Productivity and meaning of European Portuguese affixes through an onomasiological perspective

Teresa Santos

Abstract

This article aims at presenting an experimental study carried out from an onomasiological perspective and concerning possible words in European Portuguese constituted by an existing base form and a specific derivational affix. In this experiment, we emphasised 3rd-graders' cognitive capacities in the choice of the most appropriate possible word associated with a particular concept. We also tested to what extent both productivity and morphological awareness influenced the choice of those words by the same students.

Keywords: *word-formation, onomasiological theory, morphological awareness, derivational morphology, productivity, semantics*

1. Introduction

In the field of word-formation, the study of complex words can be achieved either through the semasiological perspective or the onomasiological perspective.

The semasiological angle, the most used in the study and analysis of word-formation, makes use of the existing material placed in the lexicon of a language, i.e., existing words. For its part, the onomasiological side takes as the starting point the concept to be named and its meaning to reach to the form of a new word, and it also highlights the dynamic and active role performed by the speakers of a given language in the formation of a new naming unit. By doing this, onomasiology leaves out the existing words, which already belong to the linguistic material of that specific language.

On the basis of our knowledge, there is not hitherto any study regarding word-formation in European Portuguese that makes use of onomasiological theory to assess some aspects of derivational morphology. Besides, there is a scarcity of reasearches which have as a motivation the speakers' necessity to nominate an object.

Taking the onomasiological theory into account, a survey composed of ten questions and four possible answers was applied to fifty 3rd-grade students in order to make some inferences about the productivity and meaning of some derivational affixes in European Portuguese. Those affixes are the following: *des-, anti-, in- (im-) / i-, a-, -ção, -mento, -agem, -ismo, -ado, -oso, -udo, -ento, -ista, -ês, -ano, -ura, -eu -ez/a, -idão, -idade, -ada, -eira, -ame, -deiro, -dor, -eiro, -dura* and *-ncia*. To put this into practice, children were given a multiple-choice test, which included possible words formed by existing base forms and by the derivational affixes previously mentioned, and which share the same notion with each other in some instances.

With this experimental study, it was intended to investigate which affixes were chosen in the face of the necessity of giving a name to a certain action, situation, or activity. Also, we wanted to evaluate the role of the onomasiological theory in the substantiation of productivity, frequency and semantics of the prefixes and suffixes under analysis. On the other hand, and since we are dealing with children who are still acquiring some aspects of the grammar of their first language (L1), it was our goal to analyse the development of children's morphological awareness, here defined, according to McBride-Chang *et al.* (2005:417), as an

"awareness and access to the meaning and structure of morphemes in relation to words", as well as its relation to the acquisition of the derivational morphology of children's L1 (for instance, some differences in the results in terms of gender). Last but not the least, it was intended to investigate if the affix rivalry made it difficult for students to choose the answer they considered to be the most appropriate or acceptable.

2.   Theoretical framework

According to the onomasiological theory, the need of a speaker to nominate a concept or object leads him/her to form a new name and to assemble morphemes to form that word (Štekauer, 2005). According to the paradigm presented by Štekauer (2006:35), word-formation is taken as a "naming act performed by an individual speaker/hearer". This means that the meaning of a given word is not emphasised, but rather the act of naming a certain object/concept by a speaker. In this field, a relation among three components is established, namely the object to which the speakers of a given language will name, the speech community to whom the speaker addresses and word-formation. According to this model, the focus is on the dynamic and active role performed by a speaker of a certain speech community who is going to spread a specific naming unit. This product comes up due to the necessity of giving a name to a concept or to an object which belongs to the extra-linguistic reality. It is due to this fact that it is referred that the nomination of a unit is a cognitive process, since the naming units are not formed independent of that reality. So, it is up to onomasiological theory to try to describe and analyse any word-formation process which emanates from the necessity of speakers of giving a name to something. Štekauer's (2005) paradigm allows dispensing with what is referred by the semasiological theory as the classification of word-formation processes, such as prefixation or suffixation.

Thus, in the onomasiological theory, five kinds of structures/levels are presented: conceptual, semantic, onomasiological, onomatological and morphophonological. Taking the linguistic community and the necessity of nominating an object as the starting point, it is fundamental to proceed with an analysis in conceptual terms. So, faced with an object which belongs to the extra-linguistic community, in keeping with Štekauer's (2005) model and as far as the conceptual level is concerned, it is possible to establish a division into four conceptual categories: SUBSTANCE, ACTION, QUALITY AND CIRCUMSTANCE. Next, it is the semantic level (in relation to the object which is going to be named) which arises, in which one will get the semes that can represent that object. In the onomasiological model, all the linguistic material necessary for the nomination of a naming unit is comprised in the lexicon or in the so-called lexical component, the latter being a constituent system of a given language. This means that it is the lexical component which a speaker makes do with so as to get the necessary material to form a new naming unit. According to Štekauer's (2005) perspective, a speaker can form a new naming unit only from morphemes rather than from linguistic units bigger than them, being the former elements here understood as minimal linguistic units to which a form and a meaning are associated with.

On the other hand, the onomasiological level refers us to the structure which that naming unit will show and which, in conformity with this paradigm, is made up of a "base" and "mark", the latter being unfolded into "determining" and "determined" elements. (This addition of the base and the mark will trigger the concept).

As far as the onomatological level is concerned, the so-called "Morpheme-to-Seme-Assignment-Principle" is expressed in this degree, according to which the semes contained in the semantic level acquire a formal structure as morphemes.

Lastly, in the phonological level, the concept will receive features regarding pronunciation and accent.

Onomasiological theory claims that word-formation consists in the act of naming in isolation, without any context, being word-formation the "purest result of the act of naming" (Štekauer, 2005:56), and thus precluding the interference of any kind of manipulation by a text or "discourse referents" (Muprhy, 1988:531).

With respect to productivity, this model praises that a naming unit is formed according to the rules of a word-formation process which are totally productive and regular, which means that the resulting product is always predictable from the parts that compose them. On the other hand, this predictability comes up due to the fact that a naming unit is formed so that the recipient can interpret it. To do this, it is essential that the speakers possess linguistic and extra-linguistic knowledge, as well as the capacity to analyse the objects which receive a name; this is possible to achieve through the speakers' self-conceptual knowledge and experience (Mason, 2011). Therefore, predictability results both from linguistic and extra-linguistic knowledge. Thus, the language can provide answers to the demands expressed by a speech community, namely to furnish the linguistic tools which are necessary so as to form a naming unit.

Likewise, the word-formation process is productive too, in so far as the members of a speech community can, at any moment, form a new naming unit. This fact unveils productivity in terms of the competencies of language itself, because it generates new naming units as much as the rules which suit to their formation.

In this way, and resorting to the lexical component, the members of a speech community are able to form a new naming unit as a result of the existence of a new object which needs to be named. From this, the recipients make use of the conceptual level as much as their experience and linguistic and extra-linguistic knowledge so as to interpret a new naming unit.

On the other hand, the existing theories about morphological awareness predict that, since early school years, children are sensitive to the internal structure of words and their meaning (Carlisle, 1995; Leong, 2000). For instance, Carlisle (1995) observed that, in early years, children are susceptible to the morphology of their L1 and, in particular, to the morphological structure of words, and that such awareness contributes significantly to the reading performance. In another study, Carlisle (2000) highlighted that morphological awareness is directly linked to the speakers' capacity to define morphologically complex words, reinforcing the relevance of the same in reading comprehension and also demonstrating that children have a better performance on the decomposition of derived words than on the production of lexical items provided with affixes. The tests administered by Carlisle (2000) revealed that students had a better performance with transparent words rather than with lexical items which possessed orthographic and/or phonological modifications.

In turn, McBride-Chang *et al.* analysed morphological awareness and its relation to the knowledge that children own regarding the vocabulary of their L1, showing that such awareness acts as a prevalent factor in the acquisition and development of L1's vocabulary.

Besides, as far as language acquisition is concerned, Dressler (2005) supports that children should recognise and understand earlier the more natural morphological rules.

Since the subject of this article sets in the panorama of word-formation, and because

we are also investigating some features regarding derivational morphology, namely derived complex words, it is important to highlight that, sometimes, there are some restrictions as far as the formation of derived words is concerned. For instance, Plag (1996, 1999) states that the phonological, morphological, semantic and syntactic characteristics of an affix or word-formation process determine which combinations are possible with other affixes and base forms. Also, Plag (1999) expresses that the restrictions included in the affix as much as in the base perform an essential role in the selection of a suffix so that a word-formation process can occur.

3.   Derivational affixes under study: etymological information and main connotations

In this section, the main meanings of the derivational affixes adopted for this study are presented using three etymological dictionaries of Portuguese language, namely *Novo Dicionário da Língua Portuguesa* (1986²), hereafter *Novo Dicionário*, *Dicionário Etimológico Nova Fronteira da Língua Portuguesa* ([1982] 1986²), hereafter *Nova Fronteira*, and *Dicionário Eletrônico Houaiss da Língua Portuguesa* (2010), hereafter *Houaiss*.

The affixes under analysis will be presented in alphabetical order, beginning with the prefixes and then proceeding with the suffixes.

3.1   *Prefixes*

a-

According to *Nova Fronteira*, this prefix corresponds to the Greek *a-*, existing in words formed in modern languages, and presenting the notion of 'privation'.

In *Novo Dicionário*, *a-* comes from the Latin *ab(s)-*, and it can be associated with the ideas of 'separation' and 'privation', while if it comes from the Greek *a-* it can be related to the notions of 'separation' and 'negation'.

In *Houaiss*, *a-* corresponds to the Latin form *ab(s)-* and it can bring the ideas of 'prosthetic' (*baixar/abaixar*) and 'separation'. It can also be equivalent to the Latin preposition *ad-*, meaning 'towards to', 'approximation' and 'privation/negation'. It can also correspond to the Greek element *a(n)-*, having the same connotations.

anti-

In *Nova Fronteira*, it is a prefix originating from the Greek *ant(i)-*, possessing the notions of 'against', 'in front of', 'instead of', being essentially used in politics, and, consequently, its use is more restricted to social and cultural aspects.

In *Novo Dicionário*, *anti-* corresponds to the analogue Greek prefix, and it is associated with the notions of 'opposite action/opposition', and 'against'.

In *Houaiss*, this prefix is equivalent to the Greek *anti-*, bearing the notions of 'in front of', 'against', 'instead of' and 'opposition'.

des-

In *Nova Fronteira*, *des-* comes from the Latin *ex-* and is related to 'separation', 'transformation', 'intensity', 'opposite action', 'negation' and 'privation'.

In *Novo Dicionário*, this prefix corresponds to the Latin *dis-* and it is associated with the ideas of 'opposition', 'negation', 'privation', 'separation' and 'intensity'.

In *Houaiss*, it is referred that *des-* is probably originating from the Latin *dis-* and it is related to the notions of 'opposition', 'negation', 'privation', 'separation' and 'intensity'.

in-

In *Nova Fronteira*, it is a prefix which comes from the Latin *in-* and which is equivalent to the Greek *a(n)-*, presenting the notions of 'negation' and 'privation'.

In *Novo Dicionário*, *in-* corresponds to the Latin *in-*, being associated with the ideas of 'negation' and 'privation'.

In *Houaiss*, *in-* comes from the Latin *in-* and it is related to 'privation/negation'. It can also mean 'movement inwards' when associated with the Latin prepositional prefix *in-*.

3.2   *Suffixes*

-ada

In *Nova Fronteira*, *-ada* is a nominal suffix originating from the Latin *–ata*, which is the female element of the adjectives ending in *–atus*, and it is related to the ideas of 'multitude/congregation/collection', 'portion contained in', 'protracted duration', 'quality, said , or act of', 'energetic act or movement', 'sign made with an instrument', 'injury or blow' and 'nourishing product'.

In *Novo Dicionário*, it is a nominal suffix and it presents exactly the same connotations that were found in *Nova Fronteira*.

In *Houaiss*, *-ada* comes from the Latin *–atus*, *-ata* used in the verbal and nominal derivatives, having the notion of 'collection' and being sometimes associated with pejorative connotations.

-ado

In *Nova Fronteira*, it is as nominal suffix, corresponding to the Latin *–atus*. It forms names from other names and it is related to the notions of 'territory owned by a holder', although it can also form adjectives from nominal bases, bearing the ideas of 'supplied with or full of', 'having the character of/to be similar to', 'transformed into' and 'suffering the action of'.

In *Novo Dicionário*, *-ado* is related to the notions of 'supplied with' and 'having the character or form of'.

In *Houaiss*, this suffix is equivalent to the Latin *–atu*, *-ata* and it is associated with the notions of 'conglomeration', 'dignity/job/task' and 'taxonomy'.

-agem

In *Nova Fronteira*, *-agem* corresponds to the Latin *–agine*, and it is described as a nominal suffix associated with the notions of 'action or result of the action'. In a second entry, this suffix is equivalent to the Provence *–atge* or the French *–age*, meaning 'the action or the result of the action' and 'collection'.

In *Houaiss*, *-agem* is originating from the French *–age* or the Provence *–aitge*, presenting the same notions that were found in *Novo Dicionário*.

-ame

In *Nova Fronteira*, it is considered a nominal suffix, corresponding to the Latin *–amen*, *-aminis* and which forms names associated with 'quantity'.

In *Novo Dicionário*, -ame is equivalent to –ama, and it is a nominal suffix related to the ideas of 'collection' and 'quantity'. Sometimes, it can switch to –ama.

In *Houaiss*, this suffix comes from the Latin –amine, bearing the notion of 'collection', and it can be associated with a pejorative connotation. It is susceptible to switch to –ama.

-ano

In *Nova Fronteira*, this is a nominal suffix, originating from the Latin –anus, -ani and it forms both nouns and adjectives, bearing the notions of 'origin', 'supporter of', 'relative, similar or comparable to' and 'collection of works of a famous author'. It is also used in Chemistry.

In *Novo Dicionário*, there is not any entry for –ano.

In *Houaiss*, this suffix comes from the Latin –anus, -a, -um and it appears in adjectives which can also be nouns, in gentilic names, in anthroponimic derivatives and in Chemistry.

-ção

In *Nova Fronteira*, this nominal suffix is presented in parallel with –são, the latter being equivalent to the Latin –sio, -onis and also –tio, -onis, which forms abstract names previously formed in Latin bearing the idea of 'act/action'.

In *Novo Dicionário*, -ção directs us to –ão, the latter being a vernacular nominal suffix associated with the notion of 'action or result of the action'.

In *Houaiss*, -ção does not have any entry; -ão is described instead of it, corresponding to the Latin –ione, which forms abstract nouns, and related to the idea of 'action'.

-deiro

This suffix does not appear in the three dictionaries used in this article.

-dura

In *Nova Fronteira*, this is a nominal suffix originating from the Latin –(t)ura and it bears the general notion of 'result or instrument of the action'.

In *Novo Dicionário*, -(d)ura comes from the Latin (t)ura and (s)ura, and it is described as a nominal suffix linked to the notions of 'action', 'instrument' or 'result of the action'.

In *Houaiss*, this entry guides us to –ura, which will be described further in this section.

-dor

In *Nova Fronteira*, it is a nominal suffix which derives from the Latin -(s)tor, -(s)toris and it is related to the notion of 'agent/instrument of the action'.

In *Novo Dicionário*, -(d)or is originating from the Latin –(t)ore and –(s)ore, and it is considered a nominal suffix associated with the ideas of 'occupation/job' and 'agent/instrument of the action'.

In *Houaiss*, -dor is equivalent to the Latin scholarly suffix –tor, bearing the notion of 'agent'.

-eira

In *Nova Fronteira*, *-eira* is presented in parallel with *–eiro*, and it is described as a nominal suffix coming from the Latin *–arius, -aria*. It forms nouns from nominal bases and it is related to the ideas of 'someone who practises an action or task', 'someone who exercises a job', 'someone who manufacturates or sells objects', 'someone who demonstrates a given tendency or character', 'tree or plant', 'personal object', place where someone retains something', 'place where someone breeds animals or grows plants', 'accumulation of something', 'collection of' and 'intense action'.

In *Novo Dicionário*, this entry directs us to *–ário* which, on the other hand, is originating from the Latin *–ariu* and it is a nominal suffix associated to the notions of 'job/occupation', 'place where someone retains something', 'collection', 'relation' and 'possession'.

In *Houaiss*, *-eira* is described as a suffix corresponding to the Latin *–aria*, which is the female part of the Latin suffix *–arius* (*-eiro*). Besides, *-eira* also appears in nouns related to the ideas of 'container', 'big quantity', 'name of a tree or plant', 'excess' and 'continuity'.

-eiro

In *Nova Fronteira*, both *–eiro* and *–eira* are clustered in the same entry, as it was mentioned before.

In *Novo Dicionário*, *-eiro* leads us to *–ário*, which was previously described.

In *Houaiss*, this suffix is analysed as a Latin suffix originating from *–arius, -a, -um* and it is associated with the notions of 'job/activity', 'character/nature', 'container', 'big quantity', 'name of a tree or plant' and 'gentilic names'.

-ento

In *Nova Fronteira*, *-ento* is described as a nominal suffix equivalent to the Latin *-entus* and which forms adjectives from nouns. It is related to the notions of 'supplied with or full of', 'having the nature of' and 'being similar to'.

In *Novo Dicionário*, *-(e)nto* guides us to *–(l)ento*, originating from the Latin language. It is associated with the ideas of 'supplied with or full of' and 'having the nature of'.

In *Houaiss*, *-ento* corresponds to the Latin suffix *–entus*, which forms "intensified adjectives".

-ês

In *Nova Fronteira*, this is a nominal suffix, originating from the Latin *–ense* and it bears the notions of 'relation' and 'origin'.

In *Novo Dicionário*, *-ês* directs us to *–ense*, and it is only mentioned in this dictionary that the latter suffix is related to the same ideas which were found in *Nova Fronteira*.

In *Houaiss*, this suffix corresponds to the vulgar Latin *–ense*, and both of them are described as formers of gentilic names or adjectives.

-eu

In *Nova Fronteira*, *-eu* is originating from the Latin *–aeus* and/or *–eus*, and it is associated with 'names of folks, races and tribes'.

In *Novo Dicionário*, this nominal suffix derives from the Latin *–aeu* and it is related to the notions of 'relation' and 'origin'.

In *Houaiss*, this suffix corresponds to the Latin forms *–aeum* and *–eum* and it is linked to 'gentilic or folk names'.

-ez/a

In *Nova Fronteira*, *-ez/a* is a nominal suffix, originating from the Latin form *–itie, -itia* and it bears the notions of 'quality' and 'property'.

In *Novo Dicionário*, *-ez/a* is described as a nominal suffix associated with the ideas of 'quality', 'property', 'condition' and 'temperament'.

In *Houaiss*, *-ez/a* is a suffix which forms nouns from adjectives and it comes from the Latin *–ities*, despite the alternation with *–itia* in some cases, fact which explains the existence of the *–eza* alternant.

-idade

In *Nova Fronteira*, it is only referred that *-idade* is a nominal suffix from the Latin *–itatem* and that it is possible to use the "reduced form" *–dade*.

In *Novo Dicionário*, there is not any entry regarding this suffix; it only exists for *–dade*, here described as a suffix which forms nouns, originating from the analogue Latin form *–itate*, and it is related to the notions of 'quality', 'temperament', 'condition' and 'property'.

In *Houaiss*, *-idade* directs us to *–dade*, the latter being considered as a suffix of Latin origin which forms abstract nouns from adjectives, especially through the use of the form *–idade*.

-idão

In *Nova Fronteira*, *-idão* is clustered with *–dão*, *-itude* and *–tude*, as it is described as a nominal suffix originating from the Latin *–itudo*, *-itudinem*, forming abstract nouns. Nevertheless, this dictionary does not present any connotation associated with this suffix.

In *Novo Dicionário*, this suffix corresponds to the analogue Latin form *–(i)tudine*, and it forms names related to the notions of 'temperament', 'condition' and 'property', having *–itude* as its equivalent.

In *Houaiss*, *-idão* leads us to *–dão* which, in turn, comes from the Latin *–tudo*, *-dinis* and which forms female abstract names from adjectives.

-ismo

In *Nova Fronteira*, *-ismo* is a nominal suffix originating from the Greek *–ismós* and it is related to the notions of 'doctrines or artistic, philosophical, religious or political doctrines or systems', 'action', 'thinking', 'feeling', 'nature of the language of someone', 'forms of foreign languages or words and phrases' and 'illness/defect'.

In *Novo Dicionário*, *-ismo* comes from the Greek *–ismos*, and it is analysed as a nominal suffix associated with the notions of 'artistic, philosophical, religious or political doctrine, school, theory or principle', 'action, practice or result of', 'peculiarity of', 'action, behaviour or quality typical of' and 'pathological condition caused by'.

In *Houaiss*, this suffix corresponds to the Greek *–ismós, -ôu*, through the Latin *-ismus, -i*, and it bears the notions of 'intoxication of an agent' and 'social and ideological movements'.

-ista

In *Nova Fronteira*, *-ista* is a nominal suffix originating from the Greek *–istes* and it is related to the ideas of 'supporter or sectarian of artistic, philosophical, religious and political

doctrines or systems', 'entertainment/sports supporters', 'job/occupation' and 'gentilic names'.

Novo Dicionário contains the same notions that were found in *Nova Fronteira* regarding this suffix, as well as the same etymological information.

In *Houaiss*, it is only mentioned that *–ista* is related to the idea of 'practitioner of an activity or supporter of an ideological movement', sharing the same etymological data with the two other dictionaries.

-mento

In *Nova Fronteira*, -mento is a nominal suffix originating from the Latin *–mentum*, and it expresses the ideas of 'action or result of the action', 'instrument of the action' and 'collection'.

In *Novo Dicionário,* this suffix corresponds to the analogue Latin *–mentu* and it is associated with the notions of 'action or result of the action' and 'collection'.

In *Houaiss*, -mento comes from the vulgar Latin *–mentu* and it is only mentioned that this suffix forms nouns from verbs.

-ncia

In *Nova Fronteira*, there is not any entry for *–ncia*.

In *Novo Dicionário*, -ncia directs us to *–ança*, which, in turn, is originating from the Latin *–antia*. It is described as a nominal suffix related to the ideas of 'result of the action' and 'condition'.

In *Houaiss*, there is not any entry for *–ncia*, only for *–ança*, which is described as a suffix originating from de Latin *–antia* and which forms abstract names from verbs which belong to the first conjugation (ending in *–ar*).

-oso

In *Nova Fronteira*, -oso is a nominal suffix which derives from the Latin *–osus*, and it is associated with the idea of 'supplied with'. It is also used in Chemistry for a 'denomination of some weak chemical compounds'.

In *Novo Dicionário*, -oso comes from the Latin *–osu*, and it is a nominal suffix which bears the general notions of 'supplied with or full of' and 'something that causes or produces'.

In *Houaiss*, this suffix is equivalent to the analogue Latin suffix *–osus, -a, -um*, it is related to the idea of 'abundance', and it forms adjectives from nouns. Its use is also shown in Chemistry.

-udo

In *Nova Fronteira*, this nominal suffix is originating from the Latin *–utu, -uta* and it bears the notion of 'supplied with or full of', and it is somentimes used ironically or pejoratively.

In *Novo Dicionário*, it is only referred that this nominal suffix is related to the main idea of 'supplied with or full of'.

In *Houaiss*, -udo is described as a suffix equivalent to the Latin *–utu* and it is associated with the notion of 'abundance'.

-ura

In *Nova Fronteira*, this nominal suffix comes from the Latin *–ura* and it is linked to the ideas of 'quality', 'property' and 'temperament'.

In *Novo Dicionário*, this is a nominal suffix which bears the notions of 'quality' and 'condition or temperament'.

In *Houaiss*, it is referred that *–ura* is a suffix which forms abstract nouns either from adjectives or from vernacular or Latin past participles, and it is equivalent to the Latin *–tura* and *–sura*, which, in turn, form adjectives.

4. Experimental study

We are now going to report an experimental study, which aims at providing answers to the issues previously formulated in the introduction section. This is a study which intends to investigate which answers will be provided by children faced with a given situation, object or activity which needs to be named and for which there is not a naming unit in European Portuguese yet.

Our hypothesis is that morphological awareness will influence the choice of the answer positively, making that children select the derived word that contains the affix which is largely used concerning a particular connotation. Thus, we intend to ascertain, among the hypotheses to be chosen by children, which possible naming units revealed to be the favoured ones based on the interpretation that the students did before the exposed concept for each of the questions presented in the survey.

4.1 *Method*

This experimental study comprises a multiple-choice test which was administered to 3rd-grade children. Since it was not considered necessary, time was not measured during its administration.

4.2 *Participants*

The interveners of this experimental study were fifty students from three separate classes of an elementary school near Lisbon.

In the first class, here called class I, the test was administered to twenty-two students (13 females and 9 males). In the second class, here classified as class II, the same test was applied to fourteen children (9 females and 5 males). In the third class, hereafter class III, the test was completed by 14 students (9 females and 5 males).

The ages varied between eight and nine years old in class II, whereas in classes I and III the ages varied between eight and ten years old.

4.3 *Instruments*

A survey was administered to children, and it was composed of ten questions in which there were some connotations regarding situations and/or activities for which, so far, there is not a naming unit in European Portuguese. For each of those questions, there were four possibilities of choice of the answer, from points a) to d), that children considered to be the most appropriate or acceptable, faced with what was formulated in each question.

The possibilities of answer were constituted by possible words (here understood as words which are not attested in a given language, because the speakers of that language have not needed yet to nominate a concept or an object, but that can become attested, since they are formed according to the word-formation rules of that language) which were created through the addition of existing base forms in European Portuguese and derivational affixes described in the previous section, one per base form. Some of these affixes were purposely added to more than one base form, in order to find out if children would repeat a derived word supplied with the same affix or, rather, if they would choose a derived word containing a different affix.

The possible words used in the test do not contain any restrictions (phonological or syntactic) both regarding the base and the affixes, i.e., the linguistic material which was used for the formation of such words.

4.4 *Procedure*

The questionnaire was administered to fifty children, beginning with class I, following then classes II and III. This test was done individually, and it was applied in three mornings for each day, thus totalising three days. The questionnaire was placed in front of each child so that they could see it and read it, although the researcher read all of its content to him/her loudly. The researcher also wrote the answers provided by the students.

4.5 *Ten-question survey*

The survey wich was administered to the students was the following:

1- Uma pessoa que 'não conseguiu algo ou alguma coisa' significa que essa pessoa (a person who 'was not able to do something'):

a) desconseguiu
b) inconseguiu
c) anticonseguiu
d) aconseguiu

2- Uma pessoa que é 'o contrário de ser perigosa' é uma pessoa (a 'person who is the contrary of being dangerous'):

a) desperigosa
b) imperigosa
c) antiperigosa
d)aperigosa

3- Uma pessoa que é 'o contrário de ser louca' é uma pessoa (a 'person who is the contrary of being crazy'):

a) ilouca
b)deslouca

c) alouca

d)antilouca

4- O 'acto ou efeito de perguntar' é um / uma ('the act or the result of doing a question/asking something'):

a) perguntação

b) perguntamento

c) perguntagem

d) perguntismo

5) Um sítio com muitos vasos é um sítio (a 'place full of vases'):

a) vasudo

b) vasento

c) vasoso

d)vasado

6) Se houvesse um planeta chamado Vatarno, o nome que se daria a um habitante desse planeta seria (if there were a 'planet called Vatarno, which name would have an inhabitant of that planet'):

a) vatarnês

b) vatarnista

c) vatarnano

d) vatarneu

7) Uma coisa ou algo que apresenta a qualidade ou característica daquilo que é cinzento é ('something that presents the quality or nature of what is grey'):

a) cinzentidade

b) cinzentidão

c) cinzentez/cinzenteza

d) cinzentura

8- O nome dado a uma grande quantidade de berlindes é ('name given to a big amount of marbles'):

a) berlindame

b) berlindagem

c) berlindeira

d) berlindada

9- A profissão de uma pessoa que faz canetas é ('name given to a person whose job is to make pens'):

a) caneteiro

b) canetador
c) canetadeiro
d) canetista

10- O acto ou efeito de beber alguma coisa é ('the act or the result of drinking something'):

a) bebimento
b) bebição
c) bebidura
d) bebência

5. Results

After the administration of the questionnaire, the obtained results can be seen through the following chart:
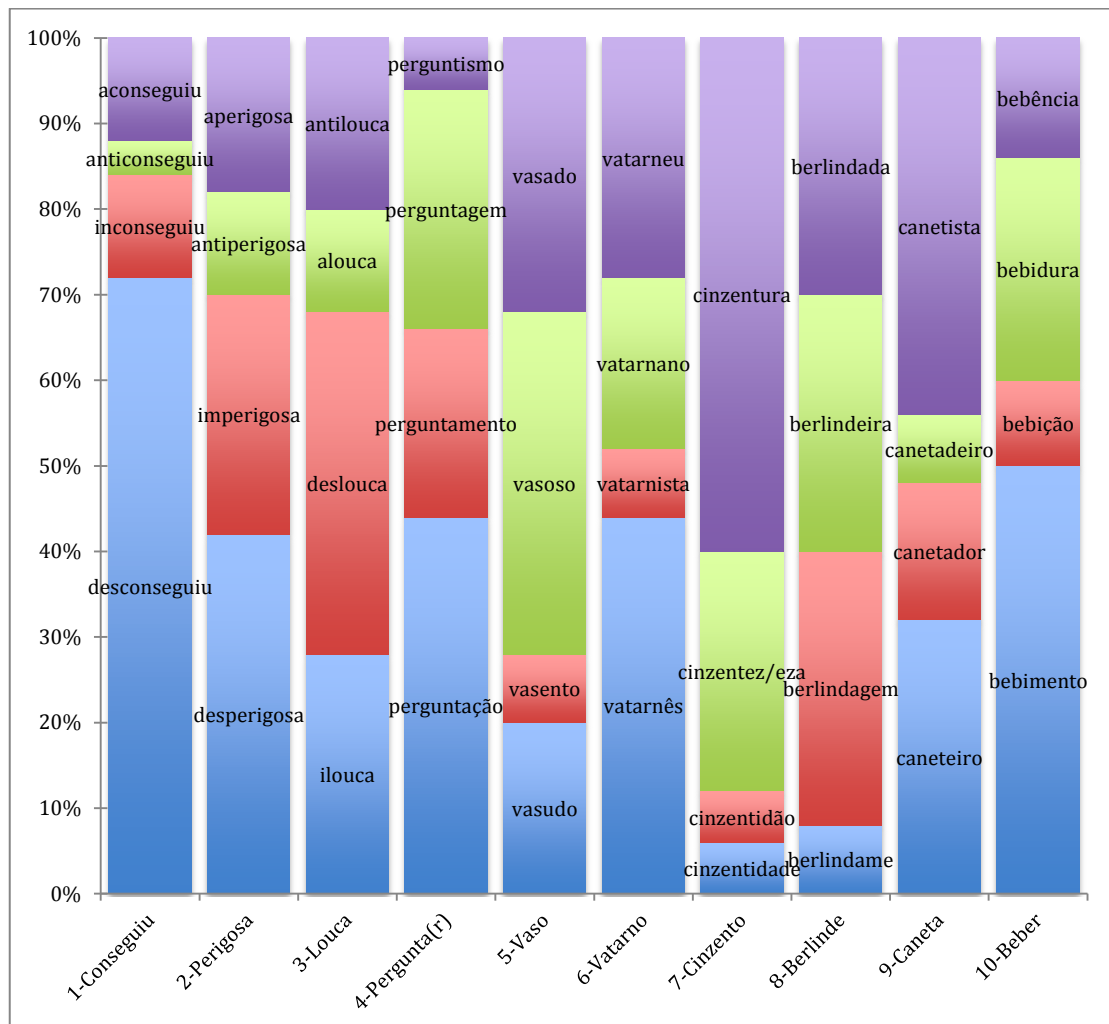

Figure 1 *Results of ten-question survey*

Based on the results presented in figure 1, we can state that *des-* was the prefix by far associated with the notions of 'negation' and 'opposite action' (questions 1-3). Furthermore, *-ção* was the chosen suffix for verbal base forms ended in *-ar* and which belong to the first conjugation) (question 4). Besides, *-oso* was the suffix largely selected for the notions of 'collective' and 'conglomeration', whereas the choice of the rival suffixes *-agem*, *-eira* and *-ada* was not consensual (questions 5 and 8).

In addition, *-ês* was predominantly elected for the notion of 'inhabitant of x', probably due to analogy with *português* = 'inhabitant of Portugal' (question 6).

As far as *–ura* is concerned, this affix was selected for the formation of abstract names related to 'quality or nature of x', and, for instance, the rival suffix -idão was not chosen by the girls concerning the referred notion (question 7).

There is also evidence that *-ista* was the suffix associated by far with occupations/jobs, and that the boys did not select this suffix for any other notion (question 9; cf. question 6).

Finally, *-mento* revealed to be the chosen suffix to form abstract names with base forms ending in *-er* and which belong to the second conjugation (question 10).

6.   **Conclusions**

Bearing in mind the achieved results, we can conclude that onomasiological theory revealed to be pertinent in the acquisition of derivational morphology, and also in its relation to the children's morphological awareness.

Moreover, word analogy and, consequently, the productivity of some affixes under study seemed to contribute to the obtained results (e.g. suffix *-ês*), since the most productive derivational affixes present in existing words in European Portuguese, containing the notions previously mentioned in the results, were the most elected ones as the answers to the survey.

Furthermore, we can state that semantics played an overwhelming role in children's decision about selecting a derived word instead of another word containing a rival affix. Also, although the same suffixed forms were repeated for more than one question and representing different notions, each suffix was chosen only once for a particular paraphrase exposed in the sentence of the question (cf., for instance, *vatarinsta* and *canestista* results).

Additionally, the possible words chosen by the students met with main notions found in the dictionaries used to describe the derivational affixes exposed in this study.

The results confirm our hypothesis that morphological awareness played an overriding role regarding the answers chosen by the students, showing that, at this stage, children are able to identify the meaning associated with each derivational affix under analysis. Also, the productivity of those affixes influenced the choice that children made of the answers that they provided, since the most productive affixes were the most chosen ones.

References:

BAUER, Laurie. 2001. *Morphological Productivity*. Cambridge: Cambridge University Press, 2001.

CARLISLE, Joanne F. 1995. Morphological awareness and early reading achievement. In FELDMAN, L. (org.). *Morphological aspects of language processing.* Hillsdale, N.J.: Lawrence Erlbaum Associates, 1995, pp. 189-211.

CARLISLE, Joanne F. 2000. Awareness of the structure and meaning of morphologically complex words: Impact on reading. In *Reading and Writing*, June 2000, vol. 12, no. 3, pp. 169-190.

DRESSLER, Wolfgang U. 2005. Word-formation in Natural Morphology. In ŠTEKAUER, P., LIEBER, R. (eds.). *Handbook of Word-Formation*. Dordrecht: Springer, 2005, pp. 267-284.

LEHMANN, Christian. 2004. The Documentation of Grammar. In *Lectures on endangered languages: 4. From Kyoto Conference 2001*, 2004, pp. 61-74.

LEONG, Chen Kan. 2000. Rapid processing of base and derived forms of words and grades 4, 5 and 6 children's spelling. In *Reading and Writing*, June 2000, vol. 12, no. 3, pp. 277-302.

LIPKA, Leonhard. 2006. Naming Units (NUs), Observational Linguistics and reference as a speech act or What's in a name. In *SKASE Journal of Theoretical Linguistics*, 2006, vol. 3, no. 3, pp. 30-39.

MASON, Julia. 2011. *Meaning Predictability and Recursion in Onomasiology*. Edinburgh: University of Edinburgh, 2011.

MCBRIDE-CHANG, Catherine, WAGNER, Richard K., MUSE, Andrea, CHOW, Bonnie W.-Y., SHU, Hua. 2005. The role of morphological awareness in children's vocabulary acquisition in English. In *Applied Linguistics,* July 2005, vol. 26, no. 3, pp. 415-435.

PLAG, Ingo. 1996. Selectional restrictions in English suffixation revisited. A reply to Fabb (1988). In *Linguistics*, 1996, vol. 34, no. 4, pp. 769-798.

PLAG, Ingo. 1999. Morphological Productivity. In *Structural Constraints in English Derivation*. Berlin; New York: Mouton de Gruyter, 1999.

ŠTEKAUER, Pavol. 2005. *Meaning Predictability in Word Formation: Novel, context-free naming units.* Amsterdam; Philadelphia: John Benjamins B.V., 2005.

ŠTEKAUER, Pavol. 2005. Onomasiological approach to word-formation. In ŠTEKAUER, P., LIEBER, R. (eds.). *Handbook of Word-Formation*. Dordrecht: Springer, 2005, pp. 207-232.

ŠTEKAUER, Pavol. 2006. Onomasiological Theory of Word-formation. In *Encyclopaedia of Language and Linguistics.* Oxford: Elsevier, 2006, vol. 9, pp. 34-37.

Dictionaries:

CUNHA, António. 1986. *Dicionário Etimológico Nova Fronteira da Língua Portuguesa* (2nd edition). Rio de Janeiro: Editora Nova Fronteira, [1982] 1986.

FERREIRA, Aurélio. 1986. *Novo Dicionário da Língua Portuguesa* (2nd edition). Rio de Janeiro: Editora Nova Fronteira, 1986.

HOUAISS, Antônio. 2009. *Dicionário Eletrônico Houaiss da Língua Portuguesa*. [CD-ROM]. Rio de Janeiro: Objetiva, 2009.

Teresa Santos
Centro de Linguística da Universidade Nova de Lisboa
Faculdade de Ciências Sociais e Humanas
Avenida de Berna, 26C, 1069-061 Lisboa
mteresa_santos@sapo.pt