

## **Interfaces between Frame Semantics and Construction Grammar A Study about Portuguese Degree Modifier Constructions**

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**ABSTRACT:** This paper aims to show how Frame Semantics contributes to the research of constructions of a language. The view of grammar that subsidizes this work is the Cognitive Construction Grammar, a model of grammar emerged within the Cognitive Linguistics. The analyzed objects are three constructions linked to the “Superlative Constructions of Brazilian Portuguese” macro project. In general, the results point to the relevance in the association of the theories, in which the Frame Semantics contributes in a very productive way in understanding the significance of the construction patterns analyzed, as well as in the understanding of the elements that compose them.

**Keywords:** Cognitive Construction Grammar; Frame Semantics; Degree modifier constructions of Portuguese

### **Introduction**

Developed within the cognitive linguistics research program (CROFT & CRUSE, 2004; FAUCONNIER, 1994, 1997; JOHNSON, 1987; LAKOFF, 1987; LAKOFF & JOHNSON, 1999; MIRANDA, 2002, 2008; SALOMÃO, 1997, 2009; among others), the Cognitive Construction Grammar (GOLDBERG, 1995, 2006) and the Frame Semantics (FILLMORE, 1982; PETRUCK, 1996) came to bring contributions of paramount importance for the understanding of how language is stored and processed. Researches related to both paradigms have shown the efficiency of the holistic view provided by the Cognitive Construction Grammar and Frame Semantics, respectively, on the grammar and the construction of meaning in a language.

The complementary character of one model in relation to the other is clear to researchers investigating language under the cognitive bias and the pairing between the two theories is not new (see BOAS, in press; CROFT & CRUSE, 2004; GOLDBERG, 1995). However, works which pair the two theories in a complementary way to find linguistic phenomena are scarce, especially in Portuguese.

Therefore, this work seeks to show how the Frame Semantics can collaborate robustly in search of language constructs, providing a successful model of semantics (coherent with the cognitive perspective), which allows rich semantic description of the structures investigated and the elements that compose it.

The objects to be examined are all linked to the macro project “Superlative Constructions of Brazilian Portuguese: a study about scale semantic” (Miranda, 2008) and have been studied fairly deep in projects related to the aforementioned macro project: Carrara (2010), Costa (2010) and Machado (2011). Thus, taking into account the theme of this work and its physical dimensions, only points that are more directly related to the topic under focus will be taken into account from those studies.

The article is organized as follows: section 1 briefly presents the theories that will support the analysis, CCxG and Frame Semantics, and the most prominent aspects that we believe to bring them closer; section 2 brings three different analyzes that support the pairing between CCxG and Frame Semantics; finally, we present some conclusions.

## **1. Theoretical framework**

As signaled in the introduction, the view of language that subsidizes our perspective to understand the objects is the Cognitive Linguistics (CROFT & CRUSE, 2004; FAUCONNIER, 1994, 1997; JOHNSON, 1987; LAKOFF, 1987; LAKOFF & JOHNSON, 1999; MIRANDA, 2002, 2008; SALOMÃO, 1997, 2009, among others), given the richness of constructs in dealing with meaning and to understand the cognitive processes that underlie the language.

The Cognitive Linguistics program of language investigation performs a break with the Generative Linguistics in the terms postulated by Chomsky. Salomão (2009, p. 22-28) considers the question of **meaning** and the question of **idiomaticity** as the two big cuts with Chomsky's Generative Grammar, and also highlights three major assertions in which the cognitive program is grounded: (i) the language is not an autonomous cognitive system, it is continuing to other cognitive systems; (ii) the grammar is a network of constructions (continuity between syntax and lexicon) modeled on language use; and (iii) the whole process of signification proceeds by projecting cognitive domains.

In this paradigmatic framework we point, fundamentally, the theories about the Cognitive Construction Grammar (GOLDBERG, 1995, 2006) and Frame Semantics (FILLMORE, 1982), which will be discussed afterwards.

## 1.1 Cognitive Construction Grammar

The initial assumption, common to all models of grammar constructions, is that the constructions, defined as **pairs of form and modes of semantic-pragmatic meaning**, have a theoretical status of basic units of the language. It is also claimed, by consensus, the theoretical and analytical interest for all constructions – from the center to the periphery – and the essential continuity between lexicon and grammar, between semantics and pragmatics.

Regarding the definition of the model of grammar constructions named Cognitive Construction Grammar (GOLDBERG, 1995, 2006), the first point to consider is their origin. The Cognitive Construction Grammar (CCxG) is a theory of grammar that has been developed within the Cognitive Linguistics and assembles, consequently, the cognitive approach foundations imposed to the lexicon and the grammar by this model. Thus, studies on semantic-cognitive processes of categorization and projections that include notions such as prototype, radiality, polysemy, metaphorical and metonymic projections, have great importance in dealing with constructions within the CCxG.

Secondly, we must point the alignment of the CCxG with usage-based models of language, which implies the relevance of use and the consideration of the role of culture and interaction in the analysis of the network of signs that make up the lexicon and grammar. In other words, the forms of expression in communication are to determine the grammatical representation in the mind of the speaker. Thus, it is assumed that **the cognitive architecture of grammar is codified in use** and that the grammar is thus a **network of constructions** built in the culture.

Given these considerations regarding the specificity of Cognitive Construction Grammar, one must then define what a construction is. According to Goldberg (2006, p. 05):

Any linguistic patterns is recognized as a construction **as long as some aspect of its form or function is not strictly predictable from its component parts** or from other constructions recognized to exist. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with **sufficient frequency**. [Bold added]

In the constructionist view, all levels of grammatical analysis involve constructions: pairings of form with semantic and discourse functions, including morphemes or words, idioms, patterns partially or fully filled lexically.

## 1.2. Frame Semantics

The Cognitive Linguistics conceives the language as a cognitive instrument that has the function of organizing and fixing the human experience. This way, meaning can only be described based on those experiences, as well as on the set of knowledge that comes from them. So, the Frame Semantics (FILLMORE, 1982) has as fundamental premise the notion that “meanings are relativized to scenes”. It means that the meaning of a linguistic item interacts with the scene activated by it.

The Frame Semantics can be defined as an empiric approach that emphasizes the continuum between language and experience and it can be used for organizing the knowledge (PETRUCK, 1996). The notion of **frame** is taken as “any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits” (FILLMORE, 1982, p. 111).

Hence, the insertion of any element of a conceptual scene makes the others cognitively available (although, not necessarily in a consciously). This view of frame leads the semantics to deal with implicit knowledge structure (experience knowledge) in order to carry out the semantic processes of inference.

Besides the frame notion, another basic concept from Frame Semantics is the **lexical unit** (LU), defined as a pairing between a frame and a monolexical (e.g. “in”) or polilexical (e.g. “in order to”) linguistic expression. Thus, for the Frame Semantics, a full meaning description requires the description of LU’s combinatory conditions, in syntactical and semantic terms, that is, in terms of their valence patterns.

The notion of frame elements (FE) is also a fundamental concept for the Frame Semantics approach. FEs are the scenes participants (entities, attributes, events, time and

space notions), “micro thematic” semantic roles, that is, defined in terms of each scene. This way, they specify and can be frame inferred, even if they are not explicitly lexicalized.

Finally, the approach to complex conceptual domains, brought by the Frame Semantics, contributes a lot to lexicographic field towards the organization of lexical items in network knowledge structure (frames network). The FrameNet project is a good example. The nature of this project and its contributions to studies on meaning are presented in the following lines.

### **The FrameNet project**

FrameNet, a lexicographic project, is, mainly, the result of the Frame Semantics studies. Coordinated by Charles J. Fillmore and Collin F. Baker, from Berkeley University – California, its main goals are:

- (i) Describing the LU’s syntactical valence.
- (ii) Capturing the grammatical necessities required by the LU, including the constituents localized out of syntactical locale, relativized or extra constituents.
- (iii) Annotating syntactically the core, non-core and extra thematic FE.

Unlike ordinary dictionaries, that simply define the lexemes, briefly, and other approaches to lexicon, like WordNet and Thesauri, that are concerned with lexical relations as synonym, antonym, etc., Framenet, in particular, according to Fillmore (2008), aims at constituting a lexicon (i) based on corpus evidences; (ii) with lexical units linked to their evoked frame and (iii) that shows the combinatory properties of each lexical unit through its annotation.

The Framenet project is developing a platform, on the internet, where you have a collection of frames and LU, described for the English language. The viewing of the established relations between frames (FrameGrapher), constituted as an inter-related conceptual network, are also available.

This platform can be accessed through the link <https://framenet.icsi.berkeley.edu/>. Up to now, identified on the homepage, there are more than 11,600 lexical units, from which almost 7,000 are already completely annotated, in more than 960 frames, with more than 150,000 exemplified sentences are available.

### 1.3 Convergences between the models

As stated in the previous subsections, the CCxG and the Frame Semantics are theoretical models founded within the Cognitive Linguistics research program of the language and refer, respectively, to the grammatical information management and semantic information management in language. It is possible to state that, somehow, these are complementary archetypes, once they provide information of distinct natures, even though related.

The convergence between these two models is given, generally, from three points, which are related: (i) the realization that certain complex formal patterns are, as well as single words, responsible for the evocation of a unique sense, which does not match the “sum” of the meaning of those elements that form it; (ii) the inclusion of semantic information as essential to the postulation of grammatical patterns; and (iii) the assumption, made by CCxG, of the Frame Semantics as the semantic model pertinent in the defining of the constructional semantics and of the elements (or element) that comprise a construction.

The proposition that grammatical constructions (from different levels of analysis) are evocative of a proper sense that concerns them (cf. LAKOFF, 1987; FILLMORE, KAY & O'CONNOR, 1988; KAY & FILLMORE, 1999; GOLDBERG, 1995, 2006; among others) caused such structures to appear in the heart of the semantic analysis, along with the words of “conventional lexicon” (point ‘i’). Thus, the most interesting way to establish the meaning that a construction evokes, or can evoke, is its definition in terms of Frame Semantics<sup>1</sup>.

Like other models of Construction Grammars, the CCxG, defining a construction as a pair formed by a form and a semantic-pragmatic function, prevents a strict separation between the formal information and the semantic information of linguistic structures (point ‘ii’). Such integration causes the constant need for a semantics theory in the investigation of grammar. Consequently, as it will be seen below, the Frame Semantics is the semantic model defined by Goldberg (1995, p. 24-66) as the most relevant to the theory of grammar that she developed.

The goldberian model of Construction Grammar defines the semantics of a construction and its parts in terms of Frame Semantics, postulating roles according to the frame evoked by the grammatical structure (point ‘iii’). By doing so, Croft and Cruse (2004, p. 272) define the goldberian model of Construction Grammar as nonreductionist in semantic

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<sup>1</sup> The need to understand the meaning of these structures is strengthened by the creation of a branch of the FrameNet Project (electronic dictionary that defines the meaning of words from the scene(s), the frame(s) that it may evoke in the target culture), the FrameNet Construction, which aims to investigate the meaning of complex grammatical structures from the same theoretical methodology of the FrameNet Project.

terms, noting that “the complex event or situation [evoked by the construction] is treated as the primitive unity representation, and the definitions of the roles in the events are derived from the situation as a whole”.

Having seen the model of language that supports the vision of the objects and the main models that underlie the analysis, the investigation of the objects themselves are the topic of the next section.

## 2. Analysis

Parts of the macro project “Superlative Construction of Brazilian Portuguese: a study about scale semantics” (MIRANDA, 2008 – CNPq), the **Causal Nominal Superlative Construction** (CARRARA, 2010), the **Superlative Construction of Body Expression** (COSTA, 2010) and the **Superlative Synthetic Construction of Absolute States** (MACHADO, 2011) form, together with other constructions, the degree modifier constructions network of Brazilian Portuguese.

Similarly, in semantic terms, once they bring up, mainly, a `Position_on_a_scale` frame, those constructions diverge on formal terms. This way, with different forms, they are seeking for the same goal: a superlative expression.

The investigations present in this paper, reveal these constructions in formal and semantic terms, emphasizing their particularities in the meaning field.

The essence of cognitive and constructionist assumptions, which guides those works, lead to a Cognitive Corpus Linguistics, which implies the use of electronic corpora and computational tools to the objects investigation. Although the analyses here use different strategies to get data, they were based on an extensive database, capable of showing indicators of the construction’s use and its real discursive habitat.

### 2.1 Causal Nominal Superlative Construction

“Você vai encontrar edifícios gigantescos, shoppings mais capitalistas do que nunca, **mulheres bonitas de doer** e gente muito rica” (something like “You will find huge buildings,

more capitalist malls than ever, really beautiful women and very rich people”). This sentence, by construction “mulheres (women-NOUM) bonitas (beautiful-ADJECTIVE) de (GEN.PREP., equivalent to “of”) doer (to hurt)” (very/really beautiful women ~ women so beautiful that make others feel pain) clearly portrays a modalization and expressive prominence strategy widely used in Portuguese language in scenes in which we seek to ensure the subjective strength, argumentative and evaluative versus the other. This is a standard specific constructional within the network of the Superlative Constructions of Portuguese – the Causal Nominal Superlative Construction (CNSC), described in Carrara (2010).

Under the Cognitive Construction Grammar (GOLDBERG, 1995, 2006), a more open standard for the superlative constructions network has been postulated, covering more canonical or regular Portuguese combinations and that can be configured as follows: a Gradable Core (GC) and a Superlative Scale Operator (SSO) that merge, in an analytical or synthetic way, to the syntactic category of adjective or noun in the pairing of the named Generic Nominal Superlative Construction of Portuguese (e.g. *muito chato* “very boring” = SSO + GC).

The CNSC, although semantically set as a superlative construction in which one SSO applies an GS, in terms of form, has a verbal lexical unit preceded by the genitive preposition *de* occupying the semantics function of superlative scalar operator:

(01) [...] o senso de humor é próprio dos seres inteligentes. Não é para os grosseiros esquerdopatas, chatos (GC) **de doer** (SSO).

[...] the sense of humor is typical of intelligent beings. It is not for the coarse leftists, a pain in the neck (~ “chatos” boring + “de” + “doer” to hurt ~ very/really boring = so boring it makes you feel pain).

<http://veja.abril.com.br/blog/reinaldo/geral/bananas-pijama/>

In terms of formal productive patterns, three traits conveyed by the syntactic structure deserve to be highlighted:

(i) the ellipse of the internal argument of causative verbs;

(02) O projeto tem orçamento proporcional ao tamanho do edifício, 1,6 bilhões de dólares, e um aspecto **de assustar Ø**.

The project budget is proportional to the size of the building, 1.6 billion dollars, and a fabulous aspect (~ “aspecto” aspect + “de” + “assustar” to scare ~ look so exaggerated that scares people).

[http://veja.abril.com.br/190599/p\\_140.html](http://veja.abril.com.br/190599/p_140.html)

(ii) the crystallized infinitive form of the same verbs preceded by the genitive preposition *de*: *de matar* “GEN. PREP. + to kill”, *morrer* “GEN. PREP. + to die”, *de lascar* “GEN. PREP. + to chip”;



(iii) the optional character of the category of adjective in the syntactic surface;

(03) Só desaconselho totalmente ficar na capital da ilha, Phuket City – é **feia de doer**, suja, medonha.

Only fully advise against staying in the capital of the island, Phuket City – it is very, very ugly (~ “feia” ugly + de + “doer” to hurt ~ so ugly that anyone who sees it feels pain), dirty, awful.

[www.abril.com.br](http://www.abril.com.br)

(04) [...] A empresa acabou com o Palio com um design **de chorar** [...]

[...] The company ruined the Palio with a very ugly design (~ “design” design + “de” + “chorar” to cry ~ design so ugly that makes you cry) [...].

[http://quatorrodas.abril.com.br/noticias/139263\\_p.shtml](http://quatorrodas.abril.com.br/noticias/139263_p.shtml)

Within the limits of the investigation, there were 28 types of these verbal LUs semantically reanalyzed as verbal superlative scale operators which evoke a Cause frame.

The more abstract frame – Transitive\_action – is, therefore, triggering the scene, characterized by an AGENT or CAUSE affecting a PATIENT. From this frame, we investigated whether the 28 types that constitute the verbal CNSC could be separated and grouped into frames heirs of that scene, and we came to the following sections:

1. Causing\_a\_Physical\_Impact: *lascar* “to chipping”, *foder* “to fuck”, *matar* “to kill”, *arrasar* “to raze”, *arrebentar* “to break”, *ofuscar* “to obfuscate”, *abalar* “to undermine”, *abafar* “to muffle”, *detonar* “to detonate”, *incendiar* “to ignite”, *arrebatar* “to snatch”, *atropelar* “to run over”, *morrer* “to die”.
2. Causing\_an\_organic\_impact: *arder* “to burn”, *chorar* “to cry”, *arrepisar* “to shiver”, *cansar* “to get tired”, *doer* “to hurt”, *enjoar* “to nauseate”, *vomitar* “to vomit”, *tremar* “to shake”, *amargar* “to embitter”.
3. Causing\_an\_Emotional\_Impact: *assustar* “to scare”, *apavorar* “to frighten”, *enlouquecer* “to craze”, *humilhar* “to humiliate”, *alegrar* “to make happy”.

In the example below, the LU *apavorar* (“to frighten”) evokes the frame *Causing\_an\_emotional\_impact*:

(05) É sério. A situação do tráfego aéreo brasileiro descrita pelos dois é **de apavorar** [...]

I mean it. The Brazilian air traffic situation described by them is really horrible (~ “de” + “apavorar” to be frighten ~ the air traffic situation is so bad that frighten [the people])

[www.newslog.com.br/site/](http://www.newslog.com.br/site/)

Note that there is CAUSE (a *situação do tráfego aéreo brasileiro* “the Brazilian air traffic situation”) acting on an EXPERIENCER lexically unexpressed, through an EVENT

metaphorically evidenced by UL *apavorar* “to frighten” – what generates negative emotions in the EXPERIENCER – affected by the event, and even if not expressed lexically, can be evoked by the larger scene.

It is observed that, in all verbal types licensed by CNSC, there is a prevalence of verbs with negative semantics. The process of semantic change in focus in CNSC metaphorically promoted, causes, somehow, a reanalysis of expressions, from the raising of the Position\_on\_a\_scale frame and the Evaluation frame, without, however, making a dull scene of damage, impact, destruction, raised by the semantics of the verbs. And it is the Position\_on\_a\_scale frame, defined in FrameNet, which point to the intensity reframing promoted by this reanalysis process.

Hence, the expression of superlative value in CNSC can be summarized as follows:

- (i) an AGENT (human) or a CAUSE (non-human) whose intensity of an ATTRIBUT affects the speaker and / or a third person (AFFECTED);
- (ii) the superlative value and effect on the AFFECTED are metaphorically expressed by verbs (preceded by the genitive preposition “de”) that, mostly, are grouped in frames of cause;
- (iii) such construction involves positive or negative evaluative inferences depending on the frame enabled on each instantiation of construction. This means that this evaluation is not semanticized and verbs with negative semantic can figure positively or negatively at scenes even though the impact inflicted on the affected is always negative.

What the analyzes undertaken show, so convincingly, is the semantic complexity of the scene evoked by a Causal Nominal Superlative Construction, in which the semantics of verbal LUs that remains in the metaphorical scene is added to the metaphorical frames evoked by the semantic of the construction – Position\_on\_a\_scale and Evaluation.

## **2.2 Superlative Construction of Body Expression**

Superlative Construction of Body Expression (SCBE), although forgotten by the grammatical tradition and even by the linguistic tradition, is a common strategy in Portuguese to intensify (suggest a superlative scale of) a statement (43.9% of the tokens of the verbs that are associated with it, in the Corpus do Português (<http://www.corpusdoportugues.org/>), occur

in its interior) and considerably older: also according to the Corpus do Português, already in the fourteenth century this construction was used for intensifying utterances<sup>2</sup>:

(07) 13:CIPM:CGEsp [...] tanta era a pestilencia e fame na terra, o bõõ rey nũca **cansou de ben fazer**.

The SCBE was first studied by Sampaio (2007), who, investigating the polysemy of the lexicon of “death” in Portuguese, faced a quite recurrent pattern in which the verb *morrer* (to die), together with the genitive preposition “de”, intensified a name (*morrer de inveja* “to die of envy” = to feel a lot of envy) and sometimes a verb (*morrer de rir* “to die of laughing” = to laugh very, very much). Following the trail blazed by Sampaio (2007), Costa (2010) is devoted exclusively to the study of such grammatical pattern, trying to understand it more deeply as a phenomenon of the Portuguese language.

Relative to its formal pole, the SCBE presents the structure: [X<sub>V</sub> Y<sub>(N/V)</sub>], where **X** is a **verb** and **Y**, prototypically, an **abstract name** or a **verb**:

(08) 19Or:Br:Intrv:ISP Aí Cacá fez Ubu, estourou e eu **fiquei morrendo (SSO) de inveja**.

Then Cacá made “bang”, it burst and I **was dying of envy** (~ to have a lot of envy).

(09) 19Or:Br:Intrv:ISP [...] o meu clown não consegue cruzar os braços. A platéia **morre de rir** do que é, na verdade, uma tragédia para o meu personagem.

[...] my clown cannot cross his arms. The audience **die of laughing** at what is, indeed, a tragedy for my character. (to die of laughing ~ to die laughing ~ to laugh too much)

The verbs that can occupy the SCBE slot X have an interesting semantic constraint: all, what we believe it is its primary senses, evoke the Physical\_damage frame or the Physiological\_damage frame. Precisely it is to this restriction that the name of the construction makes reference.

What is being pointed here as Physical\_damage frame and Physiological\_damage frame, although not having been described with the necessary specificity, in our view, they appear as stable structured scenes, soon they may be called frames, in terms of Fillmore (1982). Thus, having as bases the Damaging frame and the occurrences of the SCBE collected in the Corpus do Português, it was postulated the following elements as core

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<sup>2</sup> The examples in this section were all taken from the Corpus do Português. Thus, unlike the other examples presented in this paper, the tokens presented in this section bring with the label assigned by the corpus to the text where it was taken, instead of internet link. For more details about the labels, access the corpus website.

elements to both frames, as a way of structuring them minimally<sup>3</sup>: CAUSE (the entity that triggers the damage), which can be animate or inanimate (in the case of the SCBE, the CAUSE are prototypically inanimate) and the PATIENT (the one who is hit by CAUSE, the one who suffers the damage), which in construction is prototypically a human entity.

The verbs associated with SCBE elucidated in corpus research are distributed between the two frames as follows:

Evoked frames	Verbs
Physiological_damage	<i>borrar</i> “to take a shit”, <i>cagar</i> “to take a shit”, <i>cansar</i> “to get tired”, <i>chorar</i> “to cry”, <i>fartar</i> “to glut”, <i>finar</i> “to die”, <i>mijar</i> “to pis”, <i>morrer</i> “to die”, <i>não se aguentar</i> “cannot stand to”
Physical_damage	<i>acabar</i> “to cease”, <i>cair</i> “to fall”, <i>contorcer</i> “to contort”, <i>dobrar</i> “to bend”, <i>escangalhar</i> “to break”, <i>estourar</i> “to cause to burst”, <i>rachar</i> “to crack”, <i>rasgar</i> “to tear”, <i>reventar</i> “to burst”, <i>torcer</i> “to twist”

**Table 1** – Frames evoked by X

In view of the presence of these verbs in the establishment of construction, the SCBE evokes a basic scene: a cause of superlative intensity (Y) triggers a metaphorical damage (X), physical or physiological, on a patient, as illustrated by the examples:

- (10) 18:Azevedo:Cortiço [...] preferiam todos morar lá, porque ficavam a dois passos da obrigação. O Miranda reventava de raiva.
- PATIENT                      Damage                      CAUSE

[...] they preferred to live there, because they were two steps away from obligation. The Miranda **burst of anger**. (~ to feel very angry)

In the context of the SCBE, however, the semantic strength of the notion of damage evoked by such verbs is projected to the field of intensification, making X to act as a SSO, and Y, the GC modified by X. Therefore the one who “dies of envy” not actually dies, but experiences jealousy in a superlative degree. Thus, the SEC, as a metaphoric structure, profiles a different cognitive scene from that raised by the verbs that form it, namely the Position\_on\_a\_scale frame.

<sup>3</sup> Here we do not intend to describe the frames in the complex terms of the FrameNet, the interest is only to provide a minimal structure, so as to contribute to the establishment of the semantic coherence of the scene evoked by the SCBE. A precise description of these is content to another work(s).

Reframing the items from the semantic scale raised by construction, the components of the construction are given new labels according to the *Position\_on\_a\_scale* frame (FRAMENET): the PATIENT will fill the FE ITEM, “the entity whose scalar property is specified”; and the CAUSE, Y, the FE VARIABLE (“the scalar property that the ITEM possesses”). Since in this case, the target LU, the element that evokes the frame is the pattern [X<sub>V</sub> de Y<sub>(N/V)</sub>] as a whole, X, that in the construction loses some of its properties of plain verb (especially when Y is also a verb), fill the FE VALUE, with respect to “the position or range of positions on the scale that the ITEM occupies”. Further, the non-core FE DEGREE (which “identifies the DEGREE to which the scalar property of an ITEM holds with respect to some VARIABLE), in the SCBE, appears to be fused with FE VALUE at X, once this construction as a whole is already linked to the superlative degree:

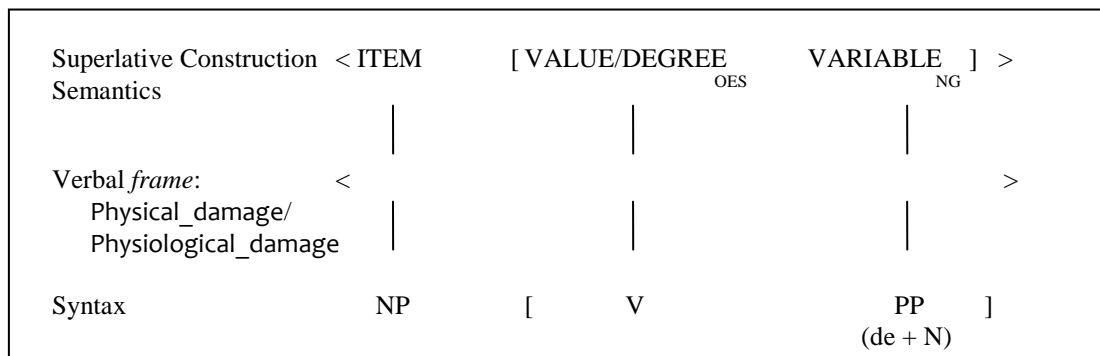
(11) 19:Fic:Pt:Joyce:Distância [...] a rapariga morria de amôres  
ITEM VALUE/DEGREE VARIABLE

por ele, ninguém lho arrancava da cabeça, nem com remoques

[...] the girl **was dying of love** for him, no one could take it out of his head, even with mockery (to die of love ~ to love very, very much)

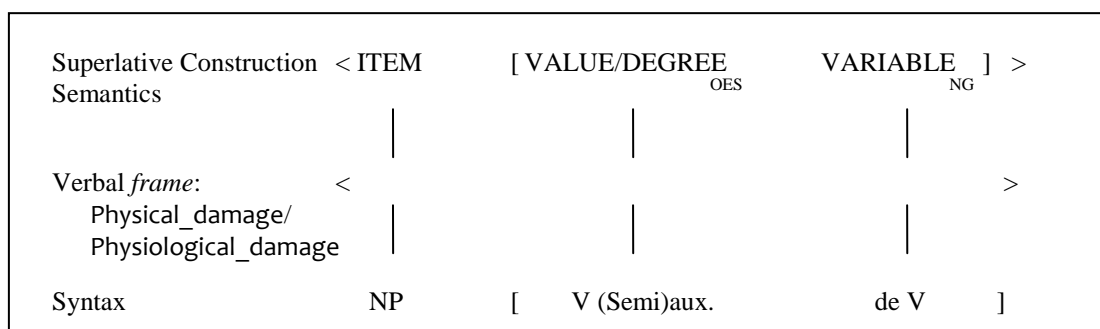
Pairing the form and the meaning of the construction with the form and the semantics of the elements that compose it, the SCBE presents, as suggested above, two versions: one nominal and one verbal. The formalization of these two variants can be stated – in formalization adapted from the one proposed by Goldberg (1995, 2006) to argument structure constructions, in the Diagram 2 and in the Diagram 3, bellow:

### 1. Nominal SCBE (*João morreu de medo* “João died of fear”)



**Diagram 1** – Formalization of Nominal SCBE

### 2. Verbal SCBE (*João morreu de rir* “João died of laughing”)



**Diagram 2** – Formalization of Verbal SCBE

### 2.3. Superlative Synthetic Construction of Absolute States (SSCAS) with suffix “-íssimo”

In face of the strict relation between experience and linguistic meaning, it is expected that social and cultural changes can influence the appearance of new expressions and meanings in language. It seems that our days, with the values fluidity and great competition (BAUMAN, 2007a, 2007b), are, somehow, the motivators for the appearance of expressions like: *gravidíssima* (“very/really pregnant”), *solteiríssimo* (“very/really single”), *casadíssimo* (“very/really married”), *desempregadíssimo* (“very/really unemployed”), *foríssimo* (“very/really out”) e *candidatíssimo* (“very/really candidate”), here called as Superlative Synthetic Construction of Absolute States (SSCAS), described by Machado (2011).

This way, we are dealing with a lexeme, which the semantic base expresses an absolute state, resulting in lexical units with superlative value. Thus, a nominal stem of an absolute state (“married”, “single”, “pregnant”) interacts with a superlative scale operator (-íssimo, here translated as very/really), bringing a new construction, instantiated by the types above, that projects those states in a superlative intensifier scale.

As we know, the Superlative Constructions have, as basic semantic function, the purpose of evoking a scale frame, focused on a maximal or minimal degree (MIRANDA, 2008). But, how could we conceive an absolute state in terms of degree?

Inside the formalist tradition, the semantic models are approaching the conceptual integration matters from the so called Strong Compositionality Hypothesis. This hypothesis implies the conception of linguistic meaning (separating dictionary from encyclopedic knowledge) as resulted from the sum of the constituents of meaning parts of a certain expression. Therefore, it is expected transparency and predictability from the linguistic

meaning sign. The result is that a great number of constructions has been ignored, put aside of the investigative projects, as irregularities and idiosyncrasies (FILLMORE, 1979).

Inside this approach, therefore, *casadíssimo* (“very/really married”), *solteiríssimo* (“very/really single”), *gravadíssimo* (“very/really pregnant”), *candidatíssimo* (“very/really candidate”) would be “outlaw” expressions, or even agrammatical ones, once, in their semantic base, the sum of an absolute stem with a superlative suffix is an incompatible phenomenon (absolute states can be gradable; there is no way to be kind of pregnant or kind of married or single).

Although, the token frequency of constructions formed from this apparent incongruence between the stem and the suffix are really significant (1.757 tokens of 30 types). Brief searches through digital tools (Google site) can also prove the existence of this construction in its analytical form (*muito dentro* “very inside”, *totalmente solteira* “totally single”, *completamente casada* “completely married”, *ligeiramente grávida* “slightly pregnant”, etc.) and with others suffixes<sup>4</sup> besides “-íssimo” (*solteirésimo* “very/ really single”, *casadaço* “very/really married”, *aprovadérrimo* “very/ really approved”, etc.). Those searches prove that SSCAS with the suffix *-íssimo* is part of a broader construction network, now, study object of Machado PhD thesis.

However, there is no way to deny the presence of an apparent semantic conflict between the SSCAS constituents. But, instead of declaring its usage ungrammatical, through the theoretical and analytical perspective of the constructionist program and the Weak Compositionality Hypothesis, those expressions can be seeing through the mismatch<sup>5</sup> phenomenon (FRANCIS & MICHAELIS, 2000; MICHAELIS, 2004; TRAUGOTT, 2007).

The mismatched construction has an incongruence compared to the harmonic construction, but in it rests, somehow, its basic structure. The new pattern differs from the other in a crucial point, the non gradable characteristic of its stem, which defines it as a mismatch.

In summary, the mismatch conditions of this construction are related to the semantic character of its stem. The SSCAS’s stem presents a peculiar structure. While the canonical construction has a gradable stem (adjectives or adverbs), the SSCAS’s stem is an adjective or

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<sup>4</sup> The different suffixes were all translated here as really/very, since, in English, there is no morphological correspondent.

<sup>5</sup> “The term ‘mismatch’ has been used to describe a number of linguistic phenomena involving mappings between (apparently) incongruent elements or structures, where incongruity is defined as relative to some typical or default condition.” (FRANCIS & MICHAELIS, 2000, p. 01).

a noun or an adverb that refers to an absolute state and, because of that, has, at first, a non gradable semantic dimension.

For understanding the meaning processes and the characteristics of SSCAS, it was necessary, first, to unveil the conceptual scenes linked to the 30 types studied.

The conceptual scenes that integrate the SSCAS are as many as its types. We recognized twelve (12) frames raised from this construction (Evaluation, Personal\_relationship, Ended\_State; Competition, Maternity, Dead\_or\_alive, Professional\_graduation, Comercial\_scene; Morality, Authorship, Birth, Working).

Since we were facing a morphological construction, the different types are identified by the lexical morphemes or stems, but, they can increase once they evoke different semantic dimensions. This way, the 30 types studied were making into 35 LU.

It is true that the different stems of SSCAS evoke different frames. But, the construction brings a new meaning (qualitative evaluation) that imposes itself upon the meanings of the stem and of the suffix *-íssimo*, without ignoring each meaning part. Thus, the gestaltic result, to which the meaning of the construction and its morphological elements contribute, is bigger than the sum of its parts.

The SSCAS is going to give a new profiling<sup>6</sup> (LANGACKER, 1987) for the frames evoked by the stem, in order to deal with the semantic and pragmatic task of evaluating the scenes in a superlative way.

This construction brings a new profiling of the twelve frames. The states/ attributes, that constitute SSCAS, get a new interpretation. A set of attributes is profiled in the discursive scene, in order to emphasize the prototypical and superlative conditions of each occurrence:

- (12) Para demonstrar melhor sua condição de **solteiríssima**, a Cali Gilr usa shorts e um top biquíni, argolas nas orelhas.

To show her **very/really single** condition, Cali Gilr wears mini shorts, a bikini top, big earrings.

<http://www.estadao.com.br/arquivo/mundo/2004/not20040212p25402.htm>

- (13) Pois apaixonei-me ‘a sério’ aos 21 anos e em dois meses estava **casadíssima**, com igreja, papel e sobrenome novo.

Because, I fell ‘seriously’ in love at 21 years old and in two months I was **very/really married**, with church, paper and new surname arranged.

[http://metadeideal.uol.com.br/diva/cronicas/passatempo.html?chrDate=passatempo&chrList=jud\\_15&chrBox=box1#mcl](http://metadeideal.uol.com.br/diva/cronicas/passatempo.html?chrDate=passatempo&chrList=jud_15&chrBox=box1#mcl)

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<sup>6</sup> The profiling concept brings the notion of gestalt theory and its oppositions between figure/ground. Some semantic features are emphasized, turning into figure, while others stay out of focus, becoming ground (SILVA, 1997).



The scalar notion is licensed once the prototype that the SSCAS brings is considered as the sum of all attributes, so, it becomes possible to graduate the properties of an absolute state. Therefore, there would be a degree scale in terms of each of these absolute states, in which the top would be the joining of all properties – the prototype – lexically represented as SSCAS. It would be possible to conceive a graduation which the less properties/ attributes it has, the less intensified it is.

According to the analyses and from the holistic vision that comes from the concept of construction, it was possible to recognize that the tension between the morphological constituents that constitute SSCAS brings a new construction pattern in Brazilian Portuguese, with peculiar sense and use. Mismatches, therefore, do not make incongruence, but act in the discourse as clues for an interpretational adjust, emerging a new construction, with new functions inside the linguistics system.

## **Conclusion**

In this paper, we aimed at elucidating how Frame Semantics can contribute towards the investigation of different grammatical patterns of a language, from a cognitive and constructionist perspective.

To accomplish the task, besides a small presentation of the mainly theoretical paradigms that influenced our work, three different constructional patterns of Portuguese were briefly analyzed in order to illustrate the relevance of joining the Cognitive Construction Grammar and the Frame Semantics to investigate constructions of a language.

With that, we would like to show how the fillmorian frame notion, and its connected concepts, enrich the description of objects, as the ones investigated here, providing a rich and successful theoretical apparatus for the understanding of constructions' semantic and of their elements.

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States with suffix *-íssimo*, for their times, were supported with scholarships by CAPES. The project that involved the investigation on Superlative Construction of Body Expression received support from FAPEMIG scholarship.

RESUMO: Este trabalho visa mostrar como a Semântica de Frames contribui na pesquisa das construções de uma língua. A visão de gramática que subsidia o trabalho é a Gramática das Construções Cognitiva, um dos modelos de gramática emergido no interior da Linguística Cognitiva. Os objetos analisados são três construções vinculadas ao macroprojeto “Construções Superlativas do Português do Brasil”. De maneira geral, os resultados apontam para a pertinência na associação das teorias, vindo a Semântica de Frames a contribuir de forma muito produtiva no entendimento da significação dos padrões construcionais analisados, assim como dos elementos que os compõem.

Palavras-chave: Linguística Cognitiva; Gramática das Construções Cognitiva; Semântica de Frames; Construções Superlativas.

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