

FUNCTIONALISM AND CONSTRUCTION GRAMMAR APPROACH

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- **ABSTRACT:** This paper presents, discusses and exemplifies the direction of the functionalist research in its most recent orientation, in its dialogue with cognitive studies. As a result of this interrelation, we highlight the constructional approach to grammar, emphasizing the function x form pairing, which marks the linguistic expressions. Besides pointing out the theoretical and methodological gains that such dialogue has brought to Functionalism, this article also refers to the specificities of both theoretical approaches and to necessary adjustments to enable researches in this interface. The treatment of grammar in a holistic perspective and the strictness in detecting properties of meaning and structures, which mark linguistic usages, are considered positive and promising biases of functionalist research in a constructional approach.
- **KEYWORDS:** Functionalism. Constructionalization. Constructional change. Cognitivism.

Introduction

In recent years, the interface Functionalism x Cognitivism has called the attention of an increasing number of researchers. The dialogue between these approaches of linguistic investigation has produced a useful theoretical body and allowed for a great amount of robust empirical analysis with an increasing level of depth.

In four sections, this paper presents the current state of this issue, based on data from the Portuguese language. In the first section, entitled *Functionalism and Cognitivism*, we have outlined the classical and contemporary versions of functionalism in the North-American trend, with special attention to the phenomenon of linguistic change. It is possible to ascertain how the functionalist studies have departed from atomic paths: from the lexicon to the grammar or from the least grammatical to the most grammatical. Over time, the studies of the lexical or grammatical item progressively incorporated other contextual elements. At this point, we highlight the contributions

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of Heine (2002) and Diewald (2002, 2006). After these contributions, the nowadays called Usage-based Functional Linguistics or Cognitive-functional Linguistics began to take shape, borrowing terms, concepts and ideas from cognitive studies.

Still in section 1, we discuss a few bases of Cognitivism and the founding concept of grammatical construction (cf. GOLDBERG, 1995, 2006; CROFT, 2001). From these theoretical contributions, it is possible to postulate that the language structure is forged both in historical and routine experience, and it is derived from the cognitive processes of general domain. Therefore, the adopted view of language is no longer centered on empirically proven tokens, i.e., on the linguistic material itself, but on instances of greater abstraction.

Section 2 is dedicated to the discussion of the constructionalization processes and linguistic change. In this section, we make appropriate associations of these processes of change with the most classical mechanisms of grammaticalization and lexicalization. Both grammatical constructionalization and lexical constructionalization focus on a theoretical framework that considers mainly three analytical factors: schematicity, productivity and compositionality.

Still in section 2, we propose a constructional hierarchy based on the latest studies on the processes of linguistic change. It is a tripartite proposal, which considers the existence of schemas, subschemas and micro-constructions, which are materialized in the so-called constructs.

Section 3 presents a case study about the connective construction LocV, formed by locative plus verb, which is analyzed according to the already mentioned theoretical framework in order to present a concrete applicability of the constructional approach. After this stage, some final considerations will be pointed out.

Functionalism and cognitivism

In this section, our focus is the correspondence between these two theoretical approaches that form the basis for the treatment of grammar proposed here, with an emphasis on grammaticalization - the functional point-of-view, in the North-American trend, according to Traugott (2008b), Bybee (2010), Givón (1979, 1995), among others, and the cognitive one, as proposed by Croft (2001), Goldberg (1995, 2006), Fillmore (1968), among others. We will thus highlight the most relevant aspects of each of these perspectives, pointing out the similarities that enable us to establish a partnership between both approaches, from the perspective of grammatical change.

The classical and contemporary functionalist versions

In its initial stage, functional studies were more specifically geared toward categorial change at the grammar level. This stage back to the concept of grammaticalization

as a path from lexical to grammatical categories, as found in Meillet (1958), or from least to most grammatical categories, according to Kurylowicz (1965). The research of isolated items is prominent and the focus on functional aspects or on specific trajectory of items is remarkable. During this first period, mainly starting from the decades 60 and 70 of the 20th century, functionalism has been dedicated to the investigation of the correlation *function > form*, in the linguistic usage, in the defense or in the reinstating of the iconic marks of this use. Of special importance in the set of functionalist research at this time are the studies on grammaticalization dedicated to the detection of historical trajectories of categories in a more atomic perspective, specifically concerned with characterizing properties of form or meaning of the aforementioned categories. In the change by grammaticalization, the focus lies on the survey for reducing marks, in functional terms, like the phenomena of abstraction and polysemy which characterize the category derivation, or be it in formal terms, in the research of erosion, the loss of structure resulting from normal usage.

In those early decades, although reference is made to the importance of contextual aspects in the change by grammaticalization, such mention do not add more strictness or discretion to the analysis since they do not define and specify the properties of the context in which a particular item is used and its role in relation to aspects of meaning and form. More general and less accurate references are found, for example, in DeLancey (1993), for whom the starting point of the linguistic change lies in a certain *productive construction*, and in Bybee (2003), in which the grammaticalization is assumed to be the creation of new constructions.

Thus, the interest of functionalist research focused on grammaticalization in the aforementioned period is more specifically geared to issues related to the functional marks of specific items or, on the other hand, to its formal traits. As Traugott (2015) points out, although the correlation *function > form* has been referred to as the basic design of the functionalist studies, initial research tends to one of the two trends, which, in a sense, conceptually drifts away from that basic assumption. Examples of the prevalence of one of the trends would be the studies of Lehmann (1985), about the trajectory of the relational names into affixes, in the emphasis on the structural dimension, or the investigations of Bybee, Perkins and Pagliuca (1994), about the derivation *ability > epistemic possibility*, at the meaning level.

In view of such framework, and taking into account the current state of the North-American functionalist researches, we refer to this phase as the *classic version* of Functionalism. This is a key moment in the path of these studies, in which, in view of the highly prestigious generative theory current at the time, formalist and innatist, present themselves, contrastively or complementarily, as a model of analysis which reinstates and gives another dimension to the importance of the linguistic usage, relating it to iconic properties and highlighting interactive strategies as grammar motivators.

Currently, this classic version, whose focus lies on a more reductionist investigation perspective and which produced and has produced fundamental descriptions and analysis for the linguistic research, was complemented and enriched with the expansion of the research object. In contemporary times, the American trend of Functionalism expands its spectrum of observation and incorporates, more effectively, the contextual dimension. In this sense, the holistic and contingent approach of linguistic usage stands out, and it considers that items do not occur nor produce meaning in isolation, and it is necessary to observe contextual relationships. Such reorientation conceives linguistic structure as derived from general cognitive processes, according to Bybee (2010). Linguistic usage, in this context, is understood as a product of experience, of routinization and perspective in language and by language, among other motivations. Factors of cognitive nature had already been on the North-American classic functionalist agenda, such as factors related to iconicity and markedness under Givón's terms (1995, 1979). However, the refinement of these factors gained importance in the 21st century, with the explanation of contextual properties and their relationship with cognitive processes, with the understanding that cognition, derived from interactive pressures and socio-historical experience, manifests itself in context.

Such an approach, which is the result of a realignment of the linguistic research objects, has also consequences in the design of grammaticalization, as it happens to incorporate the contextual, cognitive and pragmatic dimensions more explicitly in their most recent definitions. In accordance with Traugott and Trousdale (2013), we assume a broader conception of context, which incorporates the linguistic surroundings, including syntax, morphology, phonology, semantics, pragmatic inference, modality (written/spoken), and that also takes into account broader properties, such as sociolinguistic properties (profile of interlocutors, time and space of interaction) and discourse properties (typological sequence, discourse genre).

Thus, we find in Traugott (2012) the grammatical change considered as the theory of the relationships between pairs of form/meaning and its probable directionality over time. As it can be observed, this is a broad design, which explicitly includes the contextual dimension, allowing the insertion of both grammaticalization and lexicalization in this general spectrum. According to such perspective, linguistic change can be handled both at the level of procedural change, which leads to categorial migration, on the grammaticalization axis, and at the level of change restricted to content, without migration to more closed classes, in the lexicalization axis. The current stage of the functionalist research following this orientation has therefore been named as *Usage-based Linguistics* or *Cognitive-Functional Linguistics*, as seen in Bybee (2010), Traugott and Trousdale (2013) or, in Brazil, in Martelotta (2011), Oliveira e Cezario (2012), Oliveira e Rosário (2015), Teixeira (2015), Aguiar (2015) and Arena (2015), among others.

Another reflection of the holistic consideration of the linguistic usage that marks the contemporary version of Functionalism lies in the treatment of the binomial

function x form. If, in the early decades, the analysis focused in either one or another of these axes, as mentioned here, the current trend is a more integrated treatment of both, from the assumption that functional and formal properties mutually involve one another. So, instead of the primacy of the first axis, as the exclusive motivator of linguistic use, marked by (uni) directionality *function > form*, what we have today is the correlation of functional and formal aspects in the origin and establishment of linguistic categories, translated as the directionality *function < > form*. Therefore, the dimension of form is enlarged, in a procedure that balances both axes - meaning and structure. We understand that treating such dimensions with equal measure means not only assuming them as having equal importance but also, and primarily, giving functionalist research greater strictness and control in its criteria and procedures. The assumption that formal and functional aspects are correlated leads to the need of explanation and description of those aspects, which has been the focus of contemporary Functionalism.

In the wake of this trend, functionalist researches have focused on the treatment of the contextual dimension of linguistic usage, considering the processes of change, as pointed out by Traugott and Trousdale (2013) and Traugott (2012, 2015), among others. These authors assume that pragmatic and polysemy ambiguity, which are considered fundamental for the generation of the early stages of change, should be investigated precisely from the analysis of contextual dimension; at sentence level, they should be investigated in the analysis of properties of the linguistic surroundings or in broader terms, in the investigation of sociolinguistic or discourse aspects, depending on the type and nature of the research object.

Based on this design, Diewald (2002, 2006) proposes a contextual taxonomy that includes from the original or preliminary stages to those already considered as the environments in which the change is more fully fixed and established. Diewald's proposition (2002, 2006) has close correspondence with Heine's (2002), holding that, between the original usages and the usages conventionalized via grammatical change, there are ambiguous and diffuse contexts, which are responsible for the trajectory towards the establishment and systematization of a new usage, as we illustrate in the case study section of this paper.

Next, we present Traugott's table (2012), which synthesizes the two proposals for referred contextual derivation:

Table 1 – Comparison of contextual taxonomy of Heine (2002) and Diewald (2002, 2006), based on the version of Traugott (2012, p. 9)

Heine	Diewald
Stage 1: <i>normal</i> use	Stage 0: <i>normal</i> use
Stage 2: <i>bridge</i> context (pragmatic, semantic)	Stage 1: <i>atypical</i> context
	Stage 2: <i>critical</i> context (multiple opacity: pragmatics, semantics and structural)
Stage 3: <i>switch</i> context (grammaticalization)	Stage 3: <i>isolated</i> context (grammaticalization: reorganization and differentiation)
Stage 4: conventionalization	

Source: Traugott (2012, p. 9).

As we can observe in Table 1, Heine (2002) and Diewald (2002, 2006) understand context as *cline*. *Normal* contextual environments related to conventionalized modes of expression in the linguistic community become ambiguous and are re-interpreted for reasons of pragmatic-discursive order, such as *bridges* (Heine) or *atypical* (Diewald). In sequence, in addition to the polysemy or semantic-pragmatic reinterpretation, neo-analyses occur¹ at structure level, in the most advanced stage toward grammatical change, configuring *switch* (Heine) or *critical* (Diewald) phase. Finally, authors name the stage considered as the establishment of the new use *conventionalized* (Heine) or *isolated* (Diewald).

The approach of linguistic change as contextual expansion, in more linguistic terms, can still be detected in studies of Himmelmann (2004), with emphasis on the syntactic environment in which a particular item occurs. According to the author, grammaticalization is basically a process of expansion of context in three levels. Level a) change of the host class, with the paradigmatic expansion of members of a given category, due to the entry of new member in the class. Level b) change of syntactic context, involving the process of metonymy, with rearrangement in the order of internal constituents and consequent formation of a new regular syntax of expression. Level c) change of semantic-pragmatic context, considered by Himmelmann (2004) as the most important one, since it involves fading of meaning, with re-semanticization and anaforic associative use.

¹ According to Traugott and Trousdale (2013, p.36), inspired by Andersen (2001), in this article we use *neo-analysis* instead of *re-analysis*, based on the understanding that it is not possible to analyze a newly built structure one more time as it still did not have any previous analysis so far. Thus, all language change is, in fact, an inaugural and new interpretation.

As seen before, the importance of contextual and cognitive dimension widens in studies on grammaticalization and it leads, in parallel and consequently, to the approach to linguistic change as expansion. In this reorientation, to the classic focus of research, characterized by reduction, we add another, a more holistic and expanded one, which incorporates the first, which has allowed the more extensive study of the objects under analysis.

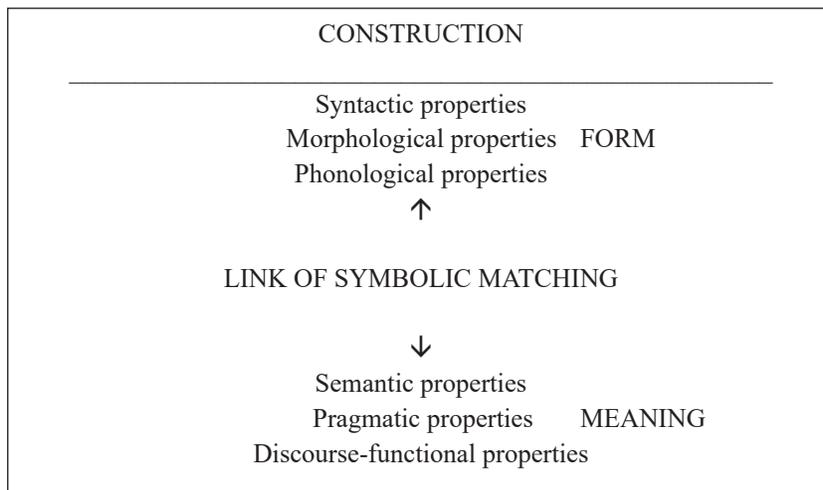
Cognitivism and grammatical construction

From the group of cognitive research, distributed among diverse trends, contemporary functionalist studies focus, specifically, on the ones targeted to the description and analysis of grammatical constructions. In this sense, contributions of Croft (2001), Croft and Cruse (2004), Goldberg (1995, 2006) and Langacker (2008) gain importance, in addition to studies of Fillmore (1968) about the semantics of *frames*, among others. Based on the consideration that language structure is forged both in historical and routine experience, and that it is derived from the cognitive processes of general domain, Cognitivism begins to investigate the effective uses in their context of production as well, thus moving closer to the Functionalism.

A fundamental point in this theoretical framework is the concept of *grammatical construction*, defined by Goldberg (1995, 2006) as a conventionalized pairing of meaning and form, as a symbolic schema from which all components of grammar are instantiated. Constructional meaning is understood as greater or distinct in relation to the sum of the meaning of its components; on the other hand, each of the referred components contribute to the establishment of the general meaning. In this model, the focus does not lie on specific items, but on the instantiation of schemas, in the relationship between subparts and their level of entrenchment. Thus, this is about the relevant approximation with the approach of grammatical change by expansion, as referred to in section *Functionalism and Cognitivism*, about the contemporary Functionalism.

Having said that, we assume construction as a basic and founding grammatical unit. Language, therefore, is defined as a set of specific and hierarchical constructions that, when interconnected, compose a wide network, in which phonological, morphosyntactic, semantic and pragmatic properties are integrated. A schematic version of this semantic-syntactic traits match is found in Croft's model (2001, p.18), presented in table 2:

Table 2 – Symbolic structure model of radical construction



Source: Croft (2001, p.18).

According to table 2, construction is defined as a bundle of properties correlated in two central axes – form and meaning. In this analytical model, there is no precedence of any axis, since the focus lies in the link of symbolic matching itself which marks them. The merit of Croft’s model (2001) also lies in allowing greater strictness to the research in this field, since it presupposes the detection of the six properties listed for the interpretative description of the constructions, which are integrated in the network of conventionalized units, generically called *constructicon*².

When summarizing the liable dimensions of approaching for the constructions, Traugott and Trousdale (2013, p.13) point to three broader and gradient perspectives: size, phonological specificity and conceptualization. In table 3 below, using examples of Portuguese, we illustrate these dimensions, adapted from the authors aforementioned:

² Structured, hierarchical and interconnected set of constructions in a given language.

Table 3 – Dimensions of the constructions

Size	Atomic <i>café, -s (pl)</i> [coffee]	Complex <i>sei lá, por isso</i> [I don't know, because of that]	Intermediate <i>pós-graduação</i> [post-graduation]
Specificity	Substantive <i>café, -eiro</i> [of coffee]	Schematic <i>SV [VP], Sprep [PP]</i>	Intermediate <i>Adj - mente</i> [Adj - suffix forming adverb of manner -ly]
Concept	Contentful <i>café, N</i> [coffee]	Procedural <i>-s (pl), por isso</i> [because of that]	Intermediate poder (verbo modal) [can - modal verb]

Source: Author's elaboration. Adapted from Traugott e Trousdale (2013, p.13) for portuguese.

Starting from Table 3, three parameters stand out, based on which constructions of a given language are classified; in each of these parameters - two more dedicated to form and a third one to meaning - apart from the extreme points, we find the intermediate level, highlighting the gradience and the prototypicality of the *construction*. The first of the parameters concerns the dimension of the construction, which classifies it as atomic (monomorphic, such as an ending or simple word, devoid of thematic vowel or another grammatical constituent) and complex (phrase or compound word), also making provision for an intermediate group, such as derived by pre-fixation. The second dimension is concerned to the phonological specificity of the construction, in such a way that more specificity of filling corresponds to minor virtual schematicity. Based on this parameter, the constructions are distributed as more substantive or idiomatic, such as fixed phrases and lexical terms, or as more schematic and virtual, like VP and PP, also admitting the intermediate group, as in the Portuguese schema *adj-mente*. [the adjective + *mente* =adverb of manner] The third dimension, related to the axis of meaning, considers the conveyed concept type, which can be more lexical, such as names and verbs, or, on the other hand, more procedural, such as grammatical categories, like endings or connectors, also taking into account, according to the other parameters, intermediate points, as, for example, the meaning of modalization or evidentiality.

The dimensional triad illustrated in table 3, presented in a *cline* form, demonstrates how contemporary functionalist researches, referred to in the previous sub-section, can be interrelated to the constructional grammar approach. The proposal of correlation of two formal dimensions (size and phonological specificity) and a semantic dimension (conceptualization) highlights the greatest connection *function < > form*, assumed in this paper as the current trend of the usage-based functionalist studies.

Thus, we understand the unfolding of the Functionalism x Cognitivism interface as: a) lexical and grammar classes share traits and are disposed in trajectory; b) the (uni) directionality of the classic *functional cycle* (GIVÓN, 1995) is taken only as directionality, assuming the constructional connection in network and its intersections; c) linguistic usage starts to be understood in its double face – as instantiation of constructions, the empirically proven token, and also as the environment in which new constructional changes originate, motivated by factors of communicative-pragmatic and cognitive order, in addition to the structural factors.

Constructionalization and linguistic change

Over time, linguistic change has been receiving various treatments depending on the theoretical affiliation of the researchers dedicated to this object of study. Since Classical Antiquity, various theories have been postulated for the explanation of this natural phenomenon that affects all the living languages of the world.

In the American Functionalist approach, the classical processes of grammaticalization and lexicalization have long aroused the attention of researchers and, without a doubt, they are still vital to the research in this line of theoretical investigation. It must be pointed out, though, that both have a closer focus on the development of particular items of a language. In the constructional grammar approach, on the other hand, the focus is on both atomic and complex constructs. Furthermore, there is special interest in more abstract linguistic organization schemas.

With respect to the process of grammaticalization, according to what was exposed in the previous section, authors generally oscillate between a perspective of reduction and expansion. For some, grammaticalization entails losses such as phonetic erosion or coalescence; for others, this process is profitable, as it brings pragmatic and semantic expansions.

Although they seem to be in antagonistic positions, these approaches are complementary. The truth is that many aspects of the so-called grammaticalization by expansion occur due to factors of grammaticalization by reduction. For example, phonetic erosion (reduction), when it occurs, normally brings semantic-pragmatic gains (expansion).

The approaches of grammaticalization by expansion can be associated with the process of grammatical constructionalization, defined as the development of procedural functions and the consequent increase in productivity. They focus especially on the frequency and degree of abstraction of grammatical items. The approaches of grammaticalization by reduction, in turn, can be associated with the grammatical constructionalization with reduction in compositionality and focus on an item internally or on a group of items.

The constructional grammar approach is a usage-based theory. Thus, the processes of language change always emerge from the interaction of speakers, who negotiate new meanings in the course of interaction. According to Traugott and Trousdale (2013, p.1), in this approach, language can be considered as a network of pairs of form and meaning. That network, because of its very nature, presents various degrees of instability, which lead to the process of linguistic change. From this vision, it is possible to postulate the existence of two major processes: constructionalization and constructional changes.

These processes can be considered an attempt to reinterpret the phenomena of grammaticalization and lexicalization starting from a constructional perspective. On the other hand, they are not merely different labels for the same phenomena. In the construction grammar approach, a point worth mentioning is how the mind conceptualizes or constructs the experience of the speaker in the world. Due to this fact, the degrees of specificity/schematicity, productivity and compositionality, which run through the issue of (inter)subjectivity, are fundamental factors in the linguistic analysis.

Constructionalization e constructional changes

According to Bergs e Diewald (2008, p.5), the process of constructionalization can be defined as “the formation of new units (constructions) based on independent materials until that moment”. In other words, it is about the creation of a pairing of new form and new meaning. This process normally happens by means of neo-analyses and analogies in the pragmatic field, going through the semantic field and, finally, through the formal field.

Departing from the pragmatic level, constructionalization starts from the negotiation of suggested interferences that, over time, become conventionalized at the level of schema (or macro-construction). This process is similar to the so-called pragmatic-semantic expansion described by Himmelmann (2004). With this process of change at pragmatic level, one leaves room to the possibility of change at other levels of grammar, such as the phonological and morphosyntactic levels.

The constructionalization can be grammatical or lexical. The *grammatical constructionalization* consists in the development of a series of changes in micro-steps in the pair form and meaning, of a more procedural characteristic. The *lexical constructionalization*, in turn, is associated with the development of new signs of form and meaning in which the meaning pole is primarily associated with a more concrete semantics and the form pole is associated with the categories of noun, verb and adjective.

Constructional changes, in turn, are defined as alterations that affect already existing construction traits or characteristics. They can occur either at the level of form or meaning. Such changes occur from linguistic use, and they not always lead to the emergence of new constructions.

Constructional changes may occur both before and after the process of constructionalization. The so-called *pre-constructionalization constructional changes* usually associate with semantic-pragmatic expansion and small distributional changes. The *post-constructionalization constructional changes*, in turn, typically involve collocational expansion and sometimes phonological and morphological reductions.

Departing from these postulates, Traugott e Trousdale (2013, p. 91-92) assert that linguistic change generally follows the steps below:

1 - *Innovation*.

- The hearer interprets and analyzes the construct differently from the way the speaker expressed it.
- The hearer reuses the construct with the new meaning.

2 - *Conventionalization*.

- Another hearer starts using the construct with a new meaning in specific niches.

3 - *Constructionalization*

- When the morphosyntactic and semantic neo-analysis is conventionalized in the population of speakers, a new micro-construction is created.

4 - *Post-constructionalization*.

- The new micro-construction can be expanded and reorganized into sub-schemas.

5 - *Reduction of form*.

- The frequent use of the token or obsolescence of the construction may lead to the decrease of use and even to zero.

In the next subsection, we discuss the factors commonly recruited for the analysis of the processes of constructionalization and constructional changes. As we are going to point out, many assumptions are retrieved from the classical studies of grammaticalization and lexicalization conducted so far.

Schematicity, productivity and compositionality

In the context of the constructional perspective of language change, three factors stand out: schematicity, productivity and compositionality. These concepts have been used by Langacker (2005) and can be aligned in the following way: *schematicity* concerns the constructional scope (the degree of generality of the construction formal and functional properties); *productivity* with *constructional vitality* (how often new instances can be generated by a constructional schema), and *compositionality* with

constructional alignment (to what extent a constructional schema is or is not created in a predictable way from its component parts).

a) Schematicity

When we mention schematicity, it is fundamental to deepen the concept of schema a little bit, departing from the theoretical approach we have adopted. A schema can be defined as a taxonomic generalization that points to routinized experience standards. They are abstractions unconsciously perceived by speakers, since various language constructions are generated by them.

In the perspective that we postulate, the schematicity level must be considered in a continuum. Therefore, there are constructions which are quite schematic and abstract, as there are constructions which are little or reasonably schematic. Such gradience has to do with levels of generality or specificity of the construction. For example, the word *mosquito* is a more specific item, and therefore less general than *insect*. *Animal*, in turn, is more general and less specific than *insect*. In terms of grammatical relations, intransitive verbs are more specific than the vast category of *verbs*. *Adjectives* are more specific and less general than *nouns*.

According to Goldberg's point of view (2006, p. 98), the speakers are not aware of the language-specific items only. On the contrary, the schematic or generalized knowledge is also part of human cognition. The sentence *Eu comi um bolo* [I ate a cake], for example, is formed based on a more general and schematic level of the type *Subject V Obj*. It is from this abstract and general schema that speakers produce the previous sentence and all other sentences formed in Portuguese starting from a subject, a verb, and a direct object, as long as it maintains similarity with the semantics proposed by the schema.

The process of creating new constructs from a more general schema is called *sanction*. However, it should be noted that the sanction is not always total. In some cases, partial sanction is tolerated as a normal process of the language. This tolerance to non-conventionality is an important factor for linguistic change and for the creation of new schemas, as it works as a trigger for innovation.

Abstract constructions can allow constructs not yet attested in the language. Thus, we can postulate that the creativity of the speaker, in elaborating new instantiations in the communicative process, stems from his/her knowledge of language schemas. These new instantiations, in turn, can set up a process of language change over time, as long as they move forward from the level of innovation.

b) Productivity

Just like what happens with schematicity, productivity is also a gradient phenomenon. When mentioning productivity, we refer to the issue of frequency, which is a highly regarded factor since classical functionalism.

Traugott and Trousdale (2013, p.17) state that the productivity of a construction belongs to the level of the schemas and relates to its extensibility, namely, (i) the degree to which the schemas sanction other less schematic constructions; (ii) the degree to which such schemas are restricted.

In the constructional grammar approach, especially in the field of productivity, the research of Bybee (2003) proves to be quite useful. For example, the distinction between type frequency and token frequency is retrieved and respectively associated with the frequency of construction and the frequency of construct.

The item productivity is one of the major contributions of the studies in grammaticalization and lexicalization to the constructional grammar approach. After all, since the earliest studies in this field, researchers have been stressing the importance of frequency, which may be responsible for the routinization and crystallization of new language uses.

c) Compositionality

The third factor, called compositionality, refers to the degree of transparency between form and meaning in terms of construction. In the constructional grammar approach, we can identify two distinct types: semantic compositionality and syntactic compositionality.

Semantic compositionality is related to the sum of the meaning of the parts. We assume that a construction is more compositional in semantic terms when the meaning of the parts is still retrieved in the meaning of the whole. Syntactic compositionality, in turn, relates to the level of morphosyntactic integrity of the subparts, in the sense that the more compositional, the more these subparts retain the grammatical properties of their source category.

Generally speaking, the phenomenon of linguistic change points to the reduction of compositionality, both syntactic and semantic. This means that, progressively, the direction of the parts becomes increasingly more opaque, as well as the morphosyntactic formation of the construction. In some cases, one cannot even predict the primary meanings that originated a new construction in the language. This is what we can see, for example, in sayings and proverbs and in cases of grammaticalization of connectors, such as *todavia* [however] and *embora* [although].

The analysis of these three factors enabled the usage-based linguistics to assume that the constructionalization process involves increase in productivity and schematicity, but a decrease in compositionality.

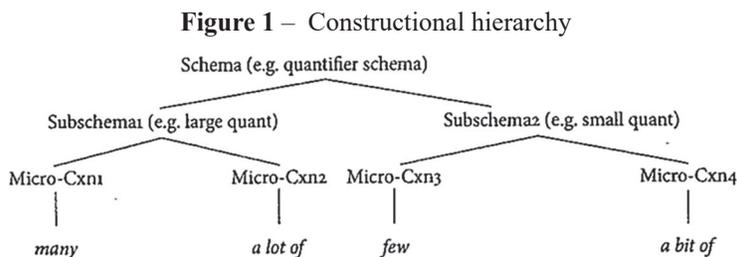
Constructional hierarchy: schema, subschema, and micro-construction

Another relevant contribution of the constructional grammar approach is precisely the displacement from the analytical look over an item to the whole language

environment that surrounds it, as well as its schematic properties. In other words, when analyzing a particular instantiation, the effort of the researcher focuses on taking into consideration the most abstract and general levels that enable its genesis and development.

In the perspective we adopted, there is a theoretical postulate that organizes the constructions in a hierarchy consisting of three levels: schemas, subschemas and micro-constructions. Those three levels are explained from the degrees of generality and abstraction that define them.

Traugott and Trousdale (2013, p.17) illustrate this proposal, based on the quantifying construction of the English language:



Source: Traugott and Trousdale (2013, p.17)

As can be seen from Figure 1, in the example, the schema is represented by the class of quantifiers, regarded as the highest level of the constructional hierarchy. At an intermediate level, there are two possible subschemas: the quantifiers that represent a large amount and the the quantifiers that indicate small amounts. At an immediately lower level of the hierarchy, we detected the micro-constructions *many*, *a lot of*, *few* and *a bit of* that are materialized in speech through various possible constructs.

As Traugott and Trousdale (2013) demonstrate with Figure 1, any language speaker who has knowledge of a given set of micro-constructions naturally also has knowledge of subschemas and schemas that instantiate them, often unconsciously.

In the model we adopted, which is essentially usage-based, the constructs are the concrete instantiations of the language, i.e., what users actually produce. According to Bybee (2010, p.14), the construct helps to shape the mental representation of the language and is the locus of innovation. After all, speakers embody language through the constructs.

It is worth mentioning that the innovations at the level of the constructs match more abstract levels of constructions, enabling the emergence of new uses. The replication of these occurrences naturally leads to innovative formations in language, due to the need for greater expressiveness in language. These new formations can become real in the linguistic system or they can simply become obsolete or even disappear altogether.

Case study – the connective construction LocV

In order to demonstrate the applicability of the constructional grammar approach, within the context of usage-based linguistics, we will present one of our research objects in this section.³ We are referring to the textual connective construction formed by locative pronoun (Loc) and verb (V), hereafter referred to as LocVconec. The LocVconec is a kind of semantic-syntactic pairing highly integrated, in which the loss of compositionality, corresponding to the dissipation of properties of the categories of their subparts - Loc and V, is offset by a gain in schematicity, such as advocated in Oliveira e Rocha (2011) and Rocha (2011). Taking into consideration Table 3, presented in the subsection *Cognitivism and the Grammatical Construction*, we classify the LocVconec as a construction that is: a) complex, because it is formed by two subparts; b) schematic, because of the high conventionalization that composes it; (c) procedural, because of the grammatical content it brings about.

The data we present in this section belong to the website *Corpus do Português*, available at www.corpusdoportugues.org. We work with fragments of written European Portuguese (EP) and Brazilian Portuguese (BP), focusing on qualitative analysis and taking into consideration quantitative aspects, within a historical perspective⁴.

The class of the connectors is considered more advanced in the cline of linguistic change when compared to other classes of lexical type, such as nouns or verbs. We assume that this class is a channel for procedural and more abstract content, in the establishment of logical-textual relations and that results in constructional change or constructionalization. In this trajectory, more compositional formations will leave room, via neo-analyses and inferences, to the more schematic and abiding uses of the grammatical function. These uses have their selection and frequency motivated by pragmatic-discursive type factors, such as the following occurrences of contemporary Portuguese:

(1) Deve fazer umas quadrinhas novas... Porque não faz? - Fiz já. - Pode recitar? - Pois não. - Diga lá.; - **Lá vai**: Ai, Filomena, Se eu fosse como tu, Punha uma máscara Na cara do Dudu. (19:Fic:Br:Barreto:Urbana)

[“You should make some new rhymes ... Why don’t you?” “I’ve already made them”. “Can you recite?” “Yes, I can”. “Tell us”. “**There you go**: Oh, Filomena, if I were like you I would put a mask on Dudu”.] (19:Fic:Br:Barreto:Urbana)

³ The data presented here are part of an integrated study, supported by CNPq and Faperj, developed under the Speech & Grammar Study Group UFF, as described on the website <http://discursoegramaticauff.blogspot.com.br/>

⁴ The LocVconec is the subject of the doctoral thesis of Rossana Alves Rocha, a study currently developed in the Post-graduate program in Language Studies at UFF. The data presented here were analyzed in the qualifying examination of her thesis, approved in 2014.

(2) Conheci, mais e de súbito, que essas confissões de autores são coisa perigosa: se se diz pouco, parece simplicidade afetada e insincera; se se diz um tanto mais, parece fatuidade e pedanteria. Quis fugir à resposta; mas estava preso pela promessa. Palavra de tabaréu não torna atrás... **Aí vai**, pois. Em mim o caso literário é complicadíssimo e anda tão misturado com situações críticas, filosóficas, científicas e até religiosas, que nunca o pude delas separar, nem mesmo agora para lhe responder. (19: Fic: Br: Rio: Time).

[I suddenly understood more clearly that these authors' confessions are dangerous; if you say little, it sounds like unnatural and insincere simplicity; if you say a little more, it sounds like vanity and pedantry. I wanted to evade the answer; but I was bound by the promise. Naïve people cannot go back on their word ... **Here it is**, then. For me, the literary case is complicated indeed and it is so entangled with critical, philosophical, scientific and even religious situations, that I could never separate it from them, I cannot even do it now in order to answer your question.] (19: Fic: Br: Rio: Time).

In (1) and (2), the constructs *lá vai e aí vai* [there you go and here it is] instantiate LocVconec. Those are highly entrenched uses, in which the traces of the original categories of their subparts wane, in order to form a semantic-syntactic whole, which acts in the articulation of ampler textual portions, connecting them. Less schematic and more compositional, such formations come to integrate another category of language, the category of the connectors, in marginal or less prototypical position.

Because of its productivity and older record in the corpus analyzed, we assume that **aí está [that is it]** is the model micro-construction of LocVconec, in Bybee's terms (2010). This is the most recurrent type in contemporary usage of Portuguese and it can serve as an analog basis for new instantiations of LocVconec. We are referring to usage such as:

(3) O melhor era fazer como todos os homens, até casados, até recém-casados. O melhor era fazer como o pai. **Aí está**. Joaquim por mais que expulsasse a lembrança amarga daquela noite da Rua das Flores era constantemente perseguido por ela. Daí a timidez de suas primeiras aventuras, nome com que ele dourava a sentida sordidez dos coitos pagos à vista. Uma aventura, uma conquista. Parecia um criminoso. Escolhia horas adiantadas da noite, se exasperava quando custavam para abrir a porta e ele ficava sujeito às olhadas dos transeuntes, exigia um quarto bem trancado, tapava o buraco da fechadura. Inutilmente procurava se confortar. (19: Fic: Br: Castillo: Maria).

[The best thing to do was to do it like all other men, even the married ones, even newlyweds. The best thing to do was to do it like the father. **That is it**. Joaquim, no matter how he expelled the bitter memory of that night on Rua das Flores, was constantly haunted by it. Hence the timidity of his first adventures, name with which he disguised the perceived sordidness of the sexual act paid in cash. An adventure, a conquest. He felt like a criminal. He would choose the late hours at night, and became exasperated when they were slow to open the door, making him subject to the looks of passers-by, he would demand a well locked room and covered the keyhole. He sought comfort, to no avail.] (19: Fic: Br: Castillo: Maria).

Dissertation-type sequences, as shown in (3), are privileged contexts for the articulation of LocVconec. These are fragments marked by (inter) subjectivity and by shared inferences, as Traugott and Dasher (2005) endorse. We assume here that these contextual environments motivate instantiations of LocVconec, because such schema articulates logical-textual relations that compete for exposure and defense of point of view. This is what happens in (3), in which the *construct **ai está [that is it]***, bordered by larger pause and connecting two textual portions, acts on behalf of what the speaker seeks to defend, namely, the shy and unconventional behavior of the character Joaquim.

In the texts of contemporary Portuguese surveyed⁵, in accordance to Diewald (2006 2002), we found 59 isolated contexts of instantiation LocVconec. From this group, 27 belong to the micro-construction *ai está [That is it]*, as shown in (3), which totalize half of the general data.

In addition to the higher productivity of *Ai está* in contemporary sources, corresponding to the 20th century, the exemplarity of this micro-construction also manifests itself in the records of its instantiation in the oldest synchronies of the language. We argue that the *cline* of constructionalization of *Ai está* has been registered from at least the 15th century, in which we detected its normal context (DIEWALD, 2002), in which Loc and V preserve its source category traits, such as the following:

(4) Capitulo XVIIIº como o comde pos primeiramente as atalaias & em que lugares, & como os mouros vieram, & da escaramuça que hii ouve. Amtre as cousas que o comde ordenou pera guarda da çidade assy foram as atalaias, as quaes foram postas logo primeiramente sobre Barbaçote, **em hũ outeiro que hii está** & no dia seguynte que hordenarão mamdou o comde hũ de cavallo que fosse por hos homês ã ellas, o qual, amdando çercamdo a çidade pera descobrir allgũs mouros, se hos hii avia, sayram a elle hũa soma delles que jaziam escomididos & começarão de ho seguyr. (Crónica do Conde D. Pedro de Meneses, 1400-1500).

[Chapter 18 – How the Count put the sentinels first, in which places, how the moors came and the battle that followed. Among the things the Count commanded for the city guards there went the sentinels, who were first deployed over the fort, on **another hill that here lies**. In the following day, the Count ordered the men to go on horseback and the sentinels to walk and besiege the city in order to find some moors, if there were any and one of them who was hiding came out, and they began to follow him.] (Crónica do Conde D. Pedro de Meneses, 1400-1500).

In fragment (4), extracted from of a narrative based text, **hii está [here lies]** makes anaphoric reference to a place (“outeiro” - a hill) which in effect is located at a specific place. This way, **hii está** is configured as a lexical arrangement, which collaborates for the spacial *frame* and the contextualization of the narrative scene. Each subpart of

⁵ As shown later in this section in Table 1, we highlight the 59 data referred to among the 565 general data of use of contiguous Loc and V.

hii está maintains its semantic-syntactic integrity, highlighting greater compositionality and the diminutive schematicity of this arrangement.

In the sources of the 16th century, the exclusiveness of normal contexts in the instantiations of Loc and V are preserved. Until that century, we only find Loc and V used effectively as adverb and verb, respectively. We argue that the later constructionalization, which is derived from LocVconec has its origin in the pre-verbal ordering of Loc, considered recurrent in the ancient stage of the language. As Martelotta (2012) demonstrates, older synchronies of Portuguese display greater positional variability of the adverb in relation to the verb. This variability, in more recent stages, mainly starting from the 19th century tends to decrease in favor of a tendency to post-verbal ordering. In this sense, LocVconec is interpreted as having its origin in the ancient tendency of pre-verbal ordering of Loc.

In the 17th century, considering normal contexts such as (5), we found data which configure themselves as atypical contexts (DIEWALD, 2002), such as (6):

(5) Então o presidente disse em segredo para alguns dos seus oficiais: Chamai aqui logo a Filemon, porque ele, com suas graças e trejeitos e música dulcíssima, sem dúvida há-de amansar a este emperrado. Buscado Filemon onde não estava, como havia de aparecer? “Senhor (disseram os oficiais) não o pudemos achar”. Tinha ele um irmão chamado Teon, ou Teonas; a este perguntou o presidente: Que é feito de teu irmão? E ele, como sabia do disfarce, respondeu logo: É esse que **ai está** em tua presença. Foi logo descoberto e conhecido; e o presidente, entendendo que o fizera por via de entremês, para dar que rir a todos, desfechou a rir e disse: “Já sabemos que és nascido para (...)”(Manuel Bernardes, Nova Floresta, 1688).

[Then the president said to some of his officers, in secret: Haste to call Philemon here, because his gestures, grimaces and sweet music will definitely soothe this stubborn man. They looked for Philemon but he was nowhere to be found. “Sir”, (the officers said), we could not find him.” He had a brother called Teon or Teonas; the president asked the man: What happened to your brother? Knowing about the disguise, he quickly answered: **Here is** the man who is in your presence. This was soon revealed and known; and the president, understanding he had done it as a joke so as to make everybody laugh, began to laugh himself and said: “We already know you were born to (...)”(Manuel Bernardes, Nova Floresta, 1688).

(6) Bom amigo he o gatto, se nam arranhasse. C. Caõ de palheiro nem come, nem deixa comer. Comadres, & vizinhas, as reuezes ham farinhas. Como te fizer teu compadre, assi lhe faze. Companhia de dous, companhia de bons. Companhia de tres he mà res. Contas na maõ, & o olho ladram. Cuida o mentiroso, que tal he o outro. D. Dadiua roim a seu dono parece. **Debaixo de boa palaura, ahiestá o engano.** Debaixo de bom sayo, está o homem mao. De roim a roim, pouca he a melhoria. De roim a roim quem acomette, vence. (Adagios, Antonio Delicado, 1651).

[A cat would be a good friend, if it did not scratch. The dog in the manger will not eat the oats nor let anyone eat them. Friends and neighbors have the same problems. Do to people what you would like people to do to you. Two is company three is a crowd. We need to be careful

and watchful of thieves. A liar thinks others are lying too. Bad people give bad things to others. **Under beautiful words, here is the deceit.** Don't judge a book by its cover. There is no use in lamenting, the one who advances is the one who conquers] (Adagios, Antonio Delicado, 1651).

In direct speech, as in the fragment (5), *ai está* displays greater compositionality, with anaphoric reference of Loc to the sentence subject, the maintenance of the deictic character of Loc, in the nomination of the interlocutor, and the permanence of full content of V. Yet, in (6), the context is more abstract and subjective. As a component of an expository sequence of adages, *ahiestá* arises in (6) more internally linked and prepended to the non-prototypical subject *o engano [deceit]*. Such configuration collaborates so that the meaning of Loc and V can be more abstract, leading them to be interpreted as one structure only, in formal terms and in only one meaning, as it highlights certain evidential or demonstrative function. We consider contexts like (6) the effective initial stage of change that derives in constructionalization LocVconec.

In the 18th century, the picture of the previous century remains with records of normal and atypical contexts of Loc and V. Next, we present one of the fragments of the referred atypical use:

(7) De versu agitur à pag. 329. 13. * Vertex, icis, || redemoinho de vento, ou de agoa: moleira da cabeça, cume de qualquer cousa, pólo do Ceo. 151. 2. * Verto, is, || volver, virar, verter, mudar, revolver, * Activ. Vertis id mihi vitio, || attribuis-me, imputais-me isso a vicio. * In eo res vertimur, || **ahi está** o ponto da cousa, nisso consiste 194. 24. 233. * fin. Veru, u, || espeto, ou zaguncho, * dativ. & abl. Pl. Verubus. 125. 18. Vervex, ecis, || o carneiro castrado. 309. 3. * Vesanus, a, um, || cousa louca, sem onse, furiosa: * Vesania, ae, || falta de onse, ou loucura 304. * fine. Vescor, eris, || comer, apascentar-se, sustentar-se: * Apud Virg. Vesci aurâ, || viver 178. * fin. 226. 6. 21. Vesper, (Manuel Alvares, Gramatica, 1744).

[(7) De versu agitur pag. 329. 13. * Vertex, icis, || whirlwind, fontanelle, summit of something, pole. 151. 2. * Verto, is, || turn, change, revolve, * Activ. Vertis id mihi vitio, || attribute this to me* In eo res vertimur, || **here is** the heart of the matter, this consists on 194. 24. 233. * fin. Veru, u, || spit or spear, * dativ. & abl. Pl. Verubus. 125. 18. Vervex, ecis, || castrated ram. 309. 3. * Vesanus, a, um, || crazy thing, meaningless, furious: * Vesania, ae, || meaninglessness, or insanity 304. * fine. Vescor, eris, || to eat, to feed, to sustain oneself: * Apud Virg. Vesci aurâ, || 178.viver * fin. 226.6. 21. Vesper,] (Manuel Alvares, Gramatica, 1744).

In (7), a grammar compendium, in the absence of an explanation of a Latin term, we found **ahi está [here is]** preceded by the non-prototypical subject *o ponto da cousa. [the heart of the matter]*. This context is very similar to (6), in which, also in expository sequence, Loc and V are more paired, in terms of form and meaning, allowing a more integrated reading of both constituents.

Only in 19th century data could we find more related usage of Loc and V, including the most conventionalized ones with instantiations of LocVconec. We present the

four contexts of occurrence below, based on Diewald's taxonomy (2002, 2006) aforementioned.

(8) - Está enganado, Sr. Abade – veio-lhe à mão Clemente. – Fosse um criminoso que me pedisse de comer e de beber, quando passasse à minha porta, eu, com ser regedor, não lho recusaria. O que a minha casa não há-de ser, isso não, é esconderijo de ladrões, de malvados e de refractários; nem sei que grande glória venha daí a quem tanto mal faz à sociedade, não deixando que se cumpram as leis. **O vinho aí está.** Efectivamente apareceram dois rapazes, empunhando cada qual uma caneca a transbordar de puríssimo vinho verde, que os dois caçadores esvaziaram de um fôlego. (18: Dinis: Fidalgos).

[You are wrong, Abbot – Clement said, reaching for his hand. “Had it been a thief who asked me to eat and drink when passing by my door, I, as a rector, would not refuse it. However, my house will not become a hiding place for robbers, for wicked and rebellious men; I do not even know what is the glory in inflicting so much evil to society, not permitting the law to be obeyed. **Here is the wine.** With effect, two young men appeared, each holding a mug filled to the brim with the purest green wine, which they drank in one gulp.] (18: Dinis: Fidalgos).

(9) O imperador que apoiou o sr. Dantas, negando indenização pelos negros de 60 anos, se prestará também a apoiar a política da indenização? Que papel ficará fazendo este país, se consentir em qualquer das duas hipóteses? Não reconhecerá ele finalmente que tem sido governado por uma facção, assalariada pelo Tesouro e decidida a tudo empenhar para garantir o salário? Deixamos aí de pé esta série de interrogações. A lógica da História faz destas emboscadas. Quem transigir com a pirataria **aí está** a consequência. O direito natural diz: ninguém pode reduzir a cousa pessoa humana. A religião diz: é inviolável na sua liberdade a imagem de Deus sobre a Terra. (18: Patrocínio: Campanha).

[Will the emperor who supported Mr. Dantas in denying compensation for the 60-year-old black men, also support the compensation policy? What is this country doing, if it consents to either one of these two hypotheses? Won't it finally understand that it has been ruled by a faction who receives a salary from the Treasure and who is determined to guarantee their salaries? We leave these questions to be considered. The logic of history prepares such traps. **Here is** the consequence for those who allow piracy. Natural rights say that no one can underestimate a human being. Religion states: God's image on Earth cannot have his freedom violated.] (18: Patrocínio: Campanha).

(10) E por isso, disse ao pequeno a verdade: disse-lhe que num momento de loucura, o papá tinha dado um tiro em si. – E ele? – E ele, replicou Afonso sorrindo, perguntou-me quem lhe tinha dado a pistola, e torturou-me toda uma manhã para lhe dar também uma pistola. E **aí está** o resultado dessa revelação: é que tive de mandar vir do Porto uma pistola de vento. Mas, sentindo Carlos em baixo, aos berros ainda pelo avô, os dois apressaram-se a ir admirar a corujazinha. Vilaça ao outro dia partiu para Lisboa. Passadas duas semanas, Afonso recebia uma carta do administrador, trazendo-lhe, com a adresse da Monforte, uma revelação imprevista. Tinha

voltado a casa do Alencar; e o poeta, recordando outros incidentes da sua visita a Mme. De l' (18:Queirós:Maiais).

[That is why he told the truth to the little boy: he said that his father had shot himself in a moment of insanity. What about him? "About him"? Replied Afonso smiling, he asked me who had given the pistol to his father, and insisted that I gave a pistol to him all morning. And **here is** the result of the revelation: I had to order a toy pistol from Oporto. But as he felt Carlos was sad, still under the effect of his grandfather's yelling, they both hastened to admire the little owl. Vilaça left for Lisbon the following day. After two weeks, Afonso received a letter from the manager, bringing an unpredicted revelation with Monforte's address. He had gone back to Alencar's house; and the poet, recalling other events when he visited Mme. De l'] (18:Queirós:Maiais).

(11) Com que direito intervém? Eu tenho ou não tenho razão? Fui ou não fui caloteado? Eusébio – Home, o sinhô se cale! Olhe que eu sou mineiro! Lourenço – Não me calo, ora **ai está**. E declaro que não me retiro daqui sem estar pago e satisfeito! (Senta-se) Eusébio – Seu home, olhe que eu ... Lourenço (Erguendo-se) – Eh! Lá! Eh! Lá! Agora sou eu que lhe digo que se cale! O senhor não tem o direito de abrir o bico... Lola (Chorando) – Que vergonha! Que vergonha! Eusébio (À parte) – Coitadinha ... Lourenço – A princípio supus que o senhor fosse o amante desta senhora. (18:Azevedo: Capital).

["By what right do you intervene? Am I right or not? Wasn't I welshed?" Eusebio: "Shut up, sir! I am from Minas Gerais, mind you!" Lourenço: "I will not be quiet, **here it is**. And I declare I will not leave this place without getting paid! (He sits down) Eusebio: "You Watch out..." Lourenço (standing up from his seat): "Hey, I tell you to be quiet, you have no right to open your mouth ..." Lola (weeping) "What a shame! What a shame!" Eusebio (aside): "Poor her" ... Lourenço: "At first I thought you were this woman's lover."] (18:Queirós:Maiais).

In (8), **ai está** is configured as the normal context; it is a less schematic and more compositional usage found in data concerning lexical level and the first formations found for this arrangement, detected since the 15th century. In (9), as we ascertained in (6) and (7), corresponding, respectively, to fragments of the 17th and 18th centuries, we find the atypical context, in which the postposition of non-prototypical subject, such as *a consequência*, [the consequence] allows a more abstract and integrated interpretation of **ai está**. Yet, in (10), a context which was only detected in the 19th century in the sources searched, the level of semantic-syntactic binding of Loc and V increases; besides the postposition of the non-prototypical subject *o resultado dessa revelação* [the result of this revelation], characteristic of atypical context, there is a pause prepending the Loc, causing **ai está** to take on critical context properties, in a more advanced stage of semantic-syntactic binding to both constituents. Next, in (11), we find **ai está** as effective isolated context, as the instantiation context LocVconec; in these environments, the compositionality of Loc and V is very committed with the increase of its schematicity; the properties of each subpart wane and the traits of the connector class stand out in the whole that Loc and V start to compose.

The isolated context of LocVconec is configured as the final stage of grammatical constructionalization, since the formation of a new semantic-syntactic pairing in the language occurs, obeying a procedural function, which becomes, albeit marginally, part of the connector class. Therefore, this is grammaticalization by expansion, which creates a new schema and allows the emergence of new usage, via neo-analysis and analogization (TRAUGOTT; TROUSDALE, 2013).

The 20th century data confirm what is found in the 19th century, highlighting the gradience and category prototypification advocated by Bybee (2010). In the aforementioned Corpus of Portuguese, database used in our research, we selected six micro-constructions of LocVconec schema, namely: **aí está**, **lá está**, **aqui está**, **lá vai**, **aí vem** e **aí vai** [that is it, there it is, here it is, there it goes, here it comes and there it goes] in sources of contemporary Portuguese, taking into account the type of articulated context. These types were chosen because of its recurrence of usage. Next, we present the frequency of contexts in which Loc and V are arranged contiguously, based on Diewald's proposal (2002, 2006), because of its highest level of refinement of contextual continuum in relation to the classification by Heine (2002):

Table 4 – Frequency of LocV contexts in contemporary Portuguese

Context	Aí está [That's it].	Lá está [There it is]	Aqui está [Here it is]	Lá vai [There it goes]	Aí vem [Here it comes]	Aí vai [There it goes]	TOTAL
Normal	44	131	68	44	28	8	323
Atypical	51	5	11	15	9	7	98
Critical	29	4	6	29	6	11	85
Isolated	27	4	9	3	13	3	59
TOTAL	151	144	94	91	56	29	565

Source: Author's elaboration.

As we can ascertain from Table 4, **aí está** is more frequent and, the most important point, it registers the greatest number of isolated contexts, i.e., with a more grammatical usage as a connector; out of the 59 data in isolated context, among 565 general ones, 27 are tokens of **aí está**. The second most instantiated micro-construction is **aí vem**, with 13 registers in isolated context, out of the general 59 of its occurrence. It is followed by **aqui está**, with 9 tokens of isolated context, and then, with lower frequency, sporadic cases of **lá está**, **lá vai** e **aí vai**. In the case of the *type* **aí vai**, we point out that it also featured a more distinctive register, with higher number of data in critical context than in normal context. For the detection of the contexts, we used the same criteria applied in the analysis of **aí está** in the distinct synchronies of the Portuguese language.

Focusing on the records by context, we observed that the normal one, corresponding to the lexical and more compositional level of Loc and V, remains as the most productive in relation to four out of the six researched patterns – they are 323 data out of 565

general. Only *aí está* registers a higher frequency of atypical contexts than normal ones, besides being the most productive type and with higher frequency of use in isolated contexts, which becomes another evidence of the exemplarity of this pattern as an effective prototypical micro-construction of the LocVconec in relation to others. In absolute numbers, the frequency of each context is proportional to the *cline* proposed by Diewald (2006, 2002) and by Heine (2002), given that one can establish the following derivational correspondence:

Schema 1 – *Cline* of contextual frequency of LocV in contemporary Portuguese

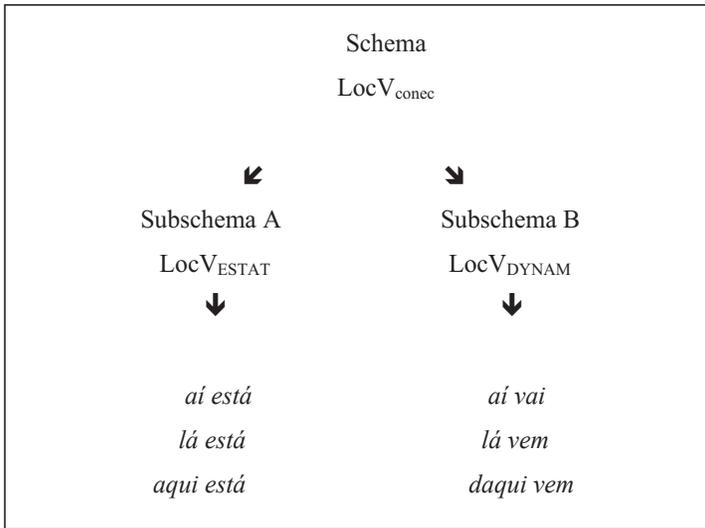
normal context	>	atypical context	>	critical context	>	isolated context
↓		↓		↓		↓
323		98		85		59

Source: Author’s elaboration.

Considering that the contextual gradience illustrated in Schema 1 corresponds to the trajectory of the constructionalization of LocVconec in Portuguese and also taking into consideration the data obtained by means of diachronic research, we can come to some relevant considerations. One of them is that we are facing a more recent schema of the language, which resulted in grammaticalization. It started in the 17th century at least, in the articulation of atypical contexts and culminated in the 19th century, with the record of the occurrence of isolated contexts. With the creation of this new pairing, one more member integrates the class of connectors. Such pairing is classified as a complex, schematic, procedural and a little compositional language formation.

At the internal level, the LocV_{conec} turns out to be highly integrated with its subparts, collaborating for the formation of a new meaning and a new function. Such schema unfolds in subschemas, depending on the semantic type of the instantiated V, if stative-locative, such as *estar* (verb to be), or dynamic, such as *ir* or *vir* [to go or to come]; the subschemas, in turn, are distributed into micro-constructions as in the case of stative subschema, the *types aí está, lá está e aqui está*. Schema 2 demonstrates the proposed constructional hierarchy:

Schema 2 – Constructional hierarchy of LocVconec



Source: Author's elaboration.

Conclusion

In this paper, we could ascertain how the studies on the interface Functionalism x Cognitivism are fruitful, providing a rich and promising agenda of linguistic research. Among the various themes that can be developed in this field of study, we highlight the issue of grammatical and lexical categorization, the process of directionality and the broader look on our objects of study, focusing them at construct level and, at the same time, in more general and abstract dimensions of linguistic organization, permeated by factors of pragmatic-communicative and cognitive order, in addition to structural factors.

Under this new perspective, grammaticalization still has its role and importance, but it gains a broader dimension in at least two ways: by expansion and by reduction. The approaches of grammaticalization by expansion can be associated with the process of grammatical constructionalization, defined as the development of procedural functions and the consequent increase in productivity. They focus especially on the frequency and degree of abstraction of grammatical items. The approaches of grammaticalization by reduction, in turn, can be associated with the grammatical constructionalization with reduction in compositionality and they focus internally on an item or on a group of items.

In the constructional grammar approach, there are three fundamental factors: schematicity, productivity and compositionality. When seen in a gradual and related way, these factors are related to the issue of (inter) subjectivity and provide strictness to the procedures of analysis. At constructional level, these factors can be associated as follows: schematicity is concerned with *constructional scope* (the degree of generality of the formal and functional properties of construction); *productivity with constructional*

vitality (how often new instances can be generated by a constructional schema), and *compositionality with constructional alignment* (to what extent a constructional schema is created in a predictable or non-predictable way from its component parts).

This paper proposed an implementation of the constructional approach to the textual connective construction LocVconec. From the theoretical basis adopted, it was possible to postulate that LocVconec is a construction with the following characteristics: a) complex, because it is formed of two subparts; b) schematic, because of the high convention it is made of; (c) procedural, because of the grammatical content it conveys.

Because of its productivity and older record in the corpus analyzed, we assume that *áí está* is the model micro-construction of LocVconec, in Bybee's terms (2010). This is the most recurrent type in contemporary usage of Portuguese and it can serve as an analog basis for new instantiations of LocVconec.

We reiterate that the reflection presented throughout this paper illustrates how the dialogue between theories can be productive for scientific research in Linguistics. The incorporation of cognitive theoretical assumptions to functionalist research of the American trend contributes to a more holistic perspective about the phenomena of language, as it was made clear in the analysis of connector LocVconec construction. In this approach, the cognitive component starts to receive greater strictness and systematization in scientific research to the same extent that the formal issues, linked to linguistic structure, also begin to receive more attention, balancing the correlation function < > form. Therefore, we hope that further research, both theoretical and empirical, may add to the proposal we presented, with a progressive development of the so-called *constructional grammar approach*, expanding the description and the analysis of the network of constructions in Portuguese.

ROSÁRIO, I.; OLIVEIRA, M. Funcionalismo e abordagem construcional da gramática. *Alfa*, São Paulo, v.60, n.2, p.233-261, 2016.

- *RESUMO: Este artigo apresenta, discute e exemplifica os rumos da pesquisa funcionalista em sua orientação mais recente, no diálogo com os estudos cognitivistas. Fruto dessa interrelação, destaca-se a abordagem construcional da gramática, na ênfase do pareamento função x forma que marca as expressões linguísticas. Além de apontar os ganhos teórico-metodológicos que tal diálogo tem trazido no âmbito do Funcionalismo, o artigo faz referência também às especificidades de ambas as vertentes teóricas e aos ajustes necessários a fim de que possam ser desenvolvidas pesquisas nessa interface. O tratamento da gramática em perspectiva holística e o rigor na detecção de propriedades de sentido e estrutura que marcam os usos linguísticos são considerados vieses positivos e promissores da pesquisa funcionalista de abordagem construcional.*
- *PALAVRAS-CHAVE: Funcionalismo. Construcionalização. Mudança construcional. Cognitivismo.*

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Received in September 2015

Approved in November 2015

