STUDIES ON PORTUGUESE PHONOLOGY, MORPHOLOGY AND SYNTAX.

by

Solange de Azambuja Lira

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BY
Solange de Azambuja Lira

Approved: [Signature]
Professor in charge of thesis on behalf of the Advisory Committee

Approved: [Signature]
Chairman of the Department of Speech Communication

Approved: [Signature]
Dean of the College of Graduate Studies
TABLE OF CONTENTS

ABSTRACT 1

CHAPTER

I  INTRODUCTION 3

II  PHONOLGY 10

2.0. Definitions 10
2.1. The Phoneme 12
2.2. The Criteria For Setting up the Phonemes 13
2.3. Suprasegmental Phonemes 14
2.31. Stress 14
2.4. The Syllable 15
2.41. Syllable Boundary 16
2.42. Syllable Patterns 17
2.43. Syllable Division and Juncture 19
2.5. Segmental Phonemes 19
2.51. Vowel Phonemes 19
2.52. Consonant Phonemes 28
2.53. Semivowels 43
2.6. Distributional Restrictions 45
2.61. Vowels 45
2.62. Consonants 47

III  MORPHOLOGY 53

3.0. Definitions 53
3.1. Inflectional Analysis 56
3.11. Nouns 56
3.111. Number Inflection 56
3.112. Inherent Gender 60
3.12. Adjectives 61
3.121. Number Inflection 62
3.122. Gender Inflection 62
3.123. Common Gender Adjectives 66
3.13. Verbs 67
3.131. General Verb Form 68
3.1311. Stem 72
3.1312. Inflectional Affixes 73
3.132. Non-Finite Verb Forms 78
3.2. Derivational Analysis
   3.21. Governing Derivation
         3.211. Noun Formative Suffixes
         3.212. Adjective Formative Suffixes
         3.213. Verb Formative Affixes
         3.214. Adverbial Formative Suffix
   3.22. Restrictive Derivations
         3.221. Noun Patterns
         3.222. Adjective Patterns
         3.223. Noun or Adjective Patterns
         3.224. Verb Pattern
   3.32. Compound Derivation

IV. SYNTAX

4.0. Definitions
4.1. Kernel Sentences of Portuguese
   4.11. According to the Type of Intonation
   4.12. According to the Clause Type
      4.121. Equational Clause Type
      4.122. Intransitive Clause Type
      4.123. Transitive Clause Type

V. CONCLUSION

LIST OF TABLES

TABLE 1  Syllable Pattern Distribution  18
TABLE 2  Vowel Phonemes in Portuguese  20
TABLE 3  Consonant Phonemes  28
TABLE 4  Semivowels  43
TABLE 5  Vowel Distributional Restriction  47
TABLE 6  General Form of Portuguese Verbs  69

BIBLIOGRAPHY  103
This thesis covers some fundamental points of Portuguese language. Its presentation follows the structural descriptive method which in analyzing a language progresses through three levels of structure: phonology, morphology and syntax.

The purpose of this study is to analyze Portuguese language under the scientific framework of modern linguistics. The author is primarily interested in discovering and describing as concisely and accurately as possible the interrelationships and patterns which make up the intricate structure of Portuguese language. This study is directed to the communication researcher who wants to study language expression and the language student.

Chapter I, Introduction, states briefly the purpose of the study, its limits and its methodology. Chapter II, Phonology, concentrates mainly on the segmental and supra-segmental phonemes of Portuguese and its main allophones. Chapter III, Morphology, focuses on the inflectional and derivational forms of Portuguese nouns, verbs and adjectives. Chapter IV, Syntax, describes the basic or kernel
sentences of Portuguese. Chapter V, Conclusion, justifies the exclusion of semantics in the thesis and suggests the need for further study of Portuguese under the area of generative grammar and semantics.

Portuguese language has been primarily analyzed under the modes of traditional grammar because Brazilian linguistics is still very much dominated by what is called "idealism" in linguistics. Therefore, the main contribution of this study lies in the fact that it attempts to systematize the language and show that language structures are regular and that when they change they do so regularly.

Language is regarded as a system of communication where human utterances and attitudes are no longer regarded as isolated and individual events but are studied within the general framework of a system of relations which determine the structures of all these events.
CHAPTER I

INTRODUCTION

The most important subsystem of communications is language. No theory of communications can avoid discussing language. When the communications researcher studies language his most primary interest is to show how man uses his language in a functional way. The communication researcher needs the help of the linguist to be able to define the characteristics of expression such as the minimum distinctive sounds, the minimum meaningful utterances and their patterns of arrangements in higher levels. This study aims to provide a linguistic, scientific description of Portuguese language which would be useful for the communication researcher, the language student, foreigner and native as well.

The methods of analysis in modern linguistics differ in detail and also in important theoretical principles. But all of them start from a common assumption, that is they regard the structure of a language as a system of communication. They are concerned with discovering and describing as concisely and accurately as possible the
interrelationships and patterns which make up the structure of language. Human utterances and attitudes are no longer regarded as isolated and individual events but are studied within the general framework of a system of relations which determine the structures of all these events.

This study does not adhere to one specific school of analysis but has chosen from various approaches and techniques those which seem to be most helpful in describing Portuguese structures clearly.

I have followed the traditional order of presentation which divides a language into three main systems: phonology, morphology and syntax. A knowledge of one system is necessary for the study of the subsequent ones. I have decided to restrict the presentation of each of the three systems, especially the last two, so that I could include examples for each component that is listed and discussed rather than covering a wider range of topics with sparser illustration. The data used in the preparation of this description have been gathered personally from native speakers and supplemented by various accounts of Portuguese phonology and morphology. It is my belief that to give examples in Portuguese only in conventional spelling would invalidate the study. Therefore, for the most part, I have given a phonemic transcription of Portuguese wherever it
was at all relevant.

In chapter II, Phonology, I have dealt with segmental and suprasegmental phonemes and their allophones. The phonemes were derived mainly from the gathering of data from tapes of conversations between the writer and an informant, Lucila Dultra, a sophomore at the University of Delaware. Both speak the carioca dialect from Rio de Janeiro consequently all rules and descriptions furnished are based on spoken colloquial Portuguese from Rio de Janeiro. The principle of contrast and complementation was the main procedure employed to derive the stock of phonemes.

In chapter III, Morphology, the analysis focuses on the derivational and inflectional forms of Portuguese nouns, verbs and adjectives. Inflection and derivation were considered the major layer in the analysis of Portuguese structure. Words were classified as nouns, verbs and adjectives depending on their pattern of affixation. The affixes were analyzed by stating the list of morphemes which marked them and the arrangements in which these morphemes occurred relative to each other in utterances. A morpheme may appear in more than one phonemic shape—allomorphs. The alternation in shape of the morphemes were predicted in terms of the environment in which they occurred and/or the morphophonemic statements made.
Chapter IV, Syntax, is based on the inference that the syntax of a language can be studied through the analysis of its basic or kernel sentence patterns. The model used for the analysis of the basic sentences was essentially the tagmemic model. The tagmemic model analyzes language elements in terms of the tagmeme, a correlation between form and function. The tagmemic model was considered the most adequate one for the analysis of the syntax of a language because of its correlation of form and function. The sentences used for this work were sorted from both the conversations on the tapes and from my competence as a native speaker of Portuguese.

The analyses of Portuguese language most readily available to me and relevant to this study were: Robert Hall's "The Unit Phonemes of Brazilian Portuguese," Studies in Linguistics, I, no. 15, (April, 1943), David Reed and Yolanda Leite's, "The Segmental Phonemes of Brazilian Portuguese," Phonomics, Kenneth Pike, (Ann Arbor: The University of Michigan Press, 1967) pp. 174-202. Descriptions nearer to the one outlined in the main body of the present work can be inferred from accounts of Portuguese phonology and morphology by Joaquim Mattoso Camara, Jr. His most important work for the present research is Estrutura da Língua Portuguesa, (Petrópolis: Editora Vozes Limitada,
There Mattoso Camara presents the main points of Portuguese phonology and morphology by employing a scientific methodology. In the phonology he presents the segmental, suprasegmental phonemes emphasizing some special problems in Portuguese phonology like "nasal" vowels, semi-vowels. In the morphological considerations he limits himself to the analysis of Portuguese inflectional patterns. The related research in the field is also mentioned briefly. Other accounts of Portuguese structure are done in more traditional modes and are not relevant to this study.

The idea that language can be the specific concern of a systematic and empirically verifiable theory is by no means universally accepted. Brazilian linguistics is still very much dominated by what is called "idealism" in Romance linguistics. Many of our most notable scholars see language only as a manifestation of an individual personality, as the reflection of man's creative mind, and therefore oppose the idea of viewing language as a system, as a whole, as a means of communication among members of a society.

The conceptions noted above have shielded the minds of many Brazilian scholars from the merits of a scientific

method in linguistics. Even now many of our grammars are based on traditional grammatical approaches. Our definitional system still employs circular notional and relational definitions for language structures instead of trying to define them in accordance with the range of situations in which the forms occur. A noun, for example, is often defined as a "name of a place, person or thing." The only way to determine that a word like verdade 'truth' is a thing is to identify the word referring to it as a noun. This circularity and subjectivity makes it very difficult for the reader to understand what a noun is. Many times Latin rules are applied to Portuguese without taking into account the differences between the two languages. The adjective in Portuguese, for instance, is said to be inflected for degree when actually the so-called "inflection for degree" is a process of derivation instead. In addition to such inaccuracies, only the written language is taken into account in the analysis of Portuguese in traditional grammars. In most modern approaches to language study it is readily recognized that there is an extreme difference between what is spoken and what is often prescribed by the traditional grammars.

The main contribution of this study, then, is its attempt to systematize the Portuguese language, to demonstrate that language structures are regular, and to show
that when they change they do so regularly.

In a study with the aims and scope of the present one it is impossible either to trace the history of the different conceptions of analysis further or to enter into further dispute about the weaknesses and strengths inherent in each type of analysis. Suffice it to say that this study will describe the structure of Portuguese rather than to prescribe it. The method to be used for this purpose is mainly one of redefinition. I have tried to redefine important structures of Portuguese under the modes of a scientific approach to language analysis.
CHAPTER II

PHONOLOGY

2.0. Definitions.

A descriptive structural grammar ... progresses upward through three levels of structure. The first or lowest level deals with the system of speech sounds employed by native speakers .... The study of this level is called phonology. The next higher level is concerned with the meaningful forms made from the individual speech sounds. Generally speaking, we may say that it deals with words and their meaningful parts. This is the realm of morphology. The top level treats of the ways in which words are arranged to form sentences, and we are in the area of syntax.2

Phonology, our first level of analysis deals with the system of sounds produced by the native speakers of Portuguese. The sounds of a language may be described in three ways: (1) by their manner and points of articulation, (2) by their distribution, and (3) by their function.

In articulatory analysis, we describe the sounds in terms of the articulatory movements required to produce the significant sounds, as disturbances of the air flow.

in the form of sound waves, or in some instances, according to a manner in which the sounds strike our ears. In our analysis of the function of sounds we separate those sounds which are in contrastive distribution from those which are in complementary distribution. In our analysis of the function of sounds, the significant sounds which are in contrastive distribution will manifest different functions in these positions.

In short, phonology may be considered in two aspects: (1) phonetics, and (2) phonemics. Phonetics is concerned with the concrete realization of the sounds and deals with individuating differences among the members of one sound, e.g. the sound /t/ in words such as tio 'uncle' and teu 'yours', in Portuguese. Phonemics is concerned with the organization of sounds into classes of sounds called phonemes. As such phonemics deals with the abstract classification of significant sounds.

One of the few language universals is that languages contain vocoids and contoids, or, consonants and vowels. Vocoid and contoid refer to the sounds in their phonetic character. A vocoid is a sound which has air escaping from the nose or from the mouth without friction in the mouth. A contoid is a sound in which the air escapes from the nose or from the mouth with friction localized at
some point, and sounds in which the air stream has no need to escape.

The terms vowel and consonants refer to the sounds in phonemic analysis. Vowels are phonemes which are largely comprised of vocoids, generally syllabic. Consonants are phonemes whose manifestation is generally nonsyllabic, and are largely comprised of contoids.

One objective of this work is to determine the phonetic distinctions in Portuguese which have a differential value and establish the system of phonemes and their most important allophones.

2.1. The Phoneme. The phoneme is the "minimal unit of distinctive sound feature." For example, the words /karu/ carro 'car' and /karu/ caro 'car' sound alike except for the phonemes /r/ and /r/. The minimal difference in sound however, is correlated with a difference in meaning. Therefore this difference is significant and hence the sounds /r/ and /r/ are in contrast and must be members of two different phonemes.

A phoneme therefore is not a concrete individual sound but a family or class of similar sounds. For instance,

the phoneme /t/ in the word /patu/ pato 'duck' and in the word /tiu/ tio 'uncle'. In the first instance the /t/ is realized as a post-dental voiceless stop and in the second example /tiu/, the /t/ is an alveo-palatal voiceless affricate [t̠ʃ] because of its position, before an /i/. If we substitute one for the other, however, it would not make a difference in meaning. As such, the sounds [t̠ʃ] and [t] are members of the same phoneme class /t/. Such variants of the same phoneme are called allophones, that is, sounds which may function as members of one phoneme family.

2.2. The Criteria for Setting up the Phonemes. The basic methodology used in the analysis of the phonology of Portuguese is that described in Phonemics by Kenneth Pike.

From the phonetic data recorded, a phonetic chart was established, all pairs of segments which were suspicious because of their phonetic similarity were listed, and samples of the most similar environment in which the segments occurred were selected. From this process the phonemes which were in contrast or in free variation and their allophones which were in complementary distribution, were determined and listed.

4 Kenneth Pike, Phonemics (Ann Arbor: 1957)
2.3. Suprasegmental Phonemes.

2.31. Stress. In a spoken sentence none of the syllables is ever produced with the same intensity. Some syllables are weaker while others are stronger. This degree of prominence or emphasis which a syllable is spoken is called stress.

Stress in Portuguese is significantly contrastive and phonemic i.e., it is possible to change the meaning of a word by changing the place or intensity of the stress:

/ kaki / caqui 'Japanese persimmon'
/ káki/ caqui 'khaki'
/sabía / sabia 'I knew'
/ sabiá/ sabia 'sabia' (a kind of bird)

In Portuguese there are two phonemic stresses: the primary stress and the weak stress. The primary stress may occur on the ultimate, penultimate and on the antepenultimate syllables. For example:

/ rotulu / rotulo 'wrap'
/rotúlu / rotulo 'I wrap'
/tátu / tato 'tact'
/tatu/ tatu 'ant-eater'
2.4. The Syllable. Before moving to the discussion of the segmental phonemes and their main allophones it is necessary to examine the nature of the syllable in Portuguese for it will be used as a point of reference for statements concerning the occurrences of allophones and the distribution of phonemes.

A syllable may be defined phonetically as "a unit of sound comprising one or more segments during which there is a single chest pulse and a single peak of sonority or prominence", and phonemically as "the smallest unit of recurrent phonemic sequences."

In Portuguese the rate of utterance of a succession of syllables remains approximately the same no matter how many stresses there are or whether they fall in the stream of speech. This evenness of time-rate results in a type of rhythm called "syllable-timed" since it is determined by the number of syllables.

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2. Syllable-Boundary. The syllable boundary in Portuguese is defined by and coincides with the number and types of peaks of prominence. Syllable-boundary can be observed according to the following rules:

(1) After every single vowel followed by a single consonant. For example:

/ sa-u-di / saúde 'health'
/a-e-ryu / aéreo 'air'

(2) Before the stop consonant of clusters of two consonants composed of stop and liquid or stop and semivowel. For example:

/a-bra-su / abraço 'hug'
/so-le-trar/ soletrar 'to spell'
/a-kwa-ryu/ aquário 'aquarius'

(3) Between the two consonants of other consonant clusters. For example:

/diš-pi-dir / despedir 'to dismiss'
/kan-tyu/ canto 'chant'
/pañ-ty-da/ partida 'departure'

(4) Before the stop in clusters of more than two consonants. For example:
2.42. Syllable Patterns. The syllable patterns in Portuguese, that is, the permissible combinations of vowel (V) and consonant (C) in the syllable are the following:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Example</th>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>/e/</td>
<td>é</td>
<td>'is'</td>
</tr>
<tr>
<td></td>
<td>/ru-i-du/</td>
<td>ruído</td>
<td>'noise'</td>
</tr>
<tr>
<td></td>
<td>/i-Ta/</td>
<td>ilha</td>
<td>'island'</td>
</tr>
<tr>
<td>VC</td>
<td>/ar/</td>
<td>ar</td>
<td>'air'</td>
</tr>
<tr>
<td></td>
<td>/ar-ka/</td>
<td>arca</td>
<td>'chest'</td>
</tr>
<tr>
<td></td>
<td>/e-gu-iš-ta/</td>
<td>egoista</td>
<td>'selfish'</td>
</tr>
<tr>
<td></td>
<td>/ru-if/</td>
<td>ruir</td>
<td>'to collapse'</td>
</tr>
<tr>
<td>VCC</td>
<td>/aws/</td>
<td>aos</td>
<td>'to the'</td>
</tr>
<tr>
<td>CV</td>
<td>/ka-za/</td>
<td>casa</td>
<td>'house'</td>
</tr>
<tr>
<td></td>
<td>/ma-ka-ku/</td>
<td>macaco</td>
<td>'monkey'</td>
</tr>
<tr>
<td></td>
<td>/la/</td>
<td>lá</td>
<td>'there'</td>
</tr>
<tr>
<td>CVC</td>
<td>/mar/</td>
<td>mar</td>
<td>'sea'</td>
</tr>
<tr>
<td></td>
<td>/ma-tar/</td>
<td>matar</td>
<td>'to kill'</td>
</tr>
<tr>
<td></td>
<td>/ma-ř-tir/</td>
<td>martir</td>
<td>'martyr'</td>
</tr>
<tr>
<td></td>
<td>/to-kan-du/</td>
<td>tocando</td>
<td>'playing'</td>
</tr>
</tbody>
</table>

? symbolizes environment.
<table>
<thead>
<tr>
<th>Environment</th>
<th>Ii</th>
<th>In</th>
<th>Me</th>
<th>Fi</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>VC</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>VCC</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>CV</td>
<td>*</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CVC</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CCV</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CCVC</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CVCC</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CVCCC</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Abbreviations.**

- Ii = In isolation
- In = Initial
- Me = Medial
- Fi = Final

**TABLE 1**

SYLLABLE PATTERN DISTRIBUTIONAL CHART

- /pra-sa/ praça 'square'
- /sem-pri/ sempre 'always'
- /re-pre-za/ reprêsa 'dam'
- /kre/ crê 'believes'
- /trem/ trem 'train'
- /tran-zi/ transe 'trance'
- /en-tran-du/ entrando 'entering'
- /en-trem/ entrem 'come in'
- /mais/ mais 'more'
- /ja-mays/ jamais 'never'
- /transparente/ transparente 'transparent'
- /trens/ trens 'trains'
- /paes/ paes 'breads'
2.43. Syllable Division and Juncture. When a phonological utterance whose last syllable ends in environment VC is adjoined to another phonological utterance starting in environment V, the final consonant of the former forms a syllable with the vowel of the latter. For example:

/maɾ/ mar 'sea'
/awtu/ alto 'high'
/ma-raw-tu/ mar alto 'high sea'
/salaɾ/ salas 'room'
/are̞žadaɾ/ are̞jadas 'ventilated'
/sa-la-za-re-ža-daɾ/ salas are̞jadas 'ventilated rooms'

2.5. Segmental Phonemes. The segmental phonemes of Portuguese are comprised of seven vowel phonemes, nineteen consonant phonemes and two semivowel phonemes. These twenty-eight sounds are called segmental because each "is a segment of the continuous flow of speech." They may be analyzed as units separated from each other.

2.51. Vowel Phonemes. Three variables in the position of the vocal organs are particularly significant in the description of Portuguese vowels. The most important is the position at the top of the tongue in the oral cavity. This

---

position varies in two dimensions: that of tongue-height (high-mid-low) and that of tongue-advancement (front-central back). The third variable is the position of the lips which may be rounded or unrounded in the production of the sounds.

These variables are the basic distinctive features to classify the vowels in Portuguese and provide us with the following table:

**TABLE 2**

VOWEL PHONEMES IN PORTUGUESE

<table>
<thead>
<tr>
<th></th>
<th>Front</th>
<th>Center</th>
<th>Back</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>i</td>
<td></td>
<td>u</td>
</tr>
<tr>
<td>Mid</td>
<td>e</td>
<td>a</td>
<td>o</td>
</tr>
<tr>
<td>Low</td>
<td>e</td>
<td>a</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>(unrounded)</td>
<td>(unrounded)</td>
<td>(rounded)</td>
</tr>
</tbody>
</table>

(1) High Front unrounded: / i /

Distribution: Word initial, medial and final.

Allophones:

- [i] /Occurs in unstressed syllables /
- [ɨ] /Occurs before nasal consonants /
- [i̯] /Occurs in a stressed syllable before a sibilant consonant next to a juncture/
- [i] /elsewhere/

Examples:

[ɨ] [paɾɨ] /paɾi/ **part**
[i]  [If²du] /lindo/ lindo  'beautiful'
[i]  [fiY] /fiš/  fiz  'I did'
[i]  [iIₐ] /iIa/  ilha  'island'

Description:
[i]  voiceless high front unrounded
[i]  voiced high front unrounded nasal
[i]  voiced high front unrounded vowel followed by a palatal semivowel
[i]  voiced high front unrounded oral

Contrast:
/iIa/  ilha  'island'
/oIa/  olha  'look'
/masa/  massa  'dough'
/misa/  missa  'mass'
/sedi/  sède  'thirst'
/seda/  seda  'silk'

(2) Front-mid unrounded: /e/

Distribution: Word initial, medial, final

Allophones:
[e]  /Occurs before nasal consonants/
[eY]  /Occurs in stressed syllable before a sibilant consonant next to a juncture/
[e]  /elsewhere/
Examples:

\[
\begin{array}{ll}
\text{[ ë ]} & \text{[ vëntu ]} /\text{ventu}/ \text{vento 'wind'} \\
\text{[ eY ]} & \text{[ feYš ]} /\text{feš}/ \text{fëz 'he did'} \\
\text{[ e ]} & \text{[ medu ]} /\text{medu}/ \text{mëdo 'fear'} \\
\end{array}
\]

Description:

\[
\begin{array}{ll}
\text{[ ë ]} & \text{mid front nasal} \\
\text{[ eY ]} & \text{mid front oral followed by a palatal semivowel} \\
\text{[ e ]} & \text{mid front unrounded vowel} \\
\end{array}
\]

Contrast:

\[
\begin{array}{ll}
/ \text{pelu } / & \text{pelo } 'fur' \\
/ \text{pulu}/ & \text{pulo } 'jump' \\
/ \text{eli } / & \text{êle } 'hé' \\
/ \text{ali } / & \text{alí } 'there' \\
/ \text{vose } / & \text{você } 'you' \\
/ \text{nôsa } / & \text{nossa } 'ours' \\
\end{array}
\]

(3.) Front low unrounded \(/\text{ê}/\)

Distribution: Word initial, medial, final

Allophones:

\[
\begin{array}{ll}
\text{[ë}^\text{Y}] & \text{/Occurs in stressed syllables before a sibilant consonant next to a juncture/} \\
\text{[ë]} & \text{/elsewhere/} \\
\end{array}
\]
Examples:
[ε]  [ε]  /pε s/  pes  'feet'
[εu] /ε lu/  elo  'link'
[ɛlə] /ɛ la/  tala  'canvas'
[ɛlə] /ɛ la/  sela  'saddle'

Description:
[ε]  Low front unrounded followed by a palatal semivowel
[ε ]  Low front unrounded

Contrast:
/ε lu /  elo  'link'
/ala /  ala  'aisle'
/sɛ la /  sela  'saddle'
/sɔ la /  sola  'sole'
/pε /  pe'  'foot'
/po /  po'  'dust'

(4) Low central unrounded: /a/

Distribution: Word initial, medial, final

Allophones:
[ə ]  /Occurs in unstressed syllables/
[œ ]  /Occurs before nasal consonants/
[aY ] /Occurs in stressed syllables before a sibilant consonant next to a juncture/
\[ \text{a} \] /elsewhere /

Examples:

\[ \text{e} \] [\text{bəndə}] /\text{banda} / \underline{\text{band}} \quad \text{'band'}
\[ \text{ē} \] [\text{kəma}] /\text{kama} / \underline{\text{cama}} \quad \text{'bed'}
\[ \text{aY} \] [\text{pəf̩}] /\text{paś} / \underline{\text{paz}} \quad \text{'peace'}
\[ \text{a} \] [\text{nada}] /\text{nada} / \underline{\text{nada}} \quad \text{'nothing'}

Description:

\[ \text{e} \] Voiced close low center unrounded oral
\[ \text{ē} \] Voiced close low center unrounded nasal
\[ \text{aY} \] Voiced open low center unrounded oral followed by a palatal semivowel
\[ \text{a} \] Voiced open low center unrounded oral

Contrast:

/\text{ala} / \underline{\text{ala}} \quad \text{'aisle'}
/\text{ela} / \underline{\text{ela}} \quad \text{'she'}
/\text{gala} / \underline{\text{gala}} \quad \text{'gala'}
/\text{gula} / \underline{\text{gula}} \quad \text{'gluttony'}
/\text{asa} / \underline{\text{assa}} \quad \text{'he bakes'}
/\text{asu} / \underline{\text{asso}} \quad \text{'I bake'}

(5) High back rounded: /\text{u} /

Distribution: Word initial, medial, final
Allophones:

[ u̯ ] /Occurs before nasal consonants/
[ u̯ ] /Occurs in stressed syllable before a sibilant consonant next to a juncture/
[ u ] /elsewhere/

Examples:

[ u̯ ] [ nʊ̯nka ] /nunka/ nunca 'never'
[ u̯ ] [ pʊ̯ ] /pʊ̯ / pus 'I put'
[ u ] [ duča ] /duča/ ducha 'douche'

Description:

[ u̯ ] Voiced high back rounded nasal
[ u̯ ] High back rounded oral followed by a palatal semivowel
[ u ] Voiced high back rounded oral

Contrast:

/ uma / uma 'one'
/ uza / usa 'she wears'
/ luta / luta 'she fights'
/ lata / lata 'can'
/ sumu / sumo 'juice'
/ suma / suma 'vanish' (imperative)
(6) Mid back rounded: /ο /

Distribution: Word initial, medial, final

Allophones:

[ œ ] /Occurs before nasal consonants/
[ o ] /elsewhere/

Examples:

[ œ ] [ kōn ] /kon/ com 'with'
[ o ] [ mosu ] /mosu/ moço 'young man'

Description:

[ œ ] Mid back rounded nasal
[ o ] Mid back rounded oral

Contrast:

/ ovu / ővo 'egg'
/ ivu / Ivo 'Ivo' (a person's name)
/ mosa / moça 'young woman'
/ misa / missa 'mass'
/ avo / avó 'grandmother'
/ avo / avò 'grandfather'
(7) Back low rounded: /ɔ /

Distribution: Word initial, medial, final.

Allophones:

[ɔ y] /Occurs in stressed syllables before a sibilant consonant next to a juncture/

[ɔ ] /elsewhere /

Examples:

[ɔ y ] [nɔ yʃ] /noʃ/ nós 'we'
[ɔ ] [nɔ ] /nɔ / nó 'knot'

Description:

[ɔ y ] Low back rounded followed by a palatal semivowel

[ɔ ] Low back rounded

Contrast:

/ɔ ða / olha 'she looks'
/ i la / ilha 'island'
/ 1ɔ / lo 'windward' (naut.)
/ la / la 'there'
/ sɔ ka / soca 'she mashes'
/ sɛ ka / seca 'he dries'
2.52 Consonant Phonemes.

**TABLE 3**
CONSONANT PHONEMES

<table>
<thead>
<tr>
<th>Bilabial Labio-</th>
<th>Plosive-</th>
<th>Alveolar Palatal Velar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental</td>
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<td>dental</td>
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<th>Stops</th>
<th>Fricatives</th>
<th>Fricatives</th>
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<tr>
<td>vl</td>
<td>p</td>
<td>f</td>
<td>s</td>
<td>ŝ</td>
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<td>vd</td>
<td>b</td>
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<td>z</td>
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<table>
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<tr>
<td>m</td>
<td>n</td>
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<td>lateral</td>
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<td>l</td>
</tr>
<tr>
<td>vibrant</td>
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</tr>
<tr>
<td>trill</td>
<td>-</td>
<td>-</td>
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<tr>
<td>flap</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

(1) Bilabial Voiceless stop: /p/

**Distribution:** Word initial and medial

**Allophone:**

[ p ] /Occurs in all circumstances/

**Example:**

- [patu] /patu/ pato 'duck'
- [tupi] /tupi/ tupi
- [apitu] /apitu/ apto 'able'
(3) Post-dental voiceless stop: /t/

Distribution: Word initial, medial

Allophones:

- [t] /Occurs before /i/
- [t] /elsewhere/

Examples:

- [t] /tinta/ tinta 'paint'
- [t] /ata/ ata 'minutes'

Description:

- [t] Alveo-palatal voiceless affricate
- [t] Post-dental voiceless stop

Contrasts:

- /tia/ tia 'aunt'
- /tua/ tua 'yours'
- /anta/ anta 'anta'
- /anda/ anda 'she walks'

(4) Post-dental voiced stop: /d/

Distribution: Word initial, medial

Allophones:

- [d] /Occurs before /i/ /
[\[d\]] \textit{/d\textasciicircum{acutec}/}

Examples:

[\[\dd\]] [\textit{\dd\textasciicircum{acutec}d}u] /\textit{\dd\textasciicircum{acutec}d\textasciicircum{acutec}}/ \textit{\dd\textasciicircum{acutec}d\textasciicircum{acutec}} 'dictation'

[\[d\]] [\textit{\dd\textasciicircum{acutec}d}u] /\textit{\dd\textasciicircum{acutec}d\textasciicircum{acutec}}/ \textit{\dd\textasciicircum{acutec}d\textasciicircum{acutec}} 'dice'

Description:

[\[\dd\]] Alveo-palatal voiced affricate

[\[d\]] Post-dental voiced stop

Contrasts:

/\textit{dia/ dia/ /day/}

/\textit{tia/ tia/ 'aunt/}

/\textit{dor/ dor/ 'pain/}

/\textit{kor/ kor/ 'color/}

(5) Velar voiceless stop: /k/

Distribution: Word initial, medial.

Allophone:

[\[k\]] /\textit{Occurs under all circumstances/}

Examples:

[\[fak\textasciicircum{cedilla}\]] /\textit{fak\textasciicircum{cedilla}/ /faca/ /knife/}

[\[oku\]] /\textit{oku/ /\textit{\dd\textasciicircum{acutec}co/ /hollow/}

[\[k\textasciicircum{cedilla}ru\]] /\textit{k\textasciicircum{cedilla}ru/ /\textit{quero/ /I want/}
Description:

[k ] Velar voiceless stop

Contrasts:

/ kama / cama 'bed'
/gama / gama 'range'
/ oku / õoo 'hollow'
/ olu / õlho 'eye'

(6) Velar voiced stop: / g /

Distribution: Word initial, medial

Allophone:

[ g ] /Ocurs under all circumstances/

Examples:

[ garfu ] /gaɾfu/ garfo 'fork'
[fugə ] /fuga/ fuga 'escape'

Description:

[ g ] Velar voiced stop

Contrasts:

/ pagu / pago 'I pay'
/ patu/ pato 'duck'
/ giar / giar 'to drive'
/ ciaɾ / chiar 'to hiss'
(7) Labio-dental voiceless fricative: / f /

Distribution: Word initial, medial

Allophones:

[f ] /Occurs under all circumstances/

Examples:

[fake ]:/faka/ faca 'knife'
[safra ]/safra/ safra 'harvest'

Description:

[f] Labio-dental voiceless fricative

Contrasts:

/faka/ faca 'knife'
/vaka/ vaca 'cow'
/tifu/ tifo 'typhoid'
/tinu/ tino 'sense'

(8) Labio-dental voiced fricative: / v /

Distribution: Word initial, medial

Allophones:

[v ] /Occurs under all circumstances/

Examples:

[v'entu ]:/ventu/ vento 'wind'
[lav o ]:/lava/ lava 'she washes'
Description:

[v ] Labio-dental voiced fricative

Contrasts:

/ lava / lava 'she washes'
/ lata / lata 'can'
/ ventu / vento 'wind'
/ lentu / lento 'slow'

(9) Alveolar voiceless fricative: / s/

Distribution: Word initial, medial

Allophones:

[ s ] /Occurs under all circumstances/

Examples:

[ mosu ] /mosu/ moço 'young man'
[ sua ] /sua/ sua 'yours'

Description:

[ s ] Alveolar voiceless fricative

Contrasts:

/ sua/ sua 'yours'
/ tua / tua 'yours'
/ ata/ ata 'minutes'
/ asa / assa 'he bakes'
(10) Alveolar voiced fricative: /z/

Distribution: Word initial and medial

Allophones:

\[ z \] /Occurs under all circumstances/

Examples:

\[ mezə \] /meza/ mesa 'table'
\[ z̞əŋ eɾ \] /zangar/ zangar 'to get angry'

Description:

\[ z \] Alveolar voiced fricative

Contrasts:

/ aza / asa 'wing'
/ asa / assa 'he bakes'
/ zelu / zelo 'zeal'
/ żelu / gelo 'ice'

(11) Palatal voiceless fricative: /s/

Distribution: Word initial, medial, final

Allophones:

\[ ʂ \] /Occurs under all circumstances/

Examples:

\[ źuva \] /șuva/ chuva 'rain'
[ mešer ] /mešeɾ/  mešer  'to stir
[ meš̪ ] /meʃ/  mês  'month'

Description:

[ʂ]  Palatal voiceless fricative

Contrasts:

/ fiš /  fiz  'I did'
/ fiŋ /  fim  'end'
/ šavi /  chave  'key'
/ lavi /  lave  'wash'(imperative)
/ ašar /  achar  'to find'
/ ažar /  ažar  'bad luck'

(12) Palatal voiced fricative: / ź /

Distribution: Word initial, medial, final

Allóphones:

[ ź̪ ] /Occurs under all circumstances/

Examples:

[ žako ] /zaka/  jaca  'jack'
[ kazo ] /kaza/  čaja  'hog plum'

Description:

[ ź̪ ]  Palatal voiced fricative
Contrasts:
/ ža /  ja  'now'
/ ma /  ma  'bad'
/laži /  laje  'slab'
/ lati /  late  'it barks'

(13) Bilabial voiced nasal: / m /

Distribution: Word initial, medial, final

Allophones:

[m] / Occurs in syllable final position before bilabial stops/
[w] / Occurs before / + / after back vowels and semivowels/
[ʊ] / Occurs after back vowel and semivowel/
[m] / elsewhere/

Examples:

[m]  [tempu ]  / tempu/  tempo  'weather'
[w]  [bɔw̃ ]  / bom/  bom  'good'
[ʊ]  [bɔs̃ ]  / bomɔ̥/  bons  'good'(pl.)
[m]  [mərtə ]  / manta/  manta  'shawl'

Description:

[m]  Bilabial voiced brief nasal
[w]  Nazalized back glide
[∅ ] Nasalization of the preceding vowel

[m ] Bilabial voiced nasal

Contrasts:

/mala/ mala 'bag'
/sala/ sala 'room'
/gama/ gama 'range'
/gata/ gata 'cat' (fem.)
/sim/ sim 'yes'
/bom/ bom 'good'

(14) Alveolar voiced nasal: /n /

Distribution: Word initial, medial, final

Allophones:

[ n ] /Occurs in syllable final position before post-dental stops/

[∅ ] /Occurs before fricatives and vibrants/

[n ] /elsewhere/

Examples:

[ n ] [lɛⁿd u]/lendu/ lendo 'reading'
[∅ ] [sɛsu]/sensu/ senso 'sense'
[n ] [n ɔ ] /nɔ/ no 'knot'
Description:

[ n ] Post-dental voiced brief nasal
[ ø ] Nasalization of the preceding vowel
[ n ] Alveolar voiced nasal

Contrasts:

/nata/ nata 'cream'
/lata/ lata 'can'
/duša/ ducha 'douche'
/duna/ duna 'dune'
/lan/ lā 'wool'
/sem/ sem 'without'

(15) Palatal voiced nasal: /n/

Distribution: Word medial, final

Allophones:

[ n ] /Occurs in syllable final position before velar stops/
[ ŋ ] /Occurs before /+/ after front vowels and semivowels/
[ ø ] /Occurs after front vowels and semivowels/
[ n ] /elsewhere/

Examples:

[ n ] [maŋga] /manga/ manga 'mango'
[ ŋ ] [veŋ] /ven/ vem 'come'
[œ] [fiː̞] /fins/ fins 'ends'
[œ̞] [m̩nə] /manə/ manha 'cry'

Description:
[œ] Velar voiced brief nasal
[œ̞] Nasalized front glide
[œ] Nasalization of the preceding vowel
[œ̞] Palatal voiced nasal

Contrasts:
/mana/ mana 'sister'
/maña/ manha 'cry'
/teñ/ tem 'she has'
/tom/ tom 'tone'

(16) Alveolar voiced lateral: /l/

Distribution: Word initial and medial

Allophone:
[œ̞] /Occurs under all circumstances/

Examples:
[lagu] /lagu/ lago 'lake'
[kalu] /kalu/ calo 'corn'
[galoʃə] /galoʃə/ galocha 'galosh'
Description:

[ 1 ] Alveolar voiced lateral

Contrasts:

/ kalu / calo 'corn'
/ gaũu / galho 'branch'
/ lata / lata 'can'
/ gata / gata 'cat' (fem.)

(17) Palatal voiced lateral: / ũ /
Distribution: Word medial.

Allophone:

[ ũ ] /Occurs under all circumstances/

Examples:

[maũ ŵa] /maũa/ malha 'knit'
[gaũu ] /gaũu/ galho 'branch'

Description:

[ũ ] Palatal voiced lateral

Contrasts:

/ maũa / malha 'knit'
/ mala / mala 'bag'
(18) Alveolar voiced flap: /r/

Distribution: Word medial

Allophone:

[r] /Occurs under all circumstances/

Examples:

[karu] /karu/ caro 'expensive'
[garota] /garota/ garota 'girl'

Description:

[r] Alveolar voiced flap

Contrasts:

/karu/ carro 'car'
/karu/ caro 'expensive'

(19) Velar voiced trill: /ʁ/

Distribution: Word initial, medial, final

Allophone:

[ʁ] /Occurs under all circumstances/

Examples:

[riku] /ʁiku/ rico 'rich'
[karu] /kaʁu/ carro 'car'
[maʁ] /maʁ/ mar 'sea'
Description:

[ ō] Velar voiceless trill

Contrasts:

/ ōiku /        rico        'rich'
/ miku /        mico        'monkey'

253. Semivowels. In this analysis vowels and consonants were distinguished phonetically on the basis of the manifestation of friction or stoppage in the former, and their absence in the latter. In the pronunciation of semivowels, there is no notable friction, that is, they are characteristically vocalic in their composition. However, they are consonantal in their distribution. In Portuguese, the vowels almost always are the central of the syllable but the semivowels have consonantal distribution as in:

/ VCV /        /boy/    boi    'ox', /mař/ mar    'sea'
/ VC /          /aw/     ao     'to the', /iř/ ir    'to go'
/ CGV /         /kwatru/ quatro 'four'
/ pratu/ prato 'dish'

Table 4

Semivowels

<table>
<thead>
<tr>
<th>Bilabial</th>
<th>Palatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>w</td>
<td>y</td>
</tr>
</tbody>
</table>
(1) Bilabial semivowel: /w/

Distribution: Word medial, final

Allophones:

[w ]/Occurs before nasal consonants/
[w ] /elsewhere/

Examples:

[w ] [maw] /maw/ mau 'bad'

Description:

[w ] Nasalized bilabial semivowel
[w ] Bilabial semivowel

Contrasts:

/paw/ pau 'hand'
/paš/ paz 'peace'

(2) Palatal semivowel: /y/

Distribution: Word medial, initial

Allophones:

[y ]/Occurs before nasal consonants/
[y ] /elsewhere/
Examples:

[\l] [mẽ̞õ] /mayõ/ mãe 'mother'

[\r] [pə] /pə/ pai 'father'

Description:

[\l] Nasalized palatal semivowel

[\r] Palatal semivowel

Contrasts:

/ boy / boi 'ox'

/ boa / boa 'good' (fem.)

2.6. Distributional Restrictions. In any given language not all phonemes occur in all positions with respect to each other or with respect to the syllables on which they are realized.

Portuguese segmental phonemes occurrence is limited in the following way.

2.61. Vowels. The occurrence of vowels in Portuguese is limited by stress and by the presence of nasal vowels. The set of vowels under the limitations of these environments can be stated as following:

All vowels occur in stressed position. For example:
All vowels except /ɛ/ and /ɔ/ occur in a non-stressed non-final position if before nasal consonants.

For example:

/kanɛla/  canela  'cinnamon'
/pimenta/ pimenta  'pepper'
/funiw/  funil  'funnel'
/montawm/  montão  'big pile'
/peneyra/  peneira  'sieve'

Only /a/, /i/ and /u/ occur in a non-stressed final position. For example:

/sedi/  sêde  'thirst'
/sedu/  cedo  'early'
/seda/  seda  'silk'
TABLE 5

VOWEL DISTRIBUTIONAL RESTRICTION

<table>
<thead>
<tr>
<th></th>
<th>Stressed</th>
<th>Non-stressed, non-final</th>
<th>Non-stressed final</th>
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</thead>
<tbody>
<tr>
<td>a</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>u</td>
<td>+</td>
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<td></td>
<td>-</td>
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<tr>
<td>e</td>
<td>+</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

2.62. Consonants. The consonants in Portuguese undergo the following distributional restrictions:

(1) Sibilants.

. In syllable final position:

/ʃ/ : Occurs before silence or voiceless consonants in the first slot of the following syllable. For example:

/testa/ testa 'forehead'
/meš/ mes 'month'
/meš feštivu/ mes festivo 'festive month'
\[ / ì / : \text{Occurs before voiced consonants in the} \]
\[ \text{first slot of the following syllable. For example:} \]
\[ /\text{mežmu/} / \text{mesmo} \quad \text{same'} \]
\[ /\text{mežga/} / \text{nesga} \quad \text{a small piece'} \]
\[ /\text{mež bunitu/} / \text{mês bonito} \quad \text{beautiful month'} \]

\[ . \text{The sibilants} /s/ \text{and} /z/ \text{do not occur before} \]
\[ \text{other sibilants.} \]

\( (2) \text{ Nasals.} \)

\[ . \text{In syllable final position of a non-final} \]
\[ \text{syllable:} \]
\[ / \text{m/ Occurs before} /p/ \text{and} /b/. \text{For example:} \]
\[ /\text{sempri/} / \text{sempre} \quad \text{always'} \]
\[ /\text{samba/} / \text{samba} \quad \text{samba'} \]
\[ /\text{ńa/ Occurs before} /k/ \text{and} /g/. \text{For example:} \]
\[ /\text{nunka/} / \text{nunca} \quad \text{never'} \]
\[ /\text{tańga/} / \text{tanga} \]
\[ /\text{n/ Occurs elsewhere. For example:} \]
\[ /\text{lan/} / \text{lā} \quad \text{wool'} \]
\[ /\text{santa/} / \text{santa} \quad \text{saint'} \]
Before juncture:

/m/: Occurs after /o/, /u/ and /w/. For example:

/bom/ bom 'good'

/mawm/ mao 'hand'

/n/: Occurs after /a/. For example:

/san/ sa 'healthy'

/n~/: Occurs after /e/, /i/ and /y/. For example:

/se~n/ sem 'without'

/si~n/ sim 'yes'

/mayn~/ mae 'mother'

Further consonant distribution restrictions can be stated by their privilege of occurrence in syllable patterns.

The syllable patterns which have distinctive consonant positions are:

CV: Almost all consonants in Portuguese occur in this position. The exceptions are:

/w/

/y/ After consonant in the preceding syllable

9 See section 2.42. for complete list of patterns.
final position.

/r/, /n/ and /I/ After juncture or consonant in the preceding syllable final position.

VC: The consonants which occur in this position are:

/s/ /sešta/ cesta 'bag'
/ž/ /fižga/ fisga 'fishing spear'
/m/ /bom/ bom 'good'
/n/ /san/ sā 'healthy'
/ŋ/ /teŋ/ tem 'has'
/r/ /ařka/ arca 'chest'
/y/ /žeytu/ jeito 'knack'
/w/ /awtu/ alto 'tall'

CCV: The two consonant slots are filled by the following group of consonants:

/pr/ /prasa/ praça 'square'
/br/ /braza/ brasa 'ember'
/tr/ /atrazu/ atraso 'delay'
/dr/ /droga/ droga 'drug'
/gr/ /agriawm/ agrião 'watercress'
/kr/ /krer/ crer 'believe'
/fr/ /kō fri/ cofre 'safe'
VCC: This consonant pattern can be occupied by the following group of consonants: the first consonant slot after the vowel can be occupied by either /m/, /n/, /n̥/, /y/ or /w/, the second consonant slot is occupied by either /s̥/ or /z̥/. For example:

/boms/ bons 'good' (pl.)
/ləns/ lās 'wool' (pl.)
/fi̞ns/ fins 'ends'
/sa̞s/ sais 'salt' (pl.)
/aw̞s/ aos 'to the' (pl.)
/me̞zmu/ mesmo 'same'
/ne̞ga/ nesga 'a small piece'

VCCC: This consonant pattern can be occupied by the following combinations of consonants: the first consonant slot can be occupied by either /y/ or /w/, the
second slot by either /m/ or /n/ and the third slot by /s/.

For example:

/mawms/  maos  'hands'
/payns/  paes  'breads'
/mayns/  maes  'mothers'
CHAPTER III

MORPHOLOGY

3.0. Definitions. Morphology deals with the morphemes and their arrangements. The morphemes can be defined as "the smallest individually meaningful elements in the utterance of a language." 10

Considering a word as "any segment of a sentence bounded by successive points at which pausing is possible," 11 a morpheme may be defined as a word or part of a word. The word /meza/ 'tables' in Portuguese contains two morphemes: /meza/ meaning an article of furniture and /s/ meaning plural.

Morphemes can be classified in the following ways depending on their distributional relations to other morphemes. They can be bound, free morphemes and roots and affixes.

11 Ibid., p. 197.
A bound morpheme never occurs in isolation, such as the plural marker /-š/ in Portuguese. A free morpheme occurs in isolation, such as the word /meza/ 'table'.

Roots in general are single morphemes which carry the basic meaning of a word, they can be bound or free morphemes. Affixes are always bound morphemes and occur with roots. In Portuguese the affixed forms are either prefixes or suffixes. In the word /inativuš/ 'inactive', /in-/ is the prefix, /ativu/ the root and /š/ the suffix.

A morpheme may have more than one phonemic shape. The morpheme of plural in Portuguese is {s} which is realized as /š/~/~/ʃ~/~/iš/. The allomorph /ʃ/ occurs with roots ending in /š/. The allomorph /iš/ occurs with all other roots.

Allomorphs can be phonologically conditioned, that is, they are stated in relation to the phonemic shape of the morphemes with which they occur. Allomorphs can also be morphologically conditioned when the distribution is stated in relation to a specific list of morphemes.

In our analysis of Portuguese morphology we will limit ourselves to the description of open class forms and their derivational and inflectional formations. Thus
words will be classified as being nouns, adjectives, and verbs, according to certain patterns of affixations.

Walter Cook summarizes the characteristic features of inflection and derivation in the following manner:

<table>
<thead>
<tr>
<th>Inflections</th>
<th>Derivations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tend to be outer formations, occur further from the stem than any inflection-derivational affix.</td>
<td>1. Tend to be inner formations, occur closer to the stem than any inflectional affix.</td>
</tr>
<tr>
<td>2. Tend to be less numerous, but with wide distribution. Each affix is used through the class.</td>
<td>2. Tend to be more numerous but very limited distribution. Each affix limited to small subclass.</td>
</tr>
<tr>
<td>3. Used to fit words for use in syntax, but never change the form class of the word.</td>
<td>3. Used to establish words in a class, and generally change the form class of the word.</td>
</tr>
<tr>
<td>4. Inflected words do not belong to the same class. The inflection is syntactically relevant.</td>
<td>4. Derived words do belong to the same distribution class as the underived members of the class. The change affected by derivation is morphologically relevant.</td>
</tr>
<tr>
<td>5. Inflectional paradigms tend to be well defined, homogenous and define major form classes.</td>
<td>5. Derivational paradigms tend to be ill defined, heterogeneous, and only define single words.</td>
</tr>
</tbody>
</table>

3.1. Inflectional Analysis. Nouns, adjectives and verbs, may be defined by inflection in Portuguese. All inflectional affixes are suffixes which are added to the end of the stem.

3.1.1. Nouns. In Portuguese a noun is inflected for number.

3.1.11. Number, Inflection. All nouns manifest singular and plural forms.

Singular

/meza/ + {s} 'table' /mezaš/ 'tables'
/pawn/ + {s} 'bread' /payš/ 'breads'
/aviawm/ + {s} 'plane' /aviyoš/ 'planes'
/paš/ + {s} 'peace' /pašiš/ 'peaces'
/dor/ + {s} 'ache' /dorš/ 'aches'
/papaw/ + {s} 'paper' /papawš/ 'papers'
/funiw/ + {s} 'funnel' /finiš/ 'funnels'

The morpheme {s} is realized in the Portuguese of Rio de Janeiro as the allomorphs /š/ /ž/ /iš/ depending on the morpheme to which is added to.

The general rules for the occurrence of the plural morpheme and its allomorphs can be stated as follows:
(1) Most words ending in vowel or nasal consonants form their plural by adding /s/. For example:

Singular
/livru/ 'book' /livruš/ 'books'
/kapa/ 'raincoat' /kapaš/ 'raincoats'
/bom/ 'good' /bomš/
/lan/ 'wool' /lanš/
/fin/ 'end' /finš/ 'ends'

However, words ending in /-awm/ form their plural in the following way:

/awm/ is substituted by /ayn/ when /š/ is added. For example:

Singular
/pawm/ 'bread' /paynš/ 'breads'

/awm/ is substituted by /oyn/ when /š/ is added. For example:

Singular
/aviawm/ 'plane' /avicynš/ 'planes'

(2) Words ending in environment /Vš/ change /š/ to /z/ and /iš/ is added. For example:
<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>/rapaš/</td>
<td>/rapazis/</td>
</tr>
<tr>
<td>'young man'</td>
<td>'young men'</td>
</tr>
<tr>
<td>/meš/</td>
<td>/mesiš/</td>
</tr>
<tr>
<td>'month'</td>
<td>'months'</td>
</tr>
<tr>
<td>/paš/</td>
<td>/paziš/</td>
</tr>
<tr>
<td>'peace'</td>
<td></td>
</tr>
</tbody>
</table>

(3) Words ending in environment unstressed

/W/ take the allomorph /Ø/ to form their plural. For example:

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>/lapiš/</td>
<td>/lapiš/</td>
</tr>
<tr>
<td>'pencil'</td>
<td>'pencils'</td>
</tr>
<tr>
<td>/onibuš/</td>
<td>/onibuš/</td>
</tr>
<tr>
<td>'bus'</td>
<td>'buses'</td>
</tr>
<tr>
<td>/piriš/</td>
<td>/piriš/</td>
</tr>
<tr>
<td>'saucer'</td>
<td>'saucers'</td>
</tr>
</tbody>
</table>

(4) Words ending in /a,ɛ,i,u,i/ plus /w/, the /w/ is changed to /y/ when /š/ is added. For example:

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>/pap ɛw/</td>
<td>/pap ɛyš/</td>
</tr>
<tr>
<td>'paper'</td>
<td>'papers'</td>
</tr>
<tr>
<td>/zornaw/</td>
<td>/zornayš/</td>
</tr>
<tr>
<td>'newspaper'</td>
<td>'newspapers'</td>
</tr>
<tr>
<td>/soš/</td>
<td>/səyš/</td>
</tr>
<tr>
<td>'sun'</td>
<td>'suns'</td>
</tr>
<tr>
<td>/kapitaw/</td>
<td>/kapitayš/</td>
</tr>
<tr>
<td>'capital'</td>
<td>'capitals'</td>
</tr>
<tr>
<td>/far ɔw/</td>
<td>/far oy.š/</td>
</tr>
<tr>
<td>'lighthouse'</td>
<td>'lighthouses'</td>
</tr>
</tbody>
</table>

However:

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>/konsuw/</td>
<td>/konsulis/</td>
</tr>
<tr>
<td>'consul'</td>
<td>'consuls'</td>
</tr>
</tbody>
</table>
/maw/ 'evil' /mališ/ 'evils'
/paw/ 'stick' /pawš/ 'sticks'

(5) Words ending in /i/ plus /w/, drop the /w/ and add /š/. For example:

Singular Plural
/funiw/ 'funnel' /funiš/ 'funnels'
/kaniw/ 'kennel' /kaniš/ 'kennels'
/bariw/ 'barrel' /bariš/ 'barrels'

However, "learned" words which are stressed in the antepenultimate syllable, /iW/ changes to /eys/ when /s/ is added. For example:

Singular Plural
/fosiw/ 'fossil' /foseys/ 'fossils'
/repitiw/ 'reptile' /repiteyš/ 'reptiles'

(6) When /s/ is added to a great number of words there is the alternation /o/ to /o/ in their penultimate syllable. For example:

Singular Plural
/posu/ 'well' /posuš/ 'wells'
/povu/ 'people' /povuš/ 'persons'
/žogu/ 'game' /žoguš/ 'games'
3.112. Inherent Gender. Gender is an inherent feature of Portuguese nouns. That is, nouns are not inflected for gender, but each noun is feminine, masculine or both. For example:

<table>
<thead>
<tr>
<th>Masc.</th>
<th>Fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>/sapa\tu/</td>
<td>'shoe'</td>
</tr>
<tr>
<td>/\ou/</td>
<td>'eye'</td>
</tr>
<tr>
<td>/livru/</td>
<td>'book'</td>
</tr>
<tr>
<td>/sintu/</td>
<td>'belt'</td>
</tr>
</tbody>
</table>
However:
/tribu/ (fem.) 'tribe'
/dia/ (masc.) 'day'
/mapa/ (masc.) 'map'

Also, there are a large number of Portuguese nouns which do not end in either /u/ or /a/. For example:
/pē/ 'foot'
/pē/ 'dust'
/pē li/ 'skin'
/nomi/ 'name'
/mawm/ 'hand'
/rumor/ 'rumor'

Noun gender in such instances is determined by the agreement it has either with the masculine or feminine article and the adjective which is inflected for gender. For example:
/a pē li masia/ 'the soft skin'
/u lapiš amar ē lu/ 'the yellow pencil'
/u nomi bunitu'/ 'the beautiful name'

3.12. Adjectives. Portuguese adjectives may be inflected for two categories: number and gender.
3.121. Number Inflection. The adjective number inflection follows the same rules set for the noun number inflection, cf. 3.111. For example:

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>/řiku/</td>
<td>'rich' /rikuš/</td>
</tr>
<tr>
<td>/feliš/</td>
<td>'happy' /feliziš/</td>
</tr>
<tr>
<td>/grosu/</td>
<td>'wide' /grösuš/</td>
</tr>
<tr>
<td>/simpliš/</td>
<td>'simple' /simpliš/</td>
</tr>
<tr>
<td>/aniw/</td>
<td>'blue' /aniš/</td>
</tr>
</tbody>
</table>

3.122. Gender inflection. Adjectives in Portuguese are formally inflected for gender. Generally, adjectives have a masculine and a feminine form. This formal characteristic is that which distinguishes adjectives from nouns in Portuguese.

The masculine gender marker in Portuguese is the morpheme {ś} which is realized as the phonemes /š /, /ř /, /m/, /n/, /ń /, /w/, /y/ and vowel phonemes which are part of the root. The feminine marker is the morpheme {a} which is realized as /a/. Adjectives undergo morphophonemic root alternations when /a/ is added to the masculine form. Such root alternations can be stated in the following way:

(1) Most adjectives which end in unstressed /u/,
when the feminine marker /a/ is added to their root the /u/ is dropped. For example:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>/be lu/</td>
<td>'beautiful'/b €la/</td>
</tr>
<tr>
<td>/šeju/</td>
<td>'full'/šeya/</td>
</tr>
<tr>
<td>/finu/</td>
<td>'thin'/fina/</td>
</tr>
<tr>
<td>/laŋgu/</td>
<td>'wide'/laŋga/</td>
</tr>
<tr>
<td>/sužu/</td>
<td>'dirty'/suža/</td>
</tr>
</tbody>
</table>

However, some adjectives with the same ending suffer another modification in the root. Adjectives which have /o/ on their penultimate syllable, when the feminine marker /a/ is added change /o/ to /ə/. For example:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>/grosu/</td>
<td>'thick'/gr o sa/</td>
</tr>
<tr>
<td>/formozu/</td>
<td>'beautiful'/form o za/</td>
</tr>
<tr>
<td>/dišpošt/u/</td>
<td>'disposed'/dišp o šta/</td>
</tr>
</tbody>
</table>

(2) If the feminine marker is added to the roots of adjectives which end in /š/ and are stressed on their last syllable, there is a consonantal alternation from /š/ to /z/. For example:

<table>
<thead>
<tr>
<th>Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>/portuguëš/ 'Portuguese'/portugueza/</td>
</tr>
</tbody>
</table>
When the feminine marker is added to adjectives which end in \( /\tilde{r}/ \), there is a consonant alternation from \( /\tilde{r}/ \) to \( /r/ \) in their root. For example:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>(/enkantad\tilde{r}/)</td>
<td>'lovely' (/en\kantadora/)</td>
</tr>
<tr>
<td>(/so\tilde{n}ad\tilde{r}/)</td>
<td>'dreamy' (/so\tilde{n}adora/)</td>
</tr>
<tr>
<td>(/pasiad\tilde{r}/)</td>
<td>'fond of walking' (/pasiadora/)</td>
</tr>
<tr>
<td>(/kolonizad\tilde{r}/)</td>
<td>'settling' (/kolonizadora/)</td>
</tr>
<tr>
<td>(/lutad\tilde{r}/)</td>
<td>'fighter' (/lutadora/)</td>
</tr>
</tbody>
</table>

However, a few adjectives manifest the following pattern:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>(/trabalad\tilde{r}/)</td>
<td>'hard-working' (/trabalade\tilde{r}a/)</td>
</tr>
</tbody>
</table>

When the feminine marker \( /a/ \) is added to adjectives which end in \( /ew/ \), there is the alternation \( /ew \sim y/ \). For example:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>(/ewrop\tilde{e}w/)</td>
<td>'European' (/ewrop\tilde{e}ya/)</td>
</tr>
<tr>
<td>(/plebew/)</td>
<td>'plebeian' (/pleb\tilde{e}ya/)</td>
</tr>
<tr>
<td>(/ebrew/)</td>
<td>'Hebrew' (/ebr\tilde{e}ya/)</td>
</tr>
</tbody>
</table>
However:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>/judew/</td>
<td>/judia/</td>
</tr>
</tbody>
</table>

(5) When the feminine marker is added to the roots of adjectives which end in /awm/, there is the alternation /awm on/. For example:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>/sorawm/</td>
<td>/sorona/</td>
</tr>
<tr>
<td>/valentawm/</td>
<td>/valentona/</td>
</tr>
<tr>
<td>/bonitawm/</td>
<td>/bonitona/</td>
</tr>
</tbody>
</table>

(6) When the feminine marker is added to the adjective /maw/, the final /w/ is dropped and /a/ + /a/ is assimilated to /a/. For example:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>/maw/</td>
<td>/ma/</td>
</tr>
</tbody>
</table>

(7) When the feminine marker is added to the adjective /bom/, the final /m/ is dropped. For example:

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>/bom/</td>
<td>/boa/</td>
</tr>
</tbody>
</table>
3.123. Common Gender Adjectives. Many adjectives in Portuguese can modify either masculine or feminine nouns. They are called common gender adjectives.

(1) Most adjectives which end in /i/. For example:

Masc. - Fem.
/trišti/         'sad'
/inteliženti/    'intelligent'
/verdi/          'green'
/eleganti/       'elegant'
/livri/          'free'
/firmi/          'strong'
/valenti/        'bold'

However:

Masc. - Fem.
/felis/          'happy'
/exemplař/       'exemplar'
/faciw/          'easy'
/komum/          'common'
/inferior/       'inferior'
3.13. Verbs. The verb paradigm in Portuguese is the most complex one of all the form classes examined by this work. Verbs are inflected for tense, aspect, mood, person and number.

Verbs in Portuguese are further classified according to their theme class and by the extent to which their paradigms can be predicted by general rules. Theme class is determined by the thematic vowel which is used in forming the verb stems. The three theme classes are:

<table>
<thead>
<tr>
<th>TC (theme class)</th>
<th>TV (theme vowel)</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>/a/</td>
<td>/am-a/ 'he loves'</td>
</tr>
<tr>
<td>II</td>
<td>/e/</td>
<td>/vend-e-muš/ 'we sell'</td>
</tr>
<tr>
<td>III</td>
<td>/i/</td>
<td>/pařt-i-ra-wm/ 'they went'</td>
</tr>
</tbody>
</table>

In the general patterning of verbs in Portuguese the root (R) is invariable and it is followed by the theme vowel (TV). These two components constitute the verb stem (S). The inflectional affixes (IA) are added to the stem in the following order: inflectional marker for tense-mood (TM) plus inflectional marker for number-person (NP).

The Portuguese verb form can be described by the formula:
S(R + TV) + IS(SMT + SNP)

Read out: A verb is formed by a stem which is composed of a root and a theme vowel plus inflectional suffixes of mood-tense and number-person.

3.131. General Verb Form in Portuguese. A verb in Portuguese is considered part of the general verb form when its radical is invariable and its paradigm conforms to general rules. In our presentation of the verb inflections we will limit ourselves to the description of the general pattern with one verb from each theme class. The verbs will be given in phonemic transcription in the table below. The full paradigm of three regular verbs in Portuguese, amar 'love', vender 'sell' and partir 'go', which represent the three different theme classes will be given below. The number heading each column indicates the different constituents of the general verb form: 1=radical, 2=theme vowel, 3=tense-mood suffix, 4=number-person suffix.  

13 The special patterns of verbs in Portuguese can be systematized, dividing them into small groups of verbs which have a common pattern in their radical changing. For this study cf., Joaquim Mattoso Camara, Estrutura da Língua Portuguesa (Petrópolis: Editora Vozes, 1970), pp. 102-6.

14 The model for table 6 was taken from Robert Stockwell et al., The Grammatical Structures of English and Spanish, (Chicago: The University of Chicago Press, 1966) p.106.
### TABLE 6

**GENERAL FORM OF PORTUGUESE VERBS**

<table>
<thead>
<tr>
<th>Present Indicative</th>
<th>Finite Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>P 1 2 3 4</td>
<td>1 2 3 4 1 2 3 4</td>
</tr>
<tr>
<td>1 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>2 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>3 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>4 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>5 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>6 am à</td>
<td>vend í</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Imperfect Indicative</th>
<th>Finite Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>P 1 2 3 4</td>
<td>1 2 3 4 1 2 3 4</td>
</tr>
<tr>
<td>1 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>2 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>3 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>4 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>5 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>6 am à</td>
<td>vend í</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perfect Indicative</th>
<th>Finite Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>P 1 2 3 4</td>
<td>1 2 3 4 1 2 3 4</td>
</tr>
<tr>
<td>1 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>2 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>3 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>4 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>5 am à</td>
<td>vend í</td>
</tr>
<tr>
<td>6 am à</td>
<td>vend í</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1</td>
<td>am</td>
</tr>
<tr>
<td>2</td>
<td>am</td>
</tr>
<tr>
<td>3</td>
<td>am</td>
</tr>
<tr>
<td>4</td>
<td>am</td>
</tr>
<tr>
<td>5</td>
<td>am</td>
</tr>
<tr>
<td>6</td>
<td>am</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>am</td>
<td>a</td>
<td>re</td>
<td>y</td>
<td>vend</td>
<td>e</td>
<td>re</td>
<td>y</td>
<td>paṛṭ</td>
<td>i</td>
<td>re</td>
<td>y</td>
<td></td>
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From the forms above, one can sum up the constituents in the following way:

3.1311. Stem.

(1) Radical. The only characteristic in the radical besides its invariability is that it is generally unstressed. The exceptions are contained in P1,2,3, and P6 of the Indicative and the Subjunctive Present, and P2 of the Imperative.

(2) Theme Vowel.

TC I marker: {a}

Allomorphs:

/a/ Stressed. Occurs in most verb forms.

Unstressed. Occurs in P2 of Imperative and P2, P3 and P6 of Indicative Present.

Pretonic. Occurs in Indicative Future Present.

/e/ Stressed. Occurs in P1 of Indicative Perfect.

/o/ Stressed. Occurs in P3 of Indicative Perfect.
/ə/ Occurs in Subjunctive Present and P1 of Indicative Present.

TC II marker: {e}

Allomorphs:
/ə/ Stressed. Occurs in most verb forms.

Pretonic. Occurs in Indicative Future Present.
Unstressed. Occurs in P2 of the Imperative.

/i/ Stressed. Occurs in Indicative Imperfect, P1 of Indicative Perfect and P2, P3 of Indicative Present.

TC III marker: {i}

Allomorphs:
/i/ Stressed. Occurs in most verb forms.

Pretonic. Occurs in Indicative Future Present.
Unstressed. Occurs in Indicative Imperfect and P2, P3 of Indicative Present.

/ə/ Occurs in Subjunctive Present and P1 of Indicative Present.
/e/ Occurs in P6 of Indicative Present.

3.1312. Inflectional Affixes.

(1) Mood-Tense marker.

Indicative Present: {ə}
Indicative Imperfect marker: \[\text{va}\] for verbs from TC I.

Allomorphs:
/\text{ve}/ Occurs in P5.
/\text{va}/ Elsewhere.

\{\text{a}\} for verbs from TC II and TC III.

Allomorphs:
/\text{e}/ Occurs in P5.
/\text{a}/ Elsewhere.

Indicative Perfect marker: \{\emptyset\}

Allomorphs:
/\text{ra}/ Occurs in P6.
/\emptyset/ Occurs elsewhere.

Indicative Plusperfect marker: \{\text{ra}\}

Allomorphs:
/\text{re}/ Occurs in P5.
/\text{ra}/ Occurs elsewhere.

---

15 The Imperfect of the Indicative has the limitation of aspect rather than tense. The Imperfect marks an unfinished process. For example: A menina estudava a lição quando eu cheguei. "The girl was studying the lesson when I arrived."
Indicative Future Present marker: {ra}
Allomorphs:
/ra/ Occurs in P2, P3 and P6.
/re/ Occurs in P1, P4 and P5.

Indicative Future Past marker: {ria}
Allomorphs:
/rie/ Occurs in P5
/ria/ Occurs elsewhere.

Subjunctive Present marker:
{e} for verbs from TC I.
Allomorphs:
/e/ Unstressed. Occurs in P1, P2, P3 and P6.
    Stressed. Occurs in P4 and P5.

{a} for verbs from TC II and TC III.
Allomorphs:
/a/ Unstressed. Occurs in P1, P2, P3 and P6.
    Stressed. Occurs in P4 and P5.

Subjunctive Past Marker: {si}
Allomorphs:
/se/ Occurs in P6.
/si/ Occurs elsewhere.
Subjunctive Future marker: \{\tilde{r}\}

Allomorphs:
\( /\tilde{r}/ \) Occurs in P2.
\( /\tilde{r}/ \) Occurs in P6.
\( /\tilde{r}/ \) Occurs elsewhere.

Imperative marker: \{\emptyset\}
Allomorphs:
\( /\emptyset/ \) Occurs everywhere.

Gerund marker: \{ndu\}
Allomorph:
\( /ndu/ \) Occurs everywhere

Participle marker: \{du\}
Allomorph:
\( /du/ \) Occurs everywhere.

Infinitive marker: \{\~{r}\}
Allomorph:
\( /\~{r}/ \) Occurs everywhere.

(2) Number-person markers.

P1 marker: \{\emptyset\}
Allomorphs:
/u/ Occurs in Indicative Present.

/y/ Occurs in Indicative Perfect TC I and Indicative Future Present.

/ø/ Occurs elsewhere.

P2 marker: \{š\}

Allomorphs:

/ši/ Occurs in Indicative Perfect.

/ø/ Occurs in Gerund, Infinitive, Participle and Imperative.

/š/ Occurs elsewhere.

P3 marker: \{ø\}

Allomorphs:

/w/ Occurs in Indicative Perfect.

/ø/ Occurs elsewhere.

P4 marker: \{muš\}

Allomorphs:

/mus/ Occurs everywhere.

P5 marker: \{yš\}

Allomorphs:

/š/ Occurs in Indicative Present from TC III.

/diš/ Occurs in Subjunctive Future.

/stiš/ Occurs in Indicative Perfect.
/ys/ Occurs elsewhere.

P 6 marker: \{wm\}

Allomorphs:

/ñ/ Occurs in Indicative Present from TC II and TC III, Subjunctive Present from TC I and Subjunctive Future and Past.

/wm/ Occurs elsewhere.

3.132. Non-Finite Verb Forms. The Infinitive, Gerund and Participle are traditionally difficult to define in comparison to the other forms of the verbs.

The infinitive has not been clearly defined in Portuguese. It is usually called the 'name' of the verb. It does not manifest either tense or aspect but both are implied in its meaning. It is formed by S(R+TV)+Infinitive marker \{r\}. For example:

/am-a-r/ 'to love'
/vend-e-r/ 'to sell'
/part-i-r/ 'to go'

The participle manifest the same characteristics of an adjective. It may be inflected for gender and number. For example:
The participle is formed by adding the markers /du- da- dus- das/ to the stem. Aspect, but not tense is implied in its meaning, that is, the participle has a 'perfective' aspect which represents completion of an action. For example:

/A lisawm foy estudada/
A licção foi estudada.

The gerund is formed by adding /ndu/ to the verb stem. For example:

/am-a-ndu/ 'loving'
/paś-t-i-ndu/ 'going'
/vend-e-ndu/ 'selling'

Similar to the participle, the gerund is limited by aspect. The gerund describes an imperfect process. For example:

/Ištow ištudandu a lisawm /
Estou estudando a lição.
'I am studying the lesson.'
3.2. Derivational Analysis. Derivational affixes in Portuguese may be either suffixes or prefixes. They may have two main functions: (1) they can change the form class of words or, (2) they can change the word’s meaning without changing its form class. The former are called governing derivational affixes and the latter, restrictive affixes.\textsuperscript{16}

3.21. Governing Derivation. The Portuguese governing derivation is formed mainly by the addition of suffixes to the word stem. They mark the new form class of the derivative as a noun, adjective, verb or adverb.

3.211. Noun Formative Suffixes (NFS). Noun formative suffixes, when added to a given stem, form a noun. The main patterns for noun formative suffixes in Portuguese are:

\begin{enumerate}
\item Adjective $+$ NFS $=$ Noun
\begin{itemize}
\item `/bel $+$ eza $=/$ beleza/ 'beauty'
\item `/maw $+$ dadi/ $=/$ mawdadi/ 'evil'
\item `/dos $+$ ura/ $=/$ dosura/ 'sweetness'
\item `/alegr $+$ ia/ $=/$ alegría/ 'joy'
\end{itemize}
\end{enumerate}

\textsuperscript{16} C.f., Walter Cook, \textit{op.cit.}, pp. 127-29.
(2) Verb + NFS = Noun

/mud + -ansa /= /mudansa/ 'move'
/ištud + -anti/ = /ištudanti/ 'student'
/kant + -oř / = / kantoř/ 'singer'
/kora + -sawm/= /koraasawm/ 'coronation'
/kaza + -mentu/= /kazamentu/ 'marriage'

3.212. Adjective Formative Suffixes (AFS). Adjective formative suffixes, when added to a given stem, form an adjective.

The main patterns for adjective formative suffixes are:

(1) Noun + AFS = Adjective

/mans + -adu / = /manšadu/ 'stained'
/mentir + -ozu/ = /mentiruzu/ 'liar'
/iškol + -ar/ = /iškolař/ 'school'
/řiz + -oňu/ = /řizoňu/ 'smiling'
/ter + -enu/ = /teřenu/ 'earthly'
/kaz + -eyru/= /kazeyru/ 'homely'
/europ + -ew / = /europew/ 'European'

(2) Verb + AFS = Adjective

/prepara + -t•ryu=//preparat•ryu/'preparatory'
/dura + -vew/ =/duravew/ 'durable'
/kebra + -disu /= /kebradisu/ 'fragile'
/pratika + -nti/= /pratikanti/ 'practicing'
3.213. Verb Formative Affixes (VF A). Verb formative affixes, when added to a given stem, form a verb. The main patterns for verb derivatives are:

(1) (Pref.) + Noun + VFS = Verb

/ ankor+ ar/ = /ankorař/ 'to anchor'
/ telefon + ar/=/telefonař/ 'to phone'
/ flor+ eser/=/floreserě/ 'to flower'
/ a + karis+ ar/ =/akarisař/ 'to caress'
/ em + baiñ + ar/=/embaïnař/ 'to hem'
/ a + mañ + eser/=/amañeserě/ 'to dawn'

(2) (Pref.) + Adjective + VFS= Verb

/ iskur + eser/=/iskureserě/ 'to dark-en'
/ klar + ifikar/=/klarifikař/ 'to clarify'
/ a + dos + ar/=/adosař/ 'to sweeten'
/ en + vel + eser/=/enveřeserě/ 'to age'

(3) Noun or Adjective + VFS = Verb

/fol/ + ear/=/foľeаř/ 'to skim'
/sawt + itař/=/sawtitar/ 'to hop'
/šuv + iškař/=/šuviškař/ 'to drizzle'
/beberŋ + ikař/=/beberikař/ 'to sip'
/klar + ifikař/=/klarifikař/ 'to clarify'
These suffixes and other verb formative suffixes give a special connotation to the new verb they form. In general they add a frequentative-diminutive and durative aspect to the verb meaning as in the examples given above.

3.214. Adverbial Formative Suffixes (Adv. FS). In Portuguese the only pattern to adverb derivation is:

(1) Adjective (feminine or common gender) + Adv. FS /menti/= Adverb

/vagar əza+ menti/= /vagarəzamenti/ 'slowly'
/bondəza+ menti/= /bondozamenti/ 'kindly'
/trištī+ menti/= /trištimenti/ 'sadly'
/faciz+ menti/= /facizamenti/ 'easily'

3.22. Restrictive Derivations. These are derivations which do not change word meaning when they are added to their stem. Restrictive derivations are quite extensive and important in Portuguese. They may be either suffixes or prefixes.

3.221. Noun Patterns.

(1) Noun + Restrictive Suffixe = Noun

/kabes + ada/= /kabesada/ 'a blow with the head'
/məstr+ adu/= /meštrazu/ 'Masters'
/luta + ador/=lutadór/ 'fighter'
/sinz + eru/=cinzeru/ 'ashtray'

(2) Restrictive Prefix + Noun = Noun

/anti + kořpu/=antikořpu/ 'antibody'
/visi + prezidenti/=visiprezidenti/ 'vice president'
/anfi + tiatru/=anfitiatru/ 'amphitheater'
/super + siliw/=superśiliw/ 'eyebrow'

3.222. Adjective Patterns.

(1) Adjective + Restrictive Suffix = Adjective
/reaw + ́ista/=realiśta/ 'realist'

(2) Restrictive Prefix + Adjective = Adjective
/super + agudu=/superagudu/ 'extra sharp'
/in + ativu/=inativu/ 'inactive'
/i + leziviw/=ileźiviw/ 'illegible'

(3) Adjective + Restrictive Intensifier suffix /isimu/ = Adjective
/trist + isimu/=trištisimu/ 'very sad'
/feliś + isimu/=felisisimu/ 'very happy'
/famoz + isimu/=famozisimu/ 'very famous'
3.223. Noun or Adjective Patterns.

(1) Noun or Adjective + Restrictive Diminutive

Suffixe= Noun or adjective.

/kaz + Ḣa/=/kaziña/ 'little hose'
/lir + ĩn/=/livriňu/ 'little book'
/peken + inu/=/pekeninu/'very small'
/ři + аšu/=/řiašu/ 'rivulet'
/barb + iša/=/barbiša/ 'small beard'

The diminutive suffixe is widely used in Portuguese.

Besides the main denotation of diminutiveness, these suffixes often carry connotation of closeness and affection. However, sometimes they also have a pejorative meaning of insignificance or contempt. For example:

/gatínũ/ 'little cat' (smallness)
/amořziňũ/ 'little love' (affection)
/livre ku/ 'little book' (insignificance)
/muĩč řziña/ 'little woman' (contempt)

(2) Noun or Adjective + Restrictive augmentative

suffixe=Noun or adjective.

/valent + aωm/=/valentawm/ 'rowdy'
/kaza + rawm/=/kazarawm/ 'mansion'
/rik + asu/=/rikasu/ 'very wealthy'
The augmentative is not as used as the diminutive and more than often carries the concept of ugliness, contemt or coarseness.

3.224. Verb Pattern.

(1) Prefix + Verb = Verb

/kom + provar/ = /komprovar/ 'to corroborate'
/kontra+ poř/ = /kontrapoř/ 'to oppose'
/de + ženerař/ = /deženerař/ 'to degenerate'
/pro + moveř/ = /promoveř/ 'to promote'
/ře + leř/= /řeleř/ 'to reread'

3.23. Compound Derivation. Compounding is the derivation process in which two roots are used to form a new word. Compounds can be described conveniently in terms of the two roots entering into the compound.

In Portuguese the most common structures of compound words are:

(1) Noun + Noun.

/abea + meštra/ _abelha-mestra_ 'queen bee'
/ařku + iriš / _arco-iris_ 'rainbow'
/ze + povinřu/ _ze-povinho_ 'the common people'
/agwa + mariña/ _áqua-marinha_ 'aquamarine'
(2) Noun + Preposition + Noun
/kara + di + paw/ egra-de-nau 'wooden face'
/řabu + di + kavalu/ rabo de cavalo 'poney tail'
/agwa + di + kolonya/ agua de colonia 'cologne'
/kabesa + di + ventu/cabeça de vento 'feather-brain'

(3) Noun + Adjective
/kriadu + mudu/ criado-mudo 'bedside table'
/awtař + mor/ altar-mór 'high altar'

(4) Adjective + Noun
/awta + sosiedadi/ alta sociedade 'high society'
/bom + dia/ bon-dia 'good-morning'

(5) Numeral + Noun
/sešta + feyra/ sexta-feira 'Friday'
/miw + folaš/ mil-folhas 'napoleon'

(6) Verb + Noun
/bati + boka/ bate-boca 'quarrel'
/gwarda+ śuva/ guarda-chuva 'umbrella'
/sawva + vidaš/ salva-vidas 'life-guard'
/pasa + tempu/ passatempo 'pastime'
CHAPTER IV

SYNTAX

4.0. Definitions. The third component of a language description, the syntax, deals with patterns of the arrangement of the forms. The syntactic component contains the components which determine how words can be used and combined to make up larger units of speech such as phrases, clauses and sentences.

A sentence is defined by Leonard Bloomfield as "an independent linguistic form not included by virtue of any grammatical construction in any larger form."17 A sentence is characterized by its clause type and its final intonation contour.

In any given language there are certain sentence structures which are considered the most frequent structures in that specific language and from which all sentences of the language in question can be derived. They are called basic or kernel sentences. The kernel sentences are

17

defined "as a sentence of a language that is (1) simple, (2) complete, (3) statement, (4) active, and (5) affirmative.\textsuperscript{18}

I will describe the syntactic component of Portuguese in terms of its basic sentence patterns. Our model of analysis is essentially the tagmemic model exposed in Walter Cook's \textit{Introduction to Tagmemic Analysis}. The tagmemic theory studies language elements as combinations of form and function. It deals with form and function together. In the grammatical analysis it emphasizes the need to define any linguistic unit by its meaning, form and distribution. The tagmeme then, is defined as "the correlation of a grammatical function, or slot, with the class of mutually substitutable items that fills that slot."\textsuperscript{19}

In the analysis of the kernel sentence patterns, the final intonation contour was removed from the sentence base. The sentence patterns were analyzed in terms of their clauses. In the clause analysis, functional slots: subjects, predicates and so on will be sorted. The filler-classes, that is, the items which can fill the functional slots will be dis-

\textsuperscript{18}\textsuperscript{19}Walter Cook, \textit{op. cit.}, p. 42.  
tributed into form classes: nouns, verbs, adjectives and so on.


4.11. According to the Type of Intonation, Intonation is often defined as significant sequences of relative pitch levels and pauses. An intonational contour is delimited by a terminal juncture or by silence and a terminal juncture.

In Portuguese there is a close relationship between stress and relative pitch levels. In the kernel sentences of Portuguese, the pitch rises on the first stressed syllable and falls back to the starting pitch on the final stress. This process can be represented by the following melodic curve:

\[ \text{Maria estuda.} \text{ "Maria studies."} \]

In the intonational pattern of the kernel sentence there are three distinctive sequences in the phonic group:

(1) The initial one in which the voice rises until it reaches the first stressed syllable.

(2) The middle one on which the voice with a slight undulation remains approximately in the same pitch level.
(3) The final one in which the voice falls sharply from the last stressed syllable.

4.12. According to the Clause Types. Besides the final intonational contour, the basic sentence patterns are classified in terms of their bases which are filled by clauses.

A clause can be defined as a word group containing one and only one predicate. "It is a construction in which the constitute is a pontential sentence base and the constituents are the subjects, predicates, objects and adjuncts, that combine to form this base."20

In Portuguese, a sentence can be formed by a clause which consists of only one predicate. For example:

Corremos.  'We ran.'
Fomos a Washington.  'We went to Washington.'
Chove muito.  'It rains a lot.'
Neve.  'It snows.'
Trovaia.  'It thunders.'

In the first two examples we have what traditional grammars consider an implicit subject. I disagree with this classification and adopt Robert Hall's21 classification

20 Walter Cook, op. cit., p. 65.
which makes a distinction between subject *Ele* 'He' in *Ele corre* 'He runs.' and actor -*mos* /muš/ in *Corremos* 'We run.' In *Corremos* 'We run,' the subject is expressed by the grammatical person and number reference of an inflectional verb ending. However, in the last three examples neither the subject or actor exists.

Before discussing the major clause types we will give the list of abbreviations used in this chapter.

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<tr>
<th>Abbreviation</th>
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<td>/=or</td>
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<td>*/=filled</td>
<td>filled by</td>
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Kernel sentences bases can be divided into three types of major clauses: Equational, transitive and Intransitive.

4.121. Equational Type Clause. An equational type clause is one whose main verb is a linking or equational verb. The subject is optional and it can be filled either by a noun or personal pronoun. The predicate is obligatory and is filled by an equational verb plus an obligatory predicate.
attribute. The predicate attribute can be filled by a noun or noun-like form, an adjective or adjective-like form or an adverb or adverb-like form. This general pattern for the equational clause can be represented as the following:

\[ \text{eqCl} = \pm \text{Subj} : N/p + \text{Pred} : \text{eqv} + \text{PA:Adj/Adv/N} \]

This pattern can be subdivided in the following subpatterns:

(1) \[ \text{eqCl} = \pm \text{Subj} : N/p + \text{Pred} : \text{eqv} + \text{PA:Adj} \]

Read out:

Maria é feliz. 'Mary is happy.'
Eles continuam felizes. 'They remain happy.'
Estamos doentes. 'We are sick.'

In this pattern the subject is optional and it can be filled by either a noun or pronoun. The most frequent equational verbs used in this pattern are: ser 'be', estar 'be', andar 'be', parecer 'seem', viver 'be', achar-se 'be', encontrar-se 'be', continuar 'be' and permanecer 'be, remain'.

(2) \[ \text{eqCl} = \pm \text{Subj} : N/p + \text{Pred} : \text{eqv} + \text{PA:Adv} \]

read out:

Nós estamos em Newark. 'We are in Newark.'
Minha casa fica na esquina. 'My house is at the corner.'
É pertinho daqui. 'It is near here.'

The subject is optional and it is filled by a noun or pronoun. The predicate is filled by the linking verbs estar 'be', ficar 'be' and ser 'be'. Ser is used in this pattern in colloquial language in place of ficar.

(3) eqCl= + Subj: N\textsuperscript{1}/p + Pred:Eqv + PA : N\textsuperscript{1}/p

Read out:

Nós somos médicos. 'We are doctors.'
Maria tornou-se freira. 'Mary became a nun.'
Sou eu. 'It is me.'

This pattern is filled by an optional subject, filled by a noun or a pronoun. The predicate is filled by linking verbs like ser 'be', virar, converter-se, tornar-se 'become' and the like. The predicate attribute is filled by a noun or pronoun. The superscript in N\textsuperscript{1} indicates that the noun in the subject is equated to the noun in the predicate attribute. Both have the same referent.

4.122. Intransitive Clause Type. Intransitive clauses are clauses which take an intransitive verb. This type of clause never takes an object, nor can it be transformed into the passive voice. In Portuguese the subject can be optional or it is not present at all. The predicate is filled by an
intransitive verb which can be modified by an adverb or adverb-like form.

In Portuguese we have two intransitive clause types:

(1) iCl= +F:tv + Int:Adv + L:loc

Read out:

Amanheceu.
Troveja.
Chove muito em Belém.

There is no subject or actor in this pattern. The predicate is filled by intransitive verbs like chover 'to rain', trovejar 'to thunder', nevar 'to snow'. These verbs may be modified or not by an adverb.

(2) iCl= + Subj + N/p + Pred : iv + Int:Adv + L:loc

Read out:

Maria dormiu tarde. 'Mary slept late.'
Nós partimos. 'We went away.'
Almoçamos cedo. 'We have lunch early.'

The subject here is optional and it can be filled either by a noun or a pronoun. The predicate is filled by any of the intransitive verbs except the ones in pattern (1). The intransitive verb may be followed or not by an ad-
verb.

4123. Transitive Clause Type. A transitive clause is a clause whose main verb is transitive. The subject is optional and it can be filled by either a noun or a pronoun. The predicate is filled by a transitive verb plus either an object or two objects, or an object and/or an object complement. This general pattern for a transitive clause can be described in the following way:

\[ tCl = \pm \text{Subj} : N/p + \text{Pred:tv} + \text{O}_1 : N/p + \text{CC:} N \]

This general clause type may be subdivided in the following subpatterns:

(1) \[ tCl = \pm \text{Subj} : N/p^1 + \text{Pred:tv} + \text{dC:iO}_2 : N^2/p^2 \]

Read out:

"Comemos as frutas." 'We ate the fruits.'

"Obedecemos ao chefe." 'We obey the boss.'

or: \[ tCl = \pm \text{Subj} : N/p^1 + \text{Pred:} dC:p^2 + tv \]

Read out:

"Nós as comemos." 'We ate them.'

"Nós lhe obedecemos." 'We obey him.'

In the subpatterns above the optional subject is filled by either a noun or pronoun. The predicate is filled
by a transitive verb which takes either a direct or indirect object. The superscripts 1 and 2 indicate that \(N^1\) and \(N^2\) manifest two different referents. The order of the slots in the pattern varies in regard to the object. If the object comes before the verb it can only be filled by a pronoun.

\[(2) \text{tCl= } + \text{Subj:}N^1/p + \text{Pred:}tv + \text{dO:}N^2/p + \text{iO:}N^3/p\]

Read out:

**Informei-o da traição.** "I informed him of the treason."

**A professora explicou a lição aos alunos.** "The teacher explained the lesson to the students."

Or: \(tCl= + \text{Subj:}N^1/p + \text{Pred:iO/dO:p} + tv + dO/iO:N\)

Read out:

**Ela as explicou aos alunos.** "She explained them to the students."

**Pedro me deu um presente.** "Peter gave me a present."

The optional subject is filled by either a noun or pronoun. The predicate is filled by a transitive verb which takes a direct and an indirect object. The objects are filled either by a noun or a pronoun when they come after the transitive verb, and by a pronoun when they come before the transitive verb. The indirect object is often preceded by a preposition \(a, de, para\). When it is not preceded by a
preposition it comes as the personal pronouns me, te, lhe, nos, vos, lhes, and the reflexive pronoun se. The superscripts 1, 2, and 3 indicate that each noun or pronoun manifest a different referent.

(3) tCl=+ Subj:N1/p +Pred:tv +dC/i0:N2/p+CC:N2/adj
read out:

O clube nomeou meu primo como secretário.
'The club nominated my cousin secretary.'

Achei-o inteligente. 'I found him intelligent.'

Or:tCl=+ Subj:N1/p +Pred:dC/i0:p+tv+CC:N2/adj
Read out:

Nós os elegemos senadores. 'We elected them as senators.'

The optional subject is filled either by a noun or pronoun. The predicate is filled by a transitive verb which takes an object plus an object complements. The direct or indirect object can be either a noun or a pronoun when it is placed after the verb or a pronoun when it is placed before the verb. The object complement is a noun when the transitive verb is a verb like elégar, 'elect', nomear, 'nominate', and an adjective when the verb is like achar, 'find', considerar and the like. The superscripts 1 and 2 show that the subject has a different referent from the object and the object complement which has the same
referent.
CHAPTER V

CONCLUSION

A final point to be considered in this study concerns the place of meaning in a linguistic analysis.

Meaning is indeed the fundamental condition that any unit on any level must fulfill to obtain linguistic status. In the definition of the smallest grammatical unit, the phoneme, it was stated that the difference in sound must be correlated with a difference in meaning so that two sound units can be considered two different phonemes. The morphemes were defined as “the smallest individually meaningful utterances” in a language and so on. I defined a noun as a word which can be inflected for number alone as opposed to an adjective which can be inflected for both number and gender. I defined the meaning of a linguistic form by the range of situations in which that form occurs. The meaning to which I refer is a certain property which an element possesses which has a meaning, i.e., that of forming a unit which is distinctive, contrastive, delimited by other units and recognized by native speakers as such. Such meaning is implicit, inherent in the linguistic system and its parts and was considered to be within the boundaries of this study.
All languages refer to the outside world, both as a whole in sentences or in smaller units, words. Each utterance and each term of the utterance has a referent, a knowledge of which is implied by the native use of a language. This kind of meaning is studied by a special division in the structure of a language—semantics. Semantics in its broad sense can be defined as the science of meaning.

One of the major contributions of structural linguistics has been the project of making the theory and the practice of grammar independent of questions of notional and referential meaning. This proposal has been widely criticized by many who say that linguists refuse to take up considerations of meaning in the study of a grammar because they do not have any interest in semantics or do not consider it an important part of language.

John Lyons, one of the linguists who has made major contributions to the development of structural semantics states:

The reason is simply that the grammatical structure of a language and its semantic structure tend to be highly but not totally congruent with one another.... As long as it is maintained that every identity or difference of grammatical structure must be matched with some corresponding identity or difference of meaning (however how subtle and difficult to determine) there is a danger that
either the grammatical description or the semantic or both will be distorted.²²

Because the purpose of this study was to examine language as rigorously, objectively and as succinctly as possible, we decided on the methodological separation of grammar and semantics. For the present, at least, it is doubtful whether meaning can be studied within the boundaries set forth in this study.

There are many other problems that might be discussed here. Some have been suggested in the course of this study. The redefinitions presented in this work are the first tentative results of a more extensive and still unfinished analysis of Portuguese structures. Further study of the generative possibilities of Portuguese and of its semantics should be pursued. It is expected that as this larger study is extended some of my tentative results would have to be modified and others rejected. And yet I trust that the present study has been a useful beginning.

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