

Constructional variation, change and stabilization in [sei] and [aham sei] as disbelief answers in Brazilian Portuguese

Estabilização, variação e mudança construcionais
em [sei] e [aham sei] como respostas de
descrença no Português Brasileiro

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Abstract

This paper aims to analyze how constructional variation, change and constructional stabilization occur with [sei] and [aham sei] as disbelief answers in Brazilian Portuguese (BP) instead of their common use linked to cognitive sense (the act of knowing something/knowing about something or knowing how to do something), perceived primarily by differences in intonation and conversational context. For this, we'll see the results found by Souza (2024) who, based on *corpora* data and tests made with native speakers, seek to understand a little further how constructional variation happens in this case and what are the preponderant factors for these speakers to choose those constructions instead of others or vice-versa in some specific dialogical scenarios. His work, elaborated under a socioconstructionist profile studied how Construction Grammar and Variationist Sociolinguistic can contribute to explain empirically the results found, which led us to follow the same theoretical path in order

to expand the examples and expose interesting data shown at his work, specially how schematicity and productivity happen within these constructions. In sum, we present the most prominent results of a work that studies how prosodic features interfere in the form-meaning pairing in the analyzed data, an interface still underexplored at the constructional studies field.

Keywords:

Brazilian Portuguese; construction grammar; constructional change and variation. socioconstructionism.

Resumo

Este artigo tem como objetivo analisar como ocorrem a variação, a mudança e a estabilização construcionais com [sei] e [aham sei] com acepção de descrença no Português Brasileiro (PB) em vez de seu uso comumente ligado ao sentido cognitivo (o ato de saber algo/saber sobre algo ou saber fazer algo), percebida principalmente pelas diferenças de entonação e contexto conversacional. Para isso, veremos os resultados encontrados por Souza (2024) que, com base em dados de *corpora* e testes feitos com falantes nativos, buscou entender um pouco mais como acontece a variação construcional neste caso e quais são os fatores preponderantes para esses falantes escolherem essas construções em vez de outras ou vice-versa em alguns cenários dialógicos específicos. Seu trabalho, elaborado sob um perfil socioconstrucionista, estudou como a Gramática de Construções e a Sociolinguística Variacionista podem contribuir para explicar empiricamente os resultados encontrados, o que nos levou a seguir o mesmo caminho teórico, visando ampliar os exemplos e expor dados interessantes mostrados em seu trabalho, especialmente como esquematicidade e produtividade acontecem dentro dessas construções. Em suma, apresentamos os resultados mais destacados de um trabalho que estuda como os traços prosódicos interferem no pareamento forma-significado dos dados analisados, interface ainda pouco explorada no campo dos estudos construcionais.

Palavras-chave:

Gramática de construções; português brasileiro; variação e mudança construcionais; socioconstrucionismo.

Introduction

This paper aims to determine how the matter of constructional variation, change and stabilization occurs with the constructions [SEI] and [AHAM (,) SEI] as disbelief answers in Brazilian Portuguese (BP). For further understanding, *sei* is a verbal form that means ‘I know’¹ while *aham* is an onomatopoeia² that has a similar application in Portuguese as ‘Yeah’ has in English (often as a confirmation), e.g.:

‘*Você sabe quanto é 1+1?*’ ‘*Sei.*’ (‘Do you know how much is 1+1?’ ‘I [do] know’.);
‘*Você sabe que amanhã tem prova, né?*’ ‘*Aham, sei.*’, (‘You do know that tomorrow we have a test, right?’ ‘Yeah, I [do] know’.)

To do so, we will analyze the results obtained in Souza (2024) which, based on two stimulus tests with more than 100 participants, captured how native speakers interpret these constructions and use them in two different senses: cognition (linked to the act of knowing [how to do] something, understand something), as the two examples seen in (a) and (b); and the sense of disbelief, a possibility with these constructions above in BP, but not seen in English the same way. To this end, the tests were divided into two steps:

The first consisted of recording 20 people reading fictitious excerpts that contained both constructions with meanings of cognition and disbelief: [SEI]_{cognition}, [SEI]_{disbelief} [AHAM SEI]_{cognition} and [AHAM SEI]_{disbelief}, with their appropriate contexts explicit in the excerpts because, regardless the sense, these constructions are written identically in BP and the most prominent difference is how people enunciate them. These recordings were collected in audio format and analyzed using the PRAAT software (Boersma; Weenink, 2001);

The second test took place using Google Forms, open to the local community through a public link available on social media, which included questions about how speakers interpreted certain stimulus phrases in terms of their meanings and also which punctuation they would choose for these sentences, so common in spoken language, in case they need to write them down.

¹ In Portuguese, including the BP, is very common for personal pronouns to be elliptical in sentences, especially when it comes to I and We. That’s why “I know” is translated simply as “*Sei*”, and not “(*Eu*) *sei*” in this paper. Native speakers naturally identify the elliptical pronoun ‘EU’ (I) in sentences like this one and are free to choose whether to write/speak it or not. Souza (2024) explains that this happens as a predicted deictic notion in discourse since it points out the speaker’s point of view in a specific discursive scenario when they point themselves as the center of the message (I know/don’t know [about] something; I believe/disbelieve something). The explanation is supported by Fillmore-s postulates (1984) and the discourse analysis models proposed by Marmaridou (2000).

² We chose to follow Souza’s (2024) classification for ‘*aham*’ as an onomatopoeia instead of an interjection because the author claims that interjections are expressive sentences and not a word class as verbs. He also claims that, once ‘*aham*’ is yet not officially included in Portuguese dictionaries, it can be seen as an onomatopoeia since it is a try to reproduce on writing an oral manifestation with no meaning attached to it, different from dictionaryed terms.

The recording of the audios and the complementation with a questionnaire that addressed the matter of punctuation was due to the perception that the difference between these two meanings in comparison (*cognitive* versus *disbelief senses*) was noticed by the speaker based on intonation and, of course, the context. Thus, the first test served to show the intonation in each participant's utterance; while the second test served, among other things, to illustrate how the speaker would reconfigure the prosodic aspects in written data.

Based on the data collected and the conclusions they led Souza (2024) to, we will analyze these disbelief constructions, with regard to their stabilization in the language and their variationist tendencies, relying on Socioconstructionism (Machado Vieira, 2016; Machado Vieira; Wiedemer, 2020; 2019a; 2019b), a theoretical-methodological approach which is structured on the interface between Functional-Cognitive Linguistics, that seeks to study language based on sociocultural and pragmatic data, communicational situations, cognitive operations and internalized knowledge; Construction Grammar (Goldberg, 1995, 2006; Traugott; Trousdale, 2013) that asserts that language is a network of form-meaning pairings; and with the postulates of Variationist Sociolinguistics (Weinreich; Labov; Herzog, 1968; Eckert, 2012). So, in the following sections, we will present basilar studies about Construction Grammar and then discuss topics on Souza's (2024) work results.

Construction Grammar: change and stabilization at stake

Traugott and Trousdale (2013), as well as Goldberg (1995) and Croft (2001), classify constructions as results of the pairing between form and meaning. By this point of view, we understand that language is a network structured based on these constructions. Below, Figure 1 shows how Croft (2001) illustrated this pairing.

For Traugott and Trousdale (2013), this schematization can be further simplified. The authors proposed a representation as follows:

$$[[F] \leftrightarrow [M]]$$

In this template, [F] represents 'form', which includes syntax, morphology and phonology; while [M] represents 'meaning', that includes discourse, semantics and pragmatics. The double-headed arrow (\leftrightarrow) is a symbolic representation of the link that emerges between form and meaning/function; while the brackets denote that it is a pairing representing an already conventionalized unit. Machado Vieira and Wiedemer (2019a), in their socioconstructionist studies, endorse that prosody, lexicon and text must also be included in the formal pole; just as, at the meaning-functional level, we must also count the social aspect. We shall agree with Machado Vieira and Wiedemer's improvement of Traugott and Trousdale's template because in

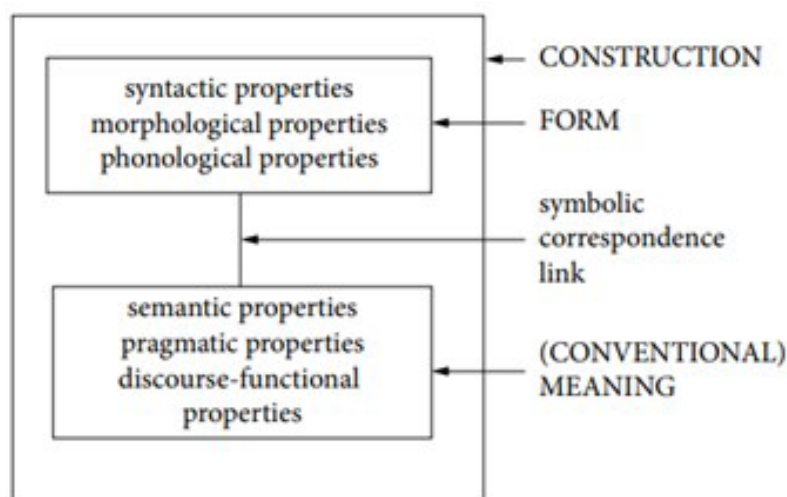


Figure 1 – Representation on Croft’s Radical Construction Grammar (2001) about form-meaning pairing.

Source: Croft (2001, p. 18).

the phenomenon being analyzed, it is extremely required to observe how prosodic, social, contextual and textual features act in a way that helps it happen. Let’s see two exemplifications in tweets that explain it better³.

In Image 1, we see a reply to a tweet that says: “Jair Renan’s, the #04⁴, company gained R\$4,5 mi in media contracts. Right after receiving monthly amounts that surpass R\$300 thousand, the company mysteriously shut down, even with all the ‘financial success’”. The X user shown on Image 1 then replied: “Oh, but he didn’t steal... it was all work!! *Sei*”.⁵

The tweet in Image 2 says: “I think he likes you” *aham sei* (as a disbelief about this person’s feelings). We do not translate the constructions analyzed here (*SEI* and *AHAM SEI*, respectively at images 1 and 2), because they do not have a clear translation as the rest of the tweets and also to highlight again that they are very expressive in BP, but only works in certain contexts, which would make the translation be a very different expression in English, even though the expression “yeah, right” does have a similar effect to north American English speakers. Brazilian speakers are

³ We know that former Twitter now is called X, but tweet is already a so-well established name for the texts on this social media that we decided to keep it here.

⁴ Since it refers to a military family, it is common in Brazilian media to address former president Jair Bolsonaro’s sons in order of their birth. As the tweet shows, Renan is his fourth son.

⁵ Just like in this tweet, Souza (2024) talks a little about emojis and others visual elements (like gifs, memes etc) that can help to put meaning effects in the written discourse because they often reconfigure physical gestures that can indicate various pragmatic efforts at speaker/listener interactions.



Image 1 – Tweet with [SEI]_{disbelief}.
Source: X (August/2023).



Image 2 – Tweet with [AHAM SEI]_{disbelief}.
Source: X (January/2024).

able to understand that these are cases of [SEI]_{disbelief} and [AHAM SEI]_{disbelief} because these expressions are easily recognizable in this sense due to the sentence structure:

Initial Proposition → Disbelief reaction

“He likes you” *seilaham sei*

“He didn’t steal any money” *seilaham sei*

“She is a good friend” *seilaham sei*

“They are no longer dating” *seilaham sei*

The examples from (c) to (f) show us that it’s important how these sentences are structured. The initial proposition can be made by one speaker and the reaction comes from a second one (speaker and listener’s/ writer and reader’s interaction) or both parts can come from the same person i.e. a reported direct speech, as Image 2 shows. Also, what allows people to understand the meaning that led to the choice of these specific constructions, just as in the tweets, are the contexts of use. For those

who don't understand them, especially non-BP speakers, it would be unlikely to capture the meanings intended by their authors.

When it comes to textual matters, Souza (2024) found out that some written text genres as tweets and fanfics (data provided by Mark-Davies *Corpus do Português*⁶, a site that contains *corpora* with over 2 billion words in Portuguese) are more likely to present this specific construction due to the level of their informality and their capacity to explore emergent new meanings and language creativity (cf. Marchuschi, 2002; 2005). About social stratifications, Souza (2024) also showed that there are some differences on how people apply or understand those constructions due to their distinct social groups, divided by socioeconomic factors like educational level and generations, which we'll see further in the analyzes section.

The explanations above, therefore, show that there are different conceptions about how this form-meaning relationship occurs to make a construction, including the need to amplify the features in each poll for some researchers. However, even though there are different constructionist approaches, the vast majority of Construction Grammars (CGs) share some of their basic principles, among which: (i) language is not the only cognitive system we have and, like the other ones, it is a network of nodes and connections between these nodes; (ii) the structure of the language is shaped by its use, that is, by its users. So, if we consider that users are the most important piece to understand linguistic constructions, it is natural to expect that changes come up from social interactions between them.

Constructions basic factors and constructional change

Before we talk specifically about change, we must revisit some of Traugott and Trousdale's relevant factors to explain the architecture of constructions, which is very important to understand in certain cases how and where they change. The authors then casted three factors: **schematicity**, **productivity** and **compositionality**.

The first of them, schematicity is defined as being "a property of categorization which crucially involves abstraction. A schema is a taxonomic generalization of categories, whether linguistic or not" (Traugott, Trousdale, 2013, p. 13). These abstract schemas basically license linguistic constructions, which allow new constructs to emerge in the speaker's inventory, such as the constructions we follow here. It means that this is inferred by language users, but not always consciously, as the authors tell us. Thus, these schemas are abstract construction groups, whether procedural or by content.

Figure 2, summarizes and exemplifies how Traugott and Trousdale casted these schemas distinctions, using the example of quantifier construction. As we can

⁶ Available at <https://www.corpusdoportugues.org/>. Accessed January, 24, 2024.

see, at the highest level, it includes all types of quantifiers, whether indicating large, small or intermediate quantity, or binominal and monomorphemic. The subschemas' distinctions displayed at the middle level are made between large, small and intermediate. At last, they showcased various micro-construction types at the lowest level (some quantifiers like *a lot of*, *few*, *many* and *a bit of*). In sequence (Figure 3), we showcase this structure applied to our phenomenon, in order to illustrate it.

Figure 3 shows only the constructions in display so far in this paper. Of course, we know that there are a lot of other BP constructions that denote disbelief, some of which we'll present and explore further in this research.

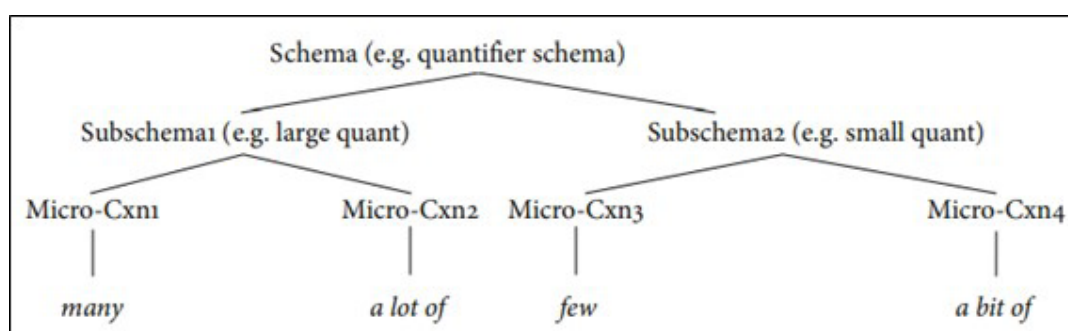


Figure 2 – Gradient of hierarchic relationships among constructions.

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

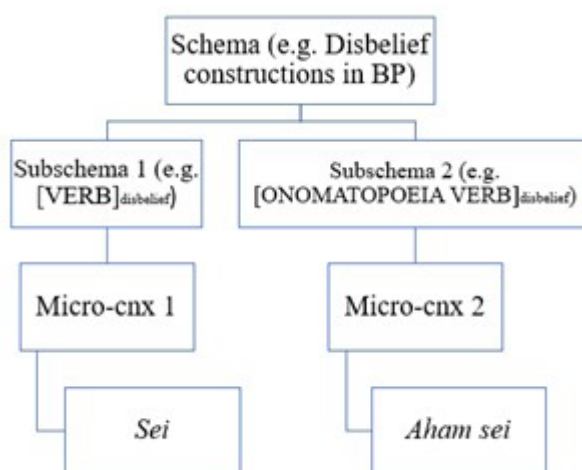


Figure 3 – Gradient of hierarchic relationships of constructions from disbelief constructions in BP to [SEI]_{disbelief} and [AHAM SEI]_{disbelief}.

Productivity is something more related to extension, that is, to what extent it sanctions less-schematic constructions which makes us see/use these constructions more often. The authors draw attention to the fact that most studies on productivity are related to the frequency with which construction occurs, but they “equate construction frequency with type frequency and construct frequency with token frequency” (Traugott; Trousdale, 2013, p. 18). For them, ‘increase in frequency of use’ (cf. Bybee; McClelland, 2005) can be somehow misunderstood. In fact, construct frequency actually is what is being increased i.e. speakers use more and more instances of the new construction. They also add that for this to happen, we must consider routinization and automatization as key conditions to resulting frequent use and repetition (cf. Pawley; Syder 1983; Haiman 1994).

When it comes to our phenomenon, Souza (2024) asserts that data with the constructions [SEI]_{disbelief} and [AHAM SEI]_{disbelief} was not seen at the Genre/Historical section at *Corpus do Português*. This is where the site keeps its texts from 1300s to the 1900s. Although his research hasn’t a diachronic focus, it showed a relevant aspect for these constructions: they are relatively new in BP. So, we can understand productivity a little better based on this information, because it means that due to the increased use and repetition of these specific constructions more recently it is possible to see them now on daily conversational situations and modern textual genres (such as tweets and fanfics), but it was rare or nonexistent in past dialogical scenarios, evidence showed by the lack of results found on the 57 thousand texts present at the *corpus*.

The third and last factor is compositionality, that is “concerned with the extent to which the link between form and meaning is transparent. Compositionality is usually thought of in terms of both semantics (the meaning of the parts and of the whole) and the combinatorial properties of the syntactic component” (Traugott; Trousdale, 2013, p. 19). The importance of understanding this factor is to comprehend a little more how new constructions emerge, especially conceived for pragmatic purposes. Traugott and Trousdale (2013, p. 20) add that “construction grammarians are interested in the extent to which such non-compositional meanings pervade the grammar of a language”. For that, they will treat both compositional and non-compositional examples as conventionalized pairings of form and meaning, then consider the non-compositional data to be “stylistically, pragmatically or semantically marked in various ways”.

Beyond those three factors casted by Traugott and Trousdale (2013), Machado Vieira and Wiedemer (2019a) assert that contextuality must also be taken as a basic construction grammar feature, especially when we think about compositionality. They propose this amplification based on Goldberg (2015), where she highlights that meaning and functionality of expressions can be reconfigured to attend communicational needs in certain context in which they are establish/inserted, just

as we see in [SEI] and [AHAM SEI] applications, going from cognitive to disbelief sense. The authors summarize this matter as follows.

The constructional network of a language has constructional patterns/constructions (lexical or procedural/grammatical) **with different degrees of schematicity** (property of generalizing categories into (sub)schemas that capture the formal and functional properties shared by instantiations), **productivity** (frequency type and extensibility potential of a constructional type into subtypes) **and compositionality (transparency relationship between meaning/analyzability of the parts and meaning/analyzability of the constructional whole, in which there is interference from contextuality)**. (Machado Vieira; Wiedemer, 2019a, p. 88, highlighted and translated by this author).

Now that we understood some factors within the constructional architecture that enable its variation, we can talk about *allostructions* (Cappelle, 2006) and *metaconstruction* (Machado Vieira and Wiedemer name for Perek's (2015) *constructeme*). Metaconstruction is "a theoretical construct that, left partially underspecified, captures the level of representation at which constructions/constructional patterns systematically in alternation are functionally equivalent" (Machado Vieira and Wiedemer, 2019b, p. 125).

Allostructions, in turn, are constructional changes in a more specific level. They are structural variants of constructions that don't select distinct meanings i.e. "they are units/constructions of the order of the constructional slot, that is, (co)lexemes (form-functional pairing representations associated to the same constructional slot) (Machado Vieira; Wiedemer, 2019b, p. 125). An example of allostruction can be seen in Machado and Cunha's (2021) work as they analyzed the prosodic aspects in interrogative questions with different forms and same meaning as: *Do you prefer chocolate or strawberry pie x Which one do you prefer between chocolate pie and strawberry pie?* Gras and Elvira-García (2021, p. 244) affirm that we can also see allostructions in intonation like "changes in the contour caused by truncation or compression effects derived from tonal crowding".

Other processes that enable variation are neoanalysis and analogy. To Traugott and Trousdale (2013), neoanalysis occur when small changes are made within the constructions. They argue that this is only possible if the speaker appropriates/ dominates a construction to understand it well to the point of being able to analyze it in a different way (generating neoanalysis), as Souza (2024) showed us in his data that Brazilian speakers *neoanalyzed* the constructions [SEI] and [AHAM SEI] through small phonological changes, just as a phoneme a little bit longer than other. Analogy, according to Traugott and Trousdale (2013), should be seen as a motivation

and, from there, a process occurs, called analogization. This motivation is due to the need for speakers to elaborate constructions based on those he has already mastered (just as neoanalysis, schematization and productivity come into play to enable it to happen). From this, new meanings will or will not emerge, depending on how the speech community reacts. The process, therefore, is then a mechanism of change that results in pairings of previously non-existent forms and meanings, resulting in new subschemas and micro-constructions.

Constructional stabilization

Another resource through which we process our linguistic knowledge is the stabilization of constructions and the probable relationships between them, which is learned from constructional networks. When it comes to networks, Langacker (2008) asserts that they are the responsible to forge the language at the same time that language forges them, i.e. networks are the basis and the results at the same time of linguistics practice.

We can describe a language as a structured inventory of conventional linguistic units. This structure – the organization of units into networks and assemblies – is intimately related to language use, both shaping it and being shaped by it (Langacker, 2008, p. 222).

Robert (2008, p. 29) affirms that words, in their infinite possibilities of combination and use, are instantiated in ‘domains of application’ that define their semantic applicability, which contributes to creating their referential values and meanings linked to different contexts, making with certain constructions accessing new pragmatic forces. This process is important because it contributes both to the variation of meanings and to their stabilization in statements.

As Traugott and Trousdale (2013) says, speakers and hearers/ writers and readers won’t necessarily process language the same way all the time and the conventionalization of some structures will depend on their social interactions among them and their community. When it happens, the hearer/reader usually activates part of a scheme they know to understand more specific form-meaning pairings, creating new subschemas that leads to new constructs and consequently new constructions to achieve the same pragmatic value. When Portuguese speakers think about the constructions analyzed here, they already know that the subschema [Onomatopoeia Verb]_{disbelief} is part of the scheme of disbelief constructions on the language. Souza (2024) verified that BP speakers have a high domain of that subschema which allow them to create new constructions, e.g.:

In the tweets below, we see at image 3 the verbal forms *‘fez’* (did), and at image 4 *‘tentou’* (tried), both used to disbelief what was said before. In the first case, twitter user disbelieved allegations that singer Lana Del Rey has done plastic surgeries (*Aham... fez...*) while the second user said: ‘(somebody) Tried to warn. *Aham tentou*, God has



Image 3 – Construction with [AHAM FEZ]_{disbelief}.
Source: X (March/2016).



Image 4 – Construction with [AHAM TENTOU]_{disbelief}.
Source: X (March/2012).

watched that they tried’, letting their followers know that they don’t believe in the reported try. Therefore, those examples follow the subschema [ONOMATOPOEIA VERB]_{disbelief} by analogy and consequently the same pattern we saw before (Initial Proposition → Disbelief reaction):

- “They tried to tell you” *Aham tentou*
- “I tried to buy it” *Aham tentou*
- “He did what he could” *Aham fez*
- “She did all the shopping” *Aham fez*

Analyzes of Souza's (2024) results

As we anticipated in the introduction section, twenty native speakers of BP volunteered to participate in recording audios so Souza (2024) could see the intonational matter about $[SEI]_{\text{disbelief}}$ and $[AHAM SEI]_{\text{disbelief}}$ compared to their cognitive senses (linked to the act of knowing something). The results show that in fact there are differences on the prosodic features, such as duration and pitch.

As figure 4 shows, most of native speakers take more time to produce the disbelief sense (blue bars) in comparison to the cognitive one (yellow bars) in the constructions with *sei* alone. The figure reveals that in most cases there is some kind of prolongation in the answers when it comes to making the hearer know that they don't believe in what was said before. In Souza (2024), the audios from $[AHAM SEI]_{\text{disbelief}}$ exposed the same patterns. In sum, $[SEI]_{\text{disbelief}}$ was read on average 8% longer than its cognitive sense while $[AHAM SEI]_{\text{disbelief}}$ had 14% on average advantage. The pitches had the same results: it was higher in the disbelief construction just like the duration, with very similar average primacy measured in Hertz (Hz) and their results stand between 11-13%.⁷

⁷ All of this statistic results can be found at Souza (2024).

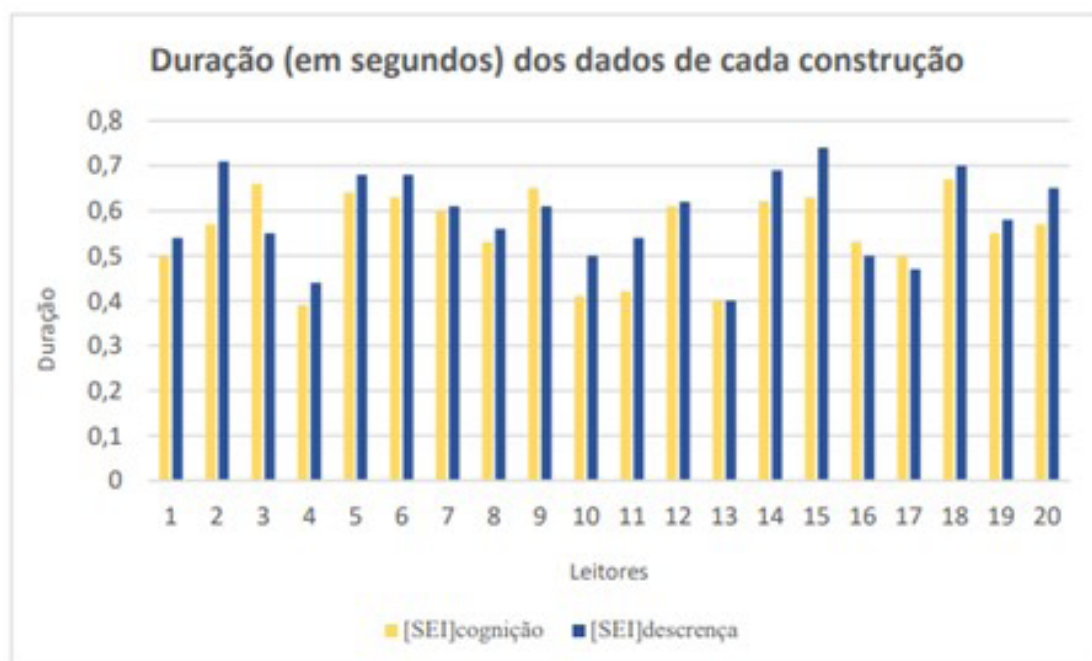


Figure 4 – Duration (in seconds) seen in $[SEI]_{\text{cognitive}}$ versus $[SEI]_{\text{disbelief}}$.

Source: Souza (2024, p. 99).

It's important to also consider the social dimension in the functional pole just as Machado Vieira and Wiedemer (2019a) asserted. Souza (2024) divided the people at the audio recording tests based on: *their educational level* (high school, primary school, middle school, and complete graduation); *their gender* (female and male); and *age groups* (10-19y, 20-29y, 30-39y, 40-49y, and +50y). The results revealed some relevant aspects like: the higher the education, longer was the difference in the duration of reading. When it comes to age groups, the ones with most people with higher education followed the same pattern. Gender, on the contrary, didn't show any relevant difference in duration, just at the pitch, as already expected due to the natural differences between feminine and masculine voices. These results revealed to Souza (2024) a confirmation of a previous hypothesis that people with higher education also have higher reading proficiency, which means they find it easier to understand diverse meanings even at sentences with no punctuation. Furthermore, these differences at the subgroups of socioeconomic factors point out the same trend, reaffirming the probability of having cases influenced by the stylistic perspective and the *macrosociological* perspective (cf. Mota, 2023), discussed by Eckert (2012)⁸ in her theory of three waves in Sociolinguistics, as differences can be seen in one (or more) social group(s) stratified based on age and/or educational parameters, for example.

By the prosodic features analyzed, the researcher could perceive that native speakers really understood the difference between the 2 fictional situations proposed to be read, even with the fact that they had no punctuation, something intentional, once it could help them to see some distinction, which often occur with ellipsis and exclamation mark, for example.

⁸ Those perspectives are discussed by Eckert (2012) in three waves of linguistic variation based in social aspects. The first one is called 'macrosociological' by Mota (2023) and is focused basically on social stratifications and linguistic features in geographically established communities. "The first wave viewed linguistic change as emerging from pressures within the linguistic system, first affecting the speech of those least subject to the influence of standard language and spreading outward through populations increasingly resistant to change. At the same time, a variety of variables that are not changes in progress are stratified as a result of such things as dialect contact and resistance to standardization. The perspective of the first wave on meaning was based in the socioeconomic hierarchy: Variables were taken to mark socioeconomic status, and stylistic and gender dynamics were seen as resulting from the effects of these categories on speakers' orientation to their assigned place in that hierarchy" (Eckert, 2012, p. 90). Second wave has an 'ethnographic approach', just as "The second wave began with the attribution of social agency to the use of vernacular as well as standard features and a focus on the vernacular as an expression of local or class identity" (Eckert, 2012, p. 91); and the third wave, called by 'stylistic perspective' says that the speakers are no longer passive agents in front of linguistic variation, but now they are the (consciously) changers due to linguistic choices made by their social groups. "Whereas the first two waves viewed the meaning of variation as incidental fallout from social space, the third wave views it as an essential feature of language. Variation constitutes a social semiotic system capable of expressing the full range of a community's social concerns. And as these concerns continually change, variables cannot be consensual markers of fixed meanings; on the contrary, their central property must be indexical mutability. This mutability is achieved in stylistic practice, as speakers make social-semiotic moves, reinterpreting variables and combining and recombining them in a continual process of bricolage (Hebdige 1984) (Eckert, 2012, p. 94).

The stimulus situations that were read were developed thinking in the structure:

Initial proposition → Context → Answer, just as:

Um rapaz chama sua colega de classe no início da aula e a pergunta: “Você sabe que hoje tem prova oral, né?”. Ela, que estava estudando para a prova há alguns dias, responde:

“Sei”/ “Aham sei”

Após tirar nota baixa em uma prova da escola, o filho diz à mãe “Eu estudei muito, a prova é que estava cheia de matéria diferente da aula”. A mãe, que sabe que o filho está mentindo e não estudou um dia sequer para a prova, então responde:

“Sei”/ “Aham sei”

As the table shows, the context was preponderant for the readers to understand the situations they were about to read. In (1) *sei/aham sei* had a confirmation meaning (related to the fact that the girl KNEW something) and in (2) *sei/aham sei* was used as a disbelief answer from a mother about what her kid was saying. The analyses of the audios’ prosodic features were focused only on the answers (*sei/aham sei*), ignoring the propositions, to check exactly if readers could notice the difference. And they could, as intonation proved. By these results plus the data collected at various *corpora*, it can be perceived that [SEI] and [AHAM SEI] as disbelief answers in BP are, therefore, already stabilized constructions.

Table 1 – Translation and organization of the situations to be read on the intonation test.

Source: Organized by us with adapted data from Souza (2024).

Situation	Initial proposition	Context	Answers
1)	A boy calls his classmate at the beginning of class time and asks “You know that we have an oral text today, right?”	She, who knows about the test and is studying for it there are some days, then answers:	<i>Sei/ Aham sei.</i>
2)	After failing at a school exam, the son says to his mother: “I studied hard, it’s the exam that was elaborated with different subjects from the classes”	The mother, who knows the kid hasn’t studied even a day, then answers:	<i>Sei/ Aham sei.</i>

Another proof of stabilization and routinization is that the volunteers were reading these sentences (the answers) without any punctuation, which is a very important factor to rearrange prosodic features in written data. Souza (2024) believed that native speakers were able to accomplish that and, to seek confirmation to that hypothesis, he asked those volunteers and other people through a Google Forms

how they would punctuate [AHAM SEI] on a disbelief context. The quiz had 116 answers and people could choose more than 1 option.

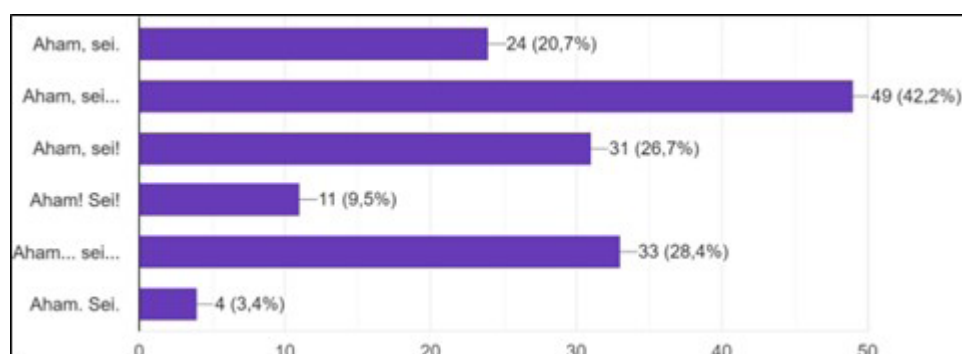


Figure 5 – Answers about punctuation in [AHAM SEI]_{disbelief}.

Source: Souza (2024).

The most prominent answers by far were the ones with ellipsis at the end of the sentences, followed by exclamation mark. It reveals how these answers were connected to the results found from the audio recordings. Usually, in written data, ellipsis and exclamation mark are the punctuation chosen to express prolongation and emphasis, respectively (cf. Kleppa; Basso, 2024). So, it is understood that most of the answerers understand that prolongation is a strong way for readers/listeners to put the disbelief sense on their answers with this construction and some others put emphasis on their answers to achieve that meaning. Most of the participants also chose a comma between *AHAM* and *SEI* which is very natural, because that is the most usual punctuation seen in constructions with this structure, something similar to “Yes (,) I know”. Still, there was a significant number of people that chose ellipsis between the words, which led us to conclude that they see the prolongation on the entire construction and not only in the end, which can be seen as an intonational allostruction in the prosodic level, just as Gras and Elvira-García (2021) assert when these changes occur in the prosodic contour due to meaning effects.

On another question, Souza (2024) intended to see which possible constructions could be considered by native speakers to analyze if there were other constructions in competition with them and which ones they were to check if they were totally different or just allostructions (changes in the whole construction or only in some parts). The answerers could choose how many options they desired between 6 constructions and also could write other ones, as they judge it to be as productive and having the same meaning. The question was: ‘If you would answer to the following sentence

doubting of what the person said, which answers do you think would fit?': Sentence: "I'm going to graduate school even though I have not studied anything".

Figure 6 revealed that [SEI]_{disbelief} and [AHAM SEI]_{disbelief} are strong options in this scenario, but other ones were highly chosen as well. Answers like '*Aham, com certeza vai*'; '*Vai sim*' and '*Aham com certeza*' had a good number of choices. They all can be translated to 'Yeah, you definitely will (in an ironic way)'. In sum, they both have an ironic perspective, i.e. the person is saying something contrary to what they believe. We can notice by that that there already is a clear disbelief sense, but with a different construction, all led by the same structure: Initial Proposition → Disbelief reaction. So, we are facing cases of micro-constructions related to subschemas distinct (cf. Traugott; Trousdale, 2013) to the ones previously seen: [VERB]_{disbelief} and [ONOMATOPOEIA VERB]_{disbelief} but they all are still connected to the same main schema: Disbelief constructions in Brazilian Portuguese (cf. figure 3). Also, it is perceivable that there are some cases very near to those subschemas, however, they differ in some aspects, just like '*Aham vai sim*' which is composed by [ONOMATOPOEIA (aham) VERB (vai) REASSURANCE PARTICLE (sim)]_{disbelief}, something possible due to cognitive processes like neanalyses and analogy by symbolic similarity.

Other than that, many constructions were written as possible examples by the volunteers on how they would choose to answer the sentence proposed with a disbelief sense answer. Among them are cases of geographical variation, popular expressions and others (Souza, 2024). It shows how productive languages can be when it comes to schemas' possibilities within the constructions, which clarifies even more how productivity and schematicity act on the constructional architecture, providing substantial ways to the constructional change. The fact that some specific constructs were cited just once also shows that some speakers recognize those constructions but they're still not largely conventionalized, which doesn't denote a constructional change in fact. About that, we shall revisit some thoughts by Traugott and Trousdale:

Innovative constructs are symbolic in that they involve a pairing of form and meaning but they lack conventionality (i.e. they are not shared by members of a social network) and—even more critically for present purposes—they are not units, because they are not (yet) substantially entrenched. They do not become instances of change until they are repeatedly used and become conventional signs. Initially persistence is in the memory of the individual, but in instances of change, the shift from construct to construction is the product not just of memory but of repeated use as increasing numbers of individuals use the same kind of innovation over time (Traugott; Trousdale, 2013, p. 52).

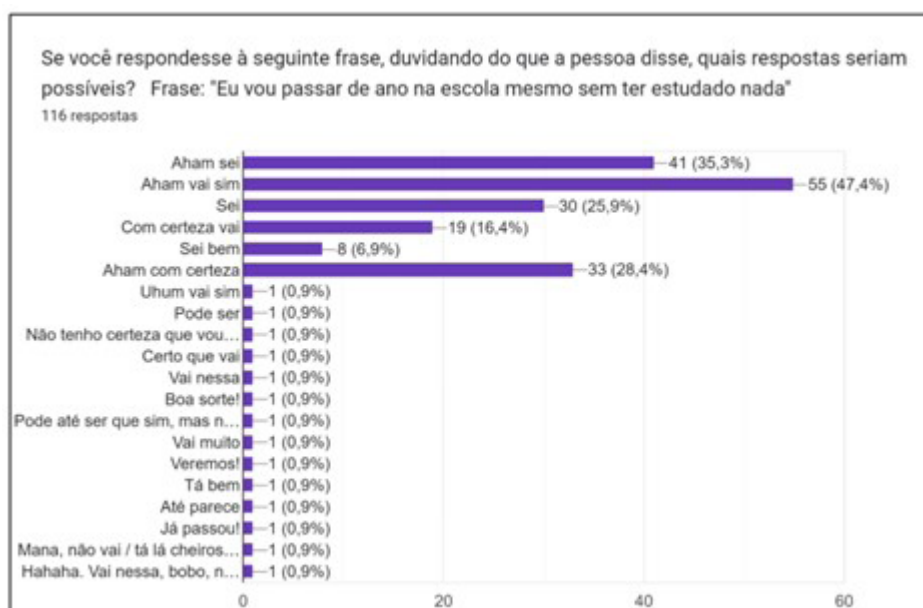


Figure 6 – Constructions in BP that speakers think have the same disbelief meaning to a specific question proposed by Souza (2024).

Source: Souza (2024).

In order to summarize the results seen from the theoretical perspective adopted in this work, we tried to organize a similar constructional network as Souza (2024) did, based on Traugott and Trousdale's (2013) template, displaying the elements seen until now on a gradient of hierarchic relationships of constructions from the main schema 'Disbelief construction on Brazilian Portuguese' to allostructions provided by data acquired in Souza's (2024) research and showcased at this paper that focused mainly on two subschemas: [VERB]_{disbelief} and [ONOMATOPOEIA VERB]_{disbelief}.

In this schematization above, we aim to highlight some prosodic attributes involved in the constructions analyzed. The rectangle drawn in yellow shows a metaconstruction (Machado Vieira, Wiedemer, 2019a, *constructemes* for Perek, 2015) in which the allostructional subschemas (i) Verb with punctuations and (ii) Onomatopoeia with pause and Verb with punctuations can be seen. The rectangles drawn in red, are the variant construction standards licensed by each of them, i.e. allostructions (Cappelle, 2006), that represent each a micro-construction (Traugott; Trousdale, 2013).

As we saw during this research, in the prosodic analysis, the duration in seconds of this pause will be one of the mechanisms with which the native speakers will discern the construction of disbelief from the construction of cognition and they will reconfigure them mostly with ellipsis and exclamation mark at written data. For this reason, we chose to cast the most recognizable punctuations by the test's participants in order to illustrate some allostructions in this figure. The constructions [AHAM,

TENTOU]_{disbelief} and [AHAM, FEZ]_{disbelief} are written with comma and ellipsis to adequate them by analogy to the most voted option at Souza’s (2024) results (cf. Figure 5): *Aham, sei...* We consider each construction above an allostruction following the postulates by Gras and Elvira-García (2021), who assert that contour changes in prosodic (one of the ways to analyze intonation) denote allostructions because they are different formal attributes for the same meaning. The little squares filled with (...) in each level denote our recognition that there are others subschemas and allostructions possible, but weren’t explored here.

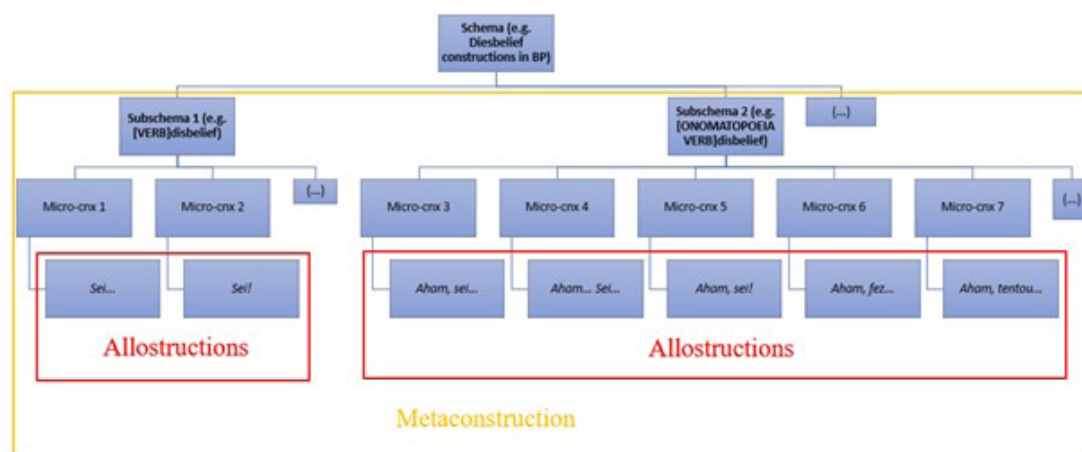


Figure 7 – Gradient of hierarchic relationships of some disbelief constructions in BP casted by Souza (2024) and showcased in this paper.

Source: Our organization, based at and adapted from Souza’s (2024) research.

Conclusions

This paper focused on see how constructional variation, change and stabilization occur at some specific disbelief contexts in Brazilian Portuguese. Based on Souza’s (2024) research that highlighted [SEI]_{disbelief} and [AHAM SEI]_{disbelief}, we seek to understand a little further some aspects about these constructions just as some factors that shape their use on daily communication such as speaker’s socioeconomic factors, most productive textual genres, conversational structure etc. Therefore, we present and revisited some data in order to illustrate a very interesting and productive linguistic phenomenon that is the abstractization of a cognitive verb going in direction to a modalizing function in communicative acts.

In sum, we tried to shed light on this phenomenon seen from the perspective of Construction Grammar, in which the focus was between the formal pole, represented mainly by prosody, and pragmatics at the functional one. We also did that to add another work to a still underexplored area: the role of intonation at the Construction Grammar (cf. Machado; Cunha, 2021; Gras; Elvira-García, 2021; Souza, 2024). Doing this, we hope to provide some understanding and to provoke the search for future possibilities involving prosodic studies that seek to identify pairings of a prosodic pattern (form) and its pragmatic function (meaning) analyzed also by a socioconstructionist point of view, which means consider social and contextual aspects too, in order to understand and describe an increasingly in-depth way these phenomena that keep emerging in languages – something naturally expected as they change and adapt by the needs of their users.

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