

DEFINING A MONSTER OPERATOR

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- **ABSTRACT:** This article reviews the literature on a particular kind of operator present in natural languages, i.e., “monster operator”. This operator can shift the context of evaluation of indexicals in its scope. Its existence was initially denied by Kaplan (1989), but later authors such as Schlenker (2003) and Anand (2006) argue that such operators do exist in natural languages. However, throughout the literature, we see different definitions of that operator. In this paper, after we introduce the concept of monster operator and defend its existence based on data from Brazilian Portuguese (BrP), we argue in favor of a definition that is wider, similar to that first one proposed by Kaplan (1989). Data from the BrP will be crucial to defending our position.
- **KEYWORDS:** Semantics. Indexicals. Monsters operators. Context shifting.

Introduction

David Kaplan's semantic theory of indexicals (linguistic items that encompass the so-called “deictics”) is certainly one of the most influential theories of indexicals in Linguistics and in Philosophy. His theory explains, in a comprehensive and elegant way, terms whose treatment by formal systems seemed impossible. Additionally, Kaplan (1989) explains a lot of other phenomena within the same theoretical framework.

Despite the success of his theory, it is not free of criticism, which focuses on the explanations given by it, its scope, its architecture, and some of its central postulates. In this paper, our objective is precisely to investigate one of the main criticisms of Kaplan's model — his thesis prohibiting the existence of a specific operator in natural languages, which he calls “monster”¹. In his 1989 text, Kaplan argues that there is no such an operator in natural language, but it is possible to build this type of beast in formal language. In the following decades, via studies of poorly understood languages and more careful analysis of languages already described, several authors have criticized Kaplan's statement, claiming that, in

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¹ A monster operator is an operator that shifts the context of evaluation of an indexical. In the following section, we present in detail how such an operator is and how it works.

fact, there are monster operators in natural language. However, in doing so, the great majority of researchers altered the definition of monster operator offered by Kaplan. In this paper, we argue that (i) there are monster operators in natural language, and (ii) the best definition for this type of operator is still the one offered by Kaplan and not the most recently found nowadays in the literature. The reasons will be exhibited throughout this text.

To achieve our goal, this paper is organized as follows: initially, we present the general outlines of the Kaplan's theory and his thesis against monster operators in natural language; then, according to the data of Schlenker (1999, 2003, 2011), Anand (2006), Predelli (2008), Basso and Teixeira (2011) and Teixeira and Basso (2013), we argue for the existence of monster operators in natural language; in the later section, we compare different concepts of monster operators advocating the one offered by Kaplan, mainly because it is more comprehensive; finally, in the conclusion, we resume the theses presented and the points defended.

Kaplan and indexicals

Kaplan's (1989) approach to indexicals is based on two main concepts: the theory of direct reference² and the idea that indexicals are rigid designators (KRIPKE, 1980). Initially, we will present how these concepts work in Kaplan's theory, and as a result, we will detail two other important points — what and how the context is conceived in his theory, and how the two functions – character and content – introduced by Kaplan determine the meaning of linguistic expressions, including indexical.

Kaplan (1989) claims that indexicals are directly referential expressions. Thus, the propositional contribution of an indexical is an entity without any property or description associated with it. Therefore, a sentence like (1), uttered by João expresses a structured proposition³ such as (1a), composed by an individual and a predicate.

(1) ***Eu*** *tenho livros de Semântica.*

'I have Semantics's books'

(1a) $\langle \text{João}, \text{ter-livros-de-Semântica} \rangle^4$

' $\langle \text{João}, \text{have-books-of-Semantics} \rangle$ '

² The direct reference concept is attributed to Kaplan and it is originally found in an exchange of correspondence between him and Kripke in the late 1970s.

³ *Roughly*, structured propositions are complex entities (i.e., having constituents or parts) and its constituents are related in some way. Generally, they are represented by tuples. Available at: <http://plato.stanford.edu/entries/propositions-structured/>. Access in: 2 apr. 2015.

⁴ We use, here and throughout the text, representations for structured propositions (tuples of elements) that contain the constituents to which we want to call attention. We do this based on Kaplan (1989). This philosopher

Indexicals are rigid designators in Kaplan's theory because they are directly referential. Being a rigid designator, in this case, is the same as saying that the referent of the indexical 'eu' (I), João in (1a), does not vary when we take different possible worlds into consideration⁵. In this sense, the referent of 'eu' (I) can only vary if there is a change in the relevant⁶ context (of utterance). Regarding this aspect, according to kaplanian theory, indexicals are distinguished, for example, from definite descriptions, since referents of these expressions change in accordance with the relevant possible world.

- (2) **O namorado da Maria** tem livros de Semântica.
'The boyfriend of Maria has Semantics's books.'

In (2), the referent of the definite description can covary with possible worlds: in w1 the description may refer to João, in w2 to Pedro, in w3 to Lucas and so on. This behavior shows that definite descriptions are not rigid designators.

Indexicals have their semantic value determined in relation to the context of use. Thus, in a sentence like (3), below, we identified the referent of the indexical 'eu' (I) because we identify the individual who uttered (3) (the agent of the context, in kaplanian terms). Together with the context of use, one must determine the world of evaluation in which the truth conditions of a sentence will be evaluated. For example, if (3) was uttered by João in the context c1 and in the possible world w1, while he was talking to Pedro, we can say that the sentence (3) is true in c1 and in w1. However, if Pedro utters the same sentence right after João, although we are considering the same possible world w1, we have another context being considered, i.e., c2. The sentence uttered by Pedro is true, in turn, in the context c2 and in the world w1.

- (3) **Eu sou homem.**
'I am a man.'

The sentences uttered by Pedro and by João are evaluated in the same possible world (w1), but not in the same context. This simple example shows that if only possible worlds were considered, we would have trouble to define the referent of the indexical 'eu' (I) in each situation: in this sense, how can we determine the referent of indexicals uttered by different speakers in the possible world?

uses structured propositions as a heuristic tool. In this case, one should not think of "propositions as sets of possible worlds, but rather as structured entities looking something like the sentences which express them" (KAPLAN, 1989, p.494). In this way, the presentation in the form of structured proposition is used simply to represent, in an organized way, the elements of the sentence, for example by distinguishing directly referential items (indexicals, proper names, etc.) from the other kinds of items. Kaplan (1989) made it clear that the design of structured proposition is not part of the formal apparatus of his theory; propositions are always functions from worlds to truth values.

⁵ According to Kripke (1980), a term is strictly referential if it refers to the same individual in all worlds in which that individual exists and has no referent in worlds in which that individual does not exist.

⁶ As we shall see below, unlike other linguistic terms, indexicals have their semantic values fixed by a context.

The answer is: we need something more refined than possible worlds. In this point, we need to discuss the kaplanian concept of context. In Kaplan (1989), contexts are formally conceived as a tuple of coordinates, such as: agent (or speaker), hearer, location, time and possible world, i.e., $\langle c_a, c_h, c_t, c_l, c_w \rangle$ ⁷. It should be mentioned that for Kaplan, the relevant context for establishing the referent of indexicals is always the utterance context of the sentence, that is represented as c^* from now on.

Given that contexts are more fine-grained than possible worlds, for each context there is only one possible world; in turn, a possible world can contain more than one context. Therefore, just if we consider the differences in the contexts of use/utterance of (3) we will be able to determine the referent of each indexical. After observe that contexts are structures required in a theory of indexicals and, moreover, that contexts are composed by coordinates, Kaplan has proposed two functions, "character" and "content", to determine the meaning of linguistic items, including the indexicals.

The character is conceived as a function that takes a context as its input and produces a content as its output; in this theory, the character acts in a pre-propositional level. On the other hand, the content takes a possible world (and a time) as its input and generates a semantic value; the content is the propositional value. Based on these concepts, we will analyze the sentence in (4).

Considering (4) and setting the utterance context as $c^* = \langle c_a = \text{Frida}, c_h = \text{João}, c_t = 2013, c_l = \text{coffee room}, c_w = w^{*8} \rangle$, we can determine its character and content:

(4) S = **Eu estou aqui**⁹

'I am here'

Character (S) = $\lambda c \lambda w [c_a \text{ is in } c_l] (c) (w)$

Content (S) = [Character (S)] (c) (w) (\rightarrow considering c^* and w^* .)

= $\lambda c \lambda w [c_a \text{ is in } c_l] (c^*) (w^*)$

= $\lambda w [\text{Frida is in the coffee room}] (w^*)$ ¹⁰

⁷ This tuple can be increased to include objects present in the context, allowing the analysis of demonstratives.

⁸ The superscript asterisk refers to the world that we inhabit, and c^* , as we have seen, refers to the context of utterance. We assume that (i) the world of the utterance context (c_w) is the world in which the speaker is; (ii) the world in which the sentence is evaluated (i.e., the possible world used in the content) is the world of the context (i.e., c_w). Thus, we evaluate the truth conditions of a sentence, in principle, in relation to a context and in relation to the world of this context.

⁹ The formalization offered aims only to illustrate the role of the character and of the content and their interaction with the context and the possible world. Such formalization ignores a number of details (like the place(s) in which the world and the context variables can appear), but it shows the steps of the semantic composition.

¹⁰ Notice that the context variable c^* does not appear in the last line of the representation, because as soon as the relevant context (c^*) assigns values to the character of the indexicals 'eu' (I) (c_a) and 'aqui' (here) (c), the next step is to calculate the content of the sentence, that is a function from (possible) worlds to semantic values. Thereby, at this point, only the relevant world remains in the representation.

Taking into account the definitions above, the character of (4) is the agent of the context being at the location of the context. However, to determine the full meaning of the indexicals expressions in (4) is necessary to define the content. The content of (4) is the character (the agent of the context being at the location of the context) in relation to a possible world (and a time), which generates a semantic value (in this case, a truth value). Therefore, the content of (4), in the context c^* , is the set of worlds in which Frida is in the coffee room.

According to Kaplan (1989), operators can operate only on the content of linguistic terms, indexicals or not; this is the case of modal operators such as '*possivelmente*' (possibly) and '*necessariamente*' (necessarily). Consider the sentence in (5),

- (5) *Necessariamente eu estou aqui*,
'Necessarily I am here'

This sentence is true if and only if in all possible worlds w , accessible from c_w , c_a (the agent of the context) is in c_1 (the place of the context). If we apply the context of utterance (c^*) already established above, to (5), the result is *roughly*,

- (6) *Necessariamente, Frida está na sala do café*,
'Necessarily, Frida is in the coffee room'

A sentence that is true if and only if in all possible worlds w , accessible from c_w , Frida is in the coffee room. As we can see, this theory captures the difference between sentences like '*Necessariamente eu estou aqui*' (Necessarily I am here) and '*Eu estou aqui*' (I am here) — the first one is not true *a priori*, because its semantic value depends on the worlds of evaluation, while the second is true *a priori*, because its value does not depend of the world of evaluation and it is true in all contexts.

As mentioned before, Kaplan (1989, p.511) states that operators of natural language, including all verbs of propositional attitude, operate only on the content of indexicals because only contents are found under the scope of these elements. This suggests that there are no operators "which attempt to meddle with the character"; such operators, nonexistent in natural language, are the "monsters operators". The philosopher is even more radical, and claims that operators that operate on characters are only found in formal language: "[...] no operator can control the character of the indexicals within its scope, because they will simply leap out of its scope to the front of the operator. I am not saying we could not construct a language with such operators [...]" (KAPLAN, 1989, p.510).

In the following section, we present the arguments used by Kaplan to support its position about monster operators.

Kaplan: monster operators do not exist in natural language

Kaplan (1989) states that, in natural language, there are only intensional operators, acting on the function from possible worlds to semantic values (i.e., the content). To show that this is indeed the case and, therefore, that there are no operators on characters, Kaplan tests an operator similar to '*em alguns contextos é verdade que*' (in some contexts it is true that) which, in theory, when prefixed to a sentence, would operate on the character of indexicals in its scope. The example suggested by the author is:

(7) *In some contexts it is true that I am not tired now.*

Assuming that such operator in fact operates on the character of the indexicals, (7) should have a reading in which the sentence is true if, in some context, the embedded sentence, 'I am not tired now', expresses a content that is true in the world of that context. Thus, (7) is true in the context of utterance c^* if an agent of a context (but not of the utterance context) is not tired at the time of the context (but not in the utterance context). (7) clearly does not present the suggested reading, and this fact supports Kaplan's idea that operators on the character of indexicals do not exist in natural language. Mainly because operators only maintain content in its scope, and never characters.

The same observations, now considering (8), apply to the BrP:

(8) *Em algum contexto é verdade que eu não estou cansado agora.*
'In some context it is true that I am not tired now'

We would expect that the sentence (8), uttered by João at 2 p.m., was true if, for example, it is true that Pedro is not tired at 8 p.m.¹¹; such an interpretation is clearly unavailable.

In sum, Kaplan shows that even a construction as explicit as 'in some contexts it is true that' can not shift the value of an indexical, and therefore he concludes that operators who can do that —monster operators— do not exist in natural language. So far, it is interesting to note that the Kaplanian concept of monster operator is wide, because to be considered a monster, a certain operator just should shift the context in which an indexical is evaluated.

¹¹ Pedro is 'eu' ($I = c_s$) and 8 p.m. is 'agora' ($now = c_t$) in a different context from which João utters (8), i.e., 'eu' and 'agora' receive their semantic value from a different context than that in which the sentence is uttered; therefore, 'eu' is Pedro, rather than João, and 'agora' is 2 p.m., rather than 8 p.m..

However, as mentioned before, some authors have identified gaps in his theory when they analyze (i) non-Indo-European languages, and (ii) phenomena involving indexicals not analyzed by Kaplan¹². Some reformulations proposed by these authors in relation to the kaplanian theory are detailed in the following sections.

Evidences that natural language have monsters

In this section, we will present evidences supporting the idea that there are monsters in natural language discussing cases in which attitude verbs¹³ can be followed by characters. After this, in the following sections, we will explore data and definitions provided by some authors who have analyzed indexicals in different languages; later, we will discuss different concepts of monsters operators presented by them.

The role of attitude verbs in the theory of monsters

Attitude verbs play an important role in the theory of indexicals (specifically in the argumentation in favor of the existence of monsters) since they affect two aspects of Kaplan's theory: (i) there are no operators on the character of indexicals and (ii) in indirect discourse it is possible to report only the content of an indexical (Kaplan's indirect discourse prevision); in fact, (i) follows from (ii). In this section, we show how an operator, i.e., the attitude verb, can indeed be followed by the character of an indexical. As a result, it is possible that characters of indexicals (from the direct discourse) would be retained in indirect discourse — a phenomenon denied by Kaplan's theory. The main argument against the indirect discourse theory of Kaplan is based in cases of *de se* reports and the discussion presented here is based on Schlenker's ideas.

The aspects reformulated by Schlenker (2003, 2011) refer to the claim that attitude operators just keep contents in its scope, and also to the claim that there is no shifted indexicals (therefore, monsters operators) in natural language. In this section, we will only discuss the first point; the other one will be discussed in the following sections, where we will present the analysis of Schlenker and other authors.

First, we will present the arguments used by Kaplan to defend the idea that only contents are to be found in the scope of attitude operators, and then we will see the arguments placed against this thesis.

¹² In fact, Kaplan (1989) dedicates a single example, and approximately two pages (510-512), to argue in favor of the inexistence of monsters in a large text of almost 100 pages (481-563).

¹³ The argumentation takes into account the so-called "verbs of propositional attitude" and "speech verbs", but we will focus only on the last group; the label "attitude verbs" should encompass both categories.

In order to prove that in natural language it is not possible to find operators keeping characters in their scope (and, therefore, operators could never shift the character of these elements), Kaplan says that whenever a sentence containing indexicals is reported, the part of the meaning regarding the character is lost — only the content remains in the report. This actually happens with the pair (9) and (10), considering that (10) reports (9).

(9) **Eu** não sei como pintar um quadro [dito por João].
 'I do not know how to paint a picture' [said by João]

(10) **O João**₁ disse que **ele**₁ não sabe como pintar um quadro [dito por Maria].
 'João₁ said that he₁ does not know how to paint a picture' [said by Maria]

When we report a sentence like (9), the information regarding the character of the indexical 'eu' (I) = 'agent of context' is no longer present in the indirect discourse. More than this, the indexical 'eu' (I) is not in the sentence (10), only its content (i.e., the individual it refers to) and this content is represented by the anaphoric pronoun ('ele' (he)) which picks up the referent of the name João — the semantic value of 'eu' in (9). In other words, the proposition (i.e., content) expressed by (9) and by the embedded sentence in (10) in the relevant context is the same, but their characters are clearly different:

Content of (9) and of the embedded sentence in (10):

(9a) ⟨João, não-saber-pintar-quadro⟩,
 '⟨João, not-know-paint-picture⟩'

(10a) ⟨Maria, dizer ⟨João, não-saber-pintar-quadro⟩⟩.
 '⟨Maria, say ⟨João, not-know-paint-picture⟩⟩'

Character of (9) and of the embedded sentence in (10):

(9b) ⟨agente do contexto, não-saber-pintar-quadro⟩
 '⟨agent of the context, not-know-paint-picture⟩'

(10b) ⟨Maria, dizer ⟨objeto apontado pelo falante¹⁴, não-saber-pintar-quadro⟩⟩.
 '⟨Maria, say ⟨pointed object, not-know-paint-picture⟩⟩'

If the embedded sentence in (10) had the same character of the one in (9), represented in (10c), the proposition would be expressed as in (10d):

¹⁴ Here, we consider 'ele' (he) as a deictic that works similarly in anaphoric contexts, i.e., it refers to what the speaker points to (either in physical contexts, or in textual surroundings). The important point, however, is that 'ele' (he) does not have the same character as 'eu' (I).

(10c) <Maria, dizer <agente do contexto¹⁵, não-saber-pintar-quadro>>
'<Maria, say <agent of the context, not-know-paint-picture>>'

(10d) <Maria, dizer <Maria, não-saber-pintar-quadro>>
'<Maria, say <Maria, not-know-paint-picture>>'

Which clearly does not work as a report of (9); therefore, the author concludes that under attitude verbs only the content of what is reported is found, and not its character.

A more sophisticated situation than this one is provided by Kaplan (1989) to demonstrate the same point. Consider an adaptation from the author's example:

(11) **Situation:** João is in a restaurant, and he observes a TV showing images from security cameras. He notes a man who is with his pants on fire. João's first thought is given by the sentence (11a). After a few seconds, João realizes that the man on TV is himself. At that point, João's thought is given by the sentence (11b).

(11a) *As calças dele estão pegando fogo.*
'His pants are on fire.'

(11b) *As minhas calças estão pegando fogo.*
'My pants are on fire'

In this case, (11a) and (11b) say the same about the world, i.e., the content of both sentences is equivalent to <calças-de-João, estar-pegando-fogo> (<pants-of-João, be-on-fire>). However, they have different characters because in (11b) the utterance context generates the information that the speaker's pants are on fire, while in (11a), the context and the use of the demonstrative indicate that the pointed person is in the described situation, i.e., the character here (in prose) is something like "the *demonstratum*'s pants are on fire". The most important thing to note about the situation in (11) is that when we report (11a) or (11b) we use the same sentence, given in (11c).

(11c) *O João pensa que as calças dele estão pegando fogo.*
'João thinks that his pants are on fire.'

These facts lead Kaplan (1989) to claim that attitude operators, such as '*pensar*' (think), operate only on contents, because if they operate on characters the situation in (11) would be reported by different sentences, since (11a) and (11b)

¹⁵ Here, as in other cases, the only context that, according to Kaplan, can be used to fix the value of an indexical is the utterance context. Hence (10c) results in (10d).

have different characters. Therefore, according to Kaplan, the character of the indexicals present in the direct discourse does not remain in the indirect discourse.

However, the generalization about the inability of operators, such as attitude verbs, to operate on characters of indexicals is too hasty. This is illustrated by Schlenker (2003, p.61) using examples similar to (12):

(12) **Situation:** João is so drunk he forgot that he is candidate for mayor in the municipal elections. He watches TV, and a candidate gets your attention. For João, this man should be elected because he has good ideas. However, João is watching himself, but he does not realize it due to his state of drunkenness.

(12a) *João espera que **ele** seja eleito.*
'João hopes that he will be elected'

(12b) *João espera PRO¹⁶ ser eleito.*
'João hopes PRO to be elected'

According to the situation in (12), the sentence that better reports João's thought is (12a), because when he does not recognize himself on TV, his thought is about another person (in this case, a *de re*¹⁷ reading). The report in (12b) is suitable if João had a thought like (12c) (in this case, a *de se*¹⁸ reading).

(12c) ***Eu*** *deveria ser eleito.*
'I should be elected'

The two sentences that describe João's thoughts, (12a) and (12b), have the same content that, *roughly speaking*, can be represented as '*João espera* ⟨*João, ser-eleito*⟩' (João hopes ⟨João, be-elected⟩). However, there are two different characters in this situation, which are responsible for the adequacy or not of these sentences to

¹⁶ PRO is the unpronounced subject of an infinitive clause under a control structure (embedded). Schlenker (2011, p.1575) makes it clear that (i) "[...] the De Se analysis crucially posits that PRO is not bound by [subject] John" in sentences like (12b), and (ii) his observations about PRO not entail anything about the indexicality of this structure, i.e., there is no reason to treat PRO as an indexical. The only important aspect about PRO in sentences like (12b) is that PRO under the scope of attitude verbs indicates that characters of indexicals can be found in their scope, which demonstrates a *de se* reading. Therefore, there are evidences that the character of linguistic expressions (not only indexicals) can be found in the scope of attitude verbs, and, thus, we can find monsters in natural language (against the concept of Kaplan, 1989).

¹⁷ *De re*, from Latin, 'about the thing'; a *de re* attitude is exemplified in the sentence 'Aníbal believes about someone, that he is a Portuguese spy'. This sentence attributes to the individual Aníbal a belief about a particular person (*res*). (BRANQUINHO; MURCHO; GOMES, 2006, p.226-227).

¹⁸ The expression was coined by Lewis (1979). Some authors who have studied and discussed the problems arising from this kind of propositional attitudes, which is one of the most challenging topics for linguists and philosophers, were David Lewis, John Perry and Hector Neri-Castañeda (BRANQUINHO; MURCHO; GOMES, 2006).

the case described: (i) the character of a *de re* reading: ‘*João espera* [$\lambda w \langle \textit{indiv\u00edduo apontado, ser-eleito} \rangle (w)$]’ (João hopes [$\lambda w \langle \textit{pointed individual, be-elected} \rangle (w)$]); and (ii) the character of a *de se* reading, ‘*João espera* [$\lambda w \langle c_a, \textit{ser-eleito} \rangle (w)$]’ (João hopes [$\lambda w \langle c_a, \textit{be-elected} \rangle (w)$]).

The situation in (12) implies that (12a) is appropriate for the case of the candidate, who does not recognize himself, i.e., in (12a) the item ‘he’ does not necessarily refer to João, but to a third person. (12b), in turn, is false in that context, because the thought of João was not *de se* and a sentence with PRO only applies to a *de se* reading /thought.

The semantic restrictions on the use of PRO, observed in relation to (12), provide arguments that this kind of structure serves to indicate, in the syntactic context, that the direct discourse (the utterance/ thought that is being reported) it was *de se*. Due to this sort of condition, it is correct to say that PRO exposes the character of the sentence with indexicals used in the direct discourse or thought, contradicting the prediction of Kaplan (1989).

Things being so, Schlenker argues that it is possible to maintain the indexical nature of direct discourse in the reports, because “[...] PRO in an attitude report can only be interpreted ‘De Se’: roughly, it can be used only in case ‘I’ was used in the original discourse” (SCHLENKER, 2003, p.61).

After claiming that Kaplan’s conceptions are not completely right, Schlenker’s next step is to show that operators can shift the character of the indexicals, i.e., there may have monsters operators in natural language, topic of the next section.

The pronominal monsters in other languages

As seen in the previous section, Schlenker reformulates some aspects of Kaplanian theory of indexicals, demonstrating that some claims made by Kaplan are not entirely correct concerning the natural language. Schlenker’s first step was to suggest that it is possible to find characters under the scope of attitude operators. This was exemplified by the *de se* cases. His next step is to demonstrate that it is possible that monsters operators exist in natural language and that they operate on the character of the indexicals, shifting the context of evaluation of these expressions. This type of data was found by Schlenker in English, French and Amharic. Defending the same conception of Schlenker, Anand and Nevins (2004) and Anand (2006) also argue against Kaplan’s idea that natural language does not have monsters operators. To argue in favor of this idea, they bring together data from Slave and Zazaki. In this section, then, cases of monsters operators found in Amharic, Zazaki and the Slave will be presented.

In Amharic, the official language of Ethiopia, there is a monster operator in the following situation:

(13) João Jägna nãNN yt-lall
João hero I-am say-3^{sg.m}
 'João_i said that I_i am a hero.'

In this case, the monster operator is the speech verb 'yt-lall'; the indexical 'nä' is being evaluated in the context that is being reported (c'), because, as Schlenker (2003, p.32) indicates, the logical formula of the Amharic sentence is: "SAY_(John, now, actually) c_i be-a-hero (agent(c_i), time(c_i), world(c_i))", where c_i represents the reported context.

Monsters operators, according to Schlenker, can shift the context of evaluation of indexicals only to a reported context. In other words, indexicals in natural language "[...] depend[s] either on the context of the actual speech act [...] or on the context of the reported speech act" (SCHLENKER, 2003, p.32). Therefore, only when an indexical, after an attitude or speech verb, is evaluated in the reported context we have an indexical monster. This aspect will be better explored in a later section, in which we compared different conceptions of monsters operators.

Anand and Nevins (2004) and Anand (2006) "[...] argue in line with Schlenker (2003, 1999) that shifting indexicals underneath attitude verbs diagnose the presence of context operators." (ANAND, 2006, p.74). The first data and monsters operators presented in Anand and Nevins (2004) and Anand (2006) are from Zazaki¹⁹. In this language, the speech verb is a monster operator shifting the context of evaluation of all indexicals under its scope. Consider (14),

(14) Heseni_i (mik-ra) va ke εz_{j,k} dεwletia
Hesen (I-to) said that I rich.be PRES
 'Hesen said that {I am / Hesen is} rich.'

In (14), 'εz' is the first person pronoun (indexical representing the agent of the context). When this indexical is under the scope of the attitude operator 'va', it can be evaluated either in the utterance context (c*) and refers to the speaker of the sentence, or it can be evaluated in the reported context (c') and refer to Hensen, the agent of the reported context.

Additional data of monsters operators are collected from *Slave*²⁰. In this language monsters operators include verbs such as: 'say', 'want', 'think' and 'ask'. In (15), "[...] both embedded pronouns refer to the author and addressee in the embedded context [...]" (ANAND, 2006, p.77).

¹⁹ Zazaki is an Indo-Iranian language spoken in Turkey for 2-6 million Kurds.

²⁰ *Slave* (or *Slavey*, *Slave*) is an Athabaskan language spoken in northwestern of Canada for approximately 760 people.

- (15) [segha ráwqđ'í] séđıdı yılé
 [1^{sg}-to 2^{sg}-buy] 2^{sg}-say-1^{sg} PAST
 'You told me to buy it for you'

As can be observed in the sentences from Zazaki and from Slave, attitude verbs shift the context of evaluation of indexicals. These examples (in the same way as those of Schlenker) show that the shifting of context is always from c^* to c' , i.e., from the utterance context to the reported context, although this is not explicitly stated by Anand and Nevins (2004), and Anand (2006).

Another aspect that suggests that data from Zazaki and Slave have monsters operators that shift the context from c^* to c' is that the evaluation of indexicals, according to the authors, occurs exclusively in speech contexts. Of course when we restrict the possible contexts of evaluation of indexicals to speech contexts, what we have are utterance contexts or reported contexts. Precisely because of this, Anand (2006) argues that shifted indexicals result from the action of monsters operators; they are not total or partial quotes.

The most important point to highlight about the aspects presented in this section is that Anand (2006) and Anand and Nevins (2004) share with Schlenker the following points: there are monsters in natural language, the attitude operators are these monsters, and, moreover, the monsters operators modify the context of evaluation of indexicals from the utterance context to the reported context (from c^* to c').

Predelli: modal and temporal monsters in fiction

Another author who defends the existence and the importance of monsters operators and, therefore, presents data from natural language that promote these points is Stefano Predelli. In his paper “Modal monsters and talk about fiction” (PREDELLI, 2008), the author presents data from monsters operators acting on modal and temporal indexicals in discourse about fiction, i.e., metafictional sentences. A sentence is classified as metafictional if it relates fictional and non-fictional context, e.g., ‘The Iron Man is funny’, as a comment about the movie *Iron Man*.

Intuitively the same sentence when related to fiction and to “real” facts does not seem to convey the same meaning. Thus, from a semantic point of view, the sentence (16), adapted from Predelli (2008), can have different truth values when uttered in different situations.

- (16) *O Ataque Doolittle*²¹ *decolou em mares calmos.*
 ‘The Doolittle Raid took off in calm seas’

²¹ Attack Doolittle: attack conducted by the U.S.A. troops toward the coast of Japan in 1942. Available at: <<http://www.uss-hornet.org/history/wwii/doolittle.shtml>>. Access in: 4 apr. 2015.

According to our intuition, (16) is considered true if someone, after watching the movie *Pearl Harbor*²², utter the sentence to remember the weather details during the air attack as reported in the film. However, if (16) is said during a debate about the military history of the U.S.A., it is false because the attack occurred in bad weather.

Predelli (2008) proposes that an adequate semantic analysis of sentences that can have different truth values in fictional and non-fictional contexts is provided only when an approach with operators on the character is used — the monster operators. According to the author the sentence in (16) (which is a comment about the film) can be represented with a sentential operator that affects the context of evaluation of the sentence — the modal monster operator.

Basically, the question that Predelli (2008) tries to answer is related to the most appropriate semantic analysis of the differences between the utterances of (16) in each case described above. He assumes that an utterance is a pair composed by a sentence and a context $\langle s, c \rangle$ and, because the author focuses its analysis on the indexicals 'now' and 'actually', the context is simply represented as a tuple $\langle c_t, c_w \rangle$ — formed by the world and by the time of the context. Overall, Predelli's idea is that in each case, sentences about fiction and non-fiction, there is a different representation of the pair "sentence-context".

Predelli (2008) proposes, to metafictional sentences, the existence of a monster operator (FM), which can sometimes be represented by an expression such as "according to the fiction x" in the surface. This operator is responsible for shifting the world of the utterance context (c_w^*) to the world of the fictional context ($c_w^\#$)²³. Thus, the sentence will be evaluated in the fictional world ($w^\#$) and its context will be shifted.

The definition of the FM operator, the modal monster operator proposed by Predelli for metafictional sentences, is presented below:

$[[FM(\alpha, \phi)]]_{c_w} = T$ iff $[[\phi]]_{c_w^\#, w^\#} = T$, where $c^\#$ is just like c , except that $c_w = w^\#$, and $w^\#$ is the possible world determined by $[[\alpha]]_{c_w}$

To Predelli (2008), c would be something like $\langle c_a, c_h, c_t, c_l, c_w \rangle$ and $c^\#$ something like $\langle c_a, c_h, c_t, c_l, c_w^\# \rangle$; c differs from $c^\#$ just because $c_w \neq c_w^\#$; that is, c and $c^\#$ are equal in everything, except in the world coordinate, that in c is the utterance world and in $c^\#$ is the fictional world (BASSO; TEIXEIRA, 2011).

²² American film produced by Jerry Bruckheimer and directed by Michael Bay.

²³ We insert here something new in the notation: '#' superscript indicates that we are mentioning a fictional context, e.g., $c^\#$ represents a fictional context.

Taking into account the monster operator and the theoretical arrangements proposed by the author, the sentence (16) is represented as (16a). (16b) is the representation of the sentence as a comment about the movie *Pearl Harbor* (in a tuple sentence-context) and (16c) is a simplification of (16b).

(16a) (decolar em mares calmos (Ataque Doolittle))
'(take off in calm seas (the Doolittle Raid))'

(16b) $\langle c^*, FM (Pearl Harbor, decolar em mares calmos (Ataque Doolittle)) \rangle$
' $\langle c^*, FM (Pearl Harbor, take off in calm seas (the Doolittle Raid)) \rangle$ '

(16c) $\langle c^*, FM (16) \rangle$

Predelli (2008, p.292) proposes a “[...] compositional system with a clause containing a sentential operator *roughly* paraphrasable as ‘according to Pearl Harbor’”. Therefore, through the monster solution the desired result is achieved, i.e., the sentence is true

$[[FM(16a)]]_{c^*, w^*} = T$
iff $[[\text{(take off in calm seas (the Doolittle Raid))}]_{c^*, w^*} = T$
iff, according to the movie *Pearl Harbor*, the Doolittle Raid took off in calm seas.

If a sentence has an indexical like ‘na verdade’ (actually) (a modal indexical operating on possible worlds), as in (17), which conveys that, according to the movie, Yamamoto was closer than the Americans thought, the representation with the monster operator will be as in (17a).

(17) *Embora os americanos pensassem que Yamamoto estivesse longe, **na verdade**, ele estava ao alcance do exército americano.*²⁴
'Although the Americans thought that Yamamoto was far away, he was actually within reach of the U.S.A. Army'

(17a) FM (na verdade (estar ao alcance (Yamamoto)))
'FM (actually (being within reach (Yamamoto)))'

Thus, (17a) is true
iff $[[FM (\text{actually (being within reach (Yamamoto))})]]_{c^*, w^*} = T$,
iff $[[\text{actually (being within reach (Yamamoto))}]_{c^*, w^*} = T$,
iff $[[\text{being within reach (Yamamoto)}]_{c^*, w^*} = T$,
iff, in the movie *Pearl Harbor*, Yamamoto was closer than the Americans thought.

²⁴ Example adapted from Predelli (2008).

With this approach Predelli (2008) argues that an analysis with monsters operators shifting the context of evaluation of modal and temporal indexicals (although the latter have not been discussed here) in sentences about fiction, explains the issues involved in their interpretation. According to him, if “[...] considerations in favor of the role for modal monsters in the analysis of certain phenomena are correct, the arguments put forth [by] Kaplan must be unsound.” (PREDELLI, 2008, p.295).

Brazilian Portuguese and its monsters

In this section, we present data of monsters operators and indexicals monsters found in BrP and analyzed in Basso and Teixeira (2011), Teixeira (2012) and Teixeira and Basso (2013). These examples reinforce the argumentation in favor of the existence of monsters in natural language, demonstrating that these elements are present in different families of languages. In the next section, we examine the most appropriate definition of monster operator, evaluating the concepts offered by the authors who have analyzed and defended these elements.

a) Monsters in the temporal domain

The first cases from BrP discussed here are monsters operators affecting the character of temporal indexicals, i.e., they act on the time coordinate of the context. To observe how they are, consider the situation in (18) and the sentence (18a)²⁵:

(18) **Situation:** João owes money to Mary. Whenever he meets her, he repeats the same promise: “*Eu vou devolver o teu dinheiro em dois dias*” (I will pay your money back in two days). But the payment never happens. Maria reports this sad situation to a friend with (18a).

(18a) *O João tem me dito, ao longo dos anos, que devolverá meu dinheiro em dois dias*²⁶.

‘John has told me, over the years, that will pay my money in two days’

²⁵ Similar examples, with data from English and French, are presented by Schlenker (2003, 2011).

²⁶ We clarify, as suggested by an anonymous reviewer, that there are two possible interpretations of (18a). They are result of ambiguity in the scope relations between the monster operator (speech verb) and the indexical expression (*em dois dias*). One of the arguments used by Kaplan (1989) to deny the existence of monsters in natural language is based on the fact that indexicals always have primary scope and, therefore, operators can not act on their evaluation contexts. So, when ‘em dois dias’ (in two days) is evaluated in relation to the utterance context of the sentence (c*) (the indexical is not shifted and the verb is not a monster), the indexical has primary scope over the speech verb. When the speech verb is a monster operator, the indexical can have narrow scope and its context of evaluation can be shifted to c’ (the reported context). Therefore, the ambiguity

A possible interpretation for (18a) is one in which the temporal indexical 'em dois dias' (in two days) has its referent established with respect to João's utterances. Therefore, this expression is evaluated in relation to the time of the reported context (c') and the speech verb is a monster operator that can shift the context of indexicals under its scope (from c* to c'). In this interpretation, (18a) means something like "*Sempre que encontro o João ele me diz: 'vou devolver teu dinheiro em dois dias'*" (Whenever I meet John he tells me: "I will pay your money back in two days.").

Reviewing the process occurred in (18a), the operation of context shifting triggered by the speech verb is only possible because, as discussed in the previous sections, 'dizer' (say) can have characters under its scope, and in addition, it can operate on those elements of meaning, shifting the context in which indexicals receive their semantic value. What happens in this case is a shifting in speech contexts – from an utterance context (c*) to a reported context (c').

b) Monsters in the spatial domain

We present, in this section, an example from BrP in which the monster operator acts on indexicals from another domain — the domain of location of the context. For this, consider the situation in (19) and the sentence (19a).

(19) **Situation:** Maria lives with her parents in São Carlos, and his brother, João, lives in Porto Alegre. At least once a week João calls Maria to tell her the news. Maria talks with his mother about his brother and she utters the following sentence:

(19a) *O João tem me dito, toda vez que me liga de Porto Alegre, que **tá chovendo**.*
'João has told me, every time he calls from Porto Alegre, that it is raining.'

In (19a), as well as in (18a), the speech verb is the monster operator that operates on the character of the indexical under its scope. Thus, a sentence like (19a) produces an interpretation that can be adequately paraphrased by (19b), and not by (20).

(19b) *O João tem me dito, toda vez que me liga de Porto Alegre, que **tá chovendo em Porto Alegre**.*
'João has told me, every time he calls from Porto Alegre, that it is raining in Porto Alegre.'

in the reading of (18a) is the result of ambiguities in the scope relations between the speech verb ('dizer') and the indexical expression ('em dois dias').

(20) *O João tem me dito, toda vez que me liga de Porto Alegre, que tá chovendo em São Carlos.*

‘João has told me, every time he calls from Porto Alegre, that it is raining in São Carlos.’

(20) is not an adequate paraphrase of the interpretation of (19a), because it shows a reading in which the predicate ‘chover’ (rain) is evaluated in relation to the location of the utterance context, i.e., the place where Maria utters the sentence (in São Carlos = c^*). In other words, if we assume that the verb ‘chover’ (rain) is an indexical that requires a location information (c_l), then (19a) should be evaluated in relation to the reported context (Porto Alegre = c') – being interpreted according to the paraphrase in (19b).

In this situation, the monster operator ‘dizer’ (say) shifts the context of evaluation and the predicate ‘chover’ (rain) is evaluated in the local of the reported context (c') (we have a spatial indexical monster); the predicate is not evaluated in the utterance context (c^*).²⁷

In both cases of monsters discussed so far, we observe that the monster operator ‘dizer’ (say) produces a shift from c^* to c' , as a consequence, the indexicals monsters (‘em dois dias’ (temporal indexical) and meteorological predicates (spatial indexical)) have their semantic values determined in the reported context and not in the utterance context. In the following section, slightly different monsters will be presented.

c) Monsters in the person domain

We will now discuss cases that do not follow the patterns of monsters analyzed above. The main differences are the following: (i) the monster operator is not a speech verb; (ii) indexicals affected by monsters operators are not evaluated in the reported context; (iii) only one speech context is involved, of course, the context in which the sentence is uttered and (iv) there is a fictional context present ($c^\#$).

Before moving to the analysis, we should mention that the sentences that are the subject of this section are called “metafictional sentences”, already presented in the section about Predelli’s approach. Consider the situation in (21) and the metafictional sentence in (21a).

²⁷ The availability or necessity of a space position for meteorological verbs raises complex issues for Semantics and Philosophy. An indexical explanation for some of these problems as the one we offer here is far from consensus and our only point is that if such an analysis is adopted, we find situations where a monster operator is present, as is the case of (18). See Recanati (2007) about issues and alternatives that involve meteorological verbs.

(21) **Situation:** imagine that at the end of a theater play, called *Maria vai com as outras*, a reporter interviews an actress (Ana) that plays the character Maria in the show. The reporter asks the following question to the actress: “What do you think could be changed so the show will be more funny?”. Ana answers with (21a).

(21a) **Eu** acho que **eu** podia ser rica.
'I think I could be rich.'

One interpretation of this sentence is with monsters and can be adequately paraphrased by (22). (23) is a representation in which the different contexts mobilized in the interpretation of the relevant indexicals are explicit.

(22) *Ana acha que Maria podia ser rica.*
'Ana thinks that Maria could be rich'

(23) **Eu**(c^*) acho que **eu**($c^\#$) podia ser rica²⁸.
'**I**(c^*) think that **I**($c^\#$) could be rich'

In the non-fictional context (c^*), the referent of the first indexical 'eu' (I) is Ana; in the fictional context ($c^\#$), the second indexical have the character Maria as its referent. In other words, the first occurrence of 'eu' (I) refers to Ana (the speaker of the utterance context c^*), and the second 'eu' (I) refers to the character played by Ana in the fictional context (Maria). Note that the first indexical is evaluated in the speech context, but not the second, and because of that, we can not say that the second 'eu' (I) is the speaker of that context. Although in the literature on indexicals often “agent of the context” is equivalent to “speaker of the context”; this is not the case to (21a).

²⁸ It was suggested, by an anonymous reviewer, that the two occurrences of the indexical 'eu' (I) have distinct references because: (i) the interpretation of indexicals depends on possible worlds and (ii) there is a modal context created by the imperfective in 'podia' (could). Initially, we clarify that the indexicals need more fine-grained structures (smaller) than possible worlds to be evaluated – such as contexts. A simple example that shows this is discussed below (several examples are presented in the literature, one of the most famous is about Lingens lost in the Stanford Library and it is due to Perry (1993) and Lewis (1983)): if João and Maria utter the sentence (s) '**Eu sou mulher**' (I am a woman) in the same world, say $w1$, we will have difficulty to assign a semantic value to the indexicals, and also to the proposition conveyed by the sentence, because there is no way to distinguish the utterances. To model these meanings we need smaller structures, i.e., the contexts. For example, Maria utters s in $c1$ and João in $c2$. From this, to '**Eu sou mulher**' (I am a woman) said by Maria, 'eu' (I) = Maria and s is T in $c1$ and $w1$; on the other hand, to '**Eu sou mulher**' (I am a woman) said by João, 'eu' (I) = João and s is F in $c2$ and $w1$. Thus, in the same possible world, $w1$, there are two different contexts, $c1$ and $c2$ (details in BASSO; TEIXEIRA; VOGT (2012)) and this allows s be modeled adequately. Regarding the statement in (ii), if the modal verb were (the only) responsible by the shifting, then we would expect that a sentence like '**Eu acho que eu podia tomar um chopp antes da peça**' (I think I could have a beer before the play) (where there is no metafictional monster operator as we will claim below) in a context as (21), had a similar interpretation to that shown in (23), i.e., the indexical 'eu' (I) would have two different referents. However, this interpretation is not achieved because the modal + the attitude verb can not shift the context; we claim, therefore, that the presence of a metafictional monster operator is required.

Another aspect to be noted in (21a) is that the work of the monster operator is not performed by the attitude verb (or, not only by the attitude verb). In fact, the attitude verb acts as a boundary between contexts, and the metafictional operator (FM#, BASSO; TEIXEIRA, 2011) is the element responsible by the shifting to the fictional context. Because of this process, FM# is the monster operator in (21a).

This case shows one of the incompatibilities between the Schlenker's ideas and the data from BrP. Schlenker (2003, p.32) states that "[...] an attitude report manipulates a context variable, whose value may fix the reference of indexicals that appear in its scope". However, in sentence (21a) 'achar (que)' (think (that)) does not have this function, because the attitude verb does not fix the referent of indexicals, it only separates the fictional context from the non-fictional. The role of setting the value of the referent in the fictional world/context is played by the monster operator FM#.

We can show that FM# is responsible for shifting contexts when we introduce the expression that explicit the monster operator work in the sentence, consider (24).

(24) **Eu** acho que, na peça *'Maria vai com as outras'*, **eu** podia ser rica.
 'I think that, in the piece *Maria vai com as outras*, I could be rich'

In (24) the expression 'na peça *Maria vai com as outras*' (the explicit FM#) controls the variable of the context and, therefore, and it fixes the semantic value of the indexicals under its scope (in the relevant show).

Formally, the monster operator proposed by Basso and Teixeira (2011) is very similar to the one presented by Predelli (2008), however, instead of just changing the coordinates of world and time of the context, it can change other coordinates, as the agent coordinate (c_a).

$[[FM^\#(\alpha, \varphi)]_{c_w} = T$ iff $[[\varphi]]_{c^\#} = T$, where $c^\#$ is just like c , except that (i) $c_w = w^\#$, and $w^\#$ is the possible world determined by $[[\alpha]]_{c_w}$, and (ii) $K(c^\#)$, where K is some relevant coordinate of the fictional context (such as c_a, c_h, c_t , etc.)

With FM# the world of the context is the world established by the fiction. However, other contextual coordinates (the relevant ones) can also be modified. In such cases, the coordinates of the fictional context are used for setting the value of indexicals, because the monster operator brings the fictional context $c^\#$ into consideration. Hence, the value of the second 'eu' (I) of (21a) is fixed, and the correct semantic values of the indexicals, is, respectively, Ana and Maria.

Suitable notion of monsters for natural language data

In this section, taking into account the data presented so far especially those related to the BrP, we present next the concepts of monsters operators defended by the authors mentioned in this paper. These conceptions can be verified (i) implicitly, by examples and by explanations presented by the authors, or (ii) explicitly, by the definitions provided by them. After this, we will analyze the concepts presented and verify which one is the most appropriate for the natural language data.

Before we do this let us recall the authors' data in the following summary table:

Frame 1 – Summary of literature

Authors	Languages	Monsters operators	Remarks
Kaplan (1989)	English	There are not in natural language.	Monsters operators shift the character of the indexicals.
Schlenker (1999, 2003, 2011)	English Amharic	'tell' 'yt-lall'	Monsters operators operate on speech contexts. The shifting occurs from c^* to c' .
Anand and Nevins (2004) and Anand (2006)	Zazaki <i>Slave</i>	'va' 'sédidí'	Operators operate on speech contexts. The shifting occurs from c^* to c' .
Predelli (2008)	English	'FM'	Operators shift the character. The shifting occurs from c^* to $c^\#$ in modal and temporal indexicals.
Basso and Teixeira (2011), Teixeira (2012) and Teixeira and Basso (2013)	BrP	'dizer' 'FM $^\#$ ' + 'achar'	The shifting occurs: (i) from c^* to c' ; (ii) from c^* to $c^\#$.

Source: Created by the author.

Observing the frame above, we note that natural language have instances of monsters operators acting only on speech contexts and instances of monsters acting on the speech context plus another kind of context. In other words, the examples presented demonstrate that monsters operators shift the character of indexicals, and this shifting takes place in two ways: (i) from the utterance context to a reported context; (ii) from the utterance context to a fictional context.

From this first observation, it is necessary a concept of monster operator comprehensive enough to include the different contexts (c^* , c' , $c^\#$) where indexicals are evaluated. In order to determine which definition of monster is more adequate, we compare the conceptions offered by the authors cited here; when this concept is not clearly defined, we try to capture their ideas based on the examples analyzed by them and based on the contexts that appear in these analyses.

Kaplan (1989), as noted, denies the existence of monsters operators in natural language, but the author offers a conception of this kind of element as: “Operators [...] which attempt to meddle with character [...]” (KAPLAN, 1989, p.511). This definition brings a broad conception of monsters, since there is no restriction on the nature of the context handled by a monster operator. It requires just that indexicals are set in a context c , where $c \neq c^*$.

Regarding Schlenker (1999, 2003, 2011), the definition of monsters operators is much more restrictive, because according to him an indexical “depend[s] either on the context of the actual speech act [...] or on the context of the reported speech act” (SCHLENKER, 2003, p.32), *i.e.*, a monster operator can modify the context of evaluation of indexicals from the utterance context to a reported context. Therefore, the range of contexts for the monster operator to act upon is restricted to two types of contexts — two speech contexts.

Anand and Nevins (2004) and Anand (2006) do not present an explicit concept of monster operator, but when we look at their examples and analysis of monsters in Slave and Zazaki, we see that indexicals monsters always have their context of evaluation modified from c^* to c' . We note that the authors only analyze with speech contexts through the following quote: “for any two shiftable indexicals $ind1$ and $ind2$ in a domain D , $ind1$ may be dependent on speech-context C_A different from $ind2$'s speech-context only if $ind2$ is not c -commanded by C_A ” (ANAND, 2006, p.107, our emphasis). This quote makes it clear that only speech contexts are involved in the evaluation of the indexicals (as a consequence, c^* and c'). Additionally, they do not present examples in which the monster operator shifts the context of indexicals to another context that is not a speech reported context. Because of this, Anand and Nevins (2004) and Anand (2006) are included in the group of authors that advocates for a restricted conception of monster operator, as well as Schlenker.

Predelli (2008), in turn, presents a concept of monster operator similar to Kaplan, since for him the appropriate semantic treatment of metafictional sentences requires “operators on character” (PREDELLI, 2008, p.277). However, the author restricts the scope of monsters operator, because he states that they are “[...] modal (and temporal) operators on character, that is, in the current jargon, modal (and temporal) monsters” (PREDELLI, 2008, p.277). Despite the restriction on the indexicals that can be monsters, Predelli's conception of a monster operator is close to the broad conception by Kaplan (1989), because it does not restrict their contexts of action. This idea reflects the cases examined by Predelli, where monsters operators shift the context of evaluation from c^* to $c^\#$. In these cases, unlike the situations analyzed by Schlenker (1999, 2003, 2011), Anand and Nevins (2004) and Anand (2006), there are not two speech contexts.

Finally, Basso and Teixeira (2011), Teixeira (2012) and Teixeira and Basso (2013) claim for a conception of monster operator that follows Kaplan. This is because we found data showing that BrP indexicals, in general, may depend on the utterance context, on the reported context and on the fictional context (c^* , c' , $c^\#$). Thus, a monster operator can shift the context of evaluation of indexicals from the utterance context: to the reported context or to the fictional context.

If we take the data from BrP into account, the concept of Schlenker, and those who follow him, is too restrictive especially for cases of metafictional sentences, because the author only provides c' to indexicals modified be evaluated and, in sentences like (21a), a fictional context ($c^\#$) is required. Therefore, if we compare the conception of monsters (indexicals and operators) of Kaplan and of Schlenker, we can say that the first is too restricting, while the second is comprehensive. Which one would be the best?

Because monsters in metafictional sentences behave differently, the concept of monster presented by Schlenker, in our view, is too restricted. For this limitation, we discard this view, since it does not address all cases of monsters found in BrP. The concept of monsters presented by Kaplan (1989) (presented in the second section of this paper), in turn, is wide enough to include the monsters found in sentence (21a) and in all other sentences in all languages presented here. Therefore, the conception of monsters proposed by Kaplan (1989) is the best for the cases analyzed here.

Conclusion

Having discussed the concepts and data of monsters (indexicals and operators) that authors like Kaplan (1989), Schlenker (1999, 2003, 2011), Anand (2006), Anand and Nevins (2004), Predelli (2008), Basso and Teixeira (2011), Teixeira (2012), and Teixeira and Basso (2013) have presented, we can say that:

- (i) there are (at least) three kinds of contexts in which an indexical can be evaluated in natural language: the utterance context, the reported context and the fictional context (c^* , c' , $c^\#$);
- (ii) there are two relevant concepts of monsters operators presented: (a) the concept of monster operator of Schlenker (1999, 2003, 2011) that is so restricted that says that a monster only can shift the context of evaluation of indexicals to the reported context (c') and (b) Kaplan's notion of monster that is so broad that it does not restrict the contexts of evaluation of indexicals.

Among a narrow proposal (Schlenker) and a broad proposal (Kaplan), there are enough arguments to defend Kaplan's concept of monster as the best one. As

we have seen, Kaplan's conception does not limit the evaluation of the indexical monster to certain contexts. For him a monster operator is simply a structure that is able to shift the context (the character) of indexicals.

So, even though Kaplan (1989) did not accept that there are monsters in natural language, he presents a concept of monster operator that fits all the data presented, i.e., the author introduces the best concept of monster proposed so far.

TEIXEIRA, L. R.; BASSO, R. M. Definindo um operador-monstro. *Alfa*, São Paulo, v.59, n.2, p.303-327, 2015.

- *RESUMO: O presente artigo revê a literatura relacionada a um tipo particular de operador, supostamente presente em línguas naturais, chamado de "operador-monstro". Esse operador tem a característica de poder mudar o contexto de avaliação de itens indexicais sob seu escopo. Sua existência foi inicialmente negada por Kaplan (1989), em seu famoso texto sobre a semântica dos itens indexicais, e, posteriormente, autores como Schlenker (2003) e Anand (2006) argumentaram que tais operadores de fato existem em línguas naturais, com base tanto em dados de línguas indo-europeias quanto de outras famílias linguísticas. Contudo, analisando com cuidado a literatura, é possível notar, nos vários autores que se debruçaram sobre o tema, diferentes definições desse operador. Neste artigo, após apresentar o conceito de operador-monstro conforme postulado por Kaplan (1989) e defender sua existência com base em dados do português brasileiro (PB), argumentamos a favor de uma definição para esse operador que seja ampla, nas linhas daquela primeiramente proposta por Kaplan (1989). Os dados do PB serão cruciais para defender nossa posição.*
- *PALAVRAS-CHAVE: Semântica. Indexicais. Operadores-monstros. Mudança de contexto.*

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