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## Contents

|  |    |
|--|----|
| HELES CONTRERAS, Spanish Non-Anaphoric <i>lo</i>   | 5  |
| ERNEST F. HADEN, The Determiners in French   | 31 |
| F. H. H. KORTLANDT, Sur l'identification des unités phonologiques du castillan   | 43 |
| A. T. KRIVONOSOV, Structural-Functional Models in Syntax   | 51 |
| JOHN M. LIPSKI The Surface Structure of Portuguese: Plurals and Other Things   | 67 |
| GARY H. ROSOFF, The Definite Article: A Distinctive Feature Approach to the Development of a French Plural Noun Marker | 83 |
| GEORGE SIMEON, Phrasal Recognition Criteria  | 91 |
| REVIEWS  | 99 |

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# THE SURFACE STRUCTURE OF PORTUGUESE: PLURALS AND OTHER THINGS

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## 1. INTRODUCTION

The investigation of a particular morphological process in a given language often necessitates the consideration of more general phenomena affecting larger segments of the language. This is amply demonstrated in the study of the pluralization process in the Romance languages, a topic which has led to a great outflow of literature in recent years, particularly within the framework of generative phonology. The inherent unity of pluralization has seemed to many to find its most natural description within the theory of generative grammar, which, by the mechanism of abstract base forms and ordered rules, apparently permits the capturing of generalizations which had escaped earlier more traditional analyses.

This paper examines recent claims offered in the description of nominal pluralization in Portuguese, in relation to more general properties exhibited by the language. The futility of restricting a linguistic analysis to a single morphological process such as pluralization has been aptly summed up by Harris (1970: 930):

Thus it is unreasonable to expect, a-priori, that just the set of singular/plural pairs of nouns and adjectives will provide a self-contained and coherent domain of any interest for the investigation of phonological processes ... it would seem to me to be of great advantage to the study of ... language in general, if the topic of 'plural formation' were permanently laid to rest, and attention devoted instead to general phonological and morphological processes of the language.

Thus, recent studies involving Portuguese pluralization *qua* pluralization are of little interest, other than as descriptive statements, but when they depart from the main track to examine less specific phonological and morphological phenomena of Portuguese, they are of crucial importance to the study of language in general. The present study feels the need to reexamine the recent studies of Portuguese pluralization and phonology,

(in particular, those of St. Clair, 1971; Brasington, 1971; Saciuk, 1970; and Hensey, 1968), because of a fundamental methodological paradox which has dominated such studies. All recent attempts at describing Portuguese (and Spanish) pluralization have departed from the *a priori* standpoint that a generative phonological description is best suited for the investigation, and have therefore embarked on a course of abstract base forms and far-reaching rules, with little or no thought as to how the results of such an analysis would compare with what the native speaker hears. It is true that, on paper, many of the proposed analyses actually work (and many of them, on closer inspection, do not); the point is not, however, whether a linguistic theory is formally self-consistent, which is clearly a requirement in any case, but whether it represents a model which could be feasibly duplicated by the native speaker acquiring his language, utilizing only the primary data that he hears. By adopting from the onset the notion of a generative grammar, the investigator commits himself to the view that the native speaker must, of necessity, create an internalized grammar often considerably more complex than that represented by the speech patterns he actually hears. The possibility that one of the most significant aspects of grammar development may be generalization resulting from an awareness of surface patterns thus goes completely unrecognized; hence, the motivation for this paper. The fundamental premise contained herein is the notion that, in attempting to establish generalizations about his language, the native speaker will turn first to the surface structure, which represents what he actually hears, and only in exceptional cases will he generalize on the basis of a wholly abstract analysis. A detailed justification of the philosophy behind such a statement is far beyond the scope of this paper: let it suffice to say that if simplicity is truly a prime motivating force in the construction of grammars (by no means an undisputable claim) then the simplest way to arrive at generalities about a language is to examine the surface patterns; that is, the actually occurring forms. If such an examination yields an intelligible and consistent solution, a more abstract analysis has no demonstrable justification.

The notion of pluralization, at least within the Romance languages, is a fundamental cognitive concept, and it would not be unreasonable to suppose that the rules involved in the actualization of the pluralization process would be obtainable through an examination of the surface structure of the languages. That this is indeed the case for Portuguese, is the claim made in this study. An analysis is presented which divides the set of Portuguese plural forms into two main categories: those forms

predictable by their surface configurations, and those forms which constitute clear exceptions to any method of analysis.

## 2. STRESS PLACEMENT

At the very heart of the generative phonological studies dealing with pluralization in Portuguese and Spanish is the notion of a 'stress placement rule', which predictably assigns word stress to most words based on the configuration of the posited underlying forms. Although not of fundamental importance to the analysis offered in the following section, the treatment of stress placement in Portuguese has served as one of the major factors in justifying an abstract analysis of pluralization and other related phenomena,<sup>1</sup> and therefore a brief examination is called for at this time.

In Portuguese, stress may occur on the final, penultimate, or antepenultimate syllables, depending largely on the word in question. Although very few minimal pairs may be found, word stress is definitely phonemic in Portuguese, as evidenced by the following examples:<sup>2</sup>

|               |            |              |
|---------------|------------|--------------|
| <i>dúvida</i> | [dúvidɐ]   | 'doubt'      |
| <i>duvida</i> | [duvidɐ]   | 'he doubts'  |
| <i>dividi</i> | [d'ivid'i] | 'I divided'  |
| <i>divide</i> | [d'ivid'i] | 'he divides' |

The wide range of stress variation possible in Portuguese has often elicited the claim, mostly by grammarians, that word stress is always a lexical feature, a claim exemplified by the textbook of Agard, Willis and Lobo (1944: 14): "The stressed or strong syllable in a Portuguese word is, we repeat, fixed by tradition. As in English, the stress must be learned with each word. The stressed syllable may (depending on the word in question) be any of the last three." Such a statement, while perhaps allowable in the course of second-language teaching, presents a distorted picture, for word stress in Portuguese is at least partially predictable on the surface (and also by the orthography, since all deviations are marked by a diacritic). It is therefore useful to examine the predictable cases of stress placement, in order to determine what kind, if any, of stress placement rule may be at work.

<sup>1</sup> This topic is treated explicitly by Hensey (1968), Agard (1967: 166-79), and St. Clair (1971). It is implicit in the work of Saciuk (1970) and Brasington (1971).

<sup>2</sup> Throughout this study, the pronunciation of cited forms will be of some variety of Brazilian Portuguese, in particular that of the cities of São Paulo and Rio de Janeiro.

By far the most consistent class of words, with respect to stress assignment, is the set of words ending in one of the permissible final consonants: *-s*, *-z*, *-l*, and *-r*, for such words invariably (with a few exceptions, all marked orthographically with an accent) take the accent on the final syllable. This phenomenon is completely general for all morphological classes, as is illustrated below:

|               |          |             |
|---------------|----------|-------------|
| <i>contar</i> | [kõtár]  | 'to count'  |
| <i>jamais</i> | [žemájs] | 'never'     |
| <i>cortes</i> | [kortés] | 'courteous' |
| <i>rapaz</i>  | [rapás]  | 'boy'       |
| <i>papel</i>  | [papél]  | 'paper'     |

It also applies when the word ends phonetically in an (oral) diphthong, including words in *-l*, which in many parts of Brazil are pronounced with final [w]:<sup>3</sup>

|                |           |                 |
|----------------|-----------|-----------------|
| <i>falarei</i> | [fəleréj] | 'I shall speak' |
| <i>fuzil</i>   | [fuzíw]   | 'rifle'         |
| <i>andou</i>   | [ẽdów]    | 'he walked'     |
| <i>viu</i>     | [víw]     | 'he saw'        |

Statistically, by far the largest portion of Portuguese words ending in an oral vowel takes stress on the penultimate syllable, a synchronic residue of the old Latin stress placement rule. Exceptions to this general tendency are marked orthographically, as illustrated above, but such exceptions yield no other clue as to the position of the accent.

Words ending in a nasal vowel or true nasal diphthongs<sup>4</sup> act as though they contained oral vowels or diphthongs; i.e. take the stress on the penultimate or final syllables, respectively:

|                  |             |             |
|------------------|-------------|-------------|
| <i>ontem</i>     | [ótẽj]      | 'yesterday' |
| <i>escuridão</i> | [iscuridẽw] | 'darkness'  |
| <i>irmã</i>      | [irmẽ]      | 'sister'    |

There is thus seen to be a certain measure of regularity among Por-

<sup>3</sup> In many parts of Brazil, the diphthongs *ei* and *ou* are reduced to *e* and *o*, in which cases the words containing the reduced diphthongs word-finally must be considered synchronic exceptions to the stress placement rule, at least in those cases where the native speaker is not aware of the presence of a diphthong.

<sup>4</sup> The glide attached to the end of word-final *-em* and *-am* is a perfectly predictable surface redundancy, and the resulting diphthongs must not be confused with true phonological diphthongs, which are marked orthographically with a *til*. The former behave like single vowels, while the latter behave in an identical manner as the oral diphthongs.

tuguese words with regard to stress assignment, a regularity predictable in terms of the surface representations and reflected by the codified orthography, and hence a regularity which may be posited as constituting a general rule of Portuguese. A tentative formulation of the stress-assignment rule would be a surface condition such as:

$$(1) V \rightarrow [+stress]/ \text{ \_\_\_\_ } ([ -voc] )_1 (V) \#$$

Statement (1) expresses the directly observable generalization that stress normally occurs on the last syllable of any word ending phonetically in a consonant or glide, otherwise occurring on the penultimate syllable. Inasmuch as it is not only consistent with the facts, but also represents a generalization which the native speaker might be expected to arrive at given only a general corpus of utterances, rule (1) may be tentatively considered as accounting for the (non-morphologically-determined) predictable cases of stress assignment in Portuguese.

In sharp contrast to the analysis proposed above, the generative phonological accounts of Portuguese stress placement have assumed from the beginning (either explicitly or implicitly) the synchronic existence of the old 'Latin stress rule', a position summed up by St. Clair (1971: 93): "stress the penultimate syllable of the underlying form if it is a strong syllable, otherwise stress the antepenultimate syllable ... a strong syllable is one which is either tense or closed. The latter is characterized as a vowel followed by two or more consonants." Accepting as synchronically productive a rule which superficially disappeared many centuries ago encounters numerous obstacles, and immediately necessitates an abstract analysis in order to achieve a consistent solution. First, such a premise must deal with such noteworthy exceptions to the environment of the LSR as *missivista* 'postman', *álgebra*, *sinapse*, *geômetra*, etc. Relying on such criteria as a [ -native] lexical classification for these forms is begging the question, since they are as much a part of the Portuguese language as any other word, and therefore must be included in any description of the language. The use of a tense/lax classification in the description of the Portuguese vowel system constitutes an otherwise unmotivated diacritic, since no such distinction is ever realized in pronunciation. It is presumably this diacritic which would be required to correctly assign stress to such otherwise unpredictable pairs as *árvore* 'tree', *tólíce* 'foolishness', as compared with *esfera* 'sphere', *portuguesa* 'Portuguese (f.)', thus regularizing a process which native speakers feel is unpredictable, and which demands a penultimate stress unless otherwise indicated (i.e. by the orthography, or by imitation).

Perhaps the most disturbing conclusion reached by assuming that the Latin stress assignment rule is currently productive in Portuguese phonology is with respect to the analysis of words ending phonetically in a consonant, which normally take stress on the final syllable. In order to utilize the LSR, which allows for stress only on the penultimate or antepenultimate syllables, it is necessary to posit an underlying final vowel (unanimously taken to be /e/, from the Latin etyma of some of the forms involved), which is subsequently deleted by an 'apocope' rule. Thus *favor* 'favor' is /favore/, *papel* 'paper' is /papele/, and so forth. This abstract analysis is usually justified by pointing out the fact that the underlying final /e/ appears in the plural forms: *favores*, *papeles*, etc. Embarrassingly difficult to include by such a technique are forms which do not normally take the plural, for example *jamais* 'never', *devagar* 'slowly', *calor* 'heat', and many others, including the verbal infinitives, which all end in *-r*.

An abstract analysis which posits an underlying final /e/ attached to the end of every form ending phonetically in a consonant completely overlooks the main goal of phonological analysis: to provide a model of the competence of the native speaker which is consistent with ALL the primary linguistic data to which the speaker is exposed, and which may be arrived at by generalizing from this primary data. To assert that a native speaker of Portuguese will analyze a form such as *favor* as underlying /favore/, merely because the final *e* appears in the plural *favores* is to ascribe to the concept of pluralization a much greater cognitive prominence than is justified by observation. In the initial stages of language acquisition, the child normally encounters more singular forms than plural forms, and at very early stages singular and plural forms are apparently learned independently, only later being grouped under a common rubric (cf. Ervin, 1964). Is one then to conclude that a Portuguese speaker, uttering the word *favor*, will mentally be deleting a final vowel which disappeared phonetically from the language some twelve centuries ago (Grandgent, 1934: 102), in order to satisfy a stress placement rule which apparently ceased to function at the same time, merely because this vowel appears in the plural form? The answer, I feel, is no, and this answer can be further justified by considering recent borrowings from English. Portuguese does not tolerate word-final stops, thus all borrowed forms ending in a stop receive an appended *-e*: *clube* 'club', *drinque* 'drink', *pingue-pongue* 'pingpong', etc. Words ending in *-l*, *-r*, *-s*, and *-z*, however, are not altered upon borrowing; hence, *futbol*

'soccer', *volibol* 'volleyball', etc. Clearly, if the need to generalize the Latin stress rule were present in Portuguese, such words would receive a final *-e*, thus making the forms immediately acceptable to the rule, and eliminating the necessity for the final vowel apocope. Or are we to maintain that the speaker, hearing the borrowed word (whose plural does not end in *-es*), will add the final vowel to the underlying form, and then remove it again by a rule of apocope?

In summary, the stress assignment of Portuguese appears to be largely dictated by the surface forms of the words involved (if indeed there is any significant difference between the surface form of a word and its 'stored' form). Normally, words ending phonetically in a consonant receive stress on the final syllable, while those ending in a vowel take a penultimate accent. There is no synchronic way of predicting those Portuguese words which demand an antepenultimate stress, these forms are evidently memorized as such by native speakers. In the light of such a surface consistency, there seems to be no motivation, other than a sort of historical nostalgia, for claiming the present existence of the old Latin stress assignment rule. Indeed, such a rule would force the speaker to actually complicate his grammar, in order to accommodate recent borrowings, as well as to account for words which do not take the plural inflection.

### 3. THE PLURALIZATION PROCESS

Having tentatively established the environments for stress assignment in Portuguese, we may proceed to investigate the various facets of Portuguese noun and adjective pluralization. Although they may be encountered in any grammar book, the traditional rules for plural formation, based largely on the orthography, are repeated here for convenience of discussion:

- I. Words ending in a vowel, except for those in *-ão*, form the plural by adding *-s*:

|               |              |                 |               |
|---------------|--------------|-----------------|---------------|
| <i>a cama</i> | 'the bed'    | <i>as camas</i> | 'the beds'    |
| <i>a irmã</i> | 'the sister' | <i>as irmãs</i> | 'the sisters' |
| <i>o pau</i>  | 'the stick'  | <i>os paus</i>  | 'the sticks'  |

- II. Words ending in *-r*, *-z*, and those ending in *-s* with accented final syllable, add *-es* to form the plural:

|                    |                  |                       |                  |
|--------------------|------------------|-----------------------|------------------|
| <i>o rapaz</i>     | 'the boy'        | <i>os rapazes</i>     | 'the boys'       |
| <i>o favor</i>     | 'the favor'      | <i>os favores</i>     | 'the favors'     |
| <i>o português</i> | 'the Portuguese' | <i>os portugueses</i> | 'the Portuguese' |

III. Words ending in *-n* or *-m* (i.e. in a nasal vowel) change the *m* to *n* and add *-s*:

|                |              |                  |               |
|----------------|--------------|------------------|---------------|
| <i>o homem</i> | 'the man'    | <i>os homens</i> | 'the men'     |
| <i>o hífen</i> | 'the hyphen' | <i>os hífen</i>  | 'the hyphens' |

IV. Words ending in *-l* form their plurals as follows:

a. Those ending in *-al*, *-el*, *-ol*, or *-ul*, drop the *l* and add *is*:

|                   |                 |                     |                  |
|-------------------|-----------------|---------------------|------------------|
| <i>o hospital</i> | 'the hospital'  | <i>os hospitais</i> | 'the hospitals'  |
| <i>o hotel</i>    | 'the hotel'     | <i>os hotéis</i>    | 'the hotels'     |
| <i>o farol</i>    | 'the headlight' | <i>os faróis</i>    | 'the headlights' |
| <i>o paul</i>     | 'the swamp'     | <i>os pântanos</i>  | 'the swamps'     |

b. Words ending in accented *-il* drop the *l* and add *s*:

|                |             |                 |              |
|----------------|-------------|-----------------|--------------|
| <i>o fuzil</i> | 'the rifle' | <i>os fuzis</i> | 'the rifles' |
|----------------|-------------|-----------------|--------------|

c. Words ending in unaccented *-il* drop the *-il* and add *eis*:

|                    |                  |                      |                   |
|--------------------|------------------|----------------------|-------------------|
| <i>o automóvil</i> | 'the automobile' | <i>os automóveis</i> | 'the automobiles' |
|--------------------|------------------|----------------------|-------------------|

V. Words ending in *-s* with unaccented final syllable remain unchanged in the plural:

|                |              |                 |               |
|----------------|--------------|-----------------|---------------|
| <i>o lápis</i> | 'the pencil' | <i>os lápis</i> | 'the pencils' |
|----------------|--------------|-----------------|---------------|

VI. Words ending in *-ão* form their plurals in one of three ways, depending on the word in question:

a. by merely adding *s*:

|                  |                 |                    |                  |
|------------------|-----------------|--------------------|------------------|
| <i>o cristão</i> | 'the Christian' | <i>os cristãos</i> | 'the Christians' |
|------------------|-----------------|--------------------|------------------|

b. by dropping the *ão* and adding *ães*:

|              |           |                |            |
|--------------|-----------|----------------|------------|
| <i>o cão</i> | 'the dog' | <i>os cães</i> | 'the dogs' |
|--------------|-----------|----------------|------------|

c. by dropping the *ão* and adding *ões*:

|                |              |                  |               |
|----------------|--------------|------------------|---------------|
| <i>a lição</i> | 'the lesson' | <i>as lições</i> | 'the lessons' |
|----------------|--------------|------------------|---------------|

In examining the various methods of plural formation in Portuguese, several general observations can be made. The most obvious one is of course the fact that all plurals end in *s*. This fact has served as the point of departure for the generative phonological studies alluded to earlier, which have dogmatically asserted that Portuguese pluralization consists

only of adding */s/* to the underlying singular form, whereas "the phonological changes which appear to accompany the plural formation are not an integral part of that phonological process" (St. Clair, 1971: 92). This may perhaps be too hasty a generalization, however, for closer inspection reveals a somewhat more involved characterization of the plural marker. It will be noticed that most Portuguese plurals end in the sequence 'vowel + *s*'. More specifically, all plurals end either in a glide or a vowel, plus *s*. We may thus propose a canonical ending for the plural of a noun or adjective, an ending so general as to be without exception in the language:

(2) CANONICAL PLURAL FORM: .....[—cons] s #

In asserting that (2) is the canonical form for a Portuguese plural, it is meant, in effect, that what the native speaker responds to in attaching the concept of plurality to a given form is not merely the final *s*, which is the plural morpheme proper, but rather the entire surface configuration of the word, which is of the form given in (2). The synchronic reason for a pattern such as (2) is straightforward, since Portuguese phonology tolerates no word-final consonant clusters. This may be expressed by a surface constraint such as the following:

(3) [+seg] → [—cons]/ \_\_\_\_ C #

The tendency to reduce consonant clusters in other positions is very strong in many dialects of Portuguese, particularly in Brazil, with the apparent aim of extending the CV syllabic pattern throughout the language. Thus we may encounter such 'expanded' forms as *obiter* for *obter* 'to obtain', *adevogado* for *advogado* 'lawyer', *abissoluto* for *absoluto* 'absolute', etc. (cf. Silva Neto, 1960: 41). It is doubtful, however, that such a tendency will ever dominate the Portuguese language.

The fact that the plural form of all Portuguese nouns and adjectives satisfies the pattern given in (2) strongly suggests that pluralization may be dictated by the need to conform to a surface configuration general to the language. In order to add substance to such a claim, it must be shown that the specific rules connected with the pluralization process are determined by the surface structure of the words to which they apply, and that the overall effect of such rules is to produce an acceptable surface form. It is to this end that the remainder of this section is dedicated.

For the forms of the above class I, which end in a vowel, the canonical shape of the plural is achieved merely by adding the plural morpheme *s*. This is true whether the singular form ends in an oral vowel (*livro*—*livros*



speech of many Portuguese and Galician dialects,<sup>8</sup> no doubt aided by the noteworthy common exception *mal-males* 'evil'.

The standard generative phonological analysis of the pluralization of words ending in *-l* (which also supposedly contain underlying final /e/) is to posit a 'general' rule which deletes the intervocalic /l/ of a form such as *papel* /papele/ when the plural morpheme is added (cf. St. Clair, 1971: 94). Aside from figuring in the analysis of the plural formation process, such a rule of 'lateral loss' does not occur in Portuguese. Not only are there thousands of words exhibiting intervocalic *l*, but the very words of class IV do not drop the *l* under circumstances other than during pluralization; for example *canal* 'canal', *canalículo* 'small canal', *papel* 'paper', *papelão* 'cardboard', etc. The forms ending in *-l*, while exhibiting an internally consistent plural formation, are the synchronic residues of a long-spent process, and there appears to be no motivated way of deriving these forms in a manner paralleling their historical evolution. In view of their exceptional status, felt by grammarians and uncultured speakers alike, the only legitimate analysis possible is one that will describe the pluralization of words in *-l* in a way that the native speaker actually hears it. For words ending in *-al*, *-ol*, *-el*, and *-ul*, the most reasonable statement of the pluralization rule is:

(5)  $l \rightarrow i/V \text{ \_\_\_\_\_\_ } s \#$

Those words ending in stressed *-il*, whose plurals end in *-is*, are also covered by (5), and the resulting lengthened vowel, *ii*, nondistinctive in Portuguese, is reduced by a general condition of shortening, the same condition that reduces, for example, *para a* to *pra* 'along the'. Forms ending in unstressed *-il*, which take the plural in *-eis*, are completely irregular, synchronically and diachronically, and constitute only a handful of examples. For obvious reasons, no attempt has ever been made to derive them in a principled way.

A further note should be added on the present situation in many dialects of Brazil, where final *-l* is vocalized to [w], thus creating homonyms like *pau* 'stick' and *paul* 'swamp'. To the speaker of such a dialect, there is no way of determining the phonological structure of a word ending in [w] unless the spelling is known. One would therefore expect confusion to occur both ways, with accompanying repercussions on the pluralization process, which in fact does occur (cf. Mattoso Câmara, 1957: 283). Such confusion points out the fact that native speakers, whenever possi-

<sup>8</sup> See, for example, Carballo (1966: 91-92).

ble, analyze words on the basis of their surface forms, since if the speakers of the Brazilian dialects in question took advantage of all the morphophonemic alternations credited to them by generative grammarians, no confusion would be possible. It therefore seems safe to say that the pluralization of words ending in *-l*, given in (5), while producing an acceptable surface form conforming to the general canonical pattern (2), is in no way a 'natural' rule general to the language, but rather a special morphophonemic rule arising as the result of previous historical developments.

The words of class V, ending in *-s* with unstressed final syllable, are quite exceptional, constituting at most half a dozen examples. Historically, these words once had a regular plural ending in *-es*, losing the ending through a process of haplology to yield the present forms (cf. Williams, 1962: 126). Synchronically, there has been no attempt at restoring a regular plural form, for the final syllable of a Portuguese proparoxytone is very weakly articulated, often dropped; thus, an ending such as *\*V̄sis* would ordinarily reduce to *V̄s*. The fact that the words in class V already sound like well-formed Portuguese plurals, and would present difficulties in pronunciation if an additional plural ending were added, explains the exceptional status of these forms in modern Portuguese.

More energy has been expended by generative phonologists to derive the plural forms of class VI, ending in *-ão*, than for all the other classes put together. This seems rather unusual, in view of the fact that synchronically, the plural of a word in *-ão* is completely unpredictable, and such forms are learned as a list by native speakers and foreign students alike. The total irregularity of many Portuguese plural forms has led one native speaker, Guterres da Silveira (1969: 173) to comment:

*Número* — o morfema é /S/, mas apresenta-se também o alomorfe /ES/. Em muitos casos, os alomorfes, diacrônicamente explicáveis, constituem complexo quadro, a que não falta a hipótese de flutuações dentro do próprio sistema usual da língua, como é o caso do plural dos nomes terminados em /ÃO/ ou dos em /IL/ átonas. [*Number* — the usual morpheme is /S/, but the allomorph /ES/ appears also. In many cases the allomorphs, considered diachronically, present a complex system, about which there are many hypotheses concerning fluctuations within the proper usual system of the language, as is the case with the plural of the nouns ending in /ÃO/ or the atonic nouns in /IL/.]

Historically, such forms derived largely from Latin words containing an intervocalic *n*; e.g. *manum* > *mão* 'hand'. Later, by a process of analogy and confusion not yet fully understood, the singular forms of words deriving from Latin *-one* and *-ane* fell together with those coming



from *-ano*, to yield a single ending in *-ão*. In the plural, however, the reflexes of the various etymological sources were kept apart; thus we have, for example, *ratione* > *razão* but *rationes* > *razões* 'reason(s)'. Synchronically, the native speaker, hearing a new word ending in *-ão*, ordinarily has no idea of the plural form, unless he also knows French, Spanish, or Latin, in which case he could make a reasonable (although not always correct) guess. Statistically, the plural ending in *-ões* is by far the most common, thus both historically and at the present time an analogical levelling is taking place to form the plural of all words in *-ão* along the *-ões* pattern. Commonly heard examples include *Castelões* for *Castelãos* 'Spaniards', *temporões* for *temporãos* 'premature', *capitões* for *capitães* 'captains', *alemões* for *alemães* 'Germans' (cf. Louro, 1952: 44). In substandard speech, this tendency dominates, and it is not unreasonable to speculate that Portuguese may eventually evolve to the point where all words in *-ão* take the plural in *-ões*. These observations demonstrate the fact that the various possibilities for pluralizing a word in *-ão*, when they are even observed by native speakers, are felt as exceptional, and levelling based on the predominant surface pattern occurs, not heeding supposed morphophonemic alternations with other forms.

Recent generative phonological studies of Portuguese have all analyzed words in *-ão* as containing underlying intervocalic /n/, and have furthermore modelled the underlying forms on the historical etyma, in order to correctly predict pluralization. Thus *cão* 'dog' is /kane/, *cristão* 'Christian' is /kristano/ and *razão* 'reason' is /ratione/. Distinguishing in the analysis underlying forms which native speakers cannot predict seems an unwise tactic, and in most cases no truly valid morphophonemic alternations may be found which would support such an analysis. Saciuk (1970: 199f.) justifies the analysis of *pão* 'bread' as /pane/, and by extension a similar analysis for all words in *-ão* by citing forms such as *panificação* 'bakery', *panificador* 'baker', and *panificar* 'to make bread'. Disregarded in such a presentation is the fact that the cited forms are erudite and scarce, whereas *pão* is probably in the vocabulary of every Portuguese speaker. The common words for 'bakery' and 'baker' are *paderia* and *padeiro*, respectively, while 'to make bread' would probably be rendered by a paraphrase such as *fazer pão*. Most words in *-ão* exhibit even fewer traces of morphophonemic alternation, thus rendering highly suspect the proposed abstract analysis. The details of these analyses (requiring between 6 and 12 steps, depending on the particular case) may be found in the papers of St. Clair, Brasington, Saciuk, and Hensey, and will not be repeated here. It is clear that those adhering to an

abstract analysis of this nature can, if sufficient rules be considered, derive anything from anything. The point is not whether the analysis produces the correct surface forms, but how such forms are arrived at. In order to describe, for instance, the 'fact' that /ratione/ becomes *razão* in the singular, but *razões* in the plural, it is necessary to posit a large number of otherwise unmotivated rules, all in order to formally regularize a process which native speakers agree is totally anomalous. In modern Portuguese, the pluralization of words in *-ão* is being levelled out by an analogical process independent of the morphophonemic alternations supposedly partitioning the class of such words into three 'predictable' categories. In the light of this tendency, as well as of the lack of adequate justification for an abstract analysis, there seems to be no way of claiming a regular derivation for Portuguese forms ending in *-ão* which will be consistent with the observable performances of native speakers.

#### 4. CONCLUSIONS

The formation of Portuguese plurals, together with various accompanying phenomena, has been examined with respect to the surface structure of the language. There has been seen to be a general canonical pattern exhibited by plural forms, arising in part from general surface constraints. Two main types of pluralization methods have been distinguished, those predictable by rules, and those which, despite conforming to the canonical pattern, cannot be derived in any principled way and must be considered anomalous. The need for positing an abstract analysis for the pluralization process has been questioned, since it is possible for the native speaker to arrive at a perfectly consistent and feasible generalization merely by examining the surface forms involved in the process.

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