

## ON THE SYNTACTIC STRUCTURES OF ENTITY NOUNS<sup>1</sup>

### SOBRE AS ESTRUTURAS SINTÁTICAS DOS NOMES DE ENTIDADE

Thiago Nascimento de Melo<sup>2</sup>

Alessandro Boechat de Medeiros<sup>3</sup>

#### ABSTRACT

The aim of this paper is to examine Brazilian Portuguese (BP) Entity Nouns, focusing on its derivational history and argument structure. The methodology entails the adoption of the Distributed Morphology (DM) theoretical framework, from which two procedures are developed: (i) a concise examination of the existing literature on nominals that denote entities, and (ii) a qualitative-interpretive analysis of BP data to ascertain whether their behaviour aligns with the predictions set forth in the literature. The data set under examination encompasses derived nominals, which may be either morphologically simple (i.e., nominalizations of roots, such as in *jogo* ‘game’ and *mesa* ‘table’) or more complex (with the presence of additional functional layers, including overt categorizing morphemes, such as in *pagamento* ‘payment’ and *notificação* ‘notification/notice’). These nouns are incorporated into contrived sentences (a procedure characteristic of Transformational Generative Grammar endeavors, with the objective of forcing the desired interpretation and verifying negative data). The results demonstrate that Entity Nouns can exhibit the same functional structures as Eventuality Nouns. Consequently, they can be deverbal and display an argument structure, including the explicit presence of arguments. This evidence substantiates the assertion that Entity Nouns do not exhibit radical morphosyntactic differences from Eventuality Nouns.

**KEYWORDS:** Nominalization. Morphosyntax. Morphosemantics. Distributed Morphology,

#### RESUMO

O objetivo deste artigo é analisar os Nomes de Entidade do português brasileiro (PB), com ênfase em seu histórico derivacional e sua estrutura argumental. A metodologia adotada envolve a adoção do arcabouço teórico da Morfologia Distribuída, a partir de que se desenvolvem dois procedimentos: (i) uma breve revisão da literatura sobre nominais que denotam entidades, e (ii) a análise qualitativo-interpretativa de dados do PB, para verificar se seu comportamento segue aquilo previsto pela literatura. Dentre os dados analisados, estão derivados nominais, sejam eles morfológicamente mais simples (ou seja, nominalizações de raízes), como *jogo* e *mesa*, ou mais complexos (com a presença de mais camadas funcionais, inclusive com morfemas categorizadores expressos), como *pagamento* e *notificação*. Esses nomes são inseridos em sentenças inventadas (procedimento típico de empreendimentos da Gramática Gerativa Transformacional, para que seja possível

<sup>1</sup> I would like to thank Alessandro for his collaboration in the development of this research. I am also grateful to the anonymous reviewers for their comments, which significantly improved this paper. Of course, any remaining errors are solely my responsibility.

<sup>2</sup> Master’s graduate and PhD candidate in Linguistics at the *Programa de Pós-Graduação em Linguística*, Universidade Federal do Rio de Janeiro (UFRJ), [tnmelo@letras.ufrj.br](mailto:tnmelo@letras.ufrj.br), <https://orcid.org/0000-0002-0643-0912>.

<sup>3</sup> Associate Professor at the *Departamento de Linguística e Filologia* and member of the *Programa de Pós-Graduação em Linguística*, Universidade Federal do Rio de Janeiro (UFRJ), [alboechat@letras.ufrj.br](mailto:alboechat@letras.ufrj.br), <https://orcid.org/0000-0001-9925-2643>.

forçar a leitura desejada e verificar dados negativos). Os resultados revelam que os Nomes de Entidade, contrariando trabalhos da literatura, podem ter as mesmas estruturas funcionais dos Nomes de Eventualidade. Assim, podem sim ser deverbais e apresentar uma grade argumental, inclusive com a presença expressa de argumentos. Essa evidência aponta que os Nomes de Entidade não possuem diferenças morfossintáticas radicais em relação aos Nomes de Eventualidade.

**PALAVRAS-CHAVE:** Nominalização. Morfossintaxe. Morfossemântica. Morfologia Distribuída.

## 1. Introduction

Since the seminal work of Grimshaw (1990), nominalizations have traditionally been classified into two major categories that intrinsically associate morphological, syntactic, and semantic properties. Complex Event Nominals (CENs) are characterized as deverbal, consequently displaying argument structure and eventive readings. In contrast, Result Nominals (RNs) are defined by the absence of these properties.

**Table 1:** Properties of CENs and RNs

| #    | Complex Event Nominal (CEN)                                      | Result Nominal (RN)  |
|------|--|--|
| i.   | Event reading  | No event reading   |
| ii.  | Obligatory arguments ( $\Theta$ -role assigner)                  | No argument structure (no $\Theta$ -role assigner)         |
| iii. | Compatible with agentive modifiers                               | Incompatible with agentive modifiers                       |
| iv.  | Compatible with aspectual modifiers                              | Incompatible with aspectual modifiers                      |
| iv.  | Subject is external argument ( <i>by</i> -phrase is an argument) | Subject is a possessive ( <i>by</i> -phrase is a modifier) |

**Source:** Roy and Soare, 2013

This paper challenges this dichotomy and takes an initial step toward a new typology of nominalizations, one that separates morphological and semantic criteria to enable a more precise analysis of nominalizations and their behavior in various syntactic contexts. To this end, we analyze Brazilian Portuguese (BP) nouns denoting entities, referred to here as **Entity Nouns** (opposed to **Eventuality Nouns**), and demonstrate that, contrary to the predictions of the existing literature, these nouns can indeed be deverbal and exhibit argumental properties.

The data analyzed includes (i) nouns traditionally considered simple, consisting solely of a root and, in some cases, a theme vowel, such as *mesa* ('table') and *jogo* ('game'); and (ii) derived nouns formed with the categorizers *-ção* and *-mento*, such as *notificação* ('notification') and *pagamento* ('payment'). This latter group is particularly revealing as it includes nouns that exhibit verbal morphophonology as well as those that do not. These nouns were tested in constructed sentences designed to enforce entity readings, allowing us to examine their properties. The nouns and their

structures were then evaluated through acceptability judgments. In cases where judgments were uncertain, additional speakers were consulted, and attested uses were examined using the Google search engine<sup>4</sup>, the social media platform X<sup>5</sup> (formerly Twitter), and the *Corpus do Português*<sup>6</sup>.

As a highly compositional, item-based model, Distributed Morphology (DM) (Halle; Marantz, 1993; Marantz, 1997) provides a detailed framework for understanding the interaction between morphophonology and meaning, with a focus on syntactic locality and its role in shaping linguistic phenomena. Importantly, while this study employs the tools and terminology of this theoretical approach, many of the findings presented here are empirical in nature.

The paper is organized as follows: section 2 provides a brief history of the study of nominalizations, encompassing both the theoretical framework and the literature review; section 3 presents an analysis of the nominalizations of BP, employing both morphosyntactic and semantic criteria; section 4 puts forth syntactic structures for Entity Nouns; and, finally, section 5 offers my final remarks.

## 2. A historical overview of the study of nominalizations

Numerous significant advancements in Generative Grammar have emerged from reevaluations of how nominalizations are conceptualized. The lexicalist hypothesis gained traction with Chomsky's *Remarks* (1970), in which he argued that so-called derived nominals cannot be explained through syntactic transformations of already-formed sentences, as they exhibit irregularities that are undesirable for syntax. Instead, Chomsky proposed that these nominals could be accounted for by the addition of a new *base rule*. This prompted researchers to move away from classical transformational syntax and introduce a new perspective on the relationship between morphology and syntax. As a result, researchers began to establish a computational lexicon, capable of word formation, as the locus of idiosyncrasies.

The DM framework emerged in the 1990s as a reinterpretation of *Remarks*, in which the authors argued that many of Chomsky's analyzed data actually reveal regularities that can be addressed within a syntactic model. Therefore, unlike the lexicalist model, DM integrates morphology into the syntactic system, asserting that morphological operations occur in phases throughout the syntactic process, meaning that morphology *is distributed* across the syntactic derivation.

In this sense, a central tenet of DM is the idea that roots are acategorical, meaning they do not inherently carry a syntactic category and must be syntactically categorized. Consequently, even simple forms like *olho* 'eye' and *mesa* 'table', which in other theoretical frameworks might be considered underived nouns, must be formed by a (complex) structure with a root and its categorizer. There are no significant issues with these data. The difficulty arises with nouns that exhibit ambiguity, as they can be interpreted in two distinct ways: either as denoting an entity or as denoting an eventuality.

<sup>4</sup> <https://www.google.com/>

<sup>5</sup> <https://x.com/>

<sup>6</sup> <https://www.corpusdoportugues.org/now/>

## On the syntactic structures of entity nouns

- (1) a. *O jogo levou três horas.* [Eventuality Noun]  
 Lit. the game took three hours  
 ‘The game lasted three hours.’
- b. *O jogo está na gaveta.* [Entity Noun]  
 Lit. the game is in the drawer  
 ‘The (board)game is in the drawer.’
- (2) a. *O pagamento do salário conta levou três dias.* [Eventuality Noun]  
 Lit. the payment of the bill took three days  
 ‘The bill payment took three days to be finalized.’
- b. *O pagamento do salário foi recebido pelo trabalhador.* [Entity Noun]  
 Lit. the payment was received by the worker  
 ‘The payment was received by the worker.’
- (3) a. *A gravação da entrevista levou uma hora.* [Eventuality Noun]  
 Lit. the recording of the interview took one hour  
 ‘The interview recording lasted one hour.’
- b. *A gravação da entrevista está em cima da mesa.* [Entity Noun]  
 Lit. the recording of the interview is on above of the table  
 ‘The interview’s recording/tape is on the table.’

In examples (1-3), the data in (a) refer to eventualities – that is, an event or state that extends temporally at a certain time and place, involving entities (or, from a syntactic standpoint, arguments). In contrast, the data in (b) refer to entities (or objects) in the world that have an independent and defined existence. Hence, the key issue is to determine how to differentiate between Entity Nouns and Eventuality Nouns. From this, we may inquire as to how the meanings of these nominals may be derived from their syntactic structure. Benz (2023: 2, adapted) identifies two potential approaches:

- (4) a. **Homophony accounts**  
 The nominals sound the same, but are in fact different lexical items or involve the same root but homophonous affixes or homophonous but distinct syntactic structures.
- b. **Polysemy accounts**  
 There is only one derived noun, which can be construed in any of the three senses above by means of a semantic shift in the lexicon, syntactic coercion or allosemy.

By adopting the bipartite typology of CENs and RNs, the existing literature (Aquino, 2021; Borer, 2013; Fábregas; Marín, 2011; Marantz, 1997; Polakof, 2013; Roy; Soare, 2013; among

many others) is compelled to embrace the homophony account. This approach assumes, *a priori*, that entity-denoting and eventuality-denoting nouns possess distinct morphosyntactic properties, with only the latter exhibiting structures that include verbalizers and arguments. However, as I will argue, such an analysis proves untenable when examined against data from BP. Empirical evidence undeniably shows that Entity Nouns can include verbalizers within their structure. It also suggests that they can occur in syntactic contexts analogous to those of their eventuality-denoting counterparts, with a particularly notable example being the *of*-phrase associated with these nouns, which should be assumed to have the same syntactic status in both cases unless a consistent counterargument is provided. Consequently, I argue in favor of the polysemy account, wherein both eventuality and entity readings are derived from the same underlying structures. These structures are differentiated by the presence or absence of internal verbal layers (as evidenced by the morphophonological realization of verbal morphemes) and by the presence or absence of argumental structure (as indicated by the syntactic contexts in which the noun occurs).

### 3. Analysis of Brazilian Portuguese nominals

In this section, I will argue that there are no significant morphosyntactic differences between Entity Nouns and Eventuality Nouns, particularly when analyzed through the lens of BP data. Specifically, Entity Nouns can display features usually associated with Eventuality Nouns, such as verbalizers and argument structures, which challenges the traditional view that only Eventuality Nouns exhibit these characteristics.

The discussion will unfold in two main parts. First, I will explore the deverbality of Entity Nouns, illustrating how they can derive from verbs yet maintain an entity reading within a sentence. In the second part, I will focus on the argument structure of Entity Nouns, demonstrating that, despite their categorization as simple underived nouns, they can, in fact, carry arguments and exhibit syntactic behavior akin to that of Eventuality Nouns. These arguments will be crucial in supporting the claim that the morphosyntactic boundary between the two nominal types is not as rigid as usually argued.

#### 3.1. Deverbality

The concept of deverbality, or the property of being deverbal, is frequently linked with Eventuality Nouns in the existing literature. Borer (2013) has presented a compelling argument that Eventuality Nouns must have an attested verbal basis. From this, Wood (2022, p. 1) formulates Borer's Generalization:

(5) **Borer's Generalization**

Nouns with a CEN reading are always derived from an existing, attested, morphologically-related verb.

It is from this base verb that Eventuality Nouns inherit both semantic properties, such as the eventive reading itself, and morphosyntactic properties, such as the presence of an argument structure. In this sense, Fábregas and Marín (2011) formalize the Aspect Preservation Hypothesis, which posits that the aspectual properties of an Eventuality Noun are encoded in the verbal functional layers present within the underlying structure of the nominal.

In contrast, Entity Nouns have been accounted for as direct nominalizations of roots (Borer, 2013; Marantz, 1997; Roy & Soare, 2013; among others). However, as Harley (2009) notes, they may be deverbal, as evidenced by the presence of deverbal morphophonology within nominals with this reading. This morphophonology must be regarded as a manifestation of the verbal functional layers inherent to the structure of nominals:

- (6) a. *A constitu-i-ção do Brasil está guardada no Congresso.*  
 The *constitute-THM(V)-NMLZ* of.the Brazil is stored in.the Congress  
 ‘Brazil’s constitution is kept in the Congress.’
- b. *A inden-iz-a-ção foi recebida pelo trabalhador.*  
 the *restitute-VBLZ-THM(V)-NMLZ* was received by.the worker  
 ‘The worker received the compensation.’
- c. *A noti-fic-a-ção foi entregue pelo guarda.*  
 the *note-VBLZ-THM(V)-NMLZ* was delivered by.the officer  
 ‘The officer handed the ticket.’
- d. *A en-cadern-a-ção foi devolvida.*  
 the *PREF-notebook-THM(V)-NMLZ* was given.back  
 ‘The bookbinding was given back.’<sup>7</sup>

In (6a), the third-class verbal theme vowel *-i-* is evident; in (6b), the verbalizer *-iz-* and the first-class verbal theme vowel *-a-* are present; in (6c), the verbalizer *-fic-* and the theme vowel *-a-* are observed; and in (6d), the formative parasynthetic structure of the verb with the prefix *en-* and the theme vowel *-a-* are identified. As DM is a realizational model, the presence of morphophonology associated with verbal functional layers indicates that these layers must be present in the underlying structure of the noun. As Harley (2009) notes, this constitutes irrefutable evidence that Entity Nouns can indeed be deverbal.

Conversely, there are Entity Nouns that have no internal verbal layers, whether they are categorized by overt nominalizers or not. Firstly, there are nominals that only have roots and nominal theme vowels:

<sup>7</sup> NMLZ: nominalizer; PREF: prefix; THM(V): verbal theme vowel; VBLZ: verbalizer



- (7) a. *Essa **mesa** é muito bonita.*  
*Lit. this table is very beautiful*  
 ‘This table is very beautiful.’
- b. *O **fantasma** está na sala.*  
*Lit. the ghost is in.the room*  
 ‘The ghost is in the living room.’
- (8) a. *O **jogo** está na gaveta.*  
*Lit. the game is in.the drawer*  
 ‘The (board)game is in the drawer.’
- b. *A **análise** dos dados foi publicada.*  
*Lit. the analysis of.the data was published*  
 ‘The analysis of the data was published.’

In Brazilian grammatical tradition, the nouns in (7) are typically classified as simple, underived forms, whereas those in (8) are viewed as instances of backformation, a process in which nouns are derived from verbs through the loss of phonological material. However, in line with the principles of DM’s non-lexicalist frameworks, both groups of nominals should be treated uniformly unless compelling empirical evidence dictates otherwise. Both types are syntactically derived via the nominalization of roots. While it is possible that the nouns in (8) involve additional types of functional structures, there is no morphological evidence to suggest that these functional layers include a verbal categorizing morpheme.

Moreover, there is another set of nouns that not only have no verbal base, but are the base of verbs (i.e. they are not deverbal nouns, but form denominal verbs). This is evidenced by the presence of *-cion-*, a mid-word allomorph of the nominalizer *-ção*:

- (9) a. *A sele-**ção** brasileira está no hotel.* [noun]  
*the select-NMLZ Brazilian is at.the hotel*  
 ‘The Brazilian national team is at the hotel.’
- b. *O treinador sele-**cion**-ou os jogadores.* [denominal verb]  
*the coach select-NMLZ-3SG.PST the players*  
 ‘The coach chose the players.’
- (10) a. *A cole-**ção** de carros está completa.* [noun]  
*the collect-NMLZ of cars is completed*  
 ‘The collection of cars is complete.’

- b. *O homem cole-cion-a* carros. [denominal verb]  
 the man collect-NMLZ-3SG.PRES cars  
 ‘The man collects cars.’

The empirical data indicates that nominals can either be derived from verbs, as in example (6), or not derived from verbs, as in examples (7-10), thereby defining two distinct morphological categories:

(11) a. **Absolute Noun (AN)**

There is no other type of categorizer present within the structure besides the nominalizer. The entire nominal structure is of a nominal nature.

b. **Deverbal Noun (DN)**

There is a verbal categorizer embedded within the nominal structure. As widely assumed in the literature, nominals may inherit syntactic-semantic properties from the functional structures associated with *v*. In this context, the function of the nominalizer is to recategorize the structure by converting it into a noun.

### 3.2. Argument structure

As argued by Alexiadou (2001) and Picallo (1991), Entity Nouns can display an argument structure, as demonstrated by the internal argument within the brackets in (12):

- (12) *A discussão [dos dados] foi publicada na revista.*  
 Lit. the discussion [of.the data] was published in.the journal  
 ‘The discussion of the data was published in the journal.’

Indeed, it is incorrect to claim that Entity Nouns lack internal arguments. This can be demonstrated through a comparison of the examples in (3), repeated below as (13):

- (13) a. *A gravação [da entrevista] levou uma hora.* [Eventuality Noun]  
 Lit. the recording of.the interview took one hour  
 ‘The interview recording lasted one hour.’  
 b. *A gravação [da entrevista] está em cima da mesa.* [Entity Noun]  
 Lit. the recording of.the interview in on above of.the table  
 ‘The interview’s recording/tape is on the table.’

The existing literature has considered that the phrases in brackets are of a different nature (i.e., argumental and non-argumental, respectively), yet no evidence has been provided to substantiate this claim. From a semantic perspective, these phrases seem to have the same interpretation: a theme of



the recording (i.e. what was recorded). From a syntactic perspective, they also seem to exhibit the same behavior. Some might argue that a possible relevant difference is in relation to the obligatoriness or optionality of these arguments. In Melo (2023), I showed that, at least in BP, the internal argument can be omitted even in a context with eventuality reading, which is true for (13a). I also tested the WH-extraction from these phrases: the hypothesis was that, if only Eventuality Nouns had an argument structure, the extraction would be more degraded for phrases associated with Entity Nouns, since adjuncts are syntactic islands. Neither my intuition nor those of the 25 speakers consulted (in an experiment with a seven-point Likert scale; see Melo (2023), for more details) showed significant differences. Therefore, I understand that the default hypothesis, which is more economical, is that the phrases in question are of the same nature, which would be of argument, as is widely recognized in the literature for Eventuality Nouns. In fact, Entity Nouns widely accept the realization of this internal argument:

- (14) a. *A remuneração [do trabalhador] está no envelope.*  
Lit. the remuneration [of.the worker] is in.the envelope  
'The worker's payment is in the envelope.'
- b. *A declaração [da independência] está no museu.*  
Lit. the declaration [of.the independence] is in.the museum  
'The independence declaration is kept in the museum.'
- c. *A identificação [desse homem] está retida.*  
Lit. the identification [of.this man] is being.held  
'This man's ID is being held.'

In addition to being more economical, treating such phrases as arguments accounts for a larger set of data, as it allows for the explanation of the impossibility of the presence of arguments in certain cases, as in (15):

- (15) a. *A construção (\*do prédio) é altíssima.*  
Lit. the construction/building (\*of.the building) is very.high  
'The building is very high' – the building was built
- b. *A criação (\*da lâmpada) de Thomas Edison está instalada.*  
Lit. the creation (of.the light.bulb) of Thomas Edison is installed  
'Thomas Edison's creation is installed.' – the light bulb was created
- c. *A composição (??da música) foi guardada.*  
Lit. the composition (of.the music) is stored  
'The composition is archived.' – the music was composed

- d. *Essa **formulação** (??da teoria) está arquivada.*  
 Lit. this formulation (of.the theory) is archived  
 ‘This formulation has been filed.’ – the theory was formulated

If the phrases in the parenthesis were adjuncts (with a reading analogous to the arguments of Eventuality Nouns), there would be no way to explain this ungrammaticality. After all, proposing a restriction for adjuncts of this kind would be unusually *ad hoc*. Postulating that phrases are, in fact, arguments allows for a syntactic explanation for this ungrammaticality.

In Melo (2021, 2023), I observed that nouns like these are associated to creation events, where the argument is created by the event denoted by the noun (see Amaral; Cançado, 2014) for a discussion on creation verbs). In (15), the building is created by the construction event, and the music is created by the composition event. Hence, the proposal put forward was that nouns derived from creation verbs would not allow their internal argument positions to be overtly filled. However, I have encountered data that challenges this particular hypothesis.

- (16) a. *A **produção** [das canetas] está na alfândega.*  
 Lit. the production [of.the pens] is at.the customs  
 ‘The pen shipment is at customs.’
- b. *A **estruturação** [da casa] ficou muito firme.*  
 Lit. the structuring [of.the house] remained very solid  
 ‘The house’s structure turned out very sturdy.’<sup>8</sup>
- (17) a. *A **construção** [do iPhone 16] permanece a mesma, mas com cores mais vivas.*<sup>9</sup>  
 Lit. the construction [of.the iPhone 16] remains the same, but with colors more vivid.  
 ‘iPhone 16’s design remains unchanged, but with more vibrant colors.’
- b. *Como eu vermifugo minha **criação** [de ovelhas].*  
 Lit. how I deworm my creation [of sheep]  
 ‘How I deworm my sheep herd’<sup>10</sup>

In all these cases, the nouns are interpreted as entities: *a produção de canetas* refers to the set of pens that have been produced and are physically located at customs; *a estruturação da casa* refers to the set of structures that support the house; *a construção do iPhone 16* refers to the phone’s physical attributes, such as its materials and design; and *a criação de ovelhas* refers to the herd of sheep that

<sup>8</sup> I and the consulted speakers consider both sentences acceptable, but one of the anonymous reviewers disagrees with this judgment. Therefore, I add the data in (17), which bring real instances of the phenomenon in question.

<sup>9</sup> Source: <https://www.tecmundo.com.br/produto/289429-iphone-16-iphone-15-muda-novos-celulares-apple.htm>. Access on January 4<sup>th</sup>, 2025.

<sup>10</sup> Source: [https://www.youtube.com/watch?v=Bl7G7\\_cL4Tc](https://www.youtube.com/watch?v=Bl7G7_cL4Tc). Access on January 4<sup>th</sup>, 2025.

is dewormed. In each of these examples, the entities interpreted as undergoing or having undergone the process denoted by the nominalizations are present in the sentences in the same way they would appear if such nominalizations were used with an eventive interpretation: as internal arguments.

Therefore, the hypothesis that nouns of creation form a subgroup that does not allow the realization of arguments is refuted. At this point, I argue that the sentences in (15) are agrammatical due to coindexation constraints. I will discuss the possibilities for the formal implementation of argument unacceptability in section 4 – *The syntactic structure(s) of Entity Nouns*. Regardless of the approach adopted, it seems essential to begin by considering such phrases as genuine arguments.

### 3.3. To conclude the analysis

There are no significant syntactic differences between Entity Nouns and Eventuality Nouns. For this reason, I am opting to differentiate between the two solely in terms of semantics, eschewing the use of morphosyntactic concepts as is customary in traditional literature. Both exhibit an argument structure and can be derived from verbs. The question still open is: is there any element in the structure that differentiates them?

In Melo (2023), I put forth the hypothesis that an aspectual node is present in Eventuality Nouns, which would trigger their eventive interpretation. Conversely, despite the presence of verbal layers, Entity Nouns would lack an AspP, resulting in *v* being interpreted as semantically null. I now challenge this assertion based on the following evidence:

- (18) a. *As construções levaram três meses e já têm moradores.*  
Lit. the constructions took three months and already have residents  
The buildings were completed in three months and already have residents.'
- b. *A documentação dos fatores de risco levou anos, mas ficou bem concisa.*  
Lit. the documentation of the factors of risk took years, but became very concise  
'It took years to document the risk factors, but the result was very concise.'

In these coordination structures, the possibility of ellipsis of the nominal in the second clause indicates repetition of the subject; in other words, the (omitted) nominalization in the second clause must have the same structure as the one (expressed) in the first. This data lends support to the polysemy account: Entity and Eventuality Nouns share the same verbal layers. Hence, it is preferable to reject the generativist instinct and opt for a semantic solution rather than a syntactic one. To achieve this, I followed Medeiros' (2024) proposal, which argues that all the information present in the structure of nominals is available at the *nP* level, so that the context in which the nominal is inserted can emphasize one or other element of the structure. We'll see details of this formal implementation in the next section.

#### 4. The syntactic structure(s) of Entity Nouns

As argued in the previous sections, Entity Nouns share the same structures as Eventuality Nouns, including the possibility of having verbal functional layers and an argument grid within their internal structure. A key aspect of this claim is the term *possibility*, as no type of nominal (including eventive nouns) is required to possess either of these two properties. By crossing the two possibilities of these criteria, four possible (and attested) structures emerge:

**Table 2:** Entity Nouns: morphology and argument structure

| Morphology                    | Overt Argument | Examples  |
|-------------------------------|----------------|---|
| <b>Absolute Noun<br/>(AN)</b> | ×              | <i>O jogo termina em dez minutos.</i><br>Lit. the game ends in ten minutes<br>'The game ends in ten minutes.'   |
|                               | ✓              | <i>Coleções de carros são ótimas de se ter.</i><br>Lit. collections of cars are great of oneself have<br>'Car collections are great to have.'                 |
| <b>Deverbal Noun<br/>(DN)</b> | ×              | <i>A construção é altíssima.</i><br>Lit. the construction/building is very.high<br>'The building is very high' – the building was built                       |
|                               | ✓              | <i>A gravação da entrevista está na gaveta.</i><br>Lit. the recording of.the interview is in.the drawer<br>'The interview's recording/tape is in the drawer.' |

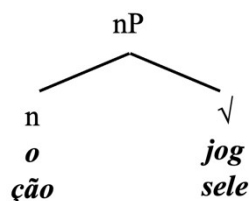
**Source:** Elaborated by the authors.

For empirical reasons, we adopt the polysemy account to differentiate Entity and Eventuality Nouns. This implies that both readings must be derived from the same underlying structures. However, since each noun may exhibit distinct morphological and syntactic properties, four possible syntactic structures emerge, each corresponding to the intersection of these two criteria. In the following sections, I will present simplified representations for each of these possibilities.

##### 4.1. Absolute Noun without arguments

Absolute (Entity) Nouns without arguments have a simpler structure. For the purposes of this article, they can be described as direct nominalizations of the root, as shown below:

- (19) *jogo* 'game' and *seleção* 'national team'

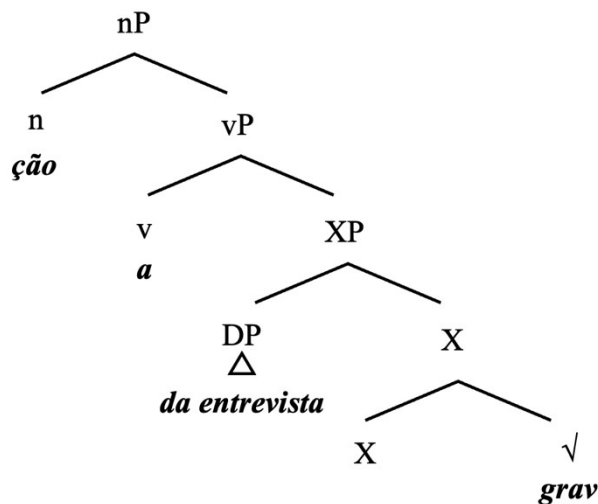


This is the minimum structure of a word for the theory of Distributed Morphology, since acategorical roots need to be assigned a category in the process of syntactic derivation.

#### 4.2. Deverbal Nouns with arguments

Moving on to the opposite pole, Deverbal Entity Nouns with an argument structure represent the highest level of complexity of the objects studied in this article. As I have argued, they have the same structure as Eventuality Deverbal Nouns, with all their functional layers. Notice how the presence of the verbalizer is verified by the morphophonology of the word:

(20) *gravação da entrevista* ‘interview’s recording/tape’

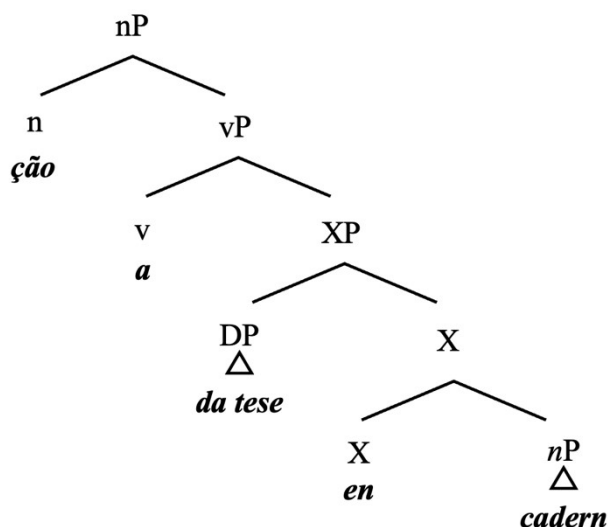


This representation employs the argument structure proposed by Medeiros (2018), whereby the morpheme X is responsible for introducing the internal argument position.<sup>11</sup> In the aforementioned example, this morpheme is not phonologically realized. In other cases, such as in *encadernação* ‘bookbinding’, the morpheme may be overt: the prefix *en-*, which is responsible for forming the verb (as illustrated in (6)), phonologically realizes the morpheme X and projects the argument position.

<sup>11</sup> This can be illustrated in the opposition between *voar* ‘to fly’ and *sobrevoar* ‘to fly over’. The addition of the prefix *sobre-* transforms an intransitive verb into a transitive one, as seen in the following examples:

- i. O passáro voa.  
‘The bird flies.’
- ii. O passáro sobrevoa o continente.  
‘The bird flies over the continent.’

This analysis aligns with a well-documented linguistic phenomenon in which prefixes play a crucial role in projecting argument positions, as the connection between argument structure and prefixes has been widely acknowledged in the literature (cf. Bassani, 2013; Bassani; Minussi, 2015; Hale; Keyser, 2002). While the specific structure (whether X or another functional morpheme) falls outside the scope of this study, the key argument here is that a morpheme – potentially realized as a prefix – is responsible for projecting the internal argument, rather than *v*.

(21) *encadernação da tese* ‘thesis’ bookbinding’

The base noun *caderno* ‘notebook’ doesn’t have an internal argument position, but the derived verb *encadernar* ‘to bind’ does – and this position is inherited by the deverbal noun *encadernação* ‘bookbinding’.

### 4.3. Deverbal Noun without (overt) arguments

As previously noted, even Deverbal Entity Nouns do not always appear with arguments. Two possible explanations can be posited for this empirical fact: either there is a position of internal argument, which remains empty or is occupied by an empty category; or this position is not available in the structure. Of course, adopting one or the other option is an empirical question.

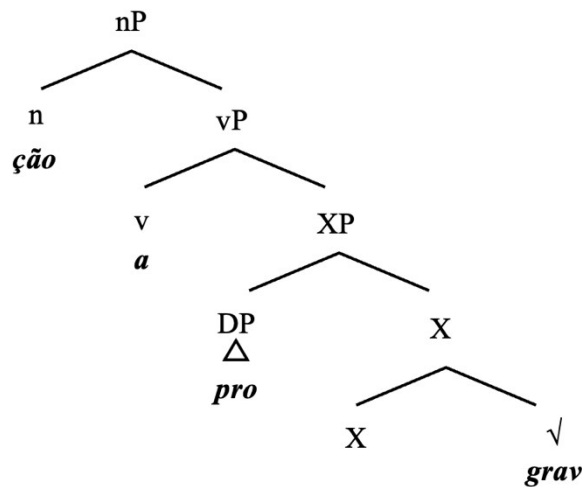
For nouns derived from unergative verbs, the first alternative would be the simplest and most economical. If even base verbs do not possess an internal argument, there is no rationale for assuming that derived nominals would. However, my analysis yielded no results for deverbal nominals derived from unergative verbs. Instead, it identified only Absolute Nouns that share roots with unergative verbs.

Conversely, there are transitive verbs whose nominal counterparts do not overtly express their internal argument. This phenomenon can occur in both Entity Nouns and Eventuality Nouns, as discussed in section 3.2 on Argument Structure. Therefore, nominal contexts seem to be more permissive in allowing argument omission, although such omission is also possible in verbal contexts. In such instances, it appears that a more generic interpretation is adopted, whereby the specific element that would otherwise be identified as the patient or theme of the event remains unspecified. In other words, we propose that speakers infer an implicit internal argument in these nominalizations, which is interpreted generically. To illustrate this, let us revisit the following example.

- (22) A **gravação** (da entrevista) está na gaveta.  
 Lit. the recording (of.the interview) is in.the drawer  
 ‘The (interview’s) recording/tape is in the drawer.’

Note that the realization of the internal argument is optional. When this argument is omitted, it is understood that the speaker retains the interpretation that something has been recorded. While other approaches may provide a more suitable explanation for this observation, we acknowledge that such a discussion falls beyond the scope of this paper. For now, I propose that a *pro* saturates the argument position.<sup>12</sup>

- (23) *gravação* ‘recording/tape’



An advantage is that it provides an explanation of why it is not possible to express the internal argument in certain contexts. In reference to the discussion presented in section 3.2 – *Argument structure*, it can be observed that there are certain nominal forms that are incapable of expressing an internal argument.

- (24) A **construção** (\*do prédio) é altíssima.  
 Lit. the construction/building (\*of.the building) is very.high  
 ‘The building is very high’ – the building was built

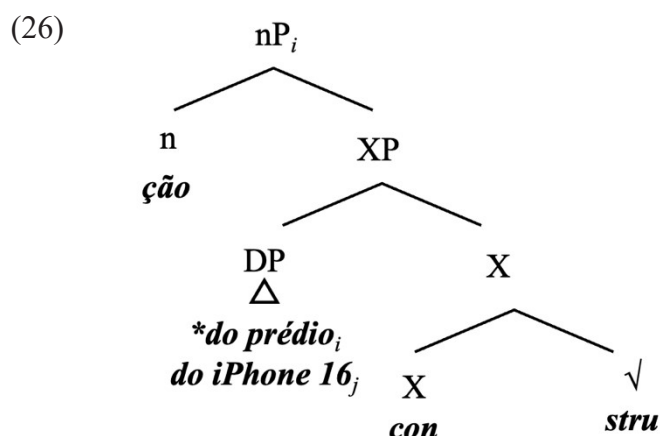
In Melo (2021, 2023), I treated this behavior as a property of the nominal, proposing the explanation that creation nouns did not accept arguments. However, in (16-17), I demonstrated that some creation nouns are capable of accepting arguments. In this section, I put forth an alternative explanation, based on the observation that these nominals do not always reject arguments, as evidenced by the examples that follow.

<sup>12</sup> In verbal contexts, Rizzi (1986) and Collins (2023) contend that even when the internal argument of a verb is not expressed, an arbitrary *pro* must saturate this syntactic position in order to respect the thematic theory. Although I am not fully committed to this position, I believe that it is adequate to account for the data analyzed here.



- (25) a. *A construção do iPhone 16 permanece a mesma, mas com cores mais vivas.*<sup>13</sup>  
 Lit. the construction of the iPhone 16 remains the same, but with colors more live  
 ‘iPhone 16’s structure remains the same, but with brighter colors.’
- b. *A construção de um smartphone determina sua durabilidade.*<sup>14</sup>  
 Lit. the construction of one smartphone determines its durability  
 ‘A smartphone’s structure/material determines its durability.’

In order to comprehend the agrammatical nature of the utterance in question, we shall consider the following representation:



Note that ungrammaticality occurs due to a coindexation problem: since  $nP$  dominates the complement  $DP$ , they cannot have the same index (see Haegeman, 1996, for a discussion about subjects and its complement being unable to have the same reference). In contexts where the noun *construção* and its complement have the same referent, the derivation fails. Conversely, in contexts where the referents are distinct, this does not present an issue. This allows us to explain not only why nominals may not express their complements in certain contexts, but also why they cannot do so in others.

Therefore, I understand that there is no true case of a Deverbal Noun without an internal argument. In fact, the nouns maintain an argument structure, although the argument, phonologically null, is not superficially visible. At this point, the Entity Deverbal Noun without an argument is the only logical possibility that I have not been able to verify in BP.

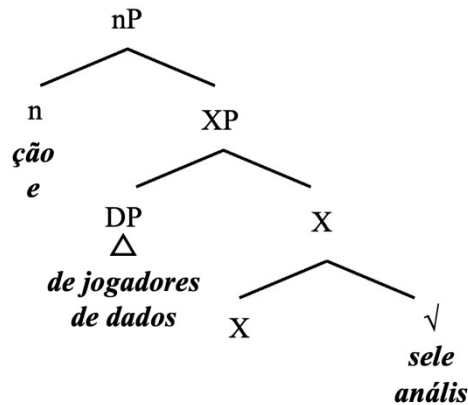
<sup>13</sup> Source: <https://www.tecmundo.com.br/produto/289429-iphone-16-iphone-15-muda-novos-celulares-apple.htm>. Access on January 4<sup>th</sup>, 2025.

<sup>14</sup> Source: <https://www.tecmundo.com.br/dispositivos-moveis/209568-galaxy-s21-dentro-veja-celular-samsung-desmontado.htm>. Access on January 4<sup>th</sup>, 2025.

#### 4.4. Absolute Nouns with arguments

Finally, Absolute Entity Nouns, although not deverbal, can present an argument structure, as discussed in section 3.2 – *Argument structure*. In the proposal outlined here, I argue that a morpheme X must not necessarily be taken by  $v$ , but may be embedded in a fully nominal environment:

- (27) *seleção de jogadores* ‘selection of players’ and *análise de dados* ‘analysis of the data’



This proposal dispenses with the need for verbal layers in order to have an argument structure, and allows fully nominal structures to have arguments.

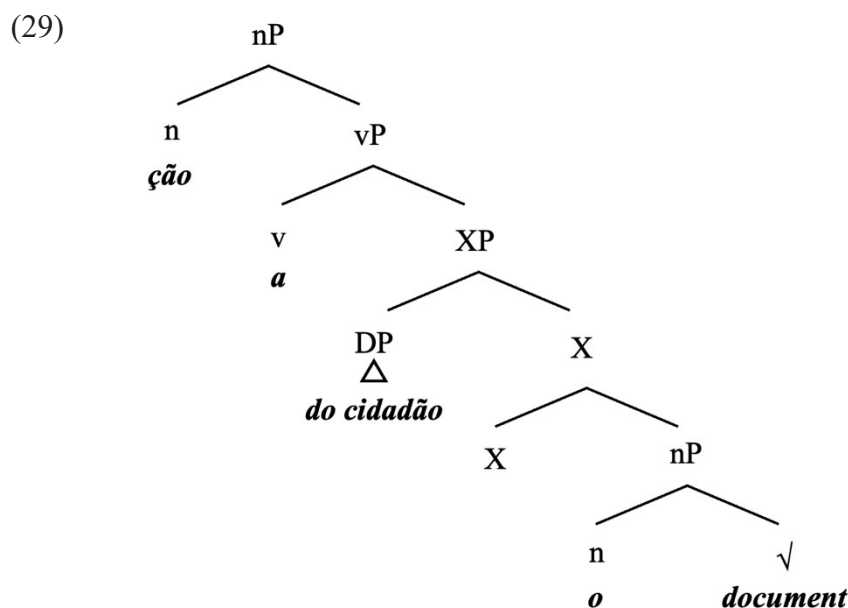
#### 4.5. Highlighting an interesting prediction

In regard to the description and representation of nominals, I have elected to adhere to the polysemy account, which posits that the entity and eventuality readings are derived from a single syntactic structure. The proposal assumes that the information present at the *nP* level is decomposed in the embedded syntactic structure. It may involve the presence of a dynamic event, a target state, and an entity. Each piece of information can be focused on, depending on the syntactic context in which the nominal is inserted. This proposal enables an explanation of the instances of coordination among the various types of nominalizations:

- (28) *A [documentação do cidadão] levou meses, mas já é o novo modelo.*

Lit. the [documentation of.the citizen] took months, but already is the new model

‘The citizen’s documentation process took two months, but the document which resulted from this process is the new version.’



At the highest level of the structure, all the information is preserved; the event of documenting necessarily presupposes the dynamic process of documenting itself (represented in *vP*); a *documented* state (*XP*); an entity (*DP*, the internal argument) that goes through this process and reaches this state; and a *document* entity (present in the most embedded *nP*).<sup>15</sup> Consequently, the noun *documentação* can refer to any of these elements, contingent on the context. In (28), the first clause has a predicate that selects an event, so the process of documenting is salient; therefore, the noun expresses the dynamic eventuality reading. The second sentence involves characteristics of an object, so the entity *document* is taken, generating an entity reading. Therefore, the proposal addresses cases of coordination.

#### 4.6. An issue of formal implementation

The analyses developed throughout this article provide an account of several empirical behaviors of BP nominals, and offer a starting point for new research that can identify in Entity Nouns characteristics previously associated only with Eventuality Nouns. However, an important question is still open and needs an adequate explanation: how to deal with the (possibility of) idiomaticity of Entity Nouns?

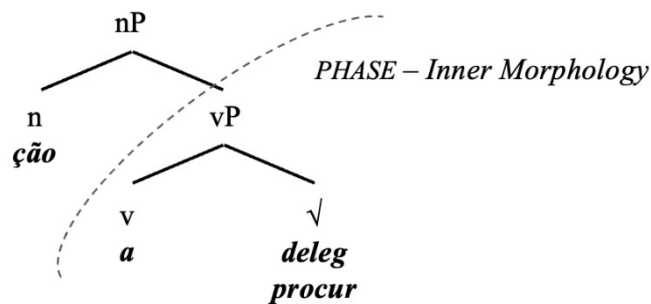
Borer (2003, 2013) has shown that Eventuality Nouns necessarily have a compositional reading (i.e. where the meaning of the whole can be achieved by composing the meaning of the parts). In fact, in Melo (2021, 2023), I found that this does indeed seem to be the case in BP. However, Entity Nouns may present special meanings:

<sup>15</sup> In this structure, I follow Arad's (2003) proposal, according to which a verb that denotes an event that presupposes an object must have that object categorized as a noun within its representation.

- (30) a. *A delegação de jogadores está no hotel.*  
 the delegate-NMLZ of players is at.the hotel  
 ‘The players’ delegation is staying at the hotel.’
- b. *A procuração foi entregue ao advogado.*  
 the search-NMLZ was delivered to.the lawyer  
 ‘The power of attorney document was delivered to the lawyer.’

In BP, the Entity Nouns *delegação* ‘delegation’ and *procuração* ‘power of attorney (document)’ do not have their meaning related to their base verbs *delegar* ‘to delegate’ and *procurar* ‘to search’. In light of the assumption that these nouns adhere to the same structures as Eventuality Nouns, this phenomenon remains inexplicable. After all, if we assume the proposal of derivation by phases (Embick, 2010; Marantz, 2007), the insertion of the first categorizing morpheme (i.e., *v*) would trigger the spell-out, ending the phase in which it would be possible to negotiate the meaning of the roots:

(31) Derivation by phases



Thus, the insertion of the nominalizing morpheme, which is less embedded, would not allow these special meanings to be expressed. In Melo (2023), when I adopted the homophony account, I proposed that verbalizers would be semantically null, which would extend the negotiation phase of root meanings to the next categorizing morpheme. At this point, however, this seems to me to be a circular explanation, since idiomaticity is present because *v* is semantically null, and *v* is semantically null because idiomaticity is present. Further research is required to ascertain the empirical fact in question.

## Final remarks

This paper presented an analysis of Brazilian Portuguese Entity Nouns within the theoretical framework of Distributed Morphology, focusing on two core aspects: the derivational history (i.e., deverbality) of these nouns and their argument structure. The empirical data provided evidence that both Absolute Nouns and Deverbal Nouns can exhibit argument structure, thereby challenging the traditional notion that only the latter possess this property. This suggests that argument projection is

not exclusive to nominals derived from verbs but can also occur in nouns traditionally classified as underived. Moreover, this study has argued that the eventive and entity readings of nominalizations are not rooted in distinct syntactic structures. Instead, both readings are derived from a common syntactic base, with differences emerging from semantic interpretation and contextual factors rather than from morphosyntactic distinctions.

By crossing morphological and syntactic criteria, this study identified four possible structural configurations for BP nominalizations. These configurations arise from the interaction of two key properties: (i) whether the noun is deverbal and (ii) whether it projects an argument structure. This typology not only accounts for the diversity observed in the empirical data but also highlights DM's flexibility in accommodating such variation.

Ultimately, the findings presented here open new perspectives for understanding nominalizations. While this analysis sheds light on important aspects of their derivation and argument structure, it also raises questions about the assumptions that have traditionally guided their study. By challenging the traditional categories of CENs and RNs, this work underscores the need to revisit foundational concepts in the analysis of nominal morphology and syntax. Hence, it must be acknowledged that further research is essential to develop these proposals in greater depth. Future studies should explore the interplay between morphological realization, syntactic configuration, and semantic interpretation, as well as examine how these findings may extend to nominalizations in other languages. By doing so, we can continue to refine our understanding of nominal structures and their place within broader theoretical models.

## References

- ALEXIADOU, A. *Functional structure in nominals: nominalization and ergativity*. Amsterdam/Philadelphia: John Benjamins Publishing Company, 2001.
- AMARAL, Luana Lopes; CANÇADO, Márcia. Verbos de criação do português brasileiro: classificação e representação lexical. *Revista Lingüística*. Universidade Federal do Rio de Janeiro, [s. l.], v. 10, n. 1, 2014.
- AQUINO, R.N.M. *Nomes deverbais em português do Brasil: um estudo na interface sintaxe-semântica*. 2021. Tese (Doutorado em Linguística) – Universidade Federal do Rio de Janeiro, Rio de Janeiro, 2021.
- AQUINO, R.N.M. Nomes deverbais em português: um estudo na interface sintaxe-semântica. In: Caderno de Resumos SEPLA 2019 – Seminário de Pesquisas Linguísticas em Andamento. Rio de Janeiro: *Revista Lingüística Rio*, [s. l.], v. 5, pp. 78-80, 2019.
- ARAD, M. Locality Constraints on the interpretation of roots: the case of Hebrew denominal verbs. *Natural Language and Linguistic Theory*, [s. l.], 2003.
- BASSANI, Indaiá de Santana. *Uma abordagem localista para morfologia e estrutura argumental dos verbos complexos (parassintéticos) do português brasileiro*. 2013. Tese (Doutorado em Linguística) – Universidade de São Paulo, São Paulo, 2013.

- BASSANI, Indaiá de Santana; MINUSSI, Rafael Dias. Contra a seleção de argumentos pelas raízes: nominalizações e verbos complexos. *Revista Virtual de Estudos da Linguagem*, v. 13, pp. 139-173, 2015.
- BENZ, Johanna. The syntax of the content reading in German nominalizations. *Proceedings of NELS*, [s. l.], v. 53, 2023.
- BORER, H. Derived nominals and the domain of content. *Lingua*, [s. l.], pp. 1-33, 2013.
- BORER, H. Exo-skeletal vs. endo-skeletal explanations. In: MOORE, J.; POLINSKY, M. (org.). *The Nature of Explanation in Linguistic Theory*. Chicago: CSLI and University of Chicago Press, 2003. pp. 31-67.
- CHOMSKY, N. Remarks on Nominalization. In: JACOBS, R.; ROSENBAUM, P. (org.). *Readings in English Transformational Grammar*. Ginn, Waltham, MA: [s. n.], 1970. pp. 184-221.
- COLLINS, Chris. *Principles of Argument Structure: A Merge-Based Approach*. [S. l.]: LingBuzz, 2023. Disponível em: <https://lingbuzz.net/lingbuzz/006409>. Acesso em: 18 set. 2024.
- EMBICK, David. *Localism Versus Globalism in Morphology and Phonology*. [S. l.]: MIT Press, 2010.
- FÁBREGAS, Antonio; MARÍN, Rafael. The role of Aktionsart in deverbal nouns: State nominalizations across languages. *J. Linguistics*, [s. l.], v. 48, pp. 35-70, 2011. DOI: <https://doi.org/10.1017/S0022226711000351>.
- HAEGEMAN, L. M. V. *Introduction to government and binding theory*. [s. l.], 1994. Disponível em: <https://cir.nii.ac.jp/crid/1130282272930591744>. Acesso em: 18 set. 2024.
- HALE, K; KEYSER, J. *Prolegomenon to a Theory of Argument Structure*. Cambridge: MIT Press, 2002
- HARLEY, Heidi. The morphology of nominalizations and the syntax of vP. In: GIANNAKIDOU, A.; RATHER, M. (org.). *Oxford Studies in Theoretical Linguistics*. Oxford: Oxford University Press, 2009. v. 24, pp. 320-343.
- MARANTZ, A. No escape from syntax: don't try morphological analysis in the privacy of your own lexicon. *University of Pennsylvania Working Papers in Linguistics*, [s. l.], v. 4, n. 2, pp. 201-225, 1997.
- MARANTZ, A. Phases and Words. In: CHOE, S.H. (org.). *Phases in the theory of grammar*. Seoul: Dong-In Publishing Co, 2007.
- MEDEIROS, A. B. *Considerações sobre a estrutura argumental dos verbos*. Campinas: Pontes, 2018.
- MEDEIROS, A. B. Compositionality in verbs and nominalizations: a (radically) formal approach. *Isogloss*, 2024.
- MELO, Thiago. *Nominalização sob investigação: uma análise dos nomes em -ção*. 2021. 63 f. Monografia (Trabalho de conclusão de curso) – Faculdade de Letras, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 2021.
- MELO, Thiago. *Por uma categorização das nominalizações*. 2023 101 f. Dissertação (Mestrado em Linguística) – Faculdade de Letras, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 2023.
- PICALLO, M. Carme. Nominals and nominalizations in Catalan. [s. l.], v. 3, n. 3, pp. 279-316, 1991. Disponível em: <https://www.degruyter.com/document/doi/10.1515/prbs.1991.3.3.279/html>. Acesso em: 15 set. 2024.

On the syntactic structures of entity nouns

POLAKOF, Ana Clara. La estructura funcional de las nominalizaciones deverbales de evento y resultado a partir de verbos de realización. *Anuari de Filologia. Estudis de Lingüística*, [s. l.], v. 3, 2013. DOI: <https://doi.org/10.1344/AFEL2013.3.5>.

RIZZI, Luigi. Null Objects in Italian and the Theory of pro. *Linguistic Inquiry*, [s. l.], v. 17, n. 3, pp. 501-557, 1986. Disponível em: <https://www.jstor.org/stable/4178501>. Acesso em: 18 set. 2024.

ROY, Isabelle; SOARE, Elena. Event-related nominalizations. In: IORDACHIOAIA, Gianina; ROY, Isabelle; TAKAMINE, Kaori (org.). *Categorization and Category Change*. [S. l.]: Cambridge Scholar Publishing, 2013. pp. 123-152.

WOOD, Jim. *Icelandic nominalizations and allosemy*. 2022.