reprinted from

kansas
working
papers
in
linguistics

volume 1
1976
This volume is a revised and reprinted edition of the Kansas Working Papers in Anthropology and Linguistics 1976, Walter M. Hull and Paul Brook- lington, eds.

Published by the Linguistics Graduate Student Association, University of Kansas, and printed at the University of Kansas Printing Office, April 1978.

Partially funded by the Student Activity Fee.
On the interpretation of two-headed stacked relative clauses 1
Gregory T. Stump

Position in grammar: Sit, stand, lie 16
Laurel J. Watkins

On the Grammatica de Lingoagem Portuguesa 42
Elizabeth Barroco Mals

Teaching English suprasegmentals to Spanish speakers 63
Bertha Chela de Rodriguez

The importance of phonetic data in all child language analyses 83
Virginia C. Sothercole

The acquisition of English derivational suffixes: A pilot study 96
Herbert Harris

The compound bilingual as an agent of language change: A psychological model of bilingualism 115
Floyd C. Miller, Cynthia O. Park, Neusa M. Carso
ON THE GRAMMATICA DE LINGOAGEM PORTUGUESA

ELIZABETH BARRETO REIS

1. INTRODUCTION

The Grammatica de lingoagem portuguesa (1536) was the first grammar of the Portuguese language. Fernão de Oliveira was therefore the first Portuguese grammarian and, moreover, the first Portuguese to publish a grammar in Portugal.

Little has been written about this grammar or about Fer- não de Oliveira, and some of the works which, in some way or another, contain information about the author or the grammar were not available when this paper was being written. Necessarily, therefore, the present study is of a preliminary character, and further research is clearly called for.

I shall focus my attention on the presentation and dis- cussion of the sound types. I shall also discuss some of the basic phonetic concepts that underlie his description by analyzing the articulation of the sounds in question.

2. LIFE AND WORKS

The biographical information presented here is from the notes by Aníbal Henriques in the 1933 edition of Oliveira's gram- mar by Sá Nogueira. (Note that all references in this paper will be made to that edition.) The source of Aníbal Henriques' was the monograph O Padre Fernando Oliveira e a sua obra náutica by Henrique Lopes de Mendonça (1898).

Fernão de Oliveira was born in Aveiro in 1507. It is not absolutely certain who his parents were. Barbosa Machado (1759), in the Biblioteca Lusitana claims that his father was a judge in Paredão, named Heitor de Oliveira. As to the date of his death, Machado states that Inocêncio Francisco da Silva (1859-1862) in his Dicionário Bibliográfico mentions that Fer- nã de Oliveira was probably still alive in 1581.
When he was 13 years old, he entered the Convent of Évora. In 1532, at the age of twenty-five, he left the brotherhood of S. Domingos. Then he went to Castile where he remained for a few years.

In 1535 he returned to Portugal, and published his Portuguese grammar in the following year.

Oliveira was involved in a number of military expeditions, and was in and out of prison several times.

In 1554 he was named proofreader at the University of Coimbra Press. It is believed that during this time he also taught rhetoric at some institution.

His activity as a teacher can be traced from 1535 to 1540. He tutored João de Barros' children (Barros was the author of the second Portuguese grammar, published in 1540), Dom Antão (the son of Dom Fernando de Almada, the man who persuaded him to write his Grammatical), and Baron do Alvito's children. (Oliveira, 1933, pp.113-118)

The Grammatica da lingoagem portuguesa was published in 1536. It was printed in Gothic characters and consisted of thirty-eight unnumbered leaves. The title page had a woodcut bearing the initials of German Galharde, the printer, and the seal of the Almada family. A second edition appeared in 1871 published by the Imprensa Portuguesa in Porto, under the editorship of Visconde d'Azvedo and Tito de Noronha. The third edition was published under the editorship of Rodrigo de Sá Nogueira in Lisbon in 1933. The fourth edition appeared in 1954 under the editorship of O. Guterres da Silveira. It was published in Rio de Janeiro with the title A "Gramática" de Fernão d'Oliveira.

In addition to the Grammatica, Oliveira published in 1555 a book on naval warfare, Arte da guerra do mar (Oliveira, 1933, pp.117-119)
An important issue which may be broached at this point is the similarity that some scholars have noted between the grammars of Oliveira and Nebrija (Nebrija's Spanish grammar appeared in 1492). There is no doubt that Oliveira had some familiarity with Nebrija's grammar, since he alludes to it in Chapter 6 of his grammar in the following terms: 'Diz Antonio de nebrissa q temos na espanha somete as letras latinas: mas porq e verdade q sao tantas e taes as letras como as vozes: nos diremos q de nos aos latinos ha hi muita diferenca nas letras: porq tambem a temos nas vozes: e nao he muyt poys somos bê apartados em tempos e terras: e nao somete isto: mas hua mesma naçao e gente de hê tempo a outro mudas as vozes e tambê as letras'. (Oliveira, 1933, pp.25-26)

However, even though there are many similarities between the two grammars, (i.e., the distinction between two types of sibilants, or the distinction between tense and lax consonants) it is clear from Oliveira's statement above that he did not blindly follow Nebrija's views.

It has been argued by some scholars, notably Manuel Severiano de Faria, that João de Barros' Gramatica da Língua Portuguesa (1540) was the first Portuguese grammar. This assumption finds some support in João de Barros' statement in his grammar to the effect that he was the first person to write a grammar of Portuguese. But Aníbal Ferreira Henriques in his brief study included in Sá Nogueira's edition suggests that claims of priority were a common practice among writers at that time. For instance, in 1606 Duarte Nunes de Leão claimed to have written the first work on Portuguese orthography. This is, however, not true since the last part of João de Barros' grammar was devoted to orthography. (Oliveira, 1933, pp.126-126)

In the preface to the fourth revised edition of Duarte Nunes de Leão's Origem da Língua Portuguesa (1945), José Pedro Machado states that Duarte differs from Oliveira in his objectives, methods and theoretical position. He suggests that one of the possible objectives of Fernão de Oliveira's grammar was
to teach the Portuguese language to the great number of foreigners in Portugal at that time. In Chapter 4, for instance, Oliveira argues that the Portuguese should teach Portuguese to the inhabitants of the newly discovered territories rather than submit to being taught Latin by Rome.

3. DEFINITIONS OF BASIC TERMS

d'Oliveira's most basic term is voice, but he never provides an explicit definition. However, from its use in the text we may infer what it means. The first time it appears (in connection with the definitions of 'vowel' and 'consonant' etc.) refers to separate sounds that can be distinguished by the ear. The same meaning can also be seen in Chapter 6 where he points out that Portuguese uses the same orthographical symbols as Latin, but that it really ought to have more symbols than Latin, since it has 32 or 33 distinct sounds. Thus, what he has in mind here is an orthographical system in which there is a one-to-one correspondence between sounds and symbols. For instance, he advocates creating special symbols to represent [ε] and [ɔ]. (Oliveira, 1933, pp.25-27)

The term voice appears also in other contexts where it may be interpreted to refer to sounds from and auditorily observational point of view. Thus he describes vowels as having voice per se and consonants as having no voice unless accompanied by a vowel. He goes on to say that b has no voice, or at least not as perfect a voice as the vowel a. (Oliveira, 1933, p.25)

Letters are what he calls the figures of voice, and he divides them into vowels and consonants.

It would seem that letter is a rather abstract concept, since the letters are also subclassified as either signs or pronunciations.
He defines signs as the actual shape of the orthographical symbols, and the pronunciations as the fundamentals of voice and writing (i.e., in modern terminology signs are the graphemes, and the pronunciations are the articulatory configurations for the production of each sound). (Oliveira, 1933, p. 25)

A syllable is a voice, i.e., a stretch of sound, consisting of one or more letters which either has a meaning on its own or is part of a diction, i.e. word. Consonants cannot constitute a syllable unless accompanied by a vowel. A diphthong is a voice pronounced with a single breath, or a syllable in which there are two vowels.

It seems that in these two definitions, he broadens the concept of voice, in that he states that a 'single voice can consist of two letters' (Oliveira, 1933, p. 45) nevertheless, this may be interpreted as a reference to syllables ending in the semivowels ɲ or ŋ which he reports to be very weakly pronounced, and to clusters consisting of liquids (both of these terms will be defined later) ʎ and r preceded by mutes. In both cases, there seems to be a process of weakening taking place, which may have caused the two sounds that make up the syllable to be perceived as one voice.

Another possibility is that Oliveira simply used the term voice vaguely. Thus, we would probably nowadays rephrase his definition of the syllable as 'one single "voice" made up of a letter or two "voices" made up with two letters'.

Finally, word is defined as that type of voice which signifies a thing, or an act, or a mode. He goes on to say that words are made up of syllables, and syllables in turn are made up of letters. (Oliveira, 1933, p. 63) Here, again, the concept of voice seems to be broadened even more, since a word is said to be a voice which has meaning. Thus, voice can be possibly understood, in this context, as being any utterance.

Concerning all these possible uses of the term, one cannot be sure that Oliveira himself was aware that it was
vague, or whether this was a casual usage of a technical term.

4. THE VOWELS

In Chapter 8, he classifies the vowels as large and small.

The large vowels are a, e, o, as in the words almada 'proper name', festa 'feast', and fermeoso 'beautiful (masc. plural)'.

The small vowels are i, e, o, as in alemãna 'Germany', festo 'decoration (archaic)', fermeoso 'beautiful (masc. singular)'.

(Oliveira, 1933, pp.27-28)

Later, in Chapter 29, he also classifies i and u as large vowels. (Oliveira, 1933, p.68)

Hart (1955, p.406) calls attention to the fact that Oliveira's description of the articulation of large vowels seems to imply that they are pronounced with much more movement of the mouth than their small counterparts. Accordingly, based on this assumption, Hart interprets large vowels (except for i and u) as being more open than the small ones.

Oliveira, as can be seen by the examples given above, was very careful in choosing the words that show the contrast between the set of small and large vowels. The minimal pairs chosen to exemplify the [e] [s] and [o] [u] distinction do support his assertion that in Portuguese one cannot predict the occurrence of a small or large vowel in terms of the following consonant (as one can in Latin according to him). This suggests that the phoneme is a principle waiting to be discovered.

Hart (1955, p.407) considers the small a to be the eighth vowel phoneme in the language, as he states in his article: 'It is highly probable, too, that the phonetic values of these eight vocalic phonemes were not greatly different from what they are today.' However, there are no convincing data to support this
assertion, since Oliveira himself did not provide examples of a and a contrasting in identical environments.

As Brian Head (1964, p.93), analysing the dialect of Lisbon, which is thought by some scholars to bear a close kinship to sixteenth Century speech, states, 'there is a phonetic distinction between a low, open central vowel, [ a ], and a mid, less open central vowel, [ ã ], in both stressed and unstressed position: stressed in mandamos [måndåmuʃ] "we order", versus mandamos, [måndåmuʃ], "we ordered", and unstressed in a [ ã ], "to" or "the" (feminine singular), as opposed to a (a+a), [ a ] "to the" (feminine singular).'

Since the two sounds are in partial complementation, he suggests that the [ ã ] in [ måmuʃ ] be analysed (since this is a close vowel before a nasal) as /-åmuʃ/ and the opposition would be handled as nasal versus oral vowel. As for the unstressed case of a and a, he treats the pretonic unstressed [a] as geminate [ ã ], an analysis which he claims would link the synchronic analysis and the historical development (Head, 1964, p.103)

In the Lisbon dialect of today, the contrast between the two a-sounds is, however, restricted and nonproductive, and moreover is not observed in a great many dialects of Portuguese.

Furthermore, the particular example used by Oliveira, if one takes into account Head's discussion does not afford a very convincing argument in favor of the analysis of small a as a separate phoneme from a. In alemanha the initial and final a are in unstressed position, where the /a/ phoneme is a always realized as the mid, less open vowel [ ã ]; and the medial a occurs before a nasal and in that position, except for the ahdóra/amos contrast, [ ã ] is realized as a close nasalized vowel [ ã ], which Brian Head analysis as /a/.

The important point to note here is that Oliveira was aware of the phonetic distinctions among these vowels. While, of course, he does not attempt a phonemic analysis in the modern sense, we must grant that he successfully recognized the pho-
netic values of these sounds. It is, moreover, on the basis of these phonetic observations that he criticizes the fact that Portuguese orthography provided only five symbols to represent these eight vowel sounds. He also argues against representing the large vowels by means of double letters (e.g. using \(\texttt{ee}\) to represent \(\texttt{e}\)), or by means of a preposed \(\texttt{h}\)(e.g. \(\texttt{he}\) to represent \(\texttt{e}\)), both of these being devices in current use at that time. He then proposes using \(\texttt{e}\), \(\texttt{e}\) and \(\texttt{y}\).

5. ARTICULATORY DESCRIPTION OF THE VOWELS

In Chapter 12 Oliveira describes the vowels articul- atorily and at the same time describes the corresponding symbols pictorially, as it were. Here we shall consider certain general characteristics of the descriptions. For a complete translation of the relevant passages see the Appendix.

1) The front vowels are described largely in terms of mouth aperture.

2) In describing the back vowels reference is made to the role of the lips.

3) The distinction between large and small vowels is drawn in terms of force of articulation, with the large vowels said to be pronounced with more espirito i.e., breath.

Note how much of this descriptive apparatus is observ- vational.

6. CONSONANTS

Oliveira (1933, pp. 29-30) divides the consonants on the basis of their positions in the syllable, distinguishing mudan 'mutes' and semivogaes 'semivowels'. 
Semivowels are consonants that occur at the end of syllables, namely \( \breve{a}, \tilde{e}, \tilde{g}, \) and \( \tilde{z} \). Note the absence of nasals.

Mutes are consonants that do not occur at the end of syllables, namely \( \tilde{b}, \tilde{c}, \tilde{d}, \tilde{f}, \tilde{p}, \tilde{r}, \tilde{d}, \tilde{g}, \tilde{i}, \) and \( \tilde{x} \).

It is important to point out that this is an essentially distributional analysis and it may be noted that it is similar to many modern analyses of contemporary Portuguese. Specifically \( /l/, /r/, /s/, /d/, /m/, \) and \( /n/ \) are described as the phonemes that can occur in syllable final position.

He asserts that \( \breve{m} \) at the end of syllables has a weak sound which is neither like initial \( \breve{m} \) nor initial \( n \). His argument against the use of the symbol \( \breve{m} \) in these cases is based on the observation that the \( \breve{m} \) sound in syllable final position sounds exactly like one of the diphthongs \( \tilde{ao}, \tilde{ae}, \tilde{es}, \tilde{ao} \). He argues that, since we clearly cannot insert \( \breve{m} \) in the middle of these diphthongs to indicate the nasalization, the most appropriate general notation for both types of cases (final weak \( \tilde{m} \) and nasal diphthongs) is the tilde.(Oliveira, 1933, pp.29, 46-47)

From this argument we may draw two conclusions. First, he seems to be aware that properly speaking neither \( [m] \) nor \( [n] \) occurs in closed syllable final position. Second, he has noticed the phonetic difference between nasalization and nasality, i.e. he is aware of the existence of nasalized diphthongs as against the nasal consonants that occur in syllable initial position. But he does not explicitly distinguish the nasalized diphthongs from the nasalizing influence of final \( [m] \) and \( [n] \) on a preceding pure vowel. On the other hand he contrasts the single nasalized vowels with the corresponding oral ones.(Oliveira, 1933, p.41)

Aside from these consonants enumerated above, which he calls \( \text{'letras acostumadas'} \) 'usual letters', he lists nine other consonants, namely \( \breve{c}, \breve{j}, \breve{r}, \tilde{g}, \tilde{y}, \tilde{y}, \tilde{e}, \tilde{m}, \) and \( \tilde{n} \). This makes a total of 32 letters.(Oliveira, 1933, p.30)
In addition to these he lists the tilde (˜) and the h which he treats as imperfect letters because they are weakly pronounced and can be perceived only in combination with other letters. (Oliveira, 1933, p.30)

Later in the book, in Chapter 16, he defines aspiration as hú grande espirito 'a strong breath' emitted from the stomach. He insists that there is no aspiration in Portuguese, and discards h from the alphabet. However, he regards the digraphs ch, lh, and nh as representations of aspirate letters. (Oliveira, 1933, pp.40-43) This indicates a confusion between the sound of h and its graphic representation. That is, he refers to these digraphs as aspirates because they contain graphic h.

In Chapter 11 he introduces the term líquidas 'liquids', which he uses to refer to the semivowels and reduced vowels. He claims that they do not constitute a class of their own, unlike the mutes and semivowels. As examples, he cites the case of y following g or q either in a diphthong as in quando 'when', or when it is not pronounced at all as in guerra "war". The same is true of i occurring in a diphthong. For this reason, in these cases he advocates the use of y in intervocalic position, for instance in maya 'a proper name'.

The two consonants that become liquids are 1 and r when preceded by a mute letter (i.e., when they occur in clusters), e.g. floren 'flowers', claro 'clear', fraco 'weak'. (Oliveira, 1933, pp.31-32)

He eliminates the letters k, ph, and ps from the spelling system on the grounds that they are borrowed from Latin, but do not occur as sounds in the language. (Oliveira, 1933, p.30)

In Chapter 11 and also in Chapter 18, he proposes to discuss what he calls parentesco, that is, relations of phonetic similarity among the letters. The propria of each letter is the set of features peculiar to it. The commun is the act
of features which a letter shares with some other letter. He claims that all vowels are similar in that they share the feature voice. Consonants are similar in that they 'strike' the vowels (i.e., they require vowels to make them audible). He also points out the relation between the pairs b/p, d/t, d/v, l/x, g/z, a/æ, ʃ/ʃ (which are all, except for ʃ/ʃ in a voiced/voiceless relation). (Oliveira, 1933, p.31)

He regards alternation as an indication of parentesco. Thus he cites the case of fermoso and feramoso, where there is a change of [o] to [u]. He also discusses some problems of juncture across word boundary. For example, amarão o seu d'ágave will love their God becomes amarano seu d'ág. This problem of juncture is analyzed in more detail in Chapter 19, where he also examines some cases of stress. He presents, for example, the following two rules:

1) if the two vowels (one in word-final and the other in word-initial positions) are identical, they collapse into one, as in the case of estava assi 'it was like that', which becomes estavassí.

2) if the two vowels are different, the the first one is deleted. For example, como este 'like this' becoming comeste. (Oliveira, 1933, pp.44-45)

Oliveira (1933, p.57) defines stress as the main voice or tone of the diction. In Chapter 29 he presents a series of stress rules, which we will not, however, discuss in this paper, since our main objective is to present the segmental units of his system. (Oliveira, 1933, pp.58-61)

7. OLIVEIRA'S ARTICULATORY DESCRIPTION OF THE CONSONANTS

For the details of his description of the consonants see the Appendix.
We may summarize the main features of his system in the following table.

<table>
<thead>
<tr>
<th>ARTICULATORS</th>
<th>ARTICULATORY PROCESSES INVOLVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>lips</td>
<td>protrusion and opening.</td>
</tr>
<tr>
<td>tongue resting</td>
<td>Velar stricture</td>
</tr>
<tr>
<td>against lower teeth, dorsum</td>
<td>(point of articulation)</td>
</tr>
<tr>
<td>of the tongue touching soft palate (this is cited as a place of stricture)</td>
<td>stop closure</td>
</tr>
<tr>
<td>tongue against upper teeth</td>
<td>alveolar region as a place of articulation</td>
</tr>
<tr>
<td>upper teeth against lower lip</td>
<td>labiodental constriction</td>
</tr>
<tr>
<td>side of the tongue approaching teeth</td>
<td>lateral release mechanism</td>
</tr>
<tr>
<td>breath vibrating at the tip of the tongue</td>
<td>flap</td>
</tr>
<tr>
<td>more vibration than for flap</td>
<td>trill</td>
</tr>
<tr>
<td>'whistle' at the sides of the tongue</td>
<td>sibilants</td>
</tr>
</tbody>
</table>

He also mentions the lip rounding which accompanies the production of the palato-alveolar fricatives.
Gálmes de Fuentes (1962, p. 69) reports that from the 14th to the 16th century, there were four sibilsants in Portuguese and Spanish, named two voiced and two voiceless ones. He presents Amado Alonso's system, which is as follows:

\[
\begin{align*}
\text{[ʒ]} & \quad \text{apico-dental} & \quad [\text{ʒ}] & \quad \text{apico-dental} \\
\text{[ʒ]} & \quad \text{apico-alveolar} & \quad [\text{ʒ}] & \quad \text{apico-alveolar} \\
\end{align*}
\]

redefining the elements in the following way:

\[
\begin{align*}
\text{[s]} & \quad \text{predorsodental} & \quad [\text{z}] & \quad \text{predorsodental} \\
\text{[ʒ]} & \quad \text{apico-alveolar} & \quad [\text{ʒ}] & \quad \text{apico-alveolar} \\
\end{align*}
\]

He insists that this is not only a hypothesis, but that it is confirmed by certain modern dialects which have retained the older system intact:

'En el norte de Portugal, provincia de, Tras-os-Montes y noroeste de Entre-Bouro-e-Minho, así como en algunos puntos aislados de España, fronterizos del norte portugués, se mantiene hoy día viva la distinción fonológica entre las parejas de sibilantes ss-c, s-z, que desde el Duero hasta el Sur, perdido el momento oclusivo de las antiguas c.z, estas se han convertido en las regiones aludidas en dos fricativas predorsodentales sorda y sonora, respectivamente. De esta forma, la antigua oposición fonológica, que se sigue conservando hasta nuestros días, se realiza entre dos parejas (sordas y sonoras) de sibilantes fricativas: una de conca-vas apicoalveolares y otra de convexas predorsodentales; de manera que en la pareja de sordas 'passo' (pasco) con s apical se opone a 'paço' (palacio) con s predorsal, del mismo modo que entre las sonoras 'coser' (cosecer) se opone a 'cozer' (cocer). (Gálmes, 1962, pp. 69-70)

One of the Portuguese grammarians, João de Moraes Madureira Feyjó, in 1734 states in his Ortoaffia portuguesa that at that time there was a distinction between s and ʒ, on the basis of his northern dialect: '...o c como c (es decir ʒ) se pronuncia con a extremidade anterior da língua tocando nos den- tes quasi fechados, em quanto sahe o seu son, que he suavemente...
brando. O s pronuncia-se com a ponta da língua, moderamente aplicada ao paladar, junto aos dentes de cima com os beços abertos, em quanto sahe hum son quasi assobiando'. (Gálmes, 1962, p.72)

Gálmes believes it is very probable that in the southern and central regions of Portugal there was originally an apico-alveolar [ ñ ], as also in the rest of the Peninsula. To back up his supposition he cites Arabic transcriptions of the Portuguese -as- with Arabic ُ (šīn) and transcriptions of the s- with ُ (žīm), as for instance ēnorer for senhor 'Mister' and nūsō for nossso 'our', and cāza for casa. Accordingly he suggests that these distinctions were observed in all dialects up to the 16th century. The graphemes -as- and ñ were equivalent to the apico-alveolar sounds [ ñ ] and [ z ], respectively, and the graphemes q and g were dorsdentals [ s ] and [ z ]. Another strong argument which Gálmes uses is the description of q and g by Fernão de Oliveira. He suspects that the confusion between the sibilants started in the 15th century and then gained ground during the 16th century. It is possible that in Oliveira's time the sibilants were still in a transitional stage, but Oliveira does not mention that the sounds were interchangeable. However, Magalhães de Gandavo, who wrote a Portuguese grammar almost half a century after Oliveira, complains that some speakers were beginning to confuse the q and g with s, both in speech and in writing. In 1574, Duarte Nunes de Leão refers to the same confusion that, according to him, was not only a feature of lower class speech, but was also taking place in the speech of the upper classes. (Gálmes, 1962, p.72)

9. SHIBILANTS

Hart claims that there was a distinction between x and ch in the 16th century. He cites the statement by Duarte Nunes de Leão which occurs in his Ortographia to the effect that Por-
tuguese **ch** in words such as **chamar** 'to call' and **chorar** 'to cry' was the same sound as the one used by the Italians when pronouncing their **ce** and **ci**.

He concludes therefore that orthographic **x** was pronounced as a fricative [ʃ] and written **ch** was pronounced as the affricate [tʃ]. (Hart, 1955, p.410)

Oliveira (1933, p.37) seems to imply that the two were different but **x** is the only one he describes in detail (Chap.13). He treats **ch** as one of the aspirates, and asserts that the aspirates differ from all non-aspirates (Chap.14).

10. **R-SOUNDS**

From his description of the two types of **r** it seems clear that the single **r** represents the flap [ɾ], and the double **rr** the trill [r̩], which at that time was the lingual rather than the uvular variant which is used in many Portuguese dialects today.

11. **TENSE VERSUS LAX**

As is evident from the description of the consonants and particularly from the way the voice/voiceless pairs are described, Oliveira categorizes the voiceless consonants as having more **espirito**, i.e., breath, than their voiced counterparts.

This is somewhat reminiscent of the modern distinction between tense and lax sounds. It should also be noted that Oliveira utilizes the same feature in describing vowels, where once more sounds with more **espirito** are what we nowadays call tense.
12. PHONETIC CHARTS

On the basis of what has been said so far, we may tentatively tabulate the vowels and consonants and their corresponding symbols as described by Fernão de Oliveira in the following way:

1) Phonetic Value

<table>
<thead>
<tr>
<th>FRONT</th>
<th>CENT.</th>
<th>BACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>i</td>
<td></td>
</tr>
<tr>
<td>MID-HI.</td>
<td>e</td>
<td>o</td>
</tr>
<tr>
<td>MID-LOW</td>
<td>e</td>
<td>o</td>
</tr>
<tr>
<td>LOW</td>
<td>a</td>
<td></td>
</tr>
</tbody>
</table>

2) Oliveira's Notation

<table>
<thead>
<tr>
<th>LARGE</th>
<th>SMALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ open</td>
<td>- open</td>
</tr>
<tr>
<td>+ espírito</td>
<td>- espírito</td>
</tr>
<tr>
<td>i</td>
<td>u</td>
</tr>
<tr>
<td>e</td>
<td>o</td>
</tr>
<tr>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>
CONSONANTS

1) Phonetic Value

<table>
<thead>
<tr>
<th></th>
<th>STOP</th>
<th>AFFRIC</th>
<th>FRIC.</th>
<th>TRILL</th>
<th>FLAP</th>
<th>LAT.</th>
<th>NASAL</th>
<th>CONT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BILABIAL</td>
<td>p b</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a</td>
</tr>
<tr>
<td>LABIOD.</td>
<td></td>
<td>f v</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DENTAL</td>
<td>t d</td>
<td></td>
<td>s z</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALVEOLAR</td>
<td>s ž</td>
<td>ř ž</td>
<td></td>
<td>l</td>
<td>n</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALVEOPAL</td>
<td>t ž</td>
<td>ř ž</td>
<td></td>
<td>l</td>
<td>n</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PALATAL</td>
<td></td>
<td></td>
<td>a n</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td>VELAR</td>
<td>k g</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UVULAR</td>
<td>q</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2) Oliveira's Notation

<table>
<thead>
<tr>
<th>MUTES</th>
<th>SEMIVOWELS</th>
<th>LESS USUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>- espito</td>
<td>+ esp.</td>
<td>+ espito</td>
</tr>
<tr>
<td>- d b g m n</td>
<td>t p q r f x</td>
<td>l r s z</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX

1) VOWELS

*a* is pronounced with the mouth more open than for any other vowel, and the position of the mouth is the same throughout.

*a* is pronounced with the same shape of the mouth as for *a*, but it involves more *espirito* 'breath'.

For *e* the mouth is not so open as for the preceding vowels and the teeth are more visible.

In the case of *e* the symbol resembles a very open mouth with the tongue in the middle. The implication seems to be that the pronunciation is analogous. It has no more strength than *e*, but it involves more *espirito*.

*i* is pronounced with the teeth almost shut, the lips in the same position as for *e*, the tongue pressed against the lower gums, and the *espirito* projected with more impetus.

In the case of *o* the symbol is shaped like a barrel hoop and its pronunciation is analogous: the interior of the mouth is also round and the lips contracted and rounded.

*u* has the same pronunciation as *e*, but with more energy and *espirito*.

For *y* the jaws are tightened and the lips are brought together in such a way that a narrow tube is formed through which a 'dark' sound escapes.

2) CONSONANTS

*b* is pronounced with the tightened lips which project the breath with force, and sometimes almost with saliva.

*c* is pronounced with the tongue bent against the lower teeth. This causes a certain bump in the central part of the tongue near the throat almost touching (with this bump) the roof
of the mouth and blocking the breath: that is, forcing its way it separates the tongue and the sides of the mouth, and breaks against the lips with impetus.

d places the tongue against the upper teeth but has little espirito.

c closes the upper teeth against the lower lip. However it does not sound as uncouth in Portuguese as Quintilian reports it to sound in Latin, but it still blows in the same way.

g is like ə, but with less espirito.

l licks the upper gums with the back of the tongue, which makes the sides of the tongue approach the teeth.

m makes a mooing sound with lips tightened and turned inwards.

n sounds, according to Quintilian, with the tip of the tongue touching the upper gums.

p has the same strength or virtue as b, but it involves more espirito.

q as reported by Diomedes, is made with the pronunciation of ə and y, and it is in some instances unnecessary and in others it requires to be followed by a liquid y. Here, in distinguishing this sound from ə, one might perhaps claim that he was referring to the retracted variant of [k] occurring before y, but we do not know, of course, whether he was aware of this phonetic distinction.

r (single) is pronounced with the tongue against the upper teeth and the breath vibrating at the tip of the tongue.

rr (double) has the same pronunciation as the single r, but it "scratches" the upper gums more. Then he points out that the single r does not vibrate as much and sometimes so little that it sounds like ə.

s (single) is pronounced with the tip of the tongue raised against the roof of the mouth and the espirito makes a whistle at the sides of the tongue.
**FOOTNOTES**


2The article "Vida de João de Barros" by Manuel Se- verian de Faria was first published in Évora in 1624 and re- published twice, once in Da Ásia de Jão de Barros e de Diogo de Couto (Lisbon: n.p., 1778) and again in Discursos vários políticos (Lisbon: Impressão Régia, 1808).
REFERENCES

a. Books:


b. Articles:


__________ (1805) "Vida de João de Barros". In Discursos vários políticos. Lisbon: Impressão Régia.