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A CONSTRUCTIONAL APPROACH TO THE PORTUGUESE PRONOMINAL SUBJECT

Pontes

SUMÁRIO

PART II – THEORETICAL FOUNDATION[1]

4. A cognitive and functional view of language

The first chapter of this section aims to introduce the language concept we chose as foundation of our research and analysis. In a cognitive and functional view to language, the grammar that enables the language has a cognitive base in a way that when one uses the language, one mobilizes a whole set of cognitive processes at the same time. In this view, the language is holistic, and the grammar is usage-based.

As it views the language as a whole set, it is possible to analyze all the linguistic levels, from the form to the meaning, and how one of the levels affects the others. Hence, it may help us to understand how the change in a linguistic aspect of the language, such as the prosody, can reveal further linguistic changes, such as its syntactic organization. To define the concept of language and grammar, we used Bybee (2010), Filippi (2020) , Goldberg (1995, 2006), Neves (1997) and Tomasello (2008, 2009).

4.1 Language Conception

The communicational need to get involved and to involve the other in a communicative event is part of the human being's constitution and, as a general cognitive feature, it is present in

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1   This section, including the chapters 4. A cognitive and functional view of language, 5. Construction Grammar, and 6. Usage-based linguistics, was the responsibility of Casseb-Galvão.

interactional relationships. Tomasello (2008) argues that human beings, even in preverbal times, used gestures to express their intentions and intervene in the actions of their peers, whereas Filippi (2020) enforces that the intonation system is an important factor of communication since preverbal times.

In both cases, to learn how to convey an idea to other human beings, it is necessary to learn how to be linguistically social, for the intonation part, in special, as Filippi (2020, p.408) proposes, it is important to understand the "(1) producing and identifying phonemes; (2) processing and learning compositional rules in vocal utterances; (3) associating unfamiliar spoken words with their meaning", to this research in specific, the second process is crucial because it is directly linked to the prosody phenomena.

In fact, the more complex the event in which the individual is inserted, the greater will be the complexity of code used. Thus, due to the need to engage the other in events that are even more complex than showing a predilection for an object and the biological predisposition of human beings to develop the phonatory system, language becomes associated with gestures, since only gestures they could not, for example, argue to convince. Thus, it is possible to infer, from Tomasello (2008; 2009), that it is in the interaction with others and in the need for cooperation that the basis for communication and for the development of linguistic systems is found.

To describe the language and its system, Bybee (2010) uses the metaphor of sand dunes. For the author, just like the dunes, the languages show regularities in form and structure, but they also present variations, gradients, and the ability to change.

Bybee (2010) determines that among the similarities they show toward each other is that they all use domain general abilities and domain specific abilities. The general abilities are the ones we use outside linguistic contexts, such as the categorization

ability, while the specific abilities are specific to language production, such as the ability to turn sounds into phonemes and, consequently, into speech.

These abilities are used to act in the world and interact with it via language, which has the capability to be transformed and organized to better serve its purpose: communication. It can be seen as such, as a complex and adaptative system.

According to Neves (1997) the grammar a language that is in constant change is to also be ready to accommodate the change, being emergent itself and being in constant variations due to the discursive necessities. The syntax of the language, in this concept, is accessed by semantic via pragmatics.

Grammar is, by default, a system of organization of the languages and, even though every language has basic concepts that are universals, such as the concept of *subject* and *verbs*, the way the world information is registered an uttered is subjective and dependent on linguistic and extralinguistic experiences. Neves (2002) postulates that is the use that enables the grammar and is organized by the grammar. Following the same lines, Oliveira and Votre (2009) defend that the there is an intimate relation between how the world is perceived and conceptualized and how it is linguistically expressed, and the languages are shaped.

As Goldberg (1995, 2006) had stated, Bybee (2010) says that, to understand the process of language formation, it is necessary to go beyond surface forms and observe the circumstances involved in the formation of the analyzed patterns.

Bybee (2010) still recognizes that, although languages differ, they share some basic principles in their formation. The author utters that, even if the statements are different, there are recognizable remnants of a similar structure. These principles make us think that there are factors that shape the language and

go beyond the linguistic structure, to which Bybee (2010) calls general domain processes.

Recognizing these processes as a forming part of language is not denying the importance of linguistic structure in the process of language change and formation, but rather admitting that there are other factors and forces, shared by speakers of all languages, that also operate in the language system.

One of these forces operating in the formation of language resides in the individual's need not only to communicate a world event, but also to involve another individual in one of these events; even a single gesture, a basic interaction social cognitive skill, such as pointing, or the intonation in which a sentence is uttered, is complex enough to convey more than one message and which, to be understood, depends on understanding its production context.

This notion that a single gesture can have different meanings, depending on the context in which it is used, supports the notion that a word can have different meanings, to be understood in relation to the context in which it is used, a prerogative adopted by Usage-Based Linguistics.

5. Construction Grammar

This chapter is dedicated to the theory known as Construction Grammar, a current approach that portrays the cognitive processing capacity that allows the individual to retain local information and, based on them, formulate generalizations about the functioning of language. The authors that aided this chapter are Barros (2016), Croft and Cruse (2004), Furtado da Cunha et al (2013), Goldberg (1995, 2006, 2019), Langacker (1987), Martelotta (2011), Traugott (2015) and Traugott and Trousdale (2013).

As defined by Goldberg (2006), constructions can be used to analyze the language at all levels, from its phonological and morphological aspects to its complex structuring schemes.

In addition, the constructionist perspective also considers that the grammar of a language emerges from the individual's communicative need and the use he gives to the language, and, when faced with new instances, through various cognitive processes, such as analogy, categorization/generalization, frequency, rich memory, and conventionalization, we have new possibilities to represent these instances based on already existing forms.

To define the assumptions of the Construction Grammar, we used the theory defended by Goldberg (2006; 2019) and by Traugott and Trousdale (2013) for the representation of a constitution.

5.1 Fundamentals of Construction Grammar

The Construction Grammar is allied to the pertinent studies of Usage-based Linguistics. Therefore, it also relies on both the dogmas of Functional Linguistics and those of Cognitive Linguistics. Studies that consider language grammar as emerging from usage have adopted this perspective in their analyses.

Goldberg (2006) recognizes a grammatical universalism, but does not add it to biological factors, but to the individual cognitive processing that is developed ontologically and philologically, from the observation of the inputs with which it has contact. need to express the same type of message, but how this happens can vary. Therefore, a constructionist approach defends and investigates this viability of forms.

Furthermore, Goldberg (2006) assures that language has more general constructions, but it also has semi-idiosyncratic patterns and, therefore, not all of them can be considered universal. Those that are regular tend to occur more often and are therefore easier to learn.

Language, for the constructionist theory, as advocated by Langacker (1987), is constituted by a network of nodes associated by their similar characteristics. In this sense, the Construction Grammar proposal conceives that all levels of language (phonologic, morphologic, syntactic, semantic, pragmatic, and discursive) are somehow interconnected. That is why, to analyze a language phenomenon, it is necessary to observe the system at its every component levels.

This is one of the most relevant reasons to broaden the scope over the *expressiveness of the subject pronoun* phenomenon in BP to a constructional extent. Being it possible to analyze it from the form to the meaning levels, it will be possible to understand not only the motivations to use null or explicit subject, but also how these motivations can impact the language in different ways.

Furthermore, as argued by Martelotta (2011), the constructionist proposal argues that there is no rigid distinction between lexicon and grammar. The notion adopted in this theory is that of gradient, of *continuum* and that schematic patterns organize usage, just as usage rearranges schematic patterns, an assumption that will be discussed in the next section.

Another principle that governs the Grammar of Constructions is to refute the autonomy of syntax. In this sense, Furtado da Cunha et al (2013) assert that syntax is in favor of use and is used to structure the language. Usage, in turn, is influenced by factors external to the language, which can alter the syntax. Thus, what exists is a cycling process: while syntax organizes use, the speaker's use of language organizes syntax.

According to Goldberg (2006), it is possible to conceive any linguistic pattern as a construction. For this to occur, some aspect of its form or function cannot be completely predictable based on the analysis of isolated parts or even the constructions that already permeate the language. Furthermore, even the structuring

patterns of a language sentence are likely to be analyzed in a constructional perspective, since it is the semantics and/or syntactic information specified by the verb that determines the form and interpretation of the basic patterns.

A construction can be defined, from the perspective of Traugott and Trousdale (2013), as the pairing of form and meaning: the link between these two instances is arbitrary and resumes the discussion proposed by Saussure about the arbitrariness of the sign. It is important to emphasize, however, that such arbitrariness is accompanied by the influence of the social and cultural space that circumscribe the language.

As reported by Barros (2016), the construction represents a schematic pattern that guides the use and is fed by it. The constructions are cognitive processes stored in the mind and, according to the speaker's communicative need, they are accessed for the formulation of utterances. Thus, it is possible to infer, as the author does, that meanings are constructed at the time of use from the fusion between form and meaning.

Croft and Cruse (2004, p. 258) present a symbolic structure for the anatomy of a construction:
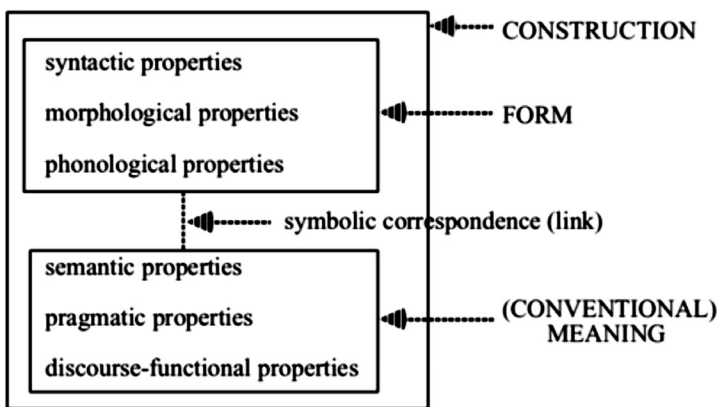

Figure 1 – Construction Anatomy (Source: CROFT; CRUSE 2004, p. 258)

The authors defines that the pair of form and meaning is at least partially arbitrary. Furthermore, they emphasize that, through the symbolic link of correspondence, the properties of form and conventional meaning are closely linked and have a direct relationship in the materialization of language, that is, in use. Croft and Cruse (2004) understand conventional meaning as the representation of all aspects of the construction function, as well as the properties of the discourse in which the utterance is found.

Goldberg (2006) states that constructions are learned based on input, world experiences, and general cognition mechanisms, such as analogy. In addition, the author emphasizes the importance of recognizing knowledge of specific items that exist alongside generalizations.

By absorbing knowledge of specific constructions, it is possible to abstract a schematic pattern, a generalization, which occurs, for example, when we record information about how a particular verb is used in argument structures. Goldberg (2006) assumes that the formulation of generalizations of a pattern for the verb occurs due to three factors: a) issues related to the partial productivity of constructions; b) evidence that children are conservative in their use of argument structures; c) the frequency with which specific verbs appear in a specific argument structure influences the speaker's understanding. These generalization formulation processes are commonly related to contact with surface shapes.

Goldberg (2006) also states that the surface shape does not need to specify a particular word order, not even grammatical categories, although there are constructions that specify these aspects, to exemplify this notion, Goldberg (2006) the ditransitives. Such structures involve a predicate with three arguments, usually agent, patient, and theme, but this does not mean that these roles are static. They are determined by the meanings of the

constructions. In the case presented by the author, the predication informally indicates an act of *giving*. In this specific situation, the established roles can be different depending on the verb used in the construction.

Sem: intend-CAUSE-RECEIVE	(agt	rec(secondary topic)	theme)
verb	(		)
Syn:	Subj	Obj1	Obj2
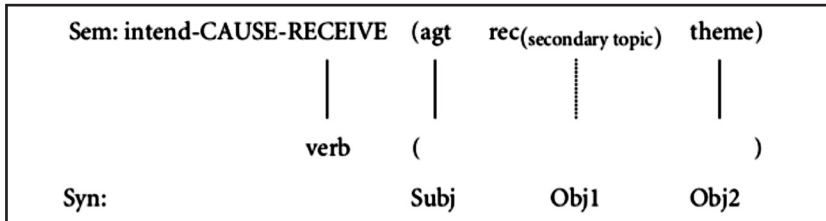
Figure 2 – Ditransitive construction (Source: GOLDBERG, 2006, p. 20)

Goldberg (2006) mentions is that roles are closely linked to construction semantics too. The profiled role and the argument are seen as unified, as shown by the lines in Figure 2, although there are cases in which this role is not pre-established by the verb itself, but by the construction.

The author highlights the importance of realizing that the reference to shape in the definition abstracts from specific surface shapes that can be attributed to other constructions, that is, an expression usually involves a combination of different constructions that can be freely combined, provided that are not in conflict.

This possibility of freely amalgamating constructions, if they are not in conflict, is related to the infinite creative potential of language, a trait shared with generative theories. But the constructionist approach postulates that what generates the sentences is not the grammar, but the speaker, a process that can be seen in the analysis of ditransitive constructions.

Still on ditransitive constructions, analyzing possible paraphrases, Goldberg (2006) highlights that it is possible to note that inputs could be grouped together, in the same way that

outputs could also be grouped, although inputs and outputs cannot be grouped. Inputs share many properties but are systematically different from their paraphrases.

> Mina bought a book for Mel. – Mina bought Mel a book.
> Mina sent a book to Mel. – Mina sent Mel a book.
> (GOLDBERG, 2006, p. 26)

Despite having the same schematic construction pattern, both are ditransitive, thus forming a group in which there is a separation between the sentences instantiated by *to* and by *for*. A sentence structured with to has a dative, Mel, in this construction, is the recipient of the action; on the other hand, the sentence structured by for indicates that Mel is the beneficiary of the action, although she is also its receiver. The perspective proposed by Goldberg (1995) regarding the profiling of roles of the participants in a sentence can help us to better understand this distinction.

As the author proposes, the verb has the power to open slots in the argument structure and to determine the profile of the arguments that can fill these slots. Based on this perspective, it is possible to determine, for example, that both the verb *buy* and the verb *send* can accommodate three participants, in the case of buying: the buyer, the purchased item, the receiver; in case of send: the sender, the item sent, the receiver. For sentences instantiated by to and for, however, it is possible to see that not only prepositions, but topicalization also have the power to change the profile of the participants, and only in Mina bought a book for Mel, Mel can be expressly interpreted as being receiver and beneficiary, which is not expressly determined in the paraphrase without the proposition for Mina bought Mel a book, sentence in which Mel assumes the role of receiver, the same role outlined in Mina sent a book to Mel and in Mina sit Honey a book.

The profiling of the participants reinforces the idea that, despite the schematic pattern being the same, the surface shapes cannot be grouped into the same group, as can be seen in Figure 3:
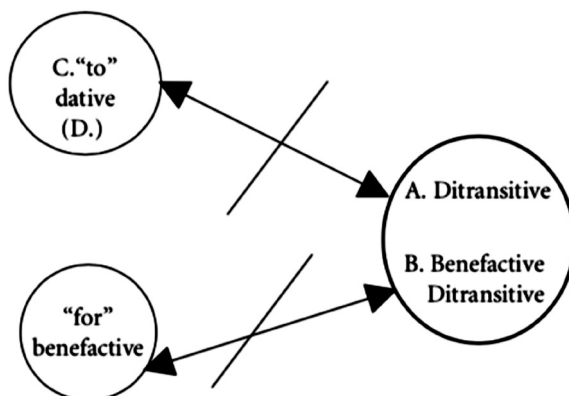
Figure 3 – Ditransitive patterns: *to* and *for* (Source: GOLDBERG, 2006, p. 26)

Furthermore, as the author reiterates, the very semantics of the verb can prevent ditransitive constructions from being seen as universal. The verbs: give, refuse, or take, for example, can be used in ditransitive constructions and share similarities among themselves and, because they have specific characteristics, are categorized into distinct groups.

Verb semantics also play an important role when analyzing the construction. Thus, it is important to note that the same verb can present different schematic patterns, depending on the context in which it is used, and some verbs, in different contexts, can assume different meanings.

From this perspective, as Goldberg (2006) argues, it is important to recognize the surface generalizations around the argument structure, because, thus, it is possible to recognize the existence of generalizations in the language. In line with this idea, it is equally important to admit that the meaning of a sentence is more than the meaning of the construction of

the argument structure used to express it. When analyzing the sentence, it is necessary to observe the individual verbs, the arguments, and the specific contexts. When generalizing between different expressions and pointing out the differences between similar constructions, the analyst needs to carefully observe the verb, since it can be interpreted differently depending on the perspective adopted.

However, Goldberg (2006) warns that the paraphrase itself should not be taken as superior to other expressions, as it is sometimes not possible to determine cases of derivation and/or independent constructions. Thus, each construction must be analyzed in isolation, even in the formation of generalizations, because by describing a vast amount of isolated surface forms, it is possible to make broader generalizations, in the form of argument structure constructions.

It is important to emphasize that, for the Grammar of Constructions, all processes inherent to the language are interconnected, since, just as there is a union between form and meaning/function, there is a connection between cognitive processes. Thus, there is no concrete separation between the levels of the language, what exists is a continuum that involves from the smallest units of the language to complex patterns. This assertion, as advocated by Traugott and Trousdale (2013), strengthens the idea that language is formed by interconnected networks of constructions.

Linguistically, as Traugott and Trousdale (2013) show, the schemas are organized in levels, being the most abstract and highest-level schemas. Within a schema, we can find different subschemas; subschema is a lower level in relation to the schema. It is a more specific group that can accommodate different groups of microconstructions. A microconstruction brings together different *tokens* that represent the same function, or similar meanings. Normally, the tokens gathered in the group of a microconstruction

can be used in the same discursive context. *Token* is the lowest level of a scheme and is the representation of use. The schematic network of quantifiers illustrates this explanation:
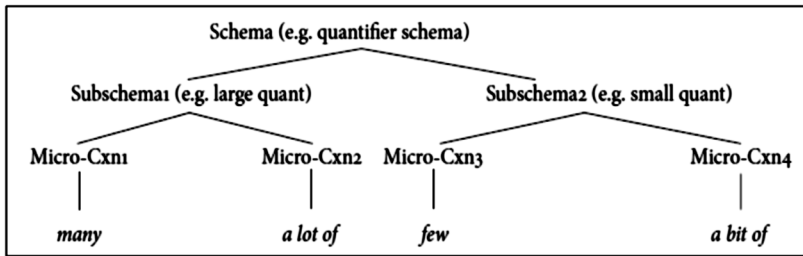
Figure 4 – Gradient of hierarchical relationships between constructions
(Source: (TRAUGOTT; TROUSDALE, 2013, p. 17)

It is possible to notice that there is a larger and more abstract scheme, which groups together all types of quantifiers. Because it is more abstract and more general, it is found at a higher level in the hierarchy. Below, we find two subschemas, still abstract, because they only represent the general characteristics used as criteria for the creation of the subscheme, but with sufficient specificities to form two different groups. A subscheme groups quantifiers that express large quantities and another subscheme groups quantifiers that express small quantities.

At the base of the network, we find different microconstructions, which we categorize the construct uses (tokens), grouped by specific uses and functions, being that the constructs of a microconstruction, normally, cannot be used in the same context of use of another construct as the same worth.

Being a network interconnected, when any aspect of the network undergoes some change, it is likely to impact other points in the network. These changes do not occur immediately, they happen in a scalar way, on a continuum, and this is one of the reasons that confirm the idea that the levels of the language are fluid and gradient and, therefore, changes are possible.

5.2 Linguistic change under a construction view

The theory of Construction Grammar understands that language is constituted within a categorical continuum, in which there is no rigid distinction between the lexical and the grammatical. Therefore, it is possible for a word to be used in contexts in which it was not common before, and it may play a new role, being used with a different meaning.

Some research from a functional perspective (MARTELOTTA, VOTRE and CEZÁRIO, 1996; GONÇALVES, et al, 2007; FURTADO DA CUNHA et al, 2013; ROSÁRIO, 2015) conceive these changes that some words go through as a grammaticalization process – when a lexical word becomes a grammar word.

Goldberg (2006) defends the opening and widening of the scope of grammaticalization studies as the change that takes place within a continuum of constructions, in which there is no absolute distinction between lexical and grammatical items. Therefore, it is possible not only for a word to change from a lexical to a grammatical category, but it can also happen that a less grammatical word becomes more grammatical.

These two changes, from lexical to grammatical and from less grammatical to more grammatical, are present in what Traugott (2015) advocates as constructionalization. For the author, constructionalization is the process of forming a new construction, in which change occurs through a neoanalysis that forms a new pair of form and meaning, that is, constructionalization happens when the two sides of the construction are changed, both the form and the meaning, and the new construction starts to integrate a new node in the constructional network. This process is accompanied by gradual changes in schematicity, productivity and compositionality.

In addition, the author presents grammatical constructionalization, a process that also includes cases of formation of schematic constructions and, in this perspective, the entire scheme is grammaticalized, not just the item.

On the other hand, constructional change happens when only one of the construction poles - form or meaning - undergoes variation. Thus, there is no formation of a new node in the constructional network, the "new" construction integrates an existing node. However, it is valid to highlight that a variation is only a possible constructional change, not all variations become an eventful change, some are just an on-point variation.

The fact is that, regardless of the type of change, Traugott (2015) emphasizes that it must occur through five microsteps: 1) innovation: the listener interprets a construct and analyzes it differently from the speaker's analysis; 2) reuse: the listener who reanalyzed the construct becomes a speaker and reuses this construct with a new meaning; 3) conventionalization: occurs when there is a semantic reanalysis and other speakers agree with the conventional relationship between the original form and the new meaning; 4) constructionalization: when semantic and morphosyntactic reanalysis occurs, a new construction is created and enters the constructional network; 5) post-constructionalization: it can occur after the construction is formed and can go through a process of expansion, reduction of shape and even disappearance.

As one of the factors that allows the language to be subject to change is the gradient and fluidity of the categories, it is important to talk about the gradient existing in the very dimension of constructions: size, phonological specificity, and type of concept.

Regarding size, Traugott and Trousdale (2013) show that a construction can be atomic, monomorphic, such as suffixes, or words that do not have affix or inflectional markings; complex,

when there is a strong connection between the items of an expression, which makes it impossible to analyze them isolatedly; and intermediate, when only part of the expression can be analyzed in isolation.

Phonological specificity analyzes whether a construction is substantive, schematic, or intermediate. Traugott and Trousdale (2013) explain that a substantive construction is completely phonologically specified as, for example, lexical items or crystallized expressions; constructions that are formed from abstractions and present a degree of schematicity are schematic, such as the inversion of the subject and auxiliary verb - SAI; constructions that have a noun part and a schematic part are considered intermediate, for example, the word formation scheme verb + ed (play*ed*).

The type of concept, according to Traugott and Trousdale (2013), involves the classification of a construction as being of content (lexical) or procedural (grammatical). Content constructions are those that can be used referentially, such as nouns, verbs, and adjectives; procedural constructions are those that signal linguistic relationships, such as verbal endings, demonstratives, and pronouns. The authors emphasize that there is no absolute division between these two groups. In addition to being a gradient division, it is possible that there are changes from one category to another, as in the grammaticalization process, when a lexical item is used with procedural value. An example of this change is the use of the verb *go*, which today is also used to mark the future (procedural).

The constructions that have both content and procedural properties are intermediate, such as the way-constructions, which, formed by some *verb+way*, prototypically establish the way a path was carried out: *force his way through*; *elbow his way through*, and *giggle his way through*. As you can see, they have enough content for us to be able to distinguish them, but they have aspect marks, which is related to their procedural property.

To summarize, the authors present the table below and point out that a construction can be analyzed considering three dimensions: size, phonological specification, and type of concept:

Size	**Atomic** *red, -s*	**Complex** **pull strings, on top of**	Intermediate bonfire
Specificity	Substantive *dropout* *-dom*	Schematic N, SAI	Intermediate V-*ment*
Concept	Content *red,* N	Procedural *-s*, SAI	Intermediate *way-* *-construction*

Table 5: Construction Dimension (Source: TRAUGOTT; TROUSDALE, 2013, p. 13)

In the languages which there is a possibility to express or omit the subject, we can propose a very schematic representation for the basic organization construction: [(SUBJECT) $V_{subject}$ (X)][2]. (SUBJECT) represents any argument in the role of the subject, for our study purpose, we are considering only its pronominal representation; $V_{subject}$ represents the verb with its inflectional suffix; (X) representing one possibility of an argument element to be used in the role of the object and, for some utterances. For the omission of the subject, in a less schematic construction, we can omit (SUBJECT) in the scheme:

$$[\quad V_{subject} \text{ (X)}]$$

Langacker (2009) defends the idea that constructional networks are formed by categorizing constructions. The cognitive ability to generalize information allows the individual to form groups that are more general or more specific, but that are somehow related.

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2   This scheme will be revisited in Chapter 10.

Linguistically, as defended by Traugott and Trousdale (2013), schemas are organized into levels, with schema being the most abstract and highest-level group. Within a schema, we can find different subschemas; subschema is a lower level in relation to the schema. It is a more specific group that can house different groups of micro-constructions, at the base of the network, we find different micro-constructions, which categorize the constructs (tokens), grouped by specific uses and functions, and the constructs of a micro-construction usually cannot be used in the same context of use of another construct with the same value.

It is important to note that new subschemas can be created over time. These are the new nodes likely to appear in the constructional network. Just as new micro-constructions can become part of an already existing subschema, so subschemas can no longer exist.

For the formation of a schematic network, the speaker must have contact with a significant number of inputs. Thus, the greater the individual's contact with samples of language use, the greater the chance that an abstraction will occur and form a schema. But, as Bybee (2015) and Goldberg (2019) highlight, there is no way we can measure how many inputs are necessary to cause abstraction, since it is a cognitive process and it is dependent on different factors, the frequency of inputs encounters is not operable.

For the formation of the network, Goldberg (2006) defends the idea that the speakers can abstract schemas from the use of several similar micro-constructions. In the scheme of ditransitives, for example, from contact with constructions of the type: $I_{subject}\, gave_v$ $a\, cake_{object1}\, to\, João_{object2}$; $I_{subject}\, sent_v\, a\, letter_{object1}\, to\, my\, friend_{object2}$; and $I_{subject}\, passed_v\, the\, salt_{object1}\, to\, the\, guest_{object2}$, the speaker can abstract the scheme X gives Y to Z, of the type: X CAUSE Y TO RECEIVE Z.

Goldberg (2006, p. 7) is also aware that the same verb can be categorized into different subschemas, for example:

He sliced the bread. (transitive)
Pat sliced the carrots into the salad. (caused motion)
Pat sliced Chris a piece of pie. (ditransitive)
Emeril sliced and diced his way to stardom. (construction-way)
Pat sliced the box open. (resultative)

In addition to the verb that can trigger different schemes, Goldberg (2006, p. 21) also says that the same communicative event also has this property. When enunciating *a dozen roses, Nina sent her mother!*, the speaker activates the construction schemes: a) ditransitives, b) topicalization, c) noun phrases, d) verbal phrases, e) indefinite determinant, f) plural, g) twelve, rose, Nina, send and mother.

Another point to be highlighted is the productivity of a construction or a scheme. Traugott and Trousdale (2013) and Bybee (2015) define *productivity* as the probability that an item is used within a specific context, and it is associated with the frequency with which the item is used. The more frequent an item is, the more likely it will be used in that context in the future. Thus, when an item is used in a new context, it is its productivity and frequency of use that can indicate whether the new form will only configure a variation or a change.

It is important to notice, though, that the changes may happen, as previously noted, in different parts of the construction and the change in one of the levels of the construction may motivate further changes, this changes in how the speaker express the subjects will be analyzed in the chapter 9.

5.3 The integration of a construction [Form + Meaning]

Linguistic changes in a constructional perspective are motivated by the use and the speaker's necessity to communicate. Every change happens in microsteps, and the change can happen

at any level of the construction. Bearing this in mind, we need to consider how the change in one of the levels of the construction can cause the other levels of the construction to also change. This goal is a key factor to a constructionist approach; since a construction is by default a pairing of form and meaning and every linguistic phenomenon can be conceived and analyzed as a construction, a study that self-proclaims itself to be constructionalist must analyze both form and meaning.

When asked if syntax and semantics, for example, could be seen as two sides of the same coin, Pulvermüller, Cappelle and Shtyrov (2013, p.14) answered that a Cognitive and Construction Grammar see "an integration machinery for form and meaning" and explained that a change in one aspect of leads to others.

Even if we conceive the construction as the metaphor of a two-side coin, one being the side of form and the other the side of the meaning, as a coin *per se*, we must look at it as a whole item, being the two sides of equal importance and one couldn't even exist without the other.

Semantics and pragmatics, according to Fried (2013), are two factors that cannot be seen as two disassociated factors either, in fact, the author states that there's an integration between semantics and pragmatics and one cannot be perceived without the other. Fried (2013) reinforces that this unity has its manifestations in new linguistic structures, by all it means, we can dictate that the innovations in the language happen in the use, the syntax is activated by semantics through pragmatics.

Steels (2013) defends the idea the syntactic structures should always be semantically analyzed and that is what makes the integration between two poles – form and meaning – increasingly tighter compared to other theoretical approaches to linguistic analyzes.

Pulvermüller, Cappelle and Shtyrov (2013), Fried (2013) and Steels (2013), they all must agree then that there is, in constructional approaches, a great integration between all the interfaces of a construction: phonological features are linked to morphological ones that are linked to syntactic ones that are linked to semantical ones that are linked to pragmatical ones and they are finally linked to the discursive features – one feature influencing the other and being influenced by it.

After assuming that all the levels of a construction are connected to one another, it is necessary to discuss what precisely link them, especially what link the poles of form and meaning. Croft and Cruse (2004) address that there is a symbolic link that put these two poles together.

This symbolic link that joints the elements of a construction and how it is perceived is what set the constructional approach apart from the general syntactic theories, Croft (2001) states this by saying that different than the general theories that see the symbolic link external to the form and the conventional meaning, the constructional approach sees it as internal to a construction.

> Thus, a symbolic link joins an element of the syntactic structure of a construction to a component of the semantic structure of that construction. There is also a symbolic link joining the whole syntactic structure to the whole semantic structure. [...] Each element plus corresponding component is a part of the whole construction (form + meaning) as well. That is, the construction as a symbolic whole is made up of symbolic units as parts. (CROFT, 2001, p.21)

This symbolic link that holds a construction and its components so tightly together is exactly what let us affirm that the change in any part of the construction affects the construction as whole. Considering the *expressiveness of the subject* as a

construction, this also let us question which other aspects in BP and in EP have been going through changes due to its need to make the subject explicit. These two questions will be addressed in chapter 10.

6. Usage-Based Linguistics

In our sixth chapter, we discuss the Usage-Based linguistics (BYBEE, 2015; FURTADO DA CUNHA ET AL.,2013; LANGACKER, 2013; MARTELOTTA, 2011; TOMASELLO, 2008) and the following general cognitive processes that are linked to the language: iconicity (GIVÓN, 1984; 2001), perspective (LANGACKER, 2008), informativity, (GARCÍA, 1996; LANGACKER, 2013), analogy (BYBEE, 2015), rich memory (BYBEE, 2010; NADER et al., 2000), we also discuss about the markedness phenomenon (GIVÓN, 1995; LAKOFF, 1987).

Usage-Based Linguistics has as its basic assumption the notion that language is structured according to the needs of those who use it. Thus, the speaker's intentions, during the structuring of the communicational act, can change the way he structures the language. This theoretical field, which arises from the union of Functional Linguistics and Cognitive Linguistics, considers the relationship between form and meaning and the notion that language is constituted and can be understood if its real use is considered.

It is possible to see that the structuring of clauses is highly linked to the information that the speaker wants to communicate, for example, when the speaker prosodically emphasis a specific element of the clause, or when the speaker topicalizes it, placing it in the foreground, the speaker does so for believing that this element is more important than the others, as it is the central information of the predication.

The *topic* always appears at the beginning of the sentence, and it is it that receives the informative force. However, when

talking about the prosody, it is possible to change the focus of the sentence to other elements other than the subject. Therefore, depending on what the speaker wants to communicate, there are different constructions for the same world event, as exemplified in our table in the sentences below, which reveal how prosody can function as a tool for topicalizing the components of the sentence:

	Sentence	Possible emphatic meaning
1a	Ø não bati nele	(Neutral)
1b	EU não bati nele	The speaker indicates that who practiced the action was some else.
1c	Eu NÃO bati nele	The speaker negates practicing the action.
1d	Eu não BATI nele	The speaker indicates that he practiced other action different than *bater*.
1e	Eu não bati NELE	The speaker indicates that who was inflicted by the action was some else.

Table 6 – Topicalizing through prosody

Thus, it is necessary to analyze not only the context of the form, but it is also necessary to observe the content context, that is, it is necessary to go beyond the phonologic, morphologic, and syntactic relations and consider the semantic, pragmatic, and discursive-functional relations. This fact becomes evident when we emphasize that the same constituents, arranged in different ways from 1a to 1d, have different informational loads and their distributions in the sentence reveal the central information that the speaker wants to communicate.

Syntactic structuring is, thus, organized by the need to communicate an event. Therefore, not only structuring, but all grammatical relations emerge from use and are likely to be influenced by factors external to the structure of the language. Some examples of these factors are the communicative intention;

the interaction between the participants in the event; the degree of intimacy between the participants and the knowledge shared by them – all these factors can be confirmed by Barros (2016, p. 24):

> [a]trelar a concepção de gramática ao uso e ao discurso implica assumir que também fazem parte do processo de linguagem duas dimensões básicas da formação humana e, exatamente, por isso, elas são constitutivas da gramática, a saber: i) a interação social; e ii) a cognição (BARROS, 2016, p. 24).

Assuming this premise for the formation of grammar is to assume that the communicative need and the goals we intend to achieve are reflected in the way we structure the language. The politeness strategy, for example, even depends on the social position occupied by the event's participants.

As already discussed, Tomasello (2008) defends the idea that language grammar is formed by the interaction between individuals, from shared events and structures that are cognitively stored. Shared knowledge is used again when a similar situation occurs. Thus, when realizing, for example, that by saying *please*, a polite strategy, obtaining a desired item is facilitated, the next time the individual wants an item, it is possible that he or she may resort to a *please*, or a similar way to formulate the statement.

This notion is reaffirmed by Martelotta (2011), when the author argues that all cognitive relationships are perceptible in the interaction. Thus, not only linguistic, syntactic, and lexical choices are present, but also the knowledge of the culture stored and shared by individuals, arising from the mind's ability to store and access experiences.

These experiences, according to Langacker (2013), are responsible for how the individual builds the meanings they use linguistically. According to Goldberg (2006) and Bybee (2015), it

is from enough similar experiences stored that the individual can re-elaborate existing patterns and generate new uses for existing forms.

Therefore, as also defended by Furtado da Cunha et al. (2013), language grammar emerges from the individual's use and is adapted by him to meet his communication needs. According to what the individual feels the need to communicate, he may resort to different communicative strategies, stored from the events experienced by this individual, as shown by Langacker (2013).

Given the above, the usage-based linguistics considers cognitive and social factors that go beyond linguistic materialization. Some of the cognitive factors that are expensive for the development of this study are present, as shown by Traugott and Trousdale (2013) and Bybee (2015), in activities that are not limited to the linguistic field – *categorization, prototypicality[3], iconicity, perspective, analogy, rich memory and markedness* – they are present in all human activities.

These conceptions, associated with the notion of *informativity*, are necessary to show that the presence or absence of the subject have implications in the linguistic construction process, in the construction of linguistic meanings.

6.1 Iconicity

Iconicity within functional paradigms, according to Givón (2001), is related to the link between the expression planes and the content planes. This link is motivated by the being's relationships

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3   We acknowledge the importance of prototypes while studying linguistic phenomena and its importance to categories formation; however, due to the nature of the object analyzed by this study, we will not consider categorization as an analysis parameter because the subject pronoun paradigm is, by default, a well-established category and we will not consider the insertion or loss of an element of this category either. In this same sense, we will not consider prototypicality as an indicator that a particular use of null subject or expressed subject pronoun as being a motivator of the use or not of a particular subject pronoun.

with the world, the way he conceives and conceptualizes all the events that occur around him. Linguistic structures adapt to human needs, thus establishing a strong connection between grammar and cognitive components linked to the way we linguistically represent the world.

As Wilson and Martelotta (2009) argue, linguistic representations are iconic, that is, they represent a natural relationship between linguistic elements and the meanings expressed by them. This relationship is so strong that it is possible to create onomatopoeias, words whose sound structure mimics the sound of the elements it designates. Onomatopoeia processes are good examples to show that language facts are not random, but a reflection of the experiences we live in the world.

Givón (2001) states that even the structure of a narrative is organized by the way events are experienced in the world. Narration of a bath, for example, is structured, prototypically, in the following order: we enter the bathroom, remove our clothes, and turn on the shower. However, if the water needs to be warmed up before we take a shower, it may be that, after entering the bathroom, the first thing we will do is turn on the shower. This example reinforces the notion that we structure language in line with our experiences of the world, however, the context of the structuring may strongly affect how the uttered results.

Givón (1984) still argues that there is a motivation that leads us to code the world as we code it. Thus, we adapted some life structures to linguistic structures, and, in this way, it is possible to state that language syntax is the representation of everything we live, which goes against the idea that linguistic signs are simply arbitrary and confirms the assumptions of that the grammar of language emerges from our use of it.

In this sense, Givón (2001) defends three subprinciples of iconicity regarding iconic representations: *quantity, proximity,* and *linear ordering.*

The subprinciple of *quantity* is related to the linguistic material used in coding an event in the world. The greater the amount of content to be encoded, the greater the amount of linguistic material: the word *bye* has little content, and it is therefore encoded with little linguistic material; *I'll see you later*, that, functionally, it can be used at the same event as *bye*, in addition to the farewell, it comes imbued with the promise of a future meeting. Therefore, it has more content and a greater amount of linguistic material.

The *proximity* subprinciple is related to more specific contexts. Thus, the greater the conceptual integration, the greater its morphosyntactic integration. Givón (2001) defines, the more semantically integrated two events are, the greater the possibility that these two events are structured in a single sentence, for example, the verb *hear* in *I heard a bomb explode* informs two events that occur simultaneously and, therefore, are structured in a single sentence. *Hear* is a verb that encodes auditory perception; in *I heard that the bomb exploded*, the two events are not simultaneous and, therefore, are structured in a subordinate clause, hear encodes evidentiality (he learned from a third party that the event happened).

Linear ordering is related to the hierarchy of clause construction. Usually, according to Givón (2001), it is the least predictable or most important information that is placed in the foreground, a position normally occupied by the subject. Furthermore, Haiman (1983) discusses the idea that there is a strong tendency to organize narrative events in a chronological perspective. We narrate the facts, as we said before, as they happen in the world.

These three subprinciples reaffirm the idea that language is not arbitrary, but a reflection of how we relate to the world. Structurings, from the most basic to the most complex, are related to the cognitive principles of how we conceive the world, so much so that the more complex the experienced event, the more complex its linguistic representation will be.

Languages in which there is a possibility to omit the subjects, as defended by Chomsky (1981) and Rizzi (1998), will only make them explicit for a communicate purpose. This action of omitting and explicitating the subject can be considered iconic, explicitating is linguistically more complex, and it can convey a more complex meaning, such as topicalization – which lays in agreement with the principle of quantity.

6.2 Perspective

The central ideas that guide this work are that there is a strong relationship between the way we conceive the world and conceptualize it and the way we organize and structure these conceptualizations. That is why it is necessary to discuss the different ways in which this relationship can be configured.

The perspective is related to the different points of view on a world event and the way this affects the linguistic organization for representing this event. Langacker (2008) asserts that the arrangement of visualization and dynamicity are two important cognitive mechanisms that affect the conceptualization of the world.

According to the Langacker's assumptions (2008), the visualization arrangement consists of the relationship between who sees and what is seen, which is configured in everyday conversational interactions, an event in which participants meet in the same place, observe the scene, and describe it. Therefore, they share the same point of view as they have the same perspective on the event.

In the example *João kissed Maria*, Langacker (2008) defines that, as it is a standard unmarked language arrangement, the inferences that can be made about this event go unnoticed by the speakers. It's as if we simply wanted to inform you that a boy in the world named John kissed a girl in the world named Mary; the implicatures and views about this event, also patterns, go unnoticed.

On the other hand, when we portray the same event in the imperative way, *kiss her*, it is possible to perceive what we did not perceive before: the linguistic configuration not only describes the event, but interferes in the development of the event, shows a desire for some situation to occur and, above all, translates a different perspective. Other aspects presented by Langacker (2008) which configure different perspectives, involve: word order, intonation, absence of subject or reordering of the subject's position, even the zero morpheme of the verb, which, in English, configures the imperative mode, reflects the speaker's intentions about the world event.

One factor that can change the perspective from which an event is described is whether the speaker is static or moving. Some linguistic constructions are only likely to happen from the perspective of the speaker in motion, as shown by Langacker (2008), *when trees hurried past at 90 miles per hour*. In theory, such construction can only take place when the speaker observes the trees of a moving vehicle and never through a static speaker, since trees have no ability to move through the forest.

Another point that Langacker (2008) says is related to perspective are deictics. The separation of speakers in space or time and the attempt to locate the interlocutor, such as in *it's hot here*, reveals exactly the perspective of where one speaks, including whether this event occurs when the two people involved are in the same physical space. However, in a phone conversation, the perspectives can be different: *it's hot in here, but it must be cold*

where you are. In this sense, perspective is determined only by the speaker.

Another example of differences, presented by Langacker (2008), between space, time and the perspective that linguistically constructs the event is the message of an answering machine. Normally, it would start with *I'm not here right now*; if the person is in the place, this denial is contradictory, since the person is in the place, but, when recording the message, the speaker alluded to a moment when he, possibly, would not be in the room.

The author also argues that one of the important factors for the arrangement of the point of view is the presupposed point of view. In a standard arrangement, the point of view is where both speaker and speaker are situated; the same situation can be observed and described from different points of view, which leads the speaker to formulate different constructions.

Langacker (2008) argues that some words and expressions already evoke the sense of advantage. The expressions in front and back are based on the location of the speaker and the event to build the vantage point:
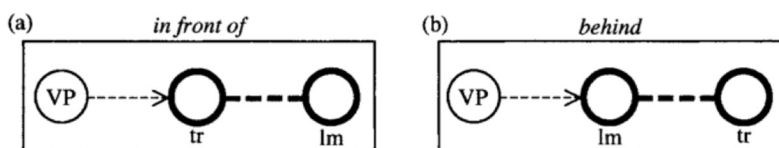
Figure 5 – Perspective based on spatial points
(Source: LANGACKER, 2008, p. 76)

Langacker (2008) establishes that *VP* marks the *vantage point*, a chosen point of view, and the dashed arrow indicates the speaker's line of sight; *tr* marks the *trajectory*, the direction in which the perspective is constructed and, *lm*, the reference point, *landmark*. In both cases presented by the author, in a and in b, the center of linguistic elaboration and what causes the semantic

contrast to lie in the choice of *tr* and *lm*, but the event described is the same. To prove this perspective, Langacker (2008) proposes that we imagine a scene with a large rock and a tree. How we describe this scene linguistically depends on the point of view chosen. In this way, the same scene can be described from different points of view. Langacker (2008) uses the following scheme to illustrate this relationship:

VP1 ---> (stone)———(tree) <--- VP2

From this scheme, it is possible to say that: 1) if the rock is chosen as the point of view, as the focal point of the line of sight, there are two construction possibilities: *the rock is in front of the tree* and *the tree is behind the rock* ; 2) if the tree is chosen as the point of view, the constructions would be different: *the tree is in front of the rock* and *the rock is behind the tree*. Langacker (2008) points out that the point of view does not necessarily need to be the exact location where the speaker is, the location can be imagined. As abstract as it may be, the ability to adopt different points of view from fictitious places allows the speaker to elaborate constructions from other perspectives.

Another important point highlighted by the author is the constitution of the point of view based on the temporal position in which the speaker finds himself.
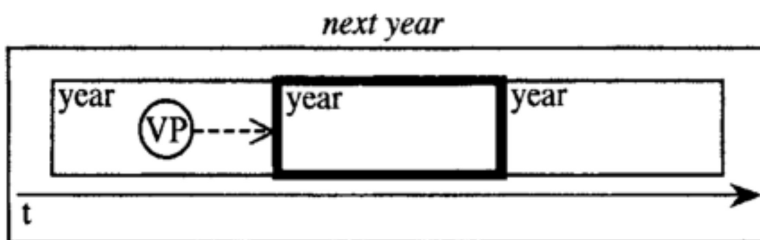

Figure 6 – Perspective based on time points (Source: LANGACKER, 2008, p. 77)

78

The expression *next year*, represented in the figure above, is based on the notion that there is a succession of years, with the following year being directly after the one that corresponds to the point of view. In this sense, in a standard construction, it corresponds to speaking time: *Next year will be full of surprises*. In other elaborations, even being the point of view, it may not correspond to the exact moment of speech. In *John believed that the next year would be full of surprises*, for example, next year corresponds to the year following that when John came to believe and not the year in which the sentence was produced.

Langacker (2008) also highlights that it is the perspective adopted by the speaker that establishes the subject or object of a scene. Using the author's assumptions, when analyzing the structure *João took the lands* and *The lands were taken*, we have the same world event described in particular ways. In the first one, João occupies the central plane corresponding to the point of view, while in the second, the expression *the lands* takes over the central plane, even though the event is the same.

Thus, what one wants to inform the other is different and what determines the choice of how we structure this event is closely linked to what one wants to inform the interlocutor and, more than that, how one wants to reveal our perspective on the event.

> **eu** falei "sabe que **eu** não sei.» **eu** falei "bom, se fosse menino ia ser Rodrigo, agora, menina , **eu** não sei. ah! bota Carolina!" porque quando, assim, **eu** me juntei com a minha mulher, **eu** não estava numa boa em casa. (CLUL – BR – 80s)

In this occurrence[4], for example, there seem to be only one of the times in which there is a specific reason for making the pronoun *eu* explicit, the last one, *eu não est***ava,** if we consider that the inflectional suffix can relate to both *eu, você, ele(a),* and *a gente* and that there is in an immediate context a person that could be recovered by the verb *minha mulher – ela estava*, it would be reasonable that the subject need to be explicit to avoid ambiguity.

> **eu** falei "sabe que **eu** não sei.» **eu** falei "bom, se fosse menino ia ser Rodrigo, agora, menina , **eu** não sei. ah! bota Carolina!" porque quando, assim, **eu** me juntei com a minha mulher, **eu** não estava numa boa em casa. (M-BR)

However, the previous mentions of the subject could be avoided if we consider that we could recover the subject by looking into the verb inflectional suffix that could only indicate the 1st singular person *eu – falei, sei, juntei*. There's probably a syntactic pressure to make the subject explicit even when there's no necessity to do it, but we could also say, judging the context, that there is an informative need to reinforce that this situation was happening to the locutor and, therefore, he feels necessity to reiterate the subject every possible time.

As the perspective of the event and the informative need of the locutor is what make him to express the subject, we decide to approach *informativity* as part of the perspective compound.

6.3 Informativity

As postulated in the previous section, the desire to show our point of view motivates us to organize sentences in specific ways, as postulated by informativity and, as Barros (2016) shows,

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4   The occurrences presented during the development of this research are part of the *corpora Português Falado - Variedades Geográficas e Sociais* which belong to the University of Lisbon and can be accessed in the link: https://clul.ulisboa.pt/recurso/portugues-falado-variedades-geograficas-e-sociais

these issues are beyond the structure of the utterance form. Informativeness is based on the relationship between those involved in the communicative act. In addition to showing our point of view about a particular event, we select ways to inform only what suits our interlocutor. Thus, informativity unites structure to pragmatic and discursive-functional functions and, according to García (1996), this determines, for example, the elements that configure *foreground* and *background*.

García (1996) conceives foreground as being the central part of the statement, the part that receives more focus, it is unique and obligatory; the background, on the other hand, is plural, has several elements that serve the foreground and configures an optional part for utterances. It is worth noting that, if one of the elements that make up the background is highlighted, it may cease to be a background and become a foreground.

According to Langacker (2013), depending on what the speaker wants to inform, some parts of the utterance can become more important and, normally, when this happens, this element needs to be, in some way, reinforced.

Going back to some examples introduced in the table 1, we can make this process explicit

1- EU não bati nele
2- Eu NÃO bati nele
3- Eu não BATI nele

Theoretically, the highlighted constituents, written in capital letters, also receive the contextual focus and they become the foreground of the scene. As it can happen to the first component – the subject – when it is fully expressed, it can receive doble focalization – one by being expressed when there was no syntactic need to and one by an extralinguistic force, such as the prosody.

6.4 Analogy

As defended by Bybee (2015), the term analogy has two meanings, a more specific and a more general one: the more specific is associated with changes in the morphological paradigm, while the more general applies to syntax and analyzes how new expressions arise from expressions already existing. A morphological change based on analogy analyzes how a word changes based on characteristics like those existing in other words. These changes tend to eliminate alternations or extend them to lexical items.

The author shows that changes that occur in sounds tend to affect all items likely to produce a certain sound; analogical change happens to one item at a time and does not necessarily affect all lexical items and morphological paradigms with the same production condition. As much as it may seem an irregular process, Bybee (2015) argues that analogical changes follow a unidirectionality.

The analogy process can take place in several ways. Bybee (2015) argues, for example, that the result of the alternative forms of dreamed and dreamt is a proportional analogy or four-part analogy, that is, two similar pairs are compared. In Portuguese, there are cases of creation of new verbs that normally use verbs from the first conjugation as a base, like this: *arma : armar :: mochila : mochilar*. From that same perspective, if it *seem : seemed* is true, probably *dream* is for *dreamed* and not *dreamt*:

seem : seemed :: dream : dream<u>ed</u>

However, the proportional analogy process does not consider the cognitive mechanisms involved in the changes. Also, hardly a single item will affect the system. The variation that occurs in *dream*, according to Bybee (2015), is based on a set of items that

follow the same form: regular verbs, which receive the suffix -ed when conjugated in the past, a structure that is present in the language as a general form.

Bybee (2015) argues, then, that the process undergone by dream was analogical leveling. In this process, a new form eliminates the existing alternance on the old form. The author gives an example of the change that occurred in the formation of some verbs in the past:

Base	Passado e Particípio Passado
[iː]	[ɛ]
keep	*kept*
leave	*left*
sleep	*slept*
sweep	*swept*
feel	*felt*
kneel	*knelt*
mean	*meant*
dream	*dreamt*
creep	*crept*
leap	*leapt*
weep	*wept*

This general change that occurs in the alternation of the sound of the verb base and the past participle is part of the *Great Vowel Shift* in which the extended sound of Middle English has been shortened when the end of the verb is *-t*.

Bybee (2015) also affirms that it is possible to perceive, in modern English, the *creeped* and *leaped* forms, although they cannot be seen as changes, from *leapt* to *leaped*, which characterizes as analogical leveling; what happens is that we have a new past form of the *leap* verb based on the regular verbs.

Bybee (2015) says that there is a strong link between the productivity of a pattern and the number of items affected by it: *type frequency*. In Modern English, 180 verbs have some productivity. Most of them are formed with the suffix -ed allomorphs ([d], [t] and [ɪd]) and, given the frequency, this pattern is usually applied to new verbs: *waltz/waltzed* (linguistic loan) / *hammer /hammered* (derivation – verb derived from a noun).

In Old English productivity was not -*ede* or -*ode,* the old form of -ed. The most frequent pattern was a complex system of alternating vowels in seven different classes, which made it difficult to create new verbs, and as there were some verbs (regular verbs) that formed the past by the suffix -*ede* and -*ode*, the formation of new derivation and borrowing verbs was more easily formed by this pattern, since it was simpler.

In addition to verbs, derivational affixes also compete for productivity: -*ness* is productive today for forming nouns in English. In Old English, there was the possibility of creating nouns with -*ship, -hood,* and -*dom*, but over time they become less frequent and, consequently, -ness becomes more productive.

When questioning how to define which is the base form that can give rise to a new item, Bybee (2015, p.102) ensures that "high-frequency forms are resistant to change on the basis of the structure of other forms or patterns, and more likely to serve as the basis of such change in low-frequency forms."

This is because each use of a word or construction strengthens its representation in memory and makes it more easily accessed in future uses. While more testing is needed to assert this, frequency is probably one of the strongest factors in predicting the direction of leveling.

Another process related to the analogy that Bybee (2015) refers to is the analog extension. In this process, the alternation starts to occur within a paradigm in which it did not occur before.

There are circumstances for extension to occur: 1. one in which a base form serves as an alternation that carries a distinct meaning that spreads to other lexical items; 2. one that is an alternation introduced by the allomorph extension of an affix. In both cases, pattern frequency is a strong determinant of change.

The first order is those that represent the alternation of vowels in irregular verbs in Old English, for example, in *swim swam swum/spin spun*, by expansion. Other verbs are added to the list, and this prevents them from disappearing, for example in *ring rang rung/dig dug*. It is interesting to note that there are similar characteristics in these verbs: they are separated into two categories, those with three different forms and those with only two forms, with the past being replaced by the participle. Verbs that have three forms present regularity in the nasalization item, although the verbs that were added to the list by extension do not necessarily characterize the nasalization pattern, the phonological format being variable.

The second extension group involves alternations between plural marking suffixes in Brazilian Portuguese which are normally formed by -s, but when the singular ends in -āo; there are three ways to mark the plural: s, -ōes and āos. As the frequency of marking the plural with -ōes is higher, some words that would receive the mark -āos receive -ōes (cidadāos-cidadōes), which can be an extension process. Thus, the tag starts to exist in words that did not appear before or, as shown by Bybee (2015), it is possible to infer that there are three allomorphs of the plural affix that compete and co-occur with the -s tag. If we didn't make this consideration, we would be saying that there is a tendency to use -s and not the other forms, which is not the case.

Supplementation, another process presented by Bybee (2015), refers to any type of synchronous irregularity in the base forms of a paradigm, although its more restricted original meaning is used to refer to items whose base derives from other lexical items, like,

for example, *go*, whose past was not *went*. *Went* was past *wend*, but today go past is *went,* while *wend* past is *wended*.

According to the author, this process normally occurs in inflectional languages that present few cases of supplementation. It is a frequent process and there are several possible generalizations about which categories can be expressed in supplementary forms.

Another process presented by Bybee (2015) is analogical reanalysis: the reformulation of an item based on other forms or patterns existing in the language, which happens when a meta-analysis takes place. Thus, some phonological material in a sequence is assigned a different morpheme or word: alternating the article *a* and *an* caused some words to lose initial *n* (naperon [French] – napron [ME] – apron) and others to acquire n (ekename – nickname).

Bybee (2015) also asserts that the change in sound occurs due to changes in articulatory habits. Although sound change is more likely to occur initially in high-frequency words, it is possible for change to occur in all words and is governed by phonetic factors.

Regarding BP, it is possible to say that some analogical process had occurred to the simplification of the pronominal paradigm. There is, as presented by Neves and Goulart (2017), an exclusive inflectional system for the pronoun *eu*, however, as we can see in Olbertz (2020), there is a syncretical form for almost all the other pronouns, basically, we would have an inflectional form for the *1st person of singular* and one form for all the pronouns.

To better understand this process of simplification, we primely must consider that, as stated by Duarte (1993), Portuguese underwent a change in its verbal inflectional suffixes its agreement process: first, there were six pronouns and six inflectional suffixes, one exclusive for each person, then, with the implementation of *você, a gente* and *os senhores* (as an alternative form to *vós*) it led

us to six pronouns but only three inflectional suffixes, resulting in three syncretical forms:

six pronouns/six inflectional suffixes :
six pronouns/three inflectional suffixes

The syncretical forms created an environment where the non-expressiveness of the subject could generate ambiguity since it was not possible to recover the subject directly from the verbal agreement process, i. e. *você/ele/a gente vai*. These situations where the subject expressiveness became mandatory, mainly to avoid ambiguity, and due to its frequency, may have enabled, via analogization, the expressiveness of the subject in contexts priorly thought as impossible, such as impersonal infinitive constructions and existential constructions.

Analogy can be, by default, used to explain how the process of pronouns simplification happened and how it is related to other changes in the language. It is only possible because analogy is related to a high level of cognition, it involves generalizations of word structures that are morphologically complex and affect one paradigm at a time, gradually enabling the change; however, some paradigms are unchanged, and when high-frequency paradigms resist change, it means they can still be easily accessed in memory.

6.5 Rich memory

Cognitive processes in general are associated with the human ability to store concepts and linguistic expressions in memory and, at appropriate times, trigger them. This process is called rich memory. As the individual interacts with the world, he stores informational data in memory so that, in a similar future event, this information can be activated.

Nader et al (2000) state that, in terms of language, this process involves how different sounds are combined to form words, the words themselves and their different meanings, and the situations, the context that allows those words to take on different meanings. Furthermore, as Goldberg (2006) shows, the individual also mentally compiles structures, complete linguistic patterns, and constructions.

It is important to emphasize, as Nader et al (2000) does, that all experiences, whether linguistic or not, affect the way we conceptualize and describe the world, as they structure cognitive representations and impact the neurological structure.

Bybee (2010), on the relationship between rich memory and language, argues that it is thanks to rich memory and the ability to form generalizations that we can deal with the complex and systematic form of communication. Memory is responsible for storing complex information, such as certain expressions that take on different meanings depending on their context of use. Generalization is responsible for storing language abstractions that allow the generation of a functional scheme to formulate categories. Without these processes, it would not be possible to store all the elements necessary for human communication and interaction.

The definitions exposed so far allow us to state that all processes in the general cognitive domain are interconnected. The process of forming categories from a prototypical member, the frequency with which items/structures are triggered in memory and become favorable or resistant to the analogical process, the way in which we organize our utterance to interact with the other are associated with representations of similar situations stored in memory.

One key factor to the storage process to occur is the frequency of encounters one individual has with an input, some structures

and patterns are so commonly used that they became easily accessed on the brain, being necessary little cognitive effort to access it. The frequency process is also responsible to determine, regarding the cognitive effort, which patters will be marked, and which ones will be unmarked.

Thus, *rich memory* is a really important factor when analyzing the *expressiveness of the subject*, it is through our capacity to link cognitive processes and real-world live experiences to linguistic creativity and production, that we can understand the *subject* as a category and it being expressed via a pronoun as a subcategory and, in turn, that the subcategory is becoming the prototypical pattern which is iconic and shows the uses' perspective of the event, then it also involves an *analogical thinking* that enabled the reduction of the pronominal paradigm to make it cognitively more accessible to finally result in a *non-marked* structure as we can see in the following section.

6.6 Markedness

According to Lakoff (1987), *markedness* is a process in which some morphological categories is entitled a "mark" while others are not. To the author, the singular form of nouns in English, for example, are not marked, while the morpheme-s that designates plural is a marked structure. In a scale of complexity, we could say that, cognitively and linguistically, the zero-marking form of plural is way less complex than the morpheme-s, it is also shorter and has less linguistic information, hence, it is simpler.

Lakoff (1987) also defends that we can also see the *markedness* process in phonology. The consonants that produce sound, that are voiced, are more complex than the ones that are voiceless, so we could say that the voiced consonants, the ones that includes vocal vibration in the production of sounds, are marked, while the voiceless are not.

In the semantics is no different, Lakoff (1987) proposes that meanings that are paired as contrasting pairs, like tall-short, may also have one of them that is marked. To prove his point, the author compares the question "How tall is Harry?" and "How short is Harry?" stating that just one of them would be elected in a current conversation, *tall*, it means that even among the contrasting pairs, one would be more likely accessed and, this way, unmarked.

Lakoff (1987) uses these examples to defend the idea that *markedness* is a process related to the asymmetries in the language, and this process can be present in different levels, basically, as it is said to be part of the prototype-effect, in all cognitive/linguistic category there will be a pattern that is simpler among the other members of the category and, therefore, unmarked.

Approaching this topic, Givón (1995) assumes that *markedness* is the same as *meta-iconicity*. To determine whether a pattern is marked or not it is necessary to analyze the context in which the pattern is used because markedness is highly dependent on the context, it is possible that a sentence be marked in on context and unmarked in another.

To stablish a guide to check whether a linguistic phenomenon is marked or not, Givón (1995) proposes the following criteria: structural complexity; (ii) low frequency occurrence; (iii) cognitive complexity. The author ponders that a linguistic phenomenon does not need to have all three criteria, and that even though they may overleap one another, they must be considered separately.

The criterion of structural complexity is related to the syntactic elaboration, it can be considered a marked structure the ones that has a more complex elaboration; the low frequency occurrence is related to the frequency a pattern is accessed, the less frequent it is, the more marked it becomes; the cognitive complexity is related to the amount of cognitive effort one must use to process the information.

Thinking about the expressiveness of the subject, it is relevant to say that in PE, the omission of the subject seems to be more frequent than its explicitation, it is more complex and presents more linguistic material and therefore it requires more cognitive effort to its interpretation, so, following Givón (1995) criteria, it is possible to say that sentences with an explicit subject have a marked structure.

Regarding BP, the expressed subject pronoun is being each time more frequent, mainly to the 2nd and 3rd person of singular, so, in this specific context, it is possible to consider the sentences lacking an explicit subject to have a marked structure.

To be sure about these assumptions, *markedness* will be one of the things to be considered, along the other cognitive process, while analyzing the data, mainly its production to whole discourse person panel. Other factors that will be considered lay on the guidelines present in the Construction Grammar, these guidelines are portrayed in the section *Methodology* – Part III of this book.

The next section will cover the phonological analysis theory, important feature of this work once it considers the prosody phenomena and its relation to the expressiveness of the subject.

7. Phonological Analysis Paramaters

This chapter presents one of the main aspects of the proposed analysis: the phonological parameters to analyze a linguistic phenomenon. Through the theoretical support of Dik (1989), Frota et al. (2015), Cagliari (1992), Massini-Cagliari (2003) Pietro and Roseano (2010) and Ramus, Nespor and Mehler (1999), it was possible to analyze the prosodic contour of our data, regarding the pitch accent pattern falling on the subject pronominally expressed.

Prosodic studies, according to Dik (1989), can be based on the analysis of the prosodic contour. For the theorist, this contour