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Portuguese converted deverbal nouns: constraints on their bases

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0-Introduction

Conversion is one of the mechanisms which are responsible for the formation of deverbal nouns in Portuguese. Portuguese converted deverbal nouns are morphologically characterised by a stem, inherited from the base verb, and a theme vowel (1).

(1)   *corte* 'cut'-CONVERTED DEVERBAL NOUN

cort 'to cut'-VERBAL STEM *e*- NOMINAL THEME VOWEL

voo 'flight'-CONVERTED DEVERBAL NOUN

vo- 'to fly'- VERBAL STEM *o*- NOMINAL THEME VOWEL

This theme vowel, as is common to nouns which have not a deverbal origin nor even a derivational one, i.e., which are basic nouns (*mesa* 'table', *gato* 'cat', *ponte* 'bridge'), does not have a derivational status (cf. Aronoff (1994: 45-46) for the arguments of stating a theme vowel – Aronoff's work is related with theme vowels of Latin verbs, but the arguments are transferable to nominal theme vowels – as a morphophonological unit lacking semantic content; cf. Rodrigues (to appear) for the negation of the derivational status to the theme vowel of Portuguese converted deverbal nouns; cf. Kerleroux (1996) for the assumption of conversion as the mechanism that forms French nouns such as *attaque* 'attack' and *avance* 'advance' from the verbs *attaquer* 'to attack' and *avancer* 'to advance', respectively; and Rodrigues (2001) for the same assumption related to Portuguese converted deverbal nouns).

The aim of this paper is to demonstrate that there are constraints that govern the formation of converted deverbal nouns with regard to the kind of verbs that may or may not function as bases of these deverbal nouns and that those constraints, although belonging to different structures of language, have interfaces with each other. The existence of those constraints shows that (i) the constraints on the bases are not exclusively founded on morphological incompatibilities between derivational affixes and other morphological units to which those would be adjoined, and thus, a derivational mechanism which does not involve affixation, such as conversion, is also ruled by restrictions on the bases; (ii) structural constraints – based on prosodic, morphological, lexical-semantic and argument

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structures – are interwoven with processing and pragmatic factors; (iii) word-formation is organised in structures that have interfaces with each other (Rio-Torto (1993) and (1998)).

Taking as point of departure the analysis of a total of 1323 converted deverbal nouns published in Rodrigues (2001), we will show these main aspects of the verbs that may or may not function as bases for those nouns (Rodrigues (2004)):

1   prosodic structure;

2   morphological structure (affixes that are present in the verb and etymologic data);

3   pragmatic data;

4   lexical-conceptual structure in connection with argument structure.

To understand if those constraints are particular to conversion or are influencing all the mechanisms of deverbal noun formation, in parallel to the converted deverbal nouns, we will show examples of affixed deverbal nouns.

The existence of those constraints shows that conversion is not an idiosyncratic word-formation mechanism (cf. Lieber (2004: 89-95), who defends that verbal conversion is idiosyncratic, characterising it as a relisting). Since it is not possible to produce a converted deverbal noun from any verb, independently of its structures, at least in Portuguese, conversion is not to be characterised as a simple relisting of a word in the lexicon.

1- Prosodic structure

In Rodrigues (2004) we find the importance of the prosodic structure to the possibility/impossibility of creating deverbal nouns by derivation vs. conversion. From the analysis of 1323 converted deverbal nouns it is concluded that there is a minimal prosodic word that may function as derivational base of converted deverbal nouns. That minimal word which constitutes the verbal stem is defined as containing at least one syllable. This means that the verbal stem must have at least one vowel, independently of its position, that may function as the nucleus of a prosodic stress. The inexistence of converted deverbal nouns from verbs such as *ler* 'to read', *dar* 'to give', *ver* 'to see', *vir* 'to come', *ir* 'to go', whose vowels represent theme vowels and do not belong to the verb stem, shows that the prosodic structure of the verbal stem induces constraints on the formation of deverbal nouns. The form of the verb that functions as derivational base of converted deverbal nouns

in Portuguese is the stem, i.e., the form of the verb without inflectional morphemes and without theme vowel. It means that if we try to produce hypothetical converted deverbal nouns from the monosyllabic verbs shown above, we must depart from their stems. Then, we must aggregate a nominal theme vowel to those stems, which, in Portuguese, may be -*a*, -*e* and -*o*, independently of the morphological structure of the base verb (2).

(2) **la*, *le*, *lo* 'reading'- hypothetical and agrammatical converted deverbal nouns of *ler* 'to read'

*da, *de*, *do* 'giving'- hypothetical and agrammatical converted deverbal nouns of *dar* 'to give'

*va, *ve*, *vo* 'sight, seeing' - hypothetical and agrammatical converted deverbal nouns of *ver* 'to see'

*va, *ve*, *vo* 'coming, arrival' - hypothetical and agrammatical converted deverbal nouns of *vir* 'to come'

*a, *e*, *o* 'departure'- hypothetical and agrammatical converted deverbal nouns of *ir* 'to go'

The main problem of these hypothetical converted deverbal nouns is concerned with the impossibility of their interpretability. A comparison with hypothetical converted deverbal nouns such as **converta*, *converte*, *converto* or **traduza*, *traduze*, *traduzo*, from the verbs *converter* 'to convert' and *traduzir* 'to translate', respectively, make it easier to understand that the reasons why the first group of hypothetical converted deverbal nouns is agrammatical are different from those reasons why the second group is also agrammatical. **Converta*, *converte*, *converto* or **traduza*, *traduze*, *traduzo*, although agrammatical, maintain the possibility of interpretability, while **la*, *le*, *lo*, **da*, *de*, *do*, **va*, *ve*, *vo* and **a*, *e*, *o* do not show that possibility.

On the contrary, examples such as *mio* 'mewing', *uivo* 'howl', *erro* 'mistake', which are converted deverbal nouns of the verbs *miar* 'to mew', *uivar* 'to howl' and *errar* 'to mistake', respectively, show that the existence of a single vowel in the stem of the base verb is sufficient to give interpretability to the converted deverbal noun constructed on that base.

This means that, prosodically, a verb may be a candidate to produce a converted deverbal noun if it has a stem containing at least one vowel that may function as a nucleus of a syllable. Only under this condition, when that stem is converted into a noun to which is

added a nominal theme vowel, may the stem be stressed and, consequently, behave as a prosodic word. If this condition does not occur, i.e., if the verbal stem does not contain at least one vowel that could function as nucleus, the hypothetical converted deverbal noun will not have a vowel to function as a nucleus, since nominal theme vowels are never stressed in Portuguese. It means that the hypothetical converted deverbal noun would not have the conditions to function as a prosodic word.

The problem of this lack of a vowel that may function as the nucleus of a syllable has to do with the impossibility of recognizing such a form as the intended lexical unit derived from the respective base verb. Hypothetical forms such as *da, *de, *do, *va, *ve, *vo* are not interpreted as correlated with the verbs *dar* and *ver* or *vir*.

Thus, only a stressed segment in the base stem is able to maintain the derivational relation between the converted deverbal noun and its verbal base, and consequently to provide the semantic interpretation of the noun. This shows that there is a relation between structural constraints and performance conditions in word-formation.

Examples of suffixed deverbal nouns: *ida* from *ir* 'to go'.

2- Morphological structure

The *corpus* of converted deverbal nouns studied (Rodrigues 2001; 2004) does not include products of verbs with a morphological structure containing constituents that can be classified as [+ Latin] or [+ Greek]. The first group may be exemplified by verbs such as *absolver* 'to absolve', *depreender* 'to infer', *inverter* 'to invert', *obtundir* 'to obtund', *adjungir* 'to adjoin', etc. The second group is connected with verbs containing the suffix -*iz*- '-ise', such as *agonizar* 'to agonise', *deslobalizar* 'to take wolves out of a place', *ionizar* 'to ionise', *rentabilizar* 'to make profitable', just to give a few examples.

In the first case none of the verbs that contain the Latin roots shown on table 1 are able to produce converted deverbal nouns (cf. Rodrigues (2004) for a more complete list of those roots):

Root	Latin origin of the root	Portuguese verbs with the root
solv-	SOLVŌ, ĬS, ĔRE, SOLVĪ, SŎLŪTUM	*solver, absolver, resolver, dissolver, exsolver*
-preend-	PRĔHENDŌ, ĬS, ĔRE, DĪ, SUM	*apreender, depreender,*

		repreender, empreender, surpreender
-fer-	FĔRŌ, FERS, FERRE, TŬLĪ, LĀTUM	*aferir, conferir, referir, deferir, inferir*
-tund-	TUNDŌ, ĬS, ĔRE, TŬTŬDĪ, TUNSUM	*obtundir, contundir, retundir*
jung-	JUNGŌ, ĬS, ĔRE, JUNXI, JUNCTUM	*jungir, adjungir, abjungir, injungir*

Table 1. Verbs with Latin roots that do not produce converted deverbal nouns

Examples of suffixed deverbal nouns: *absolvimento* from *absolver* 'to absolve', *empreendimento* from *empreender* 'to enterprise', *deferimento* from *deferir* 'to concede', *aferição* from *aferir* 'to collate'.

3- Pragmatic and processing conditions

What is peculiar to the verbs shown in table 1 and to the *-iz-* verbs is their pragmatic effect, in addition to their erudite morphological character. Those verbs are prototypically characterised as belonging to a cultivated usage. It is not only the erudite character of their forms, in etymological terms, that constrains the insertion of these verbs in the input to the formation of converted deverbal nouns, but also their prototypically cultivated usage, in pragmatic terms. Etymologic and pragmatic features are to be combined to understand the assumption that morphologically [+ erudite] verbs are not admitted as bases of converted deverbal nouns. For that, we must abandon the traditional perspective that defines 'erudite' vs. 'popular' exclusively based on the phonetic structure of the word. Clavería Nadal (1991) observes that there are words that, although showing a 'popular' phonetic structure, belong to a cultivated usage and there are others that, although showing an 'erudite' phonetic structure, belong to an ordinary usage. Thus, Clavería Nadal (1991) proposes the distinction between both levels to assure a satisfactory classification of what kind of level is 'erudite' in the word – the etymologic or the pragmatic one.

This proposal of Clevería Nadal helps to understand that the conjunction between the erudite format of the morphological structure and the prototypically cultivated usage of

verbs functions as a restriction to the eventuality of the construction of converted deverbal nouns.

On the contrary, verbs that have a non-erudite morphological structure and verbs that belong to a non-cultivated usage are good candidates to serve as bases of these deverbal nouns.

Verbs with a non-erudite morphological structure, that cannot be marked either as [+ Latin] or [+Greek], may, for example, result from the adjunction of the suffix *-e-* to an adjective, a noun or a verb. In this class of verbs we find, for instance, *bolear* 'to make round', *passear* 'to walk', *florear* 'to decorate with flowers', *ornear* 'to bray', *chilrear* 'to chirp'. These verbs belong prototypically to a non-cultivated usage.

Pragmatic and processing constraints seem to be determinant in the choice of the derivational mechanism responsible for the construction of deverbal nouns. Otherwise, it would not be understandable that converted deverbal nouns are more usual in a particular kind of lexicon related to traditional activities such as agriculture, fishery, cattle raising (cf. Rodrigues 2004) and basic and ordinary vocabulary. On the other hand, they seem to be absent from lexicon related to scientific terminology or from highly refined usages of language.

Processing and acquisition data also emphasise the basic character of these nouns, since converted deverbal nouns, like converted verbs, are preferred by young children, instead of affixed nouns and verbs (Clark 1993). This kind of preference may be explained psycholinguistically by so-called token-blocking (Rainer 1988). This kind of blocking may act under the frequency condition, which states that, if a word has a high frequency, that word has a high probability of blocking the coinage of a rival word. Plag (2003: 65-66) shows that this condition is equally true when its contrary is considered, i.e. if a word has a low frequency, and thus, has not yet a strong storage in the mental lexicon, then the token-blocking may fail. Plag gives the example of children who hesitate between regular and irregular inflection forms. It seems to us that the same explanation may be extended to converted deverbal nouns. Although ruled by some constraints, converted deverbal nouns, since they lack affixes, may substitute affixed deverbal nouns, because they do not show finer-grained restrictions related to particular affixes. These probably take more time to be lexically stored.

4 – Lexical-conceptual structure and argument structure

Taking as point of departure the works by Levin (1993) and Levin & Rappaport Hovav (1995) about the lexical-conceptual structure of verbs and its relation with syntactic structure, it is possible to state that the argument structure of a verb determines its possibility/impossibility in deriving converted deverbal nouns. What we found was that verbs that have a sentential argument in their argument structure do not appear as bases of converted deverbal nouns.

Comparing the different subclasses of verbs of communication defined by Levin (1993: 202-212), we notice that verbs of communication that include a sentential complement such as the verbs of 'transfer of a message' and verbs of 'say' (Levin 1993: 202-203; 209-210), which in Portuguese show a similar behaviour (declarative verbs), (e.g. *demonstrar* 'to demonstrate', *explicar* 'to explain'; *anunciar* 'to announce', *confessar* 'to confess', dizer 'to say', *sugerir* 'to suggest') do not present converted deverbal nouns.

However, verbs of communication whose argument structure does not have a sentential complement, such as verbs of 'manner of speaking' (Levin 1993: 204-206) and verbs of 'chitchat' (Levin 1993: 208-209) represent a considerable part in the whole of the bases of converted deverbal nouns. Table 2 shows those data.

Declarative verbs	Converted deverbal noun	Verbs of chitchat	Converted deverbal nouns	Verbs of manner of speaking	Converted deverbal nouns
declarar 'to declare'	Ø	*cochichar* 'to gossip'	*cochicho*	*trautear* 'to trill'	*trauteio*
sugerir 'to suggest'	Ø	*cuscar* 'to gossip'	*cusca*	*murmurejar* 'to murmur'	*murmurejo*
dizer 'to say'	Ø	*palrar* 'to chatter'	*palra*	*sussurrar* 'to whisper'	*sussurro*
explicar 'to explain'	Ø	*cavaquear* 'to chat'	*cavaqueio*	*ciciar* 'to lisp'	*cicio*
demonstrar 'to demonstrate'	Ø	*mexericar* 'to gossip'	*mexerico*	*rumorejar* 'to murmur'	*rumorejo*
anunciar 'to announce'	Ø	*badalar* 'to gossip'	*badala*	*gritar* 'to scream'	*grito*
propor 'to propose'	Ø	*papaguear* 'to parrot'	*papagueio*	*resmonear* 'to grumble'	*resmoneio*

assegurar 'to assure'	Ø	*fuxicar* 'to gossip'	*fuxico*	*berrar* 'to shout'	*berro*

Table 2. Relation between different subclasses of verbs of communication and the production of converted deverbal nouns

Although it may seem paradoxical to state that verbs with a sentential complement do not produce converted deverbal nouns, while verbs of manner of speaking, which present a high rate of these nouns, do admit a sentential complement, that kind of syntactic complement is not admitted in the construction of converted deverbal nouns. This means that converted deverbal nouns of verbs of manner of speaking do not present the possibility of inheritance of the argument structure that contains the sentential complement (3).

(3)   a. *A Maria gritou.*

'Maria shouted'.

b. *O grito da Maria.*

'The shout of Maria'

(4)   a. *A Maria gritou que queria viajar.*

'Maria shouted that she would like to travel'

b. **O grito da Maria de que queria viajar.*

'The shout of Maria that she would like to travel.'

Thus, what is admitted as the base of converted deverbal noun is a verb with no sentential complement, which, in terms of the lexical-conceptual structure, corresponds to a verb with no Themative θ-role (Tarvainen 1987). This is related to a more general characteristic of the verbs in question. The base verbs of converted deverbal nouns must have inserted in their lexical-conceptual structure [+ concrete] features and must not have [+ abstract] ones. This is observable in the already shown fact that when there is a verb, like a verb of manner of speaking, with a double syntactic construction related to a more concrete meaning or to a more abstract one, only the concrete construction is admitted in the formation of a converted deverbal noun. But other data emphasize the same assumption: verbs whose function is grammatical and not lexical, such as *haver* 'to have', *ter* 'to have', *ser* 'to be',

estar 'to be Space/Time', *ir* 'to go', *acabar* 'to finish, to accomplish', do not produce converted deverbal nouns.

Examples of suffixed deverbal nouns from verbs with a sentential argument: *declaração* from *declarar* 'to declare', *demonstração* from *demonstrar* 'to demonstrate'.

Examples of suffixed deverbal nouns from verbs with grammatical function: *estada* from *estar* 'to be Space/Time', *acabamento* from *acabar* 'to finish, to accomplish'.

4.1 Unergativity, Unaccusativity and Causativity (Levin & Rappaport Hovav 1995)

As we saw in 2., the reasons why verbs with certain morphological constituents are absent from the bases of converted deverbal nouns are not solved on the morphological level, but seem to have a pragmatic/processing foundation. However, pragmatic effects and choices do not explain all the constraints directly related with morphological options. These may also be ingrained with lexical-conceptual structure and its relation with argument structure. Because some verbal affixes bring to the derived verb a certain lexical-conceptual structure, the absence or the presence of some kind of affixed derived verbs as bases of converted deverbal nouns may be explained, not totally by the affixes on their own, but by lexical-conceptual foundation.

According to the analysed *corpus*, verbs with the suffix *-ec-* and *-esc-*, which construct verbs from nouns and adjectives, do not produce converted deverbal nouns. It is not possible to introduce here the pragmatic constraint related with the cultivated usage, because those verbs do not carry this feature. The foundation of this impediment has to do with the fact that those verbs are basically unaccusative (Levin & Rappaport Hovav (1995: 83) and Davis & Demirdache (2000: 97)). In Portuguese, converted deverbal nouns are not constructed from unaccusative verbs. Indeed, there are no converted deverbal nouns from unaccusative verbs of change of state (e.g. *arder* 'to flame', *morrer* 'to die', *florir* 'to flourish', *crescer* 'to grow'), unaccusative verbs of directionality (e.g. *cair* 'to fall', *chegar* 'to arrive', *ir* 'to go', *vir* 'to come', *entrar* 'to enter', *sair* 'to go out'), nor unaccusative verbs of existence and appearance (e.g. *estar* 'to be Space/Time', *jazer* 'to lie', *existir* 'to exist', *viver* 'to live', *nascer* 'to be born', *ocorrer* 'to occur').

To show that the nature of what intervenes as constraint is the lexical-conceptual structure in connection with its syntactic format, and not semantic structures on their own, we can observe that verbs with the same meaning, but with different lexical-conceptual structures and different syntactic realizations, form converted deverbal nouns if they are not unaccusative. For instance, unaccusative verbs such as *arder* 'to flame', *ruir* 'to fall into ruins' and *cair* 'to fall' do not produce converted deverbal nouns, while the transitive causative verbs *queimar* 'to burn', *tisnar* 'to soot' and *derrubar* 'to throw down' present converted deverbal nouns (*queima/queimo*, *tisna/tisne*, *derruba/derrube*).

Another example brings evidence to this assumption. Verbs of motion only produce converted deverbal nouns if they are not unaccusative verbs. As is stated by Levin & Rappaport Hovav (1995: 11-112), intransitive verbs of motion that indicate direction are unaccusative, while intransitive verbs that indicate the manner of motion are unergative. In Portuguese, only verbs of manner of motion, i.e. the unergative verbs, present converted deverbal nouns (e.g. *saracoteio* from *saracotear* 'to waggle', *coxeio* from *coxear* 'to limp', *rastejo* from *rastejar* 'to creep').

Finally, causative transitive verbs that allow an unaccusative alternation may only function as bases of converted deverbal nouns on their transitive construction. The unaccusative construction is not admitted, as it is shown by the verb *engordar* 'to fatten', whose converted deverbal noun *engorda* only occurs in a transitive causative construction and not in an unaccusative one. (6) and (7)

On the contrary, unergative verbs are good producers of converted deverbal nouns. That is why verbs of emission of light, sound (sounds made by animals are good examples of these) and substance are numerous in the bases of those nouns (e.g. *brilho* from *brilhar* 'to shine', *bruxuleio* from *bruxulear* 'to flicker', *mio* from *miar* 'to mew', *relincho* from *relinchar* 'to neigh', *regougo* from *regougar* 'to make the call of a fox', *cacarejo* from *cacarejar* 'to cluck', *cuspo* from *cuspir* 'to spit', *jorro* from *jorrar* 'to spout').

These data show that only verbs with an external argument may be bases of converted deverbal nouns.

Examples of suffixed deverbal nouns from unaccusative verbs: *nascimento* from *nascer* 'to be born', *amarelecimento* from *amarelecer* 'to grow yellow', *florescência* from *florescer* 'to flourish', *chegada* from *chegar* 'to arrive', *saída* and *saimento* from *sair*.

5- Conclusions

The different constraints on the bases of Portuguese converted deverbal nouns bring evidence to the assumption that word-formation is organised in structures that have interfaces with each other (Rio-Torto (1993) and (1998)). Morphological constraints are interwoven with etymological factors, lexical-conceptual constraints and argument structure constraints. Beyond the interfaces between these structural constraints, there seems to be an inter-relation between structural constraints and processing and pragmatic conditions. Although conversion is ruled by constraints, which denies the assumption that conversion is idiosyncratic (Lieber 2004), converted deverbal nouns, because they lack affixes and, consequently, lack the particular restrictions on these, are of common usage among young children, who substitute lexicalised suffixed deverbal nouns for converted ones. This may be explained by token-blocking (Rainer 1988; Plag 2003). Converted deverbal nouns belong prototypically to the lexicon of traditional activities and ordinary usages and are absent from scientific terminology and highly refined usages. The prosodic conditions of the verb stem also prove to have a processing implication related to the interpretability of the deverbal noun.

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