

## THE ALTERNATION OF VERBS WITH MOTIVATING ARGUMENT IN BP: A TYPE OF FACTORING OF ARGUMENT

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- **ABSTRACT:** In this paper, we analyze a type of alternation that allows to express the complex constituent, which is originally in the object position, in two different syntactic positions, such as in the sentences: *os alunos admiram o brilhantismo do professor* [students admire the teacher's brilliance]/*os alunos admiram o professor pelo brilhantismo* [students admire the teacher for his brilliance]. For the analysis of this phenomenon, we used the proposal of thematic papers as a cluster of discrete semantic properties of Caçado (2005) and Caçado and Amaral (2016). We propose that the analyzed alternation results from the factoring of the complex verb argument, being determined by semantic restrictions of nominal and verbal level. At the first level, the complex arguments which can be factored must denote a possession relationship, as in the phrase *o brilhantismo do professor* [the brilliance of the teacher] or the relationship between an eventive name and its agent, such as the nominal phrase *a excelente atuação do artista* [the excellent performance of the artist] in the alternation *o público aplaudiu a excelente atuação do artista* [the audience applauded the excellent performance of the artist]/*o público aplaudiu o artista por sua excelente atuação* [the audience applauded the artist for his excellent performance]. At the verbal level, the verbs that perform this alternation can be grouped into a coarse-grained class (LEVIN, 2010), as they all attribute the semantic properties *estativo* [estative], *objeto de referência* [reference object] and *objeto motivador* [motivating object] to their complex argument, which can be factored. Finally, we propose that the alternation is motivated by pragmatic factors related to the informational structure of the analyzed statements.
- **KEYWORDS:** verb alternation; argument factoring; semantic properties; syntactic positions; informational structure.

### Introduction

Brazilian Portuguese (BP) has several verbs that show the following syntactic behavior:

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- (1) a. *O fiel teme a força de Deus.*  
 the faithful fears the strength of God.  
 ‘The faithful fears the God’s strength.’
- b. *O fiel teme Deus por sua/pela força.*  
 the faithful fears God for his for.the strength  
 ‘The faithful fears God<sub>i</sub> for his<sub>i</sub>/for the strength.’
- (2) a. *Os alunos admiram o brilhantismo do professor.*  
 the students admire the brilliance of.the teacher  
 ‘The students admire the teacher’s brilliance.’
- b. *Os alunos admiram o professor por seu/pelo brilhantismo.*  
 the students admire the teacher for his for.the brilliance  
 ‘The students admire the teacher<sub>i</sub> for his<sub>i</sub>/for the brilliance.’

In (1a) and (2a), the complex arguments *a força de Deus* [the strength of God] and *o brilhantismo do professor* [the brilliance of the teacher] occupy the object syntactic position, while in the sentences in (b), these arguments are factored into two distinct syntactic positions: in its original position, in the case of the noun phrases (NPs) *Deus* [God] and *o professor* [the teacher], and in the adjunct position, as a prepositional phrase (PP) headed by the preposition *por* [for]: *por sua força* [for his force]/*pela [por a] força* [for the force] and *por seu brilhantismo* [for his brilliance]/*pelo [por o] brilhantismo* [for the brilliance].

We propose that this verbal alternation comes from the possibility of factoring the complex argument that occupies the syntactic position of object.<sup>1</sup> We call the examples in (a) the unfactored form and the examples in (b) the factored form of the sentences.

It is interesting to note that, in the factored form, there is an anaphoric relation, expressed by the possessive pronoun *seu* ‘his’ or by the definite article *a/o* ‘the’, between the elements of the factored argument. This relation is a condition for the realization of the alternation, as we will explain later.

We aim to show, following the research line of the Lexical Syntax-Semantic Interface, (FILLMORE, 2003 [1970]; PINKER, 1989; JACKENDOFF, 1990; LEVIN; RAPPAPORT HOVAV, 2005; BEAVERS, 2010; BEAVERS; KOONTZ-GARBODEN, 2020, among several authors), which semantic constraints determine the realization of this alternating syntactic configuration of sentences and its interpretation. In addition, we aim to provide a motivation for the occurrence of the alternation. All these issues will be explored separately along the text, starting with the discussion about the syntactic structuring of the factored form of the sentences.

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<sup>1</sup> We understand by verbal alternation any form of reorganization of the expression of the arguments of a verb and not just the alternation between a transitive and an intransitive form. (LEVIN, 1993; CANÇADO, 2010).

## Verbal arguments in adjunct position

We started this section by showing that factored arguments are really two distinct syntactic constituents. It is important to highlight this, because can be thought that, in a sentence such as *os estudantes admiram o professor pelo seu brilhantismo* [the students admire the teacher for his brilliance], the expression *pelo seu brilhantismo* [for his brilliance] behaves as an adjunct of the NP *o professor* [the teacher], constituting a single complex phrase. In order to prove that in the factored form of sentences there are, in fact, two distinct constituents and not a single complex constituent, as in the unfactored form, we will use a well-known test of constituency, which is the passivation test:

- (3) a. *Os alunos admiravam o brilhantismo do professor.*  
the students admired the brilliance of.the teacher  
'The students admired the teacher's brilliance.'
- b. *O brilhantismo do professor era admirado pelos alunos.*  
the brilliance of.the teacher was admired by.the students  
'The teacher's brilliance was admired by the students.'
- (4) a. *Os alunos admiravam o professor pelo (seu) brilhantismo.*  
the students admired the teacher for.the (his) brilliance  
'The students admire the teacher for his/the brilliance.'
- b. *O professor era admirado pelos alunos (pelo seu brilhantismo).*  
the teacher was admired by.the students (for.the his brilliance)  
'The teacher was admired by the students (for his brilliance).'
- c. \* *O professor pelo seu brilhantismo era admirado pelos alunos.*  
the teacher for.the his brilliance was admired by.the students

It is known that a constituent has syntactic mobility within the sentence. Thus, in the passive form of the unfactored sentence in (3b), the complex NP *o brilhantismo do professor* [the brilliance of the teacher] raises to the subject position. On the other hand, in the passive form of the factored sentence in (4b), only the NP *o professor* [the teacher] raises to the subject position. When *o professor pelo seu brilhantismo* [the teacher by his brilliance], example in (4c), is raised to that position, the sentence becomes ungrammatical. This shows that the NP *o professor* 'the teacher' and the PP *pelo seu brilhantismo* [by his brilliance] are two distinct constituents and not a complex NP composed by the nucleus *o professor* [the teacher] and its adjunct *pelo seu brilhantismo* [for his brilliance]. Complex constituents that present an adjunct relation can be moved as a unit within the sentences, such as in *a menina de roupa preta era admirada pelos colegas* 'the girl in the black outfit was admired by the colleagues', in which the complex NP, formed by the nucleus *a menina* 'the girl' and the adjunct *de roupa preta* [in the black outfit], occupies the subject position of the passive sentence.

After showing that the phrases *o professor* [the teacher] and *pelo seu brilhantismo* [for his brilliance] are distinct constituents, it is necessary to determine which syntactic position is occupied by the PP. As it is not an adjunct of the noun, we propose that the PP separated from the complex argument occupies the position of verbal adjunct. Our proposal is based on Cançado (2009), who, supported by authors such as Baker (2001), Franchi (2003 [1997]), Santorini and Kroch (2007), proposes that verbal arguments can occupy the adjunct position, so that predication relations do not correspond directly to the syntactic functions of subject and object.

According to Cançado (2009), verbal arguments are defined by the relation of lexical entailment (DOWTY, 1991). Thus, a verb like *vender* [sell] takes four arguments to have its meaning completed, since it conveys the information that *someone* (argument 1) sells *something* (argument 2) to *someone* (argument 3) for some *value* (argument 4). This semantic information about the verb *vender* [sell] is associated with syntax as follows: the most prominent argument in the Thematic Hierarchy occupies the subject position, the second most prominent one occupies the object position and the other arguments occupy the adjunct positions, always being prepositioned.<sup>2</sup> In this paper, we will not discuss the author's proposal in detail, nor will we state that, in fact, verbs such as *vender* [to sell] take four arguments to complete their meaning. We just adopt the idea that, in some specific cases, such as in the factoring alternation we have analyzed, verbal arguments can occupy the adjunct position in a derived form of the sentences.

We will also adopt the classification of prepositions proposed by Cançado (2009). According to the author, the prepositions *para* [to] and *por* [for], which introduce the arguments of the verb *vender* [sell], have a functional character, as they appear only to assign syntactic Case to verbal arguments. The thematic roles of the NPs are assigned by the verb itself. It is important to note that, according to Cançado (2009), the lexical or functional character of prepositions is given by the notion of predication, which differs from generativist proposals, which often adopt lists of lexical and functional prepositions. For the author, if the preposition heads a NP that is entailed by the meaning of the verb, it exists only to assign Case to that NP and, therefore, it is functional. However, if the preposition heads a NP that is not entailed by the meaning of the verb, it is lexical, appearing to assign not only Case, but also a thematic role to that NP, such as the preposition *em* [in] in the sentence *o artista cantou no Teatro Municipal* [the artist sang in the Municipal Theater], since the verb *cantar* 'sing' does not take a place to complete its meaning.

Now let's analyze the factored sentence *os estudantes admiram o professor pelo seu brilhantismo* [the students admire the teacher for his brilliance]. As we mentioned, our proposal is that the PP *pelo seu brilhantismo* [for his brilliance] occupies the position

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<sup>2</sup> We will not go into detail about the existing Thematic Hierarchy proposals. For this paper, it is sufficient to know that it is a linking principle between semantics and syntax, according to which the most prominent semantic roles (generally Agent and Cause) tend to occupy the position of the subject of the verb. In the absence of these roles, other semantic roles in the scale of prominence occupy that position. To learn more about the Thematic Hierarchy Principle, read Levin and Rappaport Hovav (2005) and Cançado and Amaral (2016).

of verbal adjunct, but this adjunct is not a canonical one, since it comes from the dismemberment of an argument of the verb. Therefore, the preposition *por* [for] has a functional character, since the NP *o brilhantismo* [the brilliance] receives the thematic role from the verb *admirar* [admire], as we will show later in this paper.<sup>3</sup>

In the next section, we will discuss the first semantic constraint for the occurrence of the alternation under analysis, which is a nominal-level constraint.

### Nominal-level semantic constraints for the factoring of the complex argument

According to Levin (1993) and to Cançado (1995), the complex argument of the verbs can be factored when it denotes the relation between a possessor and an attribute. In fact, the examples we have seen so far fit the authors' proposals, as they are composed by a possessor, which, in its unfactored form, is expressed by the phrase headed by the preposition *de* 'of', and by its attribute, expressed in the form of a NP, which comes right after the verb: in (1a), there is the NP *a força de Deus* [the strength of God] and in (2a), there is the NP *o brilhantismo do professor* [the brilliance of the teacher]. The attributes *força* [strength] and *brilhantismo* [brilliance] are necessarily linked to their possessors, respectively *Deus* [God], and *o professor* [the teacher]. Therefore, we can say that these attributes are basically relational names, which means that they function as predicator items. This makes the relations with their possessors an inalienable possession relation (FILLMORE, 2003 [1970]; VERGNAUD; ZUBIZARRETA, 1992; ALEXIADOU, 2003; BRUYN, 2014).

However, the inalienable character of the possession relation is not sufficient to determine all cases in which the factoring of argument occurs. Let's look at the following examples:

- (5) a. *A inspetora criticou as carteiras desconfortáveis da escola.*  
the inspector criticized the desks uncomfortable of.the school  
'The inspector criticized the uncomfortable school desks.'
- b. *A inspetora criticou a escola pelas (suas) carteiras desconfortáveis.*  
the inspector criticized the school for.the (its) desks uncomfortable  
'The inspector criticized the school for (its) uncomfortable desks.'
- (6) a. *As meninas elogiaram as lojas modernas do shopping.*  
the girls praised the stores modern of.the mall  
'The girls praised the mall's modern stores.'

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<sup>3</sup> We will not discuss the violation of Binding Principle A (CHOMSKY, 1981), generated by postulation that the NP, extracted from the complex argument, occupies the adjunct position. There are researches, such as those by Giorgi (1984), Lebeaux (1985) and, for BP, the research of Cançado and Franchi (1999), which discuss the possibility of Principle A does not cover all cases of existing anaphors, so that explanations of another nature determine the functioning of anaphors.

- b. *As meninas elogiaram o shopping pelas (suas) lojas modernas.*  
 the girl praised the mall for.the (its) stores modern  
 ‘The girls praised the mall for (its) modern stores.’

The NPs *as carteiras* [the desks] and *as lojas* [the stores] are not intrinsically relational names, so that the relation of possession, respectively with the NPs *a escola* [the school] and *o shopping* [the mall], is established by the preposition *de* ‘of’, which, therefore, is a lexical preposition, in the terms of Cançado (2009). *A escola* [the school] e *o shopping* [the mall] are possessors of *as carteiras* [the desks] and *as lojas* [the stores], but it is an alienable possession relation.

However, there are still complex arguments that can be factored that do not express any possession relation, whether alienable or inalienable. Let’s see:

- (7) a. *A menina aplaudiu a atuação impecável do artista.*  
 the girl applauded the performance impeccable of.the artist  
 ‘The girl applauded the artist’s impeccable performance.’  
 b. *A menina aplaudiu o artista pela (sua) atuação impecável.*  
 the girl applauded the artist for.the (his) performance impeccable  
 ‘The girl applauded the artist for (his) impeccable performance.’
- (8) a. *O professor depreciou a apresentação malfeita do aluno.*  
 the teacher depreciated the presentation poorly.done of.the student  
 ‘The teacher depreciated the student’s poorly done presentation.’  
 b. *O professor depreciou o aluno pela (sua) apresentação malfeita.*  
 the teacher depreciated the student for.the (his) presentation poorly.done  
 ‘The teacher depreciated the student for (his) poorly done presentation.’

The NPs *a atuação impecável* [the impeccable performance] and *a apresentação malfeita* [the poorly done presentation] describe a type of activity, since they are names that denote events in the world and that predicate their agents, respectively *o artista* [the artist] and *o estudante* [the student]. It is important to note that the argument of the name that denotes an event must necessarily be an agent, since when it is an entity affected by the event described by the verb, the factoring of the argument does not occur: *a mãe teme a morte do filho* [the mother fears the death of her son]/\**a mãe teme o filho pela sua morte* [\*the mother fears her son for his death]; *os colegas maldosos aplaudiram o tombo do menino* [the evil classmates applauded the boy’s fall]/\**os colegas maldosos aplaudiram o menino pelo seu tombo* [\*the evil classmates applauded the boy for his fall]. In these sentences, the NPs *o filho* [the son] and *o menino* [the boy] are affected by the event names *morte* [death] and *tombo* [fall] and, therefore, the factoring of these arguments does not occur.

Another nominal level restriction in the factored form of sentences, already pointed out by Cançado (1995) and by Cançado, Godoy and Amaral (2017 [2013]), is the

necessary presence of an anaphoric relation between the factored constituents. This relation can occur by a direct anaphor, with the presence of the anaphoric pronoun *seu/sua* [his/her], or by an indirect anaphor with a definite article, called associative anaphora. (MARCUSCHI, 2000; KLEIBER, 2002; HAAG; OTHERO, 2003)<sup>4</sup>.

In associative anaphora, the anaphoric element, called “referent”, is activated by another entity mentioned in the text, called “textual anchor”, without a coreference relation between them. According to Kleiber (2002) e Haag e Othero (2003), associative anaphors are triggered by different types of relations between the referent and its textual anchor. One of these is the relation of property, exemplified below:

- (9) [*Essa sobremesa*]<sub>a</sub> é ótima. [*O sabor*]<sub>r</sub> é bem doce, mas não é enjoativo.<sup>5</sup>  
 this dessert is great. the taste is very sweet but not is cloying.  
 ‘This dessert is great. The taste is very sweet, but it is not cloying.’

(HAAG; OTHERO, 2003, p.10)

In (9), the NP *o sabor* [the taste], which is the referent (anaphoric element), denotes a property of the NP *essa sobremesa* [this dessert], which is the textual anchor. This same relation occurs in the factored form, without the presence of the pronoun *seu* [his], in the examples *os estudantes admiram o professor pelo brilhantismo* [the students admire the teacher for the brilliance] and *os fiéis temem Deus pela força* [the faithful fear God for the strength], in which *brilliance* and *strength* denote properties of the *teacher* and of the *God*.

Another type of relation expressed by associative anaphora is called by Haag and Othero (2003) “meronymic relation by integrant part”. In this relation, the anaphoric element is an integrant part of its textual anchor, as we can see below:

- (10) [*A Linguística*]<sub>a</sub> é a ciência dos signos verbais. [*A Pragmática*]<sub>r</sub> estuda as relações entre os signos e a sociedade. [*A Semântica*]<sub>r</sub>, as relações entre os signos e seus referentes.  
 the Linguistics is the science of the signs verbal the Pragmatics studies the relations between the signs and the society the Semantics the relations between the signs and its referentes  
 ‘Linguistics is the science of verbal signs. Pragmatics studies the relations between signs and society. Semantics, the relations between signs and their referents’.

(HAAG; OTHERO, 2003, p.6)

In the example above, the NPs *Pragmática* [Pragmatics] and *Semântica* [Semantics] are an integrant part of their textual anchor, *Linguística* [Linguistics]. This same

<sup>4</sup> In the examples analyzed in this research, the definite article is expressed in the contraction of the preposition *por + o/a* [for + the], which gives rise to the forms *pelo* [for the] or *pela* [for the].

<sup>5</sup> The letter ‘a’, in subscript, means textual anchor, while the letter ‘r’, also in subscript, means referent.

type of relation occurs in the factored forms, without the direct anaphor expressed by the pronoun *sua* [her], present in (5b) and (6b), in which the NPs *as carteiras desconfortáveis* [the uncomfortable desks] and *as lojas modernas do shopping* [the modern stores] are the referents of their textual anchors *a escola* [the school] and *o shopping* [the mall].

Finally, the last type of associative anaphora that can be found in the linguistic phenomenon we are analyzing is the thematic role anaphor, which occurs when the referent plays the role of agent in relation to its textual anchor.

- (11) *[Roubaram]<sub>a</sub> um quadro de Monet do museu. [Os ladrões]<sub>r</sub> ainda são stole a painting of Monet from.the museum the thieves still are desconhecidos.*  
 unknown  
 ‘Someone stole a painting of Monet from the museum. The thieves are still unknown.’

(HAAG; OTHERO, 2003, p.12)

In (11), the referent *os ladrões* [the thieves] is the agent of its textual anchor, the verb *roubar* [to rob]. However, in the factored sentences, there is an inversion of the phrases that play the role of textual anchor and referent: the referent is the event name while the anchor is the NP which denotes the agent of the event expressed by the name: *a menina aplaudiu [o artista]<sub>a</sub> pela [atuação impecável]<sub>r</sub>* [the girl applauded [the artist]<sub>a</sub> for [the impeccable performance]<sub>r</sub>].

Summarizing, the nominal-level constraints refer to the semantic relations existing between the components of the complex argument and to the anaphoric relationship existing between the dismembered constituents in the factored form of the sentences. The following tables summarize all of these restrictions.

**Table 1** – Semantic relation between the components of the complex argument

Type of semantic relation	Example
Inalienable possession	a. <i>Os alunos admiram o brilhantismo do professor.</i> [The students admire the teacher’s brilliance.] b. <i>Os alunos admiram o professor pelo (seu) brilhantismo.</i> [The students admire the teacher for (his) brilliance.]
Alienable possession	a. <i>As meninas elogiaram as lojas modernas do shopping.</i> [The girls praised the mall’s modern stores.] b. <i>As meninas elogiaram o shopping pelas (suas) lojas modernas.</i> [The girls praised the mall for (its) modern stores.]



Type of semantic relation	Example
Event name and its agent	<p>a. <i>A menina aplaudiu a atuação impecável do artista.</i> [The girl applauded the artist's impeccable performance.]</p> <p>b. <i>A menina aplaudiu o artista pela (sua) atuação impecável.</i> [The girl applauded the artist for (his) impeccable performance.]</p>

Source: Author's elaboration.

**Table 2** – Anaphoric relationship between the factored constituents

Anaphora type	Example
Direct	<i>Os alunos admiram [o professor]<sub>i</sub> pelo [seu]<sub>i</sub> brilhantismo.</i> [The students admire [the teacher] <sub>i</sub> for [his] <sub>i</sub> brilliance.]
Associative by property	<i>Os alunos admiram [o professor]<sub>a</sub> por [o brilhantismo]<sub>r</sub>.</i> [The students admire [the teacher] <sub>a</sub> for [the brilliance] <sub>r</sub> .]
Associative by meronymic by integrant part	<i>As meninas elogiaram [o shopping]<sub>a</sub> por [as lojas modernas]<sub>r</sub>.</i> [The girls praised [the mall] <sub>a</sub> for [the modern stores] <sub>r</sub> .]
Associative by thematic role	<i>A menina aplaudiu [o artista]<sub>a</sub> por [a atuação impecável]<sub>r</sub>.</i> [The girl applauded [the artist] <sub>a</sub> for [the impeccable] <sub>r</sub> performance.]

Source: Author's elaboration.

Having shown the nominal-level constraints that allow the factoring of the complex argument of the analyzed sentences, let us move on to the description of the verbal-level constraints that license the occurrence of this alternation.

### Verb-level semantic constraints for the occurrence of alternation

To explain the verbal restrictions that delimit the occurrence of the factoring of argument that we are analyzing, we will use the proposal of thematic roles as a cluster of discrete semantic properties proposed by Cançado and Amaral (2016), which is the most recent version of the proposal of Cançado (2005). The authors are based on Dowty (1991), Franchi (2003 [1997]) and Franchi and Cançado (2003 [1997]), and assume that the thematic roles assigned by verbs are clusters of semantic properties arising from “lexical entailments established in the relation between the verbal predicate and the argument in the complement position and in the relation between the predicate expressed by the verb phrase and the argument in the subject position”<sup>6</sup> (CANÇADO, AMARAL, 2016, p. 107, our translation).

<sup>6</sup> From the original: “acarretamentos lexicais estabelecidos na relação entre o predicador verbal e o argumento na posição de complemento e na relação entre o predicador expresso pelo sintagma verbal e o argumento na posição de

Through an empirical process of analysis, carried out by Cançado (2005), between the syntactic and semantic functions of BP sentences that contained the most investigated thematic roles in the literature, Cançado and Amaral (2016) propose the existence of six semantic properties relevant to the linking between thematic roles and the syntactic functions of subject and object. This linking is called by the authors, based on Dowty (1991), Argument Selection and it is based on the existence of two axes: the axis of eventualities, which contains the semantic properties *desencadeador* [trigger], *afetado* [affected] and *estativo* [stative]; and the stative axis, which contains the semantic properties *condição mental* [mental condition], *possuidor* [possessor] and *objeto de referência* [reference object]. Cançado and Amaral (2016) emphasize that it is possible to have other semantic properties arising from the lexical entailment relation established between verbs and their arguments. However, for the authors, the properties mentioned above are sufficient to establish the Principle of Argument Selection. In our paper, we show that there is at least one more relevant semantic property to the establishment of the Principle.

According to Cançado and Amaral (2016), in the eventive axis, the property *trigger* is the most prominent, followed by the property *affected* and, after, by the property *stative*. This means that the argument which receives the thematic role of *trigger* is the one most likely to occupy the syntactic position of subject. In its absence, the *affected* argument is most likely to occupy this position, followed by the *stative* argument. On the stative axis, the properties *mental condition* and *possessor* are equally prominent, since they are not attributed, at the same time, to the same verbal argument. This means that the argument that receives them is more likely to occupy the subject position than the one that receives the property *reference object*.

At least one semantic property of the eventive axis must be attributed to each verbal argument and this property can be combined with others of the stative axis or even of the eventive axis itself. Let's look at some examples:

(12) *A pedrada quebrou a janela.*  
 the stone. PTCP broke the window<sup>7</sup>  
 'The stone hit and broke the window.'

(13) *A provas preocupam Maria.*  
 the tests worries Maria  
 'The tests worries Maria.'

(14) *O aluno sabe matemática.*  
 the student knows Math  
 'The student knows Math.'

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*sujeito*" (CANÇADO, AMARAL, 2016, p. 107).

<sup>7</sup> PTCP means 'participle', according to Leipzig glossing rules.

In the sentence in (12), the verb *quebrar* [break] assigns the property *affected* to its argument *a janela* [the window] and the semantic property *trigger* to the argument *a pedrada* [the stone]. As the *trigger* argument is the most prominent, the NP *a pedrada* [the stone] occupies the subject position.

In (13), the verb *preocupar* [worry] assigns the properties *affected* and *mental condition* to its argument *Maria*, as she undergoes a kind of psychological state change. On the other hand, the argument *as provas* [the tests] receives the property *trigger*, because it triggers that psychological change. As in (12), in (13), the *trigger* argument occupies the subject position.

In (14), by denoting a stative situation, the verb *saber* [know] only attributes properties of the stative axis to its arguments. The argument *o estudante* [the student] receives the properties *stative* and *mental condition*, while the argument *matemática* [Math] receives the properties *stative* and *reference object*. Because the property *mental condition* is more prominent on the stative axis, the argument which receives that property occupies the subject position.

Having explained, in a general way, how the proposal by Cançado and Amaral (2016) works, let us return to some examples of factoring argument presented in this article:

- (15) a. *O fiel teme a força de Deus.*  
the faithful fears the strength of God.  
'The faithful fears the God's strength.'
- b. *O fiel teme Deus por sua força.*  
the faithful fears God for his strength  
'The faithful fears God for his strength.'
- (16) a. *Os alunos admiram o brilhantismo do professor.*  
the students admire the brilliance of the teacher  
'The students admire the teacher's brilliance.'
- b. *Os alunos admiram o professor pelo brilhantismo.*  
the students admire the teacher for the brilliance  
'The students admire the teacher for the brilliance.'
- (17) a. *A menina aplaudiu a atuação impecável do artista.*  
the girl applauded the performance impeccable of the artist  
'The girl applauded the artist's impeccable performance.'
- b. *A menina aplaudiu o artista pela (sua) atuação impecável.*  
the girl applauded the artist for the his performance impeccable  
'The girl applauded the artist for his impeccable performance.'

- (18) a. *As meninas elogiaram as lojas modernas do shopping.*  
 the girl praised the stores modern of.the mall  
 ‘The girls praised the modern stores of the mall.’
- b. *As meninas elogiaram o shopping pelas (suas) lojas modernas.*  
 the girls praised the mall for.the its stores modern  
 ‘The girls praised the mall for its modern stores.’

According to Cançado (1995), the verbs *temer* [fear] and *admirar* [admire] belong to the class of psychological verbs that present an Experiencer subject. The author defines psychological verbs as those that “denote an emotional state and necessarily have an Experiencing argument”<sup>8</sup> (CANÇADO, 1995, p. 6, our translation). By Experiencer is meant the “animated being who is or becomes in a certain mental, perceptual or psychological state” (CANÇADO; AMARAL, 2016, p. 43, our translation)<sup>9</sup>. This thematic role is equivalent to the semantic properties *stative* and *mental condition*, which are defined as follows: “stative is the property related to the individual who is in a certain permanent state” and “mental condition denotes the mental state, whether psychological, cognitive, be perceptual of an individual” (CANÇADO; AMARAL, 2016, p. 111, our translation)<sup>10</sup>. The attribution of those properties to the argument that occupies the subject position of *temer* [fear] and *admirar* [admire] verbs is evidenced by tests of lexical entailment, as shown below:

- (19) a. *Os alunos admiravam o brilhantismo do professor.*  
 ‘The students admired the brilliance of the teacher.’
- b.  $\sim \vdash$  The students trigger this situation.<sup>11</sup>
- c.  $\sim \vdash$  The students were affected by this situation.
- d.  $\vdash$  The students admired the teacher’s brilliance, but the students are not in any mental condition, whether psychological, cognitive or perceptual.

The existence of the property *stative* is evidenced by the absence of the *trigger* and *affected* properties, since “what does not trigger something or is not affected by something is a state” (CANÇADO; AMARAL, 2016, p. 115, our translation).<sup>12</sup> In (19a), students do not initiate, generate or cause any situation, as evidenced by (19b), nor are they affected by the admiration they feel for the teacher, as shown in (19c). The

<sup>8</sup> From the original: “denotam um estado emocional e têm, obrigatoriamente, um argumento Experienciador” (CANÇADO, 1995, p. 6).

<sup>9</sup> From the original: o “ser animado que está ou passa a estar em determinado estado mental, perceptual ou psicológico” (CANÇADO; AMARAL, 2016, p. 43).

<sup>10</sup> From the original: “estativo é a propriedade relacionada ao indivíduo que está em um determinado estado permanente” e “condição mental denota o estado mental, seja psicológico, seja cognitivo, seja perceptual de um indivíduo” (CANÇADO; AMARAL, 2016, p. 111).

<sup>11</sup> The symbol ‘ $\vdash$ ’ indicates entailment relation and the symbol ‘ $\sim$ ’ indicates negation. Thus, ‘ $\sim \vdash$ ’ means absence of entailment relation (CANN, 1993).

<sup>12</sup> From the original: “aquilo que não desencadeia algo ou não é afetado por algo é um estado” (CANÇADO; AMARAL, 2016, p. 115)

students are only in the mental condition of admiration for some entity, as (19d) shows. However, the same cannot be said about the subjects of the verbs *aplaudir* [applaud] and *elogiar* [praise], as they initiate/trigger a process and do so intentionally. This intention is represented by the semantic property *controle* [control], which can be combined with the property *trigger* (CANÇADO, 2005; CANÇADO; AMARAL, 2016). Let's see the tests that show the attribution of these two properties to the verb *aplaudir* [applaud]:

- (20) a. *A menina aplaudiu a atuação impecável do artista.*  
 'The girl applauded the artist's impeccable performance.'  
 b. ⊢ The girl applauded the artist's impeccable performance, but it was not the girl who triggered this event.  
 c. ⊢ The girl applauded the impeccable performance of the artist, but the girl had no control over this event.

The sentences in (20 b,c) are contradictory, which shows that the NP *a menina* [the girl] receives, from the verb *aplaudir* [applaud], the semantic properties *trigger* and *control*.

Having shown the properties attributed to the subjects of the verbs, let's analyze those attributed to the arguments that occupy the object position. Both the arguments, *o brilhantismo do professor* [the brilliance of the teacher] and *a atuação impecável do artista* [the impeccable performance of the artist], receive the property *stative*, since they do not trigger any situation or suffer any type of affectation. In addition to this property, we propose that the verbs attribute two more properties, belonging to the stative axis, to the argument that occupies the syntactic position of the object. One of them is the property *reference object* and the other is one that we call, based on Franchi and Cançado (2003 [1997]), *objeto motivador* [motivating object]. This property refers to the thematic role of Stimulus, widely studied in the literature about psychological verbs (GRIMSHAW, 1990; ARAD, 1998; PESETSKY, 1995; PUSTEJOVSKY, 1995; GRAFMILLER, 2013; ALEXIADOU; IORDĂCHIOAIA, 2014, among several others). Generally speaking, the role of Stimulus is assigned to the participant responsible for the emotional state of the Experiencer argument. This means that, in the sentence, *os estudantes admiram o brilhantismo do professor* [the students admired the brilliance of the teacher], the argument *o brilhantismo do professor* [the brilliance of the teacher] is responsible for the students' state of admiration. In our analysis, we propose to extend the idea of Stimulus to verbs such as *aplaudir* [applaud] and *elogiar* [praise] and, for this purpose, we will use the term *motivating object*, which includes both stative verbs and verbs that denote events. By proposing that the verbs *aplaudir* [applaud] and *elogiar* [praise] also assign the property *motivating object* to their argument that occupies the object position, we are saying that in the sentences *a menina aplaudiu a atuação impecável do artista* [the girl applauded the impeccable performance of the artist] e *as meninas elogiaram as lojas modernas do shopping* [the girls praised the modern stores of the mall], the arguments *a atuação impecável do artista* [the impeccable performance of the artist] and *as lojas modernas do shopping* [the modern stores of the mall] motivate the girls' applause and praise.

At this point, it is important to differentiate ‘triggering a situation’ from ‘motivating a situation’. In a sentence such as *a menina aplaudiu a atuação impecável do artista* [the girl applauded the impeccable performance of the artist], we can say that *the girl* receives the property *trigger*, as she initiates the action of applauding the artist’s performance. However, in the sentence *os alunos admiravam o brilhantismo do professor* [the students admired the brilliance of the teacher], the argument *o brilhantismo do professor* [the brilliance of the teacher] does not initiate the action of admiring, what means that it does not perform any action, whether voluntarily or involuntarily. This argument works like a kind of motivation, which motivates students’ admiration and, therefore, receives the property *motivating object*. The same goes for the NP *a atuação impecável do artista* [the impeccable performance of the artist], which is the argument of the verb *aplaudir* [applaud]. This NP does not initiate the action of applauding, but motivates the applause by the girl.

Next, we evidence the attribution of the properties *stative*, *reference object* and *motivating object* to the object of the analyzed verbs:

- (21) a. *A menina aplaudiu a atuação impecável do artista.*  
 ‘The girl applauded the artist’s impeccable performance.’  
 b. ~| The artist’s impeccable performance triggered this situation.  
 c. ~| The artist’s impeccable performance was affected by this situation.  
 d. | The girl applauded the artist’s impeccable performance, but the artist’s impeccable performance is not the reference object to which the girl’s applause is directed to.  
 e. | The girl applauded the artist’s impeccable performance, but the artist’s impeccable performance is not the motivating object of the girl’s applause.
- (22) a. *Os alunos admiravam o brilhantismo do professor.*  
 ‘The students admired the teacher’s brilliance.’  
 b. ~| The teacher’s brilliance triggered this situation.  
 c. ~| The teacher’s brilliance was affected by this situation.  
 d. | The students admired the teacher’s brilliance, but the teacher’s brilliance is not the reference object to which the students’ admiration is directed to.  
 e. | The students admired the teacher’s brilliance, but the teacher’s brilliance is not the motivating object of the students’ admiration.

Since the sentences in (a) do not entail the sentences in (b) and (c), in the examples above, it evidences the attribution of the property *stative* to the argument that occupies the object position of the verbs *aplaudir* [applaud] and *admirar* [admire]. The contradiction present in the sentences in (21d, e) and in (22d, e) proves the attribution of the properties *reference object* and *motivating object* to those same arguments. It is the combination of these properties, attributed to the arguments that occupy the object position, that characterizes the verbs which perform the factoring of argument that we describe in this paper.

It is still important to note that the alternation does not only occur with direct transitive verbs, but also with verbs that have a prepositional object.<sup>13</sup>:

- (23) a. *O rapaz gostava da beleza da namorada.*  
the boy liked of.the beauty of.the girlfriend  
'The boy liked his girlfriend's beauty.'
- b. *O rapaz gostava da namorada por sua beleza.*  
the boy liked of.the girlfriend for her beauty  
'The boy liked his girlfriend for her beauty.'
- (24) a. *A população protestou contra as medidas econômicas do novo governante.*  
the population protested against the measures economic of.the new governor  
'The population protested against the economic measures of the new governor.'
- b. *A população protestou contra o novo governante pelas suas medidas econômicas.*  
the population protested against the new governor for.the his measures economic  
'The population protested against the new ruler for his economic measures.'

The verbs *gostar* [like] and *protestar* [protest] assign the properties *stative*, *mental condition* and *trigger* to their subjects, while their arguments which occupy the position of prepositional object receive the properties *stative*, *reference object* and *motivating object*.

- (25) a. *O rapaz gostava da beleza da namorada.*  
'The boy liked his girlfriend's beauty.'
- b. ~| The boy triggered this situation.
- c. ~| The boy was affected by this situation.
- d. | The boy liked his girlfriend's beauty, but the boy is not in any mental condition, whether psychological, cognitive or perceptual.
- e. ~| The girlfriend's beauty triggered this situation.
- f. ~| The girlfriend's beauty was affected by this situation.
- g. | The boy liked his girlfriend's beauty, but the girlfriend's beauty is not the reference object to which the boy's psychological state is directed to.
- h. | The boy liked his girlfriend's beauty, but the girlfriend's beauty is not the motivating object of the boy's psychological state.

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<sup>13</sup> For a description of prepositions in BP and the types of prepositions that occur with *gostar* 'like' and *protestar* 'protest' verbs, see Godoy (2008) and Cançado (2009).

- (26) a. *A população protestou contra as medidas econômicas do novo governante.*  
 ‘The population protested against the economic measures of the new governor’.
- b. ⊢ The population protested against the economic measures of the new governor, but it was not the population that triggered this event.
- c. ⊢ The population protested against the economic measures of the new governor, but the population had no control over this event.
- d. ~ ⊢ The economic measures of the new governor triggered this situation.
- e. ~ ⊢ The economic measures of the new governor were affected by this situation.
- f. ⊢ The population protested against the economic measures of the new governor, but the economic measures of the new governor are not the object of reference to which the population’s protest is directed to.
- g. ⊢ The population protested against the economic measures of the new governor, but the economic measures of the new governor are not the motivating object of the population’s protest.

The tests from (25b) to (25d) show the attribution of the properties *stative* and *mental condition* to the subject of the verb *gostar* [to like], while the tests from (25e) to (25h) show that the argument that occupies the object position receives the properties *stative*, *reference object* and *motivating object*. The tests in (26b) to (26c) show that the subject of the verb *protestar* [protest] receives the semantic properties *trigger* and *control*, while the sentences from (26d) to (26g) show that the object of this verb receives the properties *stative*, *object of reference* and *motivating object*.

Thus, we can conclude from the examples with the verbs *gostar* [to like] and *protestar* [protest] that verbal transitivity is not relevant to the phenomenon of factoring of argument that we analyze in this paper.

Verbs that perform this factoring of argument present the following argument structures in terms of discrete semantic properties:

- (27) *Admirar* [admire] and *gostar* [like] verbs – 30 verbs (*abominar* [abhor], *adorar* [adore], *amar* [love], *antipatizar* [dislike], *apreciar* [appreciate], *detestar* [hate], *menosprezar* [belittle], *subestimar* [underestimate], *temer* [fear], etc.)<sup>14</sup>

v: {stative/mental condition, stative/reference object/motivating object}

- (28) *Aplaudir* [applaud] and *protestar* [protest] – 37 verbs (*abençoar* [bless], *advertir* [admonish], *agradecer* [thank], *censurar* [censure], *criticar* [criticize], *depreciar* [depreciate], *discordar* [disagree], *elogiar* [praise], *zombar* [mock], etc.)

v: {trigger/control, stative/reference object/ motivating object}

<sup>14</sup> *Admirar* ‘admire’ and *gostar* ‘like’ verbs and their sentences in factored and in unfactored forms can be found in the appendix of the Cançado’s (1995) work, while *aplaudir* ‘applaud’ and *protestar* ‘protest’ verbs and their respective sentences are in the appendix of Meirelles’ (2018) work.



Even with different thematic grids, we can group *admirar/gostar* [admire/like] verbs and *aplaudir/protestar* [applaud/protest] verbs in a single class composed by verbs which attribute the same semantic properties to the argument which occupies the object position. This class can be represented as follows, in which the variable X represents the argument that occupies the subject position and its non-influence on the alternation:

(29) v: {X, stative/reference object/motivating object}

Cançado and Gonçalves (2016) and Cançado and Amaral (2016) propose, based on Levin (2010), that verbal classes can be analyzed at different levels, according to their degree of specificity. In our work, it is interesting to distinguish between two of these levels: the medium-grained, which is a medium level, and the coarse-grained, which is a more general level. Classes at the medium-grained level are those formed by verbs that show the same argument structure, such as the verb classes shown in (27) and (28). On the other hand, classes at the coarse-grained level are those composed of verbs that share only a part of their argument structure, such as showed by the grouping of the *admirar/gostar* [admire/like] verbs with the *aplaudir/protestar* [applaud/protest] verbs. This grouping results in the more generic structure in (29). Thus, the factoring of the verbal argument that receives the semantic properties *stative*, *reference object* and *motivating object* provides an analysis of verbal classes at a more general level, which is the coarse-grained level.

To finish this section, we will explain how the semantic properties are distributed in the factored form of sentences. According to Brunson (1992), phenomena such as the one we present in this paper are examples of thematic discontinuity, so that the same thematic role is distributed in two distinct syntactic positions. In fact, this is what happens in the factored sentences that we analyzed: the thematic role composed by the properties *stative*, *reference object* and *motivating object* is distributed by the two parts of the factored phrase. The argument that remains in the position of object carries the properties *stative* and *reference object*, while the argument that occupies the position of adjunct, headed by the preposition *por* [for], maintains the three semantic properties *stative*, *reference object* and *motivating object*. Let's see the tests that corroborate our proposal:

- (30) a. *Os alunos admiram o professor pelo seu brilhantismo.*  
 'The students admire the teacher for his brilliance.'  
 b. ~| **The teacher** triggered/initiated this situation.  
 c. ~| **The teacher** was affected by this situation.  
 d. | **The students** admire the teacher for (his) brilliance, but **the teacher** is not the reference object to which students' admiration is directed to.  
 e. The students admire the teacher for his brilliance, but the teacher himself, as a person, is not the motivating object of students' admiration.

- (31) a. *Os alunos admiram o professor pelo seu brilhantismo.*  
 ‘The students admire the teacher for his brilliance.’
- b.  $\sim \vdash$  The **brilliance** triggered/initiated this situation.
- c.  $\sim \vdash$  The *brilliance* was affected by this situation.
- d.  $\vdash$  The students admire the teacher for his brilliance, but the brilliance is not the reference object to which students’ admiration is directed to.
- e.  $\vdash$  The students admire the teacher for his brilliance, but the brilliance is not the motivating object of students’ admiration.

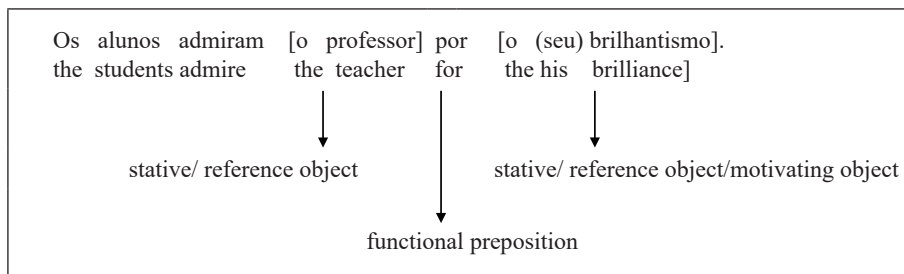
The contradiction relation existing in (30d) and the absence of this relation in (30e) show that the argument *o professor* [the teacher], in the factored form of the sentence, receives only the *stative* and *reference object* properties, not receiving the *motivating object* property. On the other hand, the argument *o seu brilhantismo* [his brilliance] continues to receive the three properties: *stative*, *reference object* and *motivating object*, as evidenced by the tests in (31). At this point, it is important to mention that the preposition *por* [for], which occurs in the factored form, has a functional nature, as it heads a verbal argument dismembered from its original constituent.

It is still important to emphasize that, in Lexical Semantics, it is assumed that thematic properties are attributed to arguments in the lexical entry of verbs, that is, in their basic form, which, in the phenomenon in question, is the unfactored form of sentences. Thus, in the factored form, there is only a reorganization of the semantic properties already assigned by the verb to its complex argument. There is no assignment of new thematic properties.

Regarding the Principle of Argument Selection, we propose that the *motivating object* property integrates the list of semantic properties of the stative axis that are relevant for establishing a linking between semantics and syntax. In our proposal, the *motivating object* property is less prominent than the *reference object* property. Thus, although both *o professor* [the teacher] and *o seu brilhantismo* [his brilliance] receive the *stative* and *reference object* properties, the constituent *o seu brilhantismo* [his brilliance] is the one that occupies a lower position hierarchically, which is the adjunct position of the verb, as it receives the least prominent property *motivating object*.

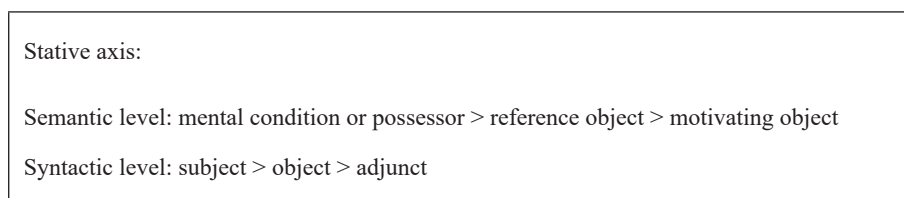
The following two schemes represent, respectively, the redistribution of thematic properties in the factored form of sentences and the functioning of the Argument Selection Principle.

### Scheme 1 – Thematic discontinuity in factored form



Source: Author's elaboration.

### Scheme 2 – Principle of Argument Selection



Source: Based on Cançado and Amaral (2016, p.122).

At this point of the paper, we finish the description of the semantic constraints which delimit the occurrence of the factoring of arguments we analyze. In the next section, we show how the factored form interpretation of sentences works.

### Semantic interpretation of factored form and pragmatic motivation for alternation

Some types of factoring of verbal arguments occur without changing the semantic interpretation of sentences, as we can see in the following examples:

- (32) a. *O braço do menino (se) quebrou no acidente.*  
the arm of.the boy REFL broke in.the accident<sup>15</sup>  
'The boy's arm broke in the accident.'
- b. *O menino quebrou o braço no acidente.*  
the boy broke the arm in.the accident  
'The boy had his arm broken in the accident.'
- c. † The boy's arm broke in the accident, but the boy did not have his arm broken in the accident.

<sup>15</sup> REFL means 'reflexive', according to Leipzig glossing rules.

- (33) a. *O cachorro mordeu a perna da menina.*  
 the dog bit the leg of.the girl  
 ‘The dog bit the girl’s leg.’
- b. *O cachorro mordeu a menina em a perna.*  
 the dog bit the girl in the leg  
 ‘The dog bit the girl on her leg.’
- c. ⊢ The dog bit the girl’s leg, but didn’t bite the girl on the leg.

Meirelles (2018) proposes that the sentences in (32b) and (33b) come from the factoring of the verbal argument that denotes the part-whole relationship (CANÇADO, 2010; MEIRELLES, 2018; MEIRELLES; CANÇADO, 2020). We will not go into details about the occurrence of these alternations. For the purposes of this article, it is enough to note that the factored and unfactored forms of sentences are synonymous, as evidenced in the examples in (c).

However, let’s now look at the factoring of arguments we are analyzing:

- (34) a. *Os alunos admiram o brilhantismo do professor.*  
 the students admire the brilliance of.the teacher  
 ‘The students admire the brilliance of the teacher.’
- b. *Os alunos admiram o professor pelo seu brilhantismo.*  
 the students admire the teacher for.the his brilliance  
 ‘The students admire the teacher for his brilliance.’
- c. The students admire the brilliance of the teacher, but they do not admire the teacher for his brilliance. They don’t admire the teacher as a person.
- (35) a. *O fiel teme a força de Deus.*  
 the faithful fear the strength of God.  
 ‘The faithful fear the strength of God.’
- b. *O fiel teme Deus por sua força.*  
 the faithful fear God for his strength.  
 ‘The faithful fear God for his strength.’
- c. The faithful fears God’s strength, but does not fear God for his strength.  
 [The faithful]<sub>i</sub> does not fear [God]<sub>j</sub>, because [he]<sub>i</sub> knows that [he]<sub>j</sub> is kind.
- (36) a. *As meninas elogiaram as lojas modernas do shopping.*  
 the girls praise the stores modern of.the mall  
 ‘The girls praised the mall’s modern stores.’
- b. *As meninas elogiaram o shopping pelas suas lojas modernas.*  
 the girls praised the mall for.the its stores modern  
 ‘The girls praised the mall for its modern stores.’
- c. The girls praised the mall’s modern stores, but didn’t praise the mall for its modern stores. They did not praise the mall, as they thought all the rest of the structure was poorly done.

- (37) a. *A menina aplaudiu a excelente atuação do artista.*  
 the girl applauded the excellent performance of.the artist  
 ‘The girl applauded the artist’s excellent performance.’
- b. *A menina aplaudiu o artista pela sua excelente atuação.*  
 the girl applauded the artist for.the his excellent performance  
 ‘The girl applauded the artist for his excellent performance.’
- c. The girl applauded the artist’s excellent performance, but did not applaud the artist for his excellent performance. She did not applaud the artist himself, as she detests him as a person.

The sentences in (c) are not contradictory and it evidences that the factored and unfactored forms are not synonymous. This factoring of argument is, therefore, a type of alternation that does not preserve the semantic interpretation of sentences. This is not new in the literature on verb alternations, given the numerous studies on alternation with the English *spray* and *load* verbs, which also present different semantic interpretations in their alternating forms.: *Jessica loaded boxes on the wagon/ Jessica loaded the wagon with boxes.* According to Fillmore (1968), Croft (1991), Dowty (1991), and Levin (1993), the form which presents the preposition *with* denotes greater affectation of *the wagon* argument, so that the sentence can be interpreted as the wagon had become full of boxes.

However, it is important to emphasize that although the alternation we analyzed does not present the same semantic interpretation in the two possible forms of realization of verbal arguments, it does not mean that we are dealing with a strictly syntactic phenomenon. As we have shown along this paper, there are several semantic constraints at nominal and verbal level that delimit the occurrence of alternation.

We believe that the motivation for the occurrence of the factoring of the verbal argument that receives the semantic properties *stative*, *reference object* and *motivating object*, is found in pragmatics, more specifically, in the organization of the informational structure of the utterance.

According to Rosenberg and Menuzzi (2011), an utterance is composed of propositional content, strictly semantic, and pragmatic content, which involves, among other factors, the way the speaker organizes the utterance in terms of given information, usually called Topic, and new information, called Focus (GUNDEL; FRETHEIM, 2004). This organization of speech is named “informational articulation of the utterance”. Thus, both the propositional content of a sentence and the informational articulation of an utterance are related to the phenomenon of signification. However, while the proposition refers to the meaning of the mention (linguistic expression studied outside a real context of communication), the informational articulation concerns the meaning of the utterance, which is the real use of a sentence.

The same propositional content, conveyed by a specific set of lexical items, can be expressed in different ways without changing the truth conditions of the sentence. Let’s look at the following examples:

- (38) a. *O Ricardo beijou a Gisela no cinema.*<sup>16</sup>  
 the Ricardo kissed the Gisela in.the cinema  
 ‘Ricardo kissed Gisela at the cinema.’
- b. *Foi no cinema que o Ricardo beijou a Gisela.*  
 was in.the cinema that the Ricardo kissed the Gisela  
 ‘It was at the cinema that Ricardo kissed Gisela.’
- c. *Foi a Gisela que o Ricardo beijou no cinema.*  
 was the Gisela that the Ricardo kissed in.the cinema  
 ‘It was Gisela that Ricardo kissed at the cinema.’

The sentences in (38), although presented in different ways, have the same propositional content, which means that they all describe a situation in which *Ricardo kisses Gisela at the cinema*. However, although they have the same semantic meaning, their pragmatic meaning is not the same: (38a) seems to inform the happening of the event, since the whole sentence carries some new information; in (38b), the informational focus is on the PP *no cinema* [at the cinema]; and in (38c), the focus is found in the phrase *a Gisela*. The following tests support these claims:

- (39) O que aconteceu?  
 ‘What happened?’
- a. *O Ricardo beijou a Gisela no cinema.*  
 ‘Ricardo kissed Gisela at the cinema.’
- # b. *Foi no cinema que o Ricardo beijou a Gisela.*<sup>17</sup>  
 ‘It was at the cinema that Ricardo kissed Gisela.’
- # c. *Foi a Gisela que o Ricardo beijou no cinema.*  
 ‘It was Gisela that Ricardo kissed at the cinema.’
- (40) *Onde o Ricardo beijou a Gisela? Foi na praça?*  
 ‘Where did Ricardo kiss Gisela? Was it in the square?’
- # a. *O Ricardo beijou a Gisela no cinema.*  
 ‘Ricardo kissed Gisela at the cinema.’
- b. *Foi no cinema que o Ricardo beijou a Gisela.*  
 ‘It was at the cinema that Ricardo kissed Gisela.’
- # c. *Foi a Gisela que o Ricardo beijou no cinema.*  
 ‘It was Gisela that Ricardo kissed at the cinema.’

<sup>16</sup> This sentence must be uttered without any special intonation being given to one of its constituents.

<sup>17</sup> According to Rosenberg and Menuzzi (2011), the symbol ‘#’ indicates inadequacy of the sentence as an answer to the question.

- (41) *Quem o Ricardo beijou no cinema? Foi a Carol?*  
 ‘Who did Ricardo kiss at the movies? Was it Carol?’
- # a. *O Ricardo beijou a Gisela no cinema.*  
 ‘Ricardo kissed Gisela at the cinema.’
  - # b. *Foi no cinema que o Ricardo beijou a Gisela.*  
 ‘It was at the cinema that Ricardo kissed Gisela.’
  - c. *Foi a Gisela que o Ricardo beijou no cinema.*  
 ‘It was Gisela that Ricardo kissed at the cinema.’

In the example in (39), the question *what happened?* asks for the occurrence of an event as new information and, therefore, the sentence in (a), which focuses on the event itself, is an adequate answer. In (40), the new information requested is the place where the event occurs, and therefore, the sentence (b), which focuses and contrasts the constituent *no cinema* [in the cinema] with *na praça* [in the square], is the one that better works as an answer to the question. Finally, in (41), the new information requested is about the person who was kissed by *Ricardo* and, therefore, the sentence (c), which focuses on and contrasts *Gisela* with the individual *Carol*, is the one that adequately answers the question.

Moving on to the analysis of the factoring of arguments, we propose that it exists as a way of focusing on the constituent extracted from the complex argument in the factored form of sentences. We evidence this by showing that what differentiates the unfactored and the factored forms is the informational articulation of each one of them. Let’s go back to the example *os alunos admiram o brilhantismo do professor* [the students admire the brilliance of the teacher]/*os alunos admiram o professor pelo seu brilhantismo* [the students admire the teacher for his brilliance] and see how these sentences behave in relation to the following questions:

- (42) *Por que os alunos admiram o professor?*  
 ‘Why do students admire the teacher?’
- # a. *Os alunos admiram o brilhantismo do professor.*  
 ‘The students admire the brilliance of the teacher.’
  - b. *Os alunos admiram o professor pelo seu brilhantismo.*  
 ‘The students admire the teacher for his brilliance.’
- (43) *O que os alunos admiram?*  
 ‘What do the students admire?’
- a. *Os alunos admiram o brilhantismo do professor.*  
 ‘The students admire the brilliance of the teacher.’
  - # b. *Os alunos admiram o professor pelo seu brilhantismo.*  
 ‘The students admire the teacher for his brilliance.’

In (42), the sentence (b) adequately answers the question, as it focuses on the new information requested: the reason why students admire the teacher. Thus, the phrase

*o seu brilhantismo* [his brilliance] is the Focus of the utterance. On the other hand, in (43), there is a change in the new information required and this makes the sentence (b), which focuses on the whole complex argument, a better answer to the question.

Having shown the pragmatic motivation for the occurrence of the phenomenon of factoring of the complex verbal argument that receives the semantic properties *stative*, *reference object* and *motivating object*, we conclude our paper.

## Final considerations

In this paper we describe an alternation in BP that comes from the factoring of the verbal argument that receives the semantic properties *stative*, *reference object* and *motivating object*. We show that this phenomenon stems from the dismemberment of the verbal argument that occupies the object position in two distinct syntactic positions: in the original object position and in the adjunct position of the verb.

The semantic constraints that delimit the realization of this alternation are of two levels: argument/nominal and verbal. At the nominal level, the factored argument must be a complex constituent formed by two entities that establish a relation of possession, alienable or inalienable, between themselves, or a relation between an event name and its agent. At the verbal level, verbs must assign the semantic properties *stative*, *reference object* and *motivating object* to their complex argument that occupies the object position.

Finally, we proposed that this factoring of argument exists in BP to provide a change in informational focus, so that the factored form of the sentence focuses on the syntactic constituent extracted from the complex argument.

MEIRELLES, L. A alternância de verbos com argumento motivador no PB: um tipo de fatoração de argumento. *Alfa*, São Paulo, v.67, 2023.

- **RESUMO:** Neste artigo, analisamos um tipo de alternância que nos permite expressar um constituinte complexo, que originalmente ocupa a posição de objeto, em duas posições sintáticas distintas, como ocorre no par de sentenças: *os alunos admiram o brilhantismo do professor/os alunos admiram o professor pelo (seu) brilhantismo*. Para a análise desse fenômeno, utilizamos a proposta de papéis temáticos enquanto propriedades semânticas discretas de Cançado (2005) e Cançado e Amaral (2016). Propomos que a alternância analisada decorre da fatoração do argumento verbal complexo, sendo determinada por restrições semânticas de nível nominal e verbal. No primeiro nível, os argumentos complexos passíveis de serem fatorados devem denotar uma relação de posse, como no sintagma *o brilhantismo do professor*, ou uma relação entre um nome eventivo e seu agente, como no sintagma nominal *a excelente atuação do artista em o público aplaudiu a excelente atuação do artista/o público aplaudiu o artista pela (sua) excelente atuação*. No nível verbal, os verbos que realizam essa alternância podem ser agrupados em uma classe *coarse-grained* (LEVIN,



2010), pois todos atribuem as propriedades semânticas estativo, objeto de referência e objeto motivador para o seu argumento complexo passível de ser fatorado. Por fim, propomos que a alternância em questão é motivada por fatores pragmáticos relacionados à estrutura informacional dos enunciados analisados.

- **PALAVRAS-CHAVE:** alternância verbal; fatoração de argumento; propriedades semânticas; posições sintáticas; estrutura Informacional.

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