

## Self organization in Plural Forms in Brazilian Portuguese

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This paper addresses sound changes which are related to the loss of plural markers in Brazilian Portuguese (BP). Any plural marker in BP may be alternatively omitted as long as the determiner retains the plural marker (Naro & Scherre 2013). Thus, we find forms in competition such as ‘os meninos bonitos’ and ‘os menino bonito’ *the handsome boys* or ‘uns dias chuvosos’ and ‘uns dia chuvoso’ *some raining days*. The definite or indefinite article retains the plural marker – which is underlined in the examples above – whereas the plural markers are not present in the nouns and adjectives. The loss of plural marker is an ongoing phenomenon in BP and we will argue that its current state reflects patterns of self-organization in a complex system. We adopted a Complex Adaptive Systems approach to interpret our findings (Beckner et alii 2009; Ellis and Larsen Freeman 2009, Bybee & Beckner 2013). We will argue that the current sound changes related to the loss of a plural marker in BP actually reflect trajectories which contribute to the stabilization of a more general configuration in the language which is the morphological loss of plural markers in noun and adjectives. Regular plurals in nouns/adjectives in BP are formed by adding an (-s) to them: (kaza+s) > (kazas) ‘house’. Irregular plurals may fall into five different groups. Group 1 refers to nouns/adjectives ending in (-s) which take the suffix (-is) where the final (s) of the nouns becomes voiced: (mes+is) > (mezis) ‘months’. Group 2 encompass nouns ending in [h] which take the suffix (-is) where the fricative becomes a tap: (koh+is) > (koris) ‘colours’. Group 3 involves nouns/adjectives which have a primarily stressed back mid-high vowel where in the plural form, when (-s) is added, the mid vowel will manifest as a mid-low back vowel: (ovu+s) > (ovus) ‘eggs’. Group 4 refers to nouns ending in (ão) which may have three different plural forms: ãos, ães, ões as in (mão+s) > (mãos) ‘hands’; (pão+s) > (pães) ‘bread (pl)’ and (leão+s) > (leões) ‘lions’. Group 5 is related to nouns ending in a lateral which is vocalized in BP: (sal) > (saw) ‘salt’. The plural form in this group takes the (-is) ending and the vocalized-L disappears: (sal+s) > (sais) ‘salt (pl)’. What is of interest in this paper is to understand how the various irregular plural forms accommodate to the loss of a plural marker. We will show that two competing forces contribute to the implementation of plural marker loss: gestural reduction in a prosodically weak position and analogy. We claim that gestural reduction and analogical forces combine in order to promote the stabilization of the morphological loss of plural markers in noun and adjectives in BP. Within a complex adaptive system perspective view our findings may be understood as variable trajectories which configure the morphological loss of plural markers in noun and adjectives. Thus, several apparently independent sound changes involving the loss of a plural marker in BP (Groups 2 to 5) operate with the general purpose of reassessing ways of marking plurals in nouns and adjectives. Thus, sound change may operate through various trajectories in order to consolidate grammatical patterns which in the case under investigation, is the loss of plural forms.

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