would demonstrate the use of one rule over the other. That is what Hooper did when observing the subjunctive forms of the three verb classes, as used in Chicano Spanish.¹

<table>
<thead>
<tr>
<th>AMAR</th>
<th>COMER</th>
<th>VIVIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st.p.s. _ame</td>
<td>coma</td>
<td>viva</td>
</tr>
<tr>
<td>3rd.p.s. _ame</td>
<td>coma</td>
<td>viva</td>
</tr>
<tr>
<td>1st.pl. *amenos</td>
<td>*comemos</td>
<td>*vivamos</td>
</tr>
</tbody>
</table>

The shift from the penultimate vowel to the stem in the first person plural brings one more argument to the morphologization of stress. It shows that a native's grammar, present tenses, just like all the others, have a characteristic stress, which falls on the last vowel of a stem. Indeed, if verb stress was really penultimate, such changes would not occur.

In the light of these observations, NGP claims that natives will demonstrate an analysis that identifies phonological phenomena with morphological phenomena.

The reason is that the function of grammar is to associate sounds with meanings. Speakers prefer to consider phonological variations meaningful, rather than predictable and meaningless.¹

Verb stress in Spanish illustrates this point well.

5. We can now proceed to find out what kind of analysis NGP provides for stem-vowel alternations. The first step is to determine what the conditioning factor of the alternation is, and second, which is the alternant. On the basis of the data brought forth so far, it becomes fairly evident that stress conditions the "simple vowel" diphthong alternation so it has to be decided why is the basic variant of the alternation. Hooper proposes two possible rules:

\begin{align*}
\text{#3.} & \quad \{ \text{o/e} \} \quad \{ \text{we/ye} \} \\
& \{ \text{we/ye} \} \quad \{ \text{o/e} \} \\
\text{#4.} & \quad \{ \text{o/e} \} \quad \{ \text{o/e} \} \\
& \{ \text{we/ye} \} \quad \{ \text{we/ye} \}
\end{align*}

In the first of these rules, the simple vowels are the basic alternant; in the second, the diphthongs are the basic alternant.

basic ones. It becomes easier to make a choice between the two possibilities, after observing how other types of alternations behave. For example, the verb "mentir" (to lie) shows a three-fold alternation, between /ye/ /i/ and /e/. Observe:

miento (I lie)
mentía (He was lying)
mintió (He lied)

The diphthong /ye/ occurs under stress, but both /i/ and /e/ occur in unstressed syllable. As "mentir" is not an isolated case, but representative of a class of verbs, this observation suggests that (+stress) is associated with diphthongs, instead of (−stress). In other words, /i/ and /e/ are the basic, or "elsewhere" alternant. The respective distribution of these alternants can be predicted by the following rule:

\[
\#5. \begin{cases} 
\text{ye/we} \\
\text{e/o} \\
\langle i/u \rangle 
\end{cases}
\begin{cases} 
\text{ye/we / [+ stress]} \\
\text{e/o} \\
\langle i/u \rangle 
\end{cases}
\]

This three-part rule will account for all the stem-vowel alternations within the verb system in Spanish.

We should mention at this point, that NGP handles the problem of recognizing which forms diphthongize from those that do not quite simply. The verbs that show the alternations are distinguished from those that do not by their lexical entry, instead of by an added feature in
the underlying representation, as proposed by Harris. For example, the lexical entry for "mover" is: mover/m\{\text{\text{o}}\}w\{\text{\text{e}}\}v\_{\text{\text{e}}} / (to move): for "dormir" it is: dormir/d\{\text{\text{o}}\}w\{\text{\text{e}}\}m\_{\text{\text{e}}} / (to sleep).

A verb like mentir/m\{\text{\text{e}}\}n\{\text{\text{t}}\}_{\text{\text{e}}} / therefore uses all three parts of rule #5.; a verb like jugar/j\{\text{\text{u}}\}\_\_ / (to play) uses only the first and the last part of the rule, since their lexical form shows no mid-vowel; a verb like pedir/p\{\text{\text{e}}\}d\_{\text{\text{e}}} / (to ask) only uses the two last items, since the stem vowel never diphthongizes.

For the presentation to be complete, we must add that a grammar of Spanish has to contain three more facts, listed by Hooper as being:

a) all third-conjugation mid stem-vowels alternate
b) no second-conjugation verb stem has a high stem vowel (this was also noted by Harris)
c) the mid/high/diphthong stem-vowel alternations only appear in the third conjugation.

Hooper explains these facts by means of lexical redundancy rules which we will not discuss, by fear of going beyond our area of concern. We have established, at the beginning of this discussion, that NGP accepted stress as a conditioning factor of diphthongization; however, it does not claim stress to be an indispensable conditioning factor of diphthong formation. Spanish has various forms like: "buen\_\_ismo", "viej\_\_ito", "adiestr\_\_ar"
which show non-stressed diphthongs. Hooper concludes that these forms have been lexicalized, because if stress and diphthongization were really interdependent at all times, the absence of one would also mean the absence of the other. If this were true, the forms would be: *bongísmo", *vejíto", *"adestrar". Observe the following examples:

a. 

buenísmo  bueno  bondad  (very good)  (good)  (goodness)  

viejito  viejo  vejez  (little old man)  (old)  (old age)  
pueblito  pueblo  población  (little village)  (village)  (population)

On the basis of the True Generalization Condition, (which claims that if something cannot be explained by a phonological rule, without diacritics or exceptions, another rule should be used) and also on the basis of the differences between lexicalized and productive morphology, NGP claims that the forms in c. are lexicalized, while the forms in a. come from productive morphological process. For example, "bondad" is listed in the lexicon, and so is "bueno". It is clear that "bueno" has a diphthong in its lexical form, because "buenísmo" is derived directly from it, and it has a diphthong, even though the stem vowel is unstressed. The effect of the stress, the diphthong, has then been lexicalized.
The important thing to realize here is that NGP posits /bwen__/ as an underlying form of "bueno" and "buenísimo", and /bOn__/ as the underlying form of "bondad" to account for the fact that a diphthong is not always the result of a stressed stem-vowel. We will remember at this point that Harris, in the TGP framework, proposed one single underlying form for all the derivates of a word (here, it would be /bOn__/), and added a feature +D as a diacritic to the diphthongizing forms. However, the True Generalization Condition in NGP does not allow that, unless there is a concrete phonetic evidence of $[+D]$.

Hooper insists on the fact that monophthong/diphthong alternations in the adjective and nouns are derived by a different type of rule (via-rules) than those in the verb paradigms (morphophonemic rules). What is most important to us, however, is that TGP and NGP analyzed the same data. TGP makes the generalization that stress is an essential factor of diphthongization; NGP does not make such a claim because surface forms show no such generalization. We could add here that Hooper's claim is backed by the evidence of Chicano Spanish, which diphthongizes every form of the verbs that alternate between /we/ and /o/ in standard Spanish. Observe:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Chicano</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contar</td>
<td>Cuentar</td>
</tr>
<tr>
<td>Cuento</td>
<td>Cuento</td>
</tr>
</tbody>
</table>

(I count)
Contamos Cuentamos (we count)
Conté Cuenta (I counted)

The tendency to regularize exceptions is a powerful element in the gradual changes of a language. A generalizing of forms should therefore be considered as a clue to the evolving processes of language.

We have exposed the most basic facts about stress assignment and stem-vowel alternations, as analyzed by different schools, equally valid in their own terms. The most direct implication of this survey concerns the concept of an internalized grammar, as manifested through a speaker's stream of utterances. How these insights on grammar can influence, or be translated into, teaching attitudes and methods is the subject of the next chapter.
CHAPTER IV

The object of this chapter is to try to establish links between the theoretical considerations presented in this work so far, and their possible practical application to the foreign language classroom. The following discussion is addressed mostly to language teachers. In section 1 will be discussed the feasibility of applying general transformational generative principles to the classroom. Section 2 will offer an overview of the contributions of traditional grammar and structuralism to the teaching of stress and diphthongization, as well as the contribution of TGP and NGP to the understanding of those two points. Since no pedagogical method has been developed on the basis of TGP or NGP alone, most considerations will still be theoretical. Section 3 will illustrate how textbooks of various affiliations have handled stress and diphthongization. In section 4 will appear a presentation of a suggested learning sequence for stress, accompanied by examples of exercises. Section 5 will offer pedagogical suggestions and classroom activities related to the teaching of stress.

1. The reader might wonder why, since I also covered traditional grammar and structuralism in this work, I do not elaborate on their implication to language teaching.

95
The reason is that they both have been extensively experimented, studied and applied. TGP and NGP however, are a challenge to the field and therefore are more rewarding to study.

Stress and diphthongization have been chosen as the focus of this paper, mainly because of their complexity and the difficulty experienced by students when trying to learn them. We have seen in previous chapters how traditional grammar and structural linguistics presented the problem; we could now examine whether TGP and NGP shed any light on the complexity of diphthongizing forms and verb forms; and if so, to what point.

First of all, I believe that the most usable contribution of both TGP and NGP lies in the concept of grammar that underlies them. The notion of grammar as a description instead of a prescriptive device, as well as the fact that language operates on a finite set of components can and should be pointed out to the student, I believe, as assets in language learning. Since these facts carry positive value, they will help psychologically. The student might feel that he has less to learn, less to memorize and more to actually observe and understand. A difficult rule of grammar could probably cause less frustration if viewed as "what the natives do" instead of blamed on "the guy who wrote this book", this being a comment frequently heard in the classroom.
Leaving the psychological level, however, I propose that by its very methods of derivation TGP is very difficult to apply to language instruction. The problematic forms, as stem-vowel alternations, apparently haphazard diphthongization, etc. are analyzed on the basis of abstract underlying forms. These forms cannot be observed on the surface, so they would come to the students as a surprise, and an added complication. The phonetic forms are derived from them by rules which apply in a strict order, and which often have to be constrained to generate a given surface form. A simple example of this is that Harris posits a theme vowel in all verbs, and then deletes it if it occurs before a vowel. For example, in the imperfect, he posits /kom+i+ba/ as the underlying representation of "comía". The /i/ here cannot be deleted since it is not followed by a vowel; rather it is the /b/ that is deleted "after the vowel deletion rule has attempted to operate but failed".¹

NGP sees no motivation for generating a theme vowel in all verbs and then deleting it only in some cases. Instead, the theme vowels will only be generated in the forms in which they appear on the surface. NGP will posit a rule stating that the occurrence of the theme vowel depends partly on the following segment. As one phonological

¹Harris, *Spanish Phonology*, p. 76.
function of a theme vowel is to fill out the syllable between the stem and the tense marker, if the latter begins in a consonant, the imperfect indicative must be viewed as an exception. In cases like that of /comía/ the appearance of the theme vowel (despite the following vowel) is treated as a characteristic of the imperfect.

With regard to verb stress, TGP assigns it by the LSR, that is, stress is mostly penultimate, with a few exceptions in the verb forms. Harris claims that, on an abstract level, those forms show a penultimate stress. NGP, on the other hand, does not claim one rule to fit all the verb forms, but rather claims that stress is related to the position of the theme vowel, and is consistent within its own paradigm. There is no abstract level to take into account, and there is only one exception in the plural of the present sets. However, this "exception" is backed by some forms of Chicano Spanish, which leveled them (ex.: ame - amemos) pointing out that NGP's claims, regardless of the exception, might be the closest to a native's grammar. This means that it could also be closest to the principles of language acquisition.

These brief examples serve to illustrate the point that both TGP and NGP work at the level of competence, which makes both their claims hard for a student to grasp; however, TGP's explanations are of a phonological nature and very abstract, which only increases the difficulty.
NGP, on the other hand, generally derives its explanation from morphologically related forms, which is more readily attainable for the student. Both approaches give whoever wants to take a deep look at language, new and valuable ideas. I believe that a teacher's presentation would profit tremendously from the insights TGP and NGP have to offer; but if I were to elaborate a teaching method based on transformational grammar, I would start from NGP.¹

2. For the purpose of clarity, let us review briefly the standpoints from which the four approaches studied so far have coped with stress assignment. Possibly the most extensive contribution of traditional grammar lies in the historical justification of stress assignment. Stress patterns of modern Spanish are traced back to their Latin or Romance origins, and their evolution is explained by such factors as vowel length, quality and position in the original forms. We have mentioned that, as a rule, the stress has remained on the same vowel in the evolution from Latin to Castilian, which for example, can be observed in: arboře > árbol. Even syllable deletion did not hamper this process, as illustrated by forms like: frigidu > frio. Traditional grammar acknowledges stress assignment as the cause of diphthongization of certain vowels; it also emphasizes the phonemic value of stress in the verb forms, as

¹More on the application of NGP in section 2.

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for example in the Preterite of the -ar verbs. Those forms are attributed to a Latin paradigm, and its particular evolution. One of many examples of this is the derivation of:

\[
\begin{align*}
\text{amavi} & \longrightarrow \text{ame}^\prime \\
\text{amaut} & \longrightarrow \text{amo}^\prime
\end{align*}
\]

as detailed in Chapter III, section 3.

From a pedagogical point of view the historical justification will indeed satisfy the student's curiosity about the origin of a given Spanish stress or form. If questioning the final stress of the word *edad* 'age' he will be made aware that the original form is "aetate" which after losing its final "e" has conserved the stress on the penultimate.

This justification, however, is mostly of a formal nature; in other words, it consists mostly of a study of the forms of the language. Traditional grammar presents a valid answer to the question of earlier forms, but helps very little with the question "why?". Since the historical approach is not concerned to describe the rules that account for the learning individual's re-creation of language, it is safe to assume that the contribution of traditional grammar to the teaching of stress is minimal, since it may satisfy the student's intellectual curiosity, but offer no device actually to help him acquire the language.
Structuralism, on the other hand, does not reach into the past to explain present patterns. In this light, the Spanish language is divided into its most minute components, in order to gain an understanding of how different parts of speech (or components) interact with one another to create the forms actually used in the language. The most noteworthy contribution of structuralism to the teaching of stress has certainly been a detailed inventory of the stem-vowel alternations and the methods for arriving at this inventory. Vowels and their alternants are brought to attention, along with the notion of stress as a diphthongizing factor. The specific stem-vowel changes are spelled out (e.g. /o/ → /ue/); the changes are linked to the positions of the stress, and the only exception to the o/we alternation is mentioned. In all, the phenomena of stress and vowel alternations have been carefully analyzed by the Structuralists, not from the angle of a historical origin, but rather from an observation of spoken utterances. It was mentioned in Chapter II, section 3, that Structuralism has contributed very positively to the teaching of verb systems, among other things, by pointing out the constancy of the stress positions within the system. Very helpful also are the careful lists of vowel alternations and the divisions of all utterances into meaningful parts. But if the phenomena are carefully mapped out, no rule is yet offered that would explain what in the language
makes stress function the way it does, or why the stem-vowel alternations follow their particular patterns. Structuralism then; has contributed a high degree of organization of the data, and often this very organization has allowed new insights into the functioning of a language as a system. But it sheds little light on how a language is acquired and on how a native perceives and uses his own. Discoveries in these areas are those that will truly profit pedagogy, since language acquisition is what should be happening in the language classroom.

At this point, it would be helpful to discuss briefly the applicability of TG to pedagogical principles before going more specifically into how TG could be used to teach stress and stem vowel alternations.

With Transformational Generative Grammar, a significant step was taken. Not only the stem-vowel alternations are accounted for (see: Harris), but also a rule is offered for them. In doing this, Harris has gone further than any previous schools. The question: "why?" is answered by phonological rules which describe and predict the phonological environment and the forms of an utterance. (See, for example, the sample derivations offered in CHAPTER III, section 2). From a pedagogical standpoint, the main value of the phonological rules seems to be the possibility of predicting the type of mistakes a student will make. Such knowledge is a definite asset in setting up the
the sequence and the format of presentation of an item.

Let's take, for example, the case of the verbs "poder" and "correr" which both have a penultimate stress in the first person singular of the Present. "Poder" becomes \( \text{[pwe}^\text{d}\text{o]} \) "correr" becomes \( \text{[corro]} \). The form of "poder" is predicted by the rule:

\[
\begin{array}{c}
E \\
O
\end{array} \rightarrow \begin{array}{c}
\text{ye} \\
\text{we}
\end{array} \quad \text{(under certain conditions)}
\]

"(Under certain conditions)" refers to a certain set of formatives, morphologically marked for specialty (as seen in Chapter III, section 2). Obviously, "poder" is marked (+S) and "correr" is not. Since it has been observed\(^1\) that the amount of formatives marked (+S) is much smaller than those marked (-S), it appears logical to expect a mistake such as *"podo", which indeed occurs quite often. Predicting mistakes is a useful teaching tool, since remedial activities, similar to those of contrastive analysis for phonetics, can be devised to correct them.

So TG is ahead of other schools inasmuch as it offers rules for the seemingly unpredictable behavior of language. However, we have seen that the rules presented by Harris are of such a level of abstractness that their practical application to the classroom is questionable.

\(^1\)Harris, Spanish Phonology, p. 197.
NGP basically presents the same important feature as TGP, in that it points out the patterns of stress and of the alternations; it recognizes the environment and offers rules. However, TGP and NGP differ on the level of abstractness necessary to predict forms. NGP is known as "Natural" Generative Phonology, precisely to indicate that it does not advocate the use of highly abstract derivations from posited underlying representations. Rather, the aim of NGP is to bring out the links between surface forms and show how they are related to one another. Those relations between forms are often apparent through uncensored generalizations, as they would appear, for example in the speech of a child, or an uneducated person.

NGP will then allow a teacher to have a different attitude towards "mistakes" which are often generalizations, making certain patterns of a language apparent. It will also allow to explain more easily why forms behave the way they do, as we saw for example in section 1 of this chapter, and in section 5 of Chapter III.

Among the most tangible contributions of NGP to the study of stress and vowel alternations, we could list:

1. Pointing out that apparently irregular stress patterns are actually regular in their own paradigm.
2. Presenting stress as distinctive of the verb forms.
3. Showing that stress and diphthongization are not always interdependent.
At this point, we could take a look at some modern textbooks of Spanish, in order to see which of the principles presented above have been, or could be, used in instruction.

3. **El Camino Real**, by Jarret and McManus\(^1\) is a textbook of Spanish based mostly on the principles of Traditional Grammar, in that rendering print into speech and not the other way around, remains an important goal. Several revised editions have been published, however, and they reflect more modern trends in language pedagogy. In this textbook, stress is handled strictly from a phonetic point of view. The stated phonetic rules of stress - the rules that a non-speaker needs to place stress properly - are given in the pronunciation section of the lesson. In the 1971 edition, a parallel is drawn between stress as the only differentiating factor in minimal pairs in Spanish. Examples such as the following are brought up:

\begin{itemize}
  \item \textit{se}: I know \textit{se}: himself
  \item \textit{como}: how \textit{como}: like, as.
\end{itemize}

These examples of course have to do with orthography only. No particular instruction is given on how stress functions in verbs as a whole: it is emphasized, however, that the

\(^1\)Houghton Mifflin Co. Boston (Copyright 1947, by Edith Moore Jarret).
placement of the orthographic mark is phonemic, as in the examples above. Closer to the point is the case of *estar*; it is brought to attention to "*estas*" without the penultimate stress is a demonstrative adjective, whereas the ultimate stress will qualify "*estas*" as a verb. The teaching of the Preterite brings the same general remarks on the phonemic role of stress, but the question is not approached from a standpoint that would allow a student to see a pattern in stress assignment, or to try to predict the latter.

The vowel alternations in the stem-changing verbs are presented as a result of stress; a student has to memorize that o - us and e --ie when stressed, in certain verbs. It is suggested that students classify them as "boot verbs", to help them in memorizing such verbs; for example:

<table>
<thead>
<tr>
<th>puedo</th>
<th>podemos</th>
</tr>
</thead>
<tbody>
<tr>
<td>puedes</td>
<td>podeis</td>
</tr>
<tr>
<td>puede</td>
<td>pueden</td>
</tr>
</tbody>
</table>

It is not clear, however, if such device helps in remembering which forms of the verb diphthongize, or which verb undergo the vowel alternations. As presented in this method, the learner's task appears to be in finding out how to read out loud what he sees written. This impression results from handling orthography as a reflection of speech. Stress, however, is more than the mere placement of a written accent. Modern textbooks should assume the student will first learn how a word sounds and subsequently lead
him to correct writing conventions.

Another textbook, of roughly the same chronological period, also based on the teaching of Traditional Grammar, is *Learning Spanish* by Hayward Keniston.\(^1\) This book offers a very similar approach to that of *El Camino Real*, presents the same confusion between sound and orthography and therefore does not need a detailed evaluation. One point, however, is worthy of mention. On the topic of cognates, the text states that the only difference between cognates of two different languages lies in the spelling, or in a written accent mark. It seems unjustifiable to limit the differences between cognates to a purely orthographic matter. In cognates such as:

<table>
<thead>
<tr>
<th>SPANISH</th>
<th>ENGLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>opinión</td>
<td>opinion</td>
</tr>
<tr>
<td>posible</td>
<td>possible</td>
</tr>
<tr>
<td>doctor</td>
<td>doctor</td>
</tr>
</tbody>
</table>

The different stress is heard and pronounced, not just written. In many cases, the Spanish does not even bear a written accent mark.

Traditional textbooks have, in general, concentrated very little on teaching the particularities of stress. The latter is more likely to be mentioned in passing, when its immediate effects are readily recognizable, and con-

\(^1\)N.Y. Henry Holt & Co., 1938.
fused with the written accent. Virtually nothing is said on stress in Spanish, on its nature and its effects. A lot of memorization is expected from the students.

A result of structural studies, the ALM series\(^1\) (audio-lingual methods) provide the student with a detailed anatomy of stress. First of all, one unit is dedicated fully to the application of stress in reading. This unit emphasizes that stress assignment is natural to natives of a language, rather than being memorized. It also points out that learners of Spanish probably pick up the stress along with the new vocabulary item, when learning Spanish, without being aware of it. This adds a new dimension to the learning of stress. Without further explanation, the rules of stress usually given in the "Pronunciation" section of textbooks often give the impression that stress is learned that way; that natives actually check how a word ends to make sure they assign stress rightly. It is then a positive contribution of structuralism, to have pointed out that stress is an inherent part of a word, and that stress is learned along with acquiring lexicon.

In the ALM series, two types of stress are recognized: strong, and weak. The two main patterns of stress in Spanish, ultimate and penultimate, are also acknowledged. The phonemic value of stress is emphasized, accompanied


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by appropriate drills on minimal pairs.

In conclusion, ALM gives much more importance to stress than El Camino Real, mostly in that it presents many different facets of stress which had so far been taken as a whole. The contribution of the student consists more in understanding and less in memorizing. If the qualities and characteristics of stress are the subject of a good analysis, however, this analysis remains concerned with surface forms. Indeed, surface forms are what speakers, and therefore learners, use; but should the underlying patterns of stress assignment be studied, the student might find an answer to questions such as "why is this form this way?" and "how do I go about learning this?" Structural studies present the different aspects of stress very well, but offer no pointers for learning.

A fourth textbook, Spanish for Communication, was particularly interesting to study, due to the contribution of William E. Bull as a co-author of the manual. His extensive research in the field of applied linguistics and language pedagogy made me curious about his views on teaching stress.

Spanish for Communication presents stress quite similarly to ALM. The basic innovations found in ALM are present here, sometimes with a few additional comments.

---

1William E. Bull et al. (Houghton and Mifflin Co., 1972) 1st ed.
For example, it is emphasized that stress falls on a vowel, and that there are basic orthography rules that predict a written accent mark, according to what one hears. A lot more importance is given to the accent mark rather than to the stress itself, probably because it is what the student first encounters. The accent mark is presented as a feature of word spelling, therefore, leaving it off is a spelling error to a Spaniard. The purpose of the accent mark is to tell where to put the stress when reading aloud (it is understood that this is needed for Americans that haven't heard the language before).

The authors mention that a word like "estoy" has the final stress explained by the fact that "y" is "considered a final consonant by the Spaniards." This observation is confusing to me, because it implies that natives assign stress by the rules mentioned earlier - stress is penultimate if the word ends in a vowel, n, or s; and penultimate if the word ends in a consonant, except n or s. I consider those rules to be of a phonetic nature with the main function to illustrate the surface forms of Spanish.

My conclusion to this brief overview of textbooks is that more and more importance is given to stress as we proceed chronologically towards the present year. The aspects of stress that are emphasized, however, are mostly based on its surface form: accent mark, minimal pairs, phonetic rules, etc. No textbook, to my knowledge,
mentions such occurrences as stress variations, as we can observe in:

**ER-IR verbs**

Leyó (he read)
Abrió (he opened)
Pudo (he was able to)

nor the phonological environment, or underlying phonemic representation that might explain them. Stress is generally presented as a peculiarity of Spanish to be learned, rather than as an intuition. It could then very well be that the intuitive aspect of language acquisition does not belong in the classroom, and that students should be presented with well-organized facts on a data they can readily observe. I would like to quote Julia Falk,\(^1\) who seems to have felt the same hesitations:

"Many languages have not been studied, and much about the nature of human language is not known. Therefore, despite the significant achievements of linguistics, many linguists hesitate to apply results of their research to practical matters (such as foreign language teaching)."

If many questions remain unresolved for the moment, we can nevertheless bring a few suggestions that are applicable to today's foreign language classroom; and stay in rhythm with the textbooks used at this time. These suggestions will be the subject of the following section.

\(^1\)Linguistics and Language: A Survey of Basic Concepts and Implications.
4. This section will attempt to organize the previously discussed insights on stress and diphthongization in a manner that could be directly useable in a textbook presentation, but, first, a word on sequencing.

One very important facet of applying transformational generative concepts to language teaching is the implication of sequencing. Since language functions on the basis of a finite set of components that go through various rules to appear as surface structures, it makes sense to:

1. Teach basic patterns first
2. Teach transformational rules by degree of complexity.

Since a student does not have a native's grammar to draw from in the target language, his grammar is slowly formed on the basis of what he learns of the second language every day. His grammar or the internal rules he uses will be refined as he goes along. First, he should be taught the generalities and later on, the exceptions, when he can refine his rules. For example, a student who is absorbing the rules of past formation, will generate forms like:

1. "comio"
2. "venio"*
3. "decio"*

He will later refine them to account for the special form of certain pasts and generate:

1. "comió"
2. "vino"
3. "dijo"
This is an area that leaves a lot to be desired in the field of formal instruction. Of course, it is difficult to plan a sequencing of rules that will accommodate a large number of students, but some effort could be made in the textbooks to separate suitably base forms and "irregular" forms.

With regard to stress and diphthongization, this idea of sequencing is just as valid. As we have mentioned a few times already, stress so far has not been treated as a teaching item per se. The occurrence and quality of stress are generally mentioned, in passing, while teaching verb forms or vocabulary. The conclusions drawn from this research, however, lead us to suggest that stress, with its manifestations and characteristics should be given more solid and detailed consideration. The following is a logical sequence in which the teaching of stress could appear in a textbook.

1. The student should be brought to realize that in Spanish, stress is a matter of loudness, and that phonemic stress exists at the word level. This can be done at the very beginning of instruction. Aural recognition exercises such as the following should help achieve this goal:

   a) Reading Spanish texts out loud to students, so that they familiarize themselves with the rhythm created by word stress.
b) Reading out loud lists of words in isolation, so that the student identifies which syllable is stressed.

2. The student should develop an aural appreciation for the levels of stress. Spanish only has two stresses, a strong and a weak. Some exercises that could improve stress appreciation are:

a) In the list of words read by the teacher, the students are asked to identify in turn the syllable bearing strong stress, and that bearing weak stress.

b) The teacher writes a list of words on the board and the students code mark the strong-stress syllable. Next, the students have to read the words out loud, trying to acquire a smooth balance between the weak and the strong stress.

c) An advanced level of this exercise would be to use their early intuition of the language, to "guess" where stress falls, without any help from the teacher.

3. The student should be made aware of how stress is patterned in verbs. Once the pattern is established, the student can develop an intuition on how stress works in the verbs, nouns, adjectives etc. This is not with reference to diphthongization, we are only concerned here with where the stress falls in a word.

For example:  
\[\begin{array}{c}
  \text{Ama} \\
  \hline
  \text{Amas} \\
  \text{Amamos} \\
\end{array}\]  etc.
Once this aspect is emphasized, the student will be quick to realize that Spanish stress is for most part penultimate; he will also realize that certain persons and tenses fail to fall in that pattern, as for example:

Teníamos (Imperfect)
Trabajó (Preterite) etc.

At this point, the student should be brought to investigate on whether this stress assignment falls into any other type of pattern, or stands out on its own. It will soon become evident that forms of the Imperfect such as:
(tenía, tenías, teníamos, tenían) are all stressed on the theme vowel, as is the case for: (mandé, mandaste, mandó, mandaron), therefore being very regular in their own paradigm. Instead of being considered an exception, the particular set can be identified by its stress and therefore be easier to learn.

4. Once the stress patterns are established, the student can be taught the nature of diphthongs, and their relationship to stress. Diphthongs are formed by the juxtaposition of a semivowel /y/ or /w/ to a vowel /a/ /o/ or /e/. Orthographically, the semivowels appear as /i/ and /u/; however, it is incorrect to label them as vowels, since the sounds that /i/ and /u/ stand for occasionally play the role of consonants (as, for example in "hueso" and "verba") as well as of vowels (as in "hay" and "muy"). They are therefore classified as semivowels.
or semiconsonants depending on their position in the syllable. A diphthong is then a conventional name for a syllabic group made of a semivowel and a vowel.

5. The student is now ready to appreciate vowel changes in paradigms such as:

\[
\begin{align*}
Poder \\
Puedo \\
Podemos \\
Pueden
\end{align*}
\]

He can be made aware of two facts. First, that it is the stem vowel that changes, and second, that it does so under the influence of stress. As he will often encounter verbs that do not undergo these changes, such as:

\[
\begin{align*}
Beber \\
Bebo \\
Bebemos \\
Beben
\end{align*}
\]

he will have to conclude that stem-vowel changes due to stress are limited to a certain category or type of verbs. It is then time to introduce stem-vowel changing verbs, and to drill them solidly. The student will have had enough background to see more into them than a memorization task. At this point, exercises of the type later presented in Chapter IV, section 5, would be most useful.

Ex.: 
\[
\begin{align*}
Lola tiene su carro & -querer \\
Lola quiere su carro & -vender \\
Lola vende su carro & -limpiar \\
Lola limpia su carro & etc.
\end{align*}
\]
6. At the same time that the student is brought to observe stress patterns in the verb system, he should be made aware of its phonemic value. Pairs like the following should be brought together and compared.

Camino (I walk) \hspace{1cm} \text{Me cansé} (I got tired)
Camino (he walked) \hspace{1cm} \text{Me canse} (that I get tired)

For suggestions on teaching applications, see section 5 of this chapter.

If this sequencing is followed and properly carried through in the classroom, I believe that a student will have gained in control of the language and in insights into actual grammar of the Spanish language.

5. In this last section, I would like to present briefly five suggestions inspired directly by the examples brought forth in this paper.

1. Stress and its characteristics should be taught as a special topic.

To my knowledge, stress, to this day, is presented in orthography at the beginning of most Spanish textbooks, and thereafter expected to be learned in the same time as each new lexical item that bears it.

In view of the fact that Spanish stress is more predictable than English, and that it has both phonemic and morphological functions, special discussions should be devoted to it.
Stress as a unit could be presented at a stage of learning when students are already familiar with the notions of vowel, diphthongs, and phonemicity. Once the students have been made aware of the functions of stress in English, as for example in: progress (noun) progress (verb) they could concentrate on various forms such as:

\[
\begin{align*}
\text{amé} & \quad \text{(preterite)} \\
\text{logró} & \quad \text{(preterite)} \\
\text{ame} & \quad \text{(subjunctive)} \\
\text{logro} & \quad \text{(present indic.)}
\end{align*}
\]

It should be pointed out that there are only two stresses possible in Spanish, a weak and a strong, and that contrary to English, stress is marked by an increase of intensity. A good beginning exercise would be to give the students a list of written words which the teacher reads out loud. The student then has to use aural discrimination in underlying the stressed vowel. Afterwards, he can read the list out loud, trying to use only the two stresses allowed by Spanish. After the phonetic level is mastered, the student can proceed to distinguish between minimal pairs in which stress is the phonemic element. Since this is observable in English, it is a good idea to start with some examples that will no doubt be meaningful to a speaker of English. See, for example:

1. I object to this idea.
2. She likes small objects.
These two sentences, used with an opposite verb stress, would most likely rupture the sound-meaning connection established.

#1. I object to this idea,
#2. She likes small objects, must sound ungrammatical to speakers of English. A student of Spanish then must be taught the phonemic value of stress. This could be done through visuals which show the actual situations described by the different stress assignment. For example, the forms of "tomaras" (that you would take) and "tomaras" (you will take (or drink)) could be illustrated by a scene of a man and his wife, before and after a party. The "before" section shows the man admonishing his wife at the door: "No tomaras vino, verdad?" (you won't drink wine, will you?). The "after" section shows a green-faced lady, back at home. "Te dije que no tomaras vino!" (I told you not to drink wine!) A whole set of visuals could be devised to illustrate the phonemic function of stress. Exercises could then be written on the use of both stresses. Even though patterns are easily observable in the verb forms, stress has to be memorized in the noun and adjective forms, as in English.

2. Verb forms should be divided in four and even five slots in a textbook presentation. This division of the verb forms has been suggested by Stockwell and Bowen, (see Insert II) and reinforced

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by Hooper. (She proposes, for example, to divide a future form as such: am+a+r+e+mos). We propose here that this suggestion be applied to textbook writing. It has for definite advantage to separate the morphological parts of a verb. It could be found that at the very beginning, the standard division (infinitive + ending) is a better learning device, from a mechanical point of view. But as soon as the students have learned enough verb tenses to understand their basic characteristics, they should become aware of the clues given by their various morphemes. A student would profit from understanding the function of each part of a verb; once he understands them he will know how to generate any verb form he likes. Separating the morphemes will make the differences between tenses and persons easily localized. The reverse is also true, since it will also make apparent the fact that traditionally marked "exceptions" often appear regular when related to morphologically similar forms in the paradigm. A good example of that is stress, which brings us to the next point.

3. Stress should be used as a key to verb forms.

At different points of this discussion, we pointed out the consistency of stress within each paradigm. Hooper's analysis of verb stress could indeed help a student primarily because it reduces the number of "excep-
tions" which hamper the learning process and secondly, because it makes the tenses easier to learn, since they then carry two distinctive features: the tense-marker and the stress (even though stress is not as specific to a tense than the tense-marker is).

4. Forms that undergo diphthongization should indicate it in their lexical entry.

Hooper suggested lexical entries such as: "contar" /k o nt/ for diphthongizing forms. While the phonetic symbols might confuse students who have not been exposed to them, I see no reason not to list entries in the following manner:

"comer": to eat.
"perder" (ie) to lose.
"dormir" (ue,u) to sleep. etc.

This is already done in some textbooks, and it should be generalized. These forms have a historical explanation, and also phonological derivations, as we mostly saw in Harris's discussion. But since they ultimately have to be memorized, I see no more practical solution than to include their vowel alternations as one of their lexical feature. It stands to reason that the student would have to receive instruction on stem changes and vowel alternations, prior to being presented with this form of lexical entry.

5. Students should be made aware of the notion of grammar as a description of competence.
This point comes last because, first of all, it has already been mentioned, and also because it contains all the others. If students set out to learn a language, the least we can do is provide them with the best tools with which to do it. At the end, the student is the one who does most of the work. The methods used, the teacher's attitude, the textbook, only have a very partial responsibility on the final result. So the student is the most active factor in the language learning process. He should know how a second language is learned and know as much as possible how a first language is acquired. Grammar has been understood for too long as a set of rigid rules with pages of exceptions that one had to learn by heart, and apply, or else be laughed at by the target language natives. Students would benefit from the knowledge that grammar represents something that is actually going on, and which is also in a state of flux. Since the majority of foreign language students, in the initial stages of instruction, reflect that they have difficulty because they don't know the grammar of their own language, it seems appropriate at that time to show them that they know their grammar very well, but they just don't know how to describe it. By the same token, they already know some of the Spanish grammar. Indeed, such a positive fact should not be overlooked.
CONCLUSION

As a teacher, my own perspectives on grammar and first and second-language acquisition have been significantly broadened by the input of modern linguistics. The most recent speculations on language, however, are still so new that very little research has actually been done on their pedagogical possibilities. It would be a very redeeming enterprise to define relationships further between the concepts of transformations and generative grammar on one hand, and second-language learning on the other.

The language teacher would then mold his presentation of the language to fit the principles of language acquisition. Such an enterprise will require a lot of work, however, because of the basically different nature of the linguist's and the teacher's work. The linguist, in his work, deals with data of a given language as expressed by informants. By observation and deduction, he formulates the basic framework of the language, elaborating rules and their relationships. Lots of different approaches may seem acceptable; the only way to verify them is to check them against the actual language. However, this comparison is not at everybody's level, since a good deal of abstraction and training in the field is required to do so. It is then strictly a linguist's task to pronounce certain concepts as valid or non-valid.
The teacher, in his attempt to present a language to his students, has many physical factors to take into consideration. First of all, he has to work within the frame of a textbook, which already contains an order of presentation of data, reflects the emphasis of the authors, and usually comes along with a time schedule, which more or less dictates the amount of time to spend on each section of the material. Another very important factor in the validity of a teacher's work and the applicability of his methods, is the nature of the student. Students come with a large variety of linguistic backgrounds, different degrees of interferences and a diversity of learning styles. The information that the teacher wishes to impart has to be made so flexible that it will reach the students over those obstacles. A linguistic fact, as elaborated in a system is then not automatically a pedagogical fact. The link between the two, however obvious in theory, is quite difficult to achieve in practice. However, one important point can be taken into consideration on the basis of this work. I am referring here to the use of dialectal forms. These are often brought up by students, some with a home knowledge of the language, others with friends who know some of the language.

Forms like: *Cuentar (cf. contar)
*He rompido el vaso  (cf. he roto el vaso)
*Sabo la verdad     (sé la verdad)
are generalizations of paradigms; most of them are systematic in a given dialect, and should be respected as the manifestation of a certain group of native's grammar. In other words, a teacher's knowledge of grammar, as a description of competence, should be translated into tolerance of non-standard Spanish forms which are systematic. There will still be need to indicate to the class the difference between standard Spanish, and its uses around the world, and colloquial Spanish and its geographical limitations. But dialectal forms are a good place to stop dividing utterances in terms of "right" and "wrong".

This research has presented the main claims of traditional grammar, structuralism and generative phonology, as illustrated through their application to the presentation of stress assignment and diphthongization. Emphasis has been put on the newest of these approaches, for reasons that have hopefully been sufficiently stressed. So much has been written about the deficiencies of traditional grammar as applied in a teaching program, that it was not felt necessary to include it here. Structural linguistics still constitutes the central inspiration for teaching methods; however, NGP has brought so much more translatability and elucidation to the transformational views that there is reason to believe that transformational generative grammar might find more of a place in applied linguistics in the future.
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