

Semantics of Under-Represented Languages in the Americas

Volume 2 *The Proceedings of the Second Conference on the Semantics of Under-Represented Languages in the Americas*

Article 8

2020

Is *todo N* in Brazilian Portuguese a quantifier?

Roberta Pires de Oliveira
UFSC/CNPq

Follow this and additional works at: <https://scholarworks.umass.edu/sula>



Part of the [Semantics and Pragmatics Commons](#)

Recommended Citation

Pires de Oliveira, Roberta (2020) "Is *todo N* in Brazilian Portuguese a quantifier?," *Semantics of Under-Represented Languages in the Americas*: Vol. 2 , Article 8.

Available at: <https://scholarworks.umass.edu/sula/vol2/iss1/8>

This Article is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Semantics of Under-Represented Languages in the Americas by an authorized editor of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

Is *todo N* in Brazilian Portuguese a quantifier?

Roberta Pires de Oliveira
UFSC/CNPq*

This paper investigates whether *todo N* (universal quantifier + noun phrase) in Brazilian Portuguese is existential (an indefinite) or a universal. It concludes that it is a universal with a modal trait. The first section shows that *todo N* has properties which distinguish it from definite universal phrases. These properties may be explained by Matthewson's (2001) suggestion concerning the semantic structures of *every* and *all*. Within such an approach, *todo N* would not be a quantifier. This hypothesis finds support in Negrão's (2002) analysis, which claims that *todo N* is an indefinite. Based on Dayal (1998) and Saeboe's (2001) analyses of *any*, we show that *todo N* is a universal with a modal trait. Finally, we show that *todo N* cannot be specific in Enç's sense (1991); thus her generalization concerning quantifiers should be revised. We conclude that quantification and specificity should be kept apart and that *todo N* is a non-specific quantifier.

This paper seeks to investigate whether *todo N* (universal quantifier + noun phrase), the bare universal phrase, in Brazilian Portuguese (BP) is a quantifier or an indefinite in Heim's sense. The first section demonstrates that the bare universal phrase does not have the same behavior as the definite universal phrase (*todo o N*, *todos os N*) be it singular or plural. The contrast is explained, according to Matthewson's proposal for *every* and *all*, by ascribing to each universal phrase a distinct semantic structure. According to her proposal, quantifiers must have argumental type sisters. Thus, *todo N* would not be a quantifier but a determiner. In the second section we explore Negrão's hypothesis that *todo N* is an indefinite. Section 3 shows, based on Dayal's analysis of *any*, that *todo* is a quantifier and that it carries some trait of modality. We also explore Saeboe's analysis of *any* to reinforce this claim. Finally, we show, in section 4, that *todo N* cannot be specific, and therefore Enç's generalization concerning quantifiers should be reconsidered. We propose to keep the notions of quantification and specificity apart, and that *todo N* is a non-specific modal quantifier.

1. Universal quantification in Brazilian Portuguese: a brief survey

Pires de Oliveira (2002a, 2002b) argues that in BP it is descriptively possible to identify two structures headed by *todo*, traditionally taken to express the same content as

* This paper would not be possible without financial support from CNPq.

a universal quantifier. They are exemplified by the following sentences:

- (1) Toda criança chora.
UQ child cries¹
'Every child cries'
- (2) Toda a criançada² chora.³
UQ singular definite article singular children (group) cry.
'The entire group of children cries'
- (3) Todas as crianças choram.
UQ plural definite article plural children cry.
'All the children cry'.

In BP, there is no quantifier phrase with bare plural, although there are bare plurals:

- (4) * Todas crianças choram.
UQ plural children cry.
'All children cry'.

It does not seem fortuitous that the quantifier phrase in sentences like (2) and (3) are built from a definite phrase, whereas in sentences like (1) the universal quantifier is bare in to the degree that it functions like a determiner since it is linked directly to a common noun. This is what motivates calling the former a Definite Universal Phrase (DUP) and the latter a Bare Universal Phrase (BUP). There is an asymmetry between these two universal phrases that may be recognized by their distinct behavior concerning several syntactic and semantic properties. Here are some of these differences; others will be mentioned later on:

- a) Flotation is only possible with DUP:
- (5) * Criança toda chora.
Child UQ cries.
'Any child cries'
- (6) A criançada toda chora.
Definite article singular child (group) cries.
'The entire group of children cries'
- (7) As crianças todas choram.
Definite article plural children UQ plural cry.
'The children all cry'.

¹ We gloss in order to avoid interferences from English. *Todo* does not have the same meaning as *every*, since it shares many features with *any*, and with *all*.

² *Criançada* is composed from *criança* (*child*) and the suffix *-ada*, which indicates a group of.

³ Brazilian Portuguese also admits sentences like *Toda a criança se machucou* (*The whole child got hurt*). For a more detailed analysis see Pires de Oliveira (2002).

b) Both (2) and (3) allow for anaphoric relations, while the anaphoric relation is either impossible or very difficult with BUP.

(8) Toda criança chora. ??Ela/* Elas sente/m medo.
UQ child (common noun) cry. She/They feel afraid.
'Any child cries. It/They fell fear.'

(9) Toda a criançada chora. Elas sentem medo.
UQ singular definite article singular child (group) cry. They feel afraid.
'The entire group of children cries. They feel afraid.'

(10) Todas as crianças choram. Elas sentem medo.
UQ plural definite article plural child plural cry. They feel afraid.
'All the children cry. They feel afraid.'

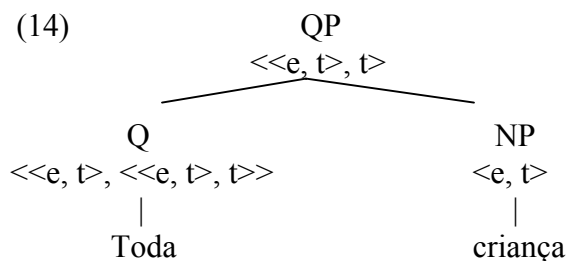
c) A collective reading is only possible with sentences headed by a definite quantifier phrase:

(11) * Toda criança se reúne no parque.
UQ child reciprocal pronoun meets in the park.
'Every child meets in the park'

(12) Toda a criançada se reúne no parque.
UQ singular definite article singular child reciprocal pronoun meets in the park
'The entire group of children meets in the park.'

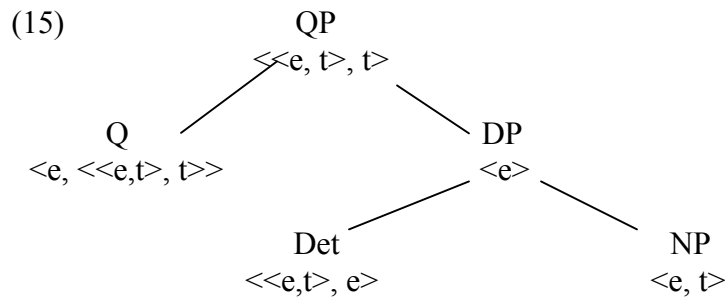
(13) Todas as crianças se reúnem no parque.
UQ plural definite article plural child plural reciprocal pronoun meets in the park
'All the children meet in the park.'

Bearing on Matthewson's (2001) proposal concerning the analysis of *every* and *all* in English, and of quantifier phrases in St'át'imcets, a Salish language, Pires de Oliveira (2002) argues that the asymmetry between BUP and DUP may be explained by distinct semantic structures attributed to each of them. Here are the structures:



Structure (14) corresponds to the quantifier phrase in sentence (1), where the universal quantifier combines with a common noun, a predicate, type $\langle e, t \rangle$, and generates a quantifier phrase, type $\langle\langle e, t \rangle, t \rangle$. Thus the universal quantifier must be of type $\langle\langle e, t \rangle, t \rangle$,

$\langle\langle e, t \rangle, t \rangle$, as is predicted by the traditional analysis of quantifiers, of which Heim and Kratzer's (1998) is one example among others. However, such an analysis cannot be applied to DUP, which is exemplified by sentences (2) and (3), since in it the universal quantifier is combined with a determiner phrase that must be type $\langle e \rangle$, an argument not a predicate.⁴ Thus, it should have type $\langle e, \langle\langle e, t \rangle, t \rangle \rangle$, as shown in (15) below:



The distinct behavior of DUP and BUP is thus explained structurally. In sentences with a definite determiner phrase the universal quantifier is combined with a full determiner phrase, that is, a phrase that stands on its own, which allows flotation. In (1) flotation is not possible because the universal quantifier is combined with a common noun that is not a full nominal phrase, but a predicate. As such it cannot stand on its own, since it needs to be bound by a quantifier.⁵ Anaphoric recovering is also a consequence of the different structures that underlie each of the quantifier phrases; if anaphoric linking is only possible when it recovers an individual, that is, a type $\langle e \rangle$, it can only happen with DUP.

Finally, since a predicate does not denote an individual, it is not possible to combine it with a group predicate, which requires an individual. This analysis is reinforced by the phenomena of topicalization and anaphoric linking, which are only possible if the nominal phrase is a definite one:

- (16) * Criança toda ela brinca.
Child UQ she plays.
'Each child plays'
- (17) A meninada toda ela brinca.
Definite article singular child (group) UQ singular she plays.
'The entire group of children plays'
- (18) As crianças todas elas brincam.
Definite article plural child plural UQ plural them play.
'All the children, they play'

⁴ Our analysis of the quantifier phrase is in accordance with Müller's proposal (2001) for the description of common nouns in BP. Thus, it assumes that the reference of a generic description is an individual since it refers to a kind. The reference of bare plurals is also to individuals, plural individuals. The denotation of a common noun is a set of individuals, type $\langle e, t \rangle$.

⁵ Thus, as Müller (2001) claims, bare singular sentences in BP, such as *Criança chora* (Children cry), are under the scope of a generic operator

Matthewson (2001) suggests that *every* is not a quantifier. If we transpose her analysis to BP, then we should at least consider the hypothesis that the bare *todo* may not be a quantifier after all, since it seems to function more like a determiner. The author claims that “quantifiers actually require sisters of argumental type” (Matthewson, 2001: 1), that “*every* is not a quantifier, and that its apparent quantificational nature comes from some other (possibly null) element.” Perhaps, continues the author, Zimmermann (*apud* Matthewson, 2001: 46) is right: “although noun phrases of the form ‘every N’ are traditionally analyzed as denoting quantifiers, it is clear that this cannot be the whole story: despite their being in the singular, they may express some kind of summation (or maybe collectivity).” Applying this reasoning to BP we should claim that only DUP is a true quantifier, the quantifier in BUP would be something else. Such a view of *todo N* finds support in Negrão’s (2002) analysis of *todo* and *cada* (each). This paper aims to further investigate the hypothesis that *todo N* is not a quantifier. Such an investigation points toward a theoretical issue: what defines something as a quantifier? What is a quantifier after all?

2. Would *todo* be an indefinite in Heim’s sense?

Before introducing Negrão’s reasoning we will present two other properties that characterize BUP. First, an episodic reading is only possible with sentences headed by definite universal phrases whether singular or plural. Several authors (Negrão 2002, Vazzata-Dias 2001, Gomes 2002) have attested to this fact:

- (19) * Toda criança está brincando.
 UQ child is playing
 ‘Every child is playing’
- (20) Toda a criançada está brincando.
 UQ singular define article singular child (group) is playing.
 ‘The entire group of children is playing’
- (21) Todas as crianças estão brincando.
 UQ plural define article plural child plural are playing.
 ‘All the children are playing’.

Why is it that *todo N* cannot occur in existential contexts? A sound hypothesis concerns once again the semantic structure of this quantifier phrase. The absence of a definite article would only allow a non-specific interpretation. If this is so, then we have reason to believe that there is no null article between *todo* and the common noun. The presence of the definite article in (20) and (21) explains their episodic reading.

The second property has to do with the fact that the bare universal phrase is not licensed in object position. This phenomenon has also been attested to several authors (Negrão 2002, Vazzata-Dias 2001, Gomes 2002). Gomes (2002) illustrates this point with the following pair of sentences:

- (22) * Ele canta toda canção.
 He sings UQ song.
 ‘He sings every song.’

- (23) a. Ele canta todas as canções.
He sings UQ plural definite article plural song plural.
'He sings all the songs'
- b. Ele canta toda a canção.
He sings UQ singular definite article singular song singular.
'He sings the whole song.'

Negrão (2002) aims not only to explain these two properties but also to distinguish *todo N* from *cada N* (*each*). The author claims that sentences with *todo N* are underspecified for the feature Distributive, since it may or may not have a distributive reading; thus it has a **portmanteau** behavior according to Gil's (1995) terminology. *Cada* (*each*), on the other hand, carries such a feature, and must confirm it; otherwise the sentence is ungrammatical. The author also shows that *todo* and *cada* do not occur in the same contexts. *Todo* is licensed as the subject of a sentence the object of which is a group quantifier phrase, whereas *cada* is not:

- (24) a. *Cada homem ama aquela mulher.
UQ man loves that woman.
'Each man loves that woman.'
- b. Todo homem ama aquela mulher.
UQ man loves that woman.
'Every man loves that woman.'

(24.b) is possible because *todo N* is not necessarily distributive.

Furthermore, *todo* but not *cada* may be the subject of an individual level predicate:

- (25) a. *Cada homem é inteligente.
UQ man is clever.
'Each man is clever'
- b. Todo homem é inteligente.
UQ man is clever.
'Every man is clever'

Thus, *todo N* is licensed in "generic" (non-episodic) sentences, while *cada* is not.

Finally, *todo* does not support the inverted scope reading, that is, it does not have wide scope whenever it occupies other positions besides being the subject of the sentence:

- (25) *Aquele médico examinou todo paciente.
That doctor saw UQ patient.
That doctor saw every patient.'

We will return to this point in the next section.

Her conclusion is that *todo* is not a true quantifier phrase, but rather an indefinite in Heim's sense, whereas *cada* (*each*) is a true quantifier. The author advocates that *todo*

quantifier phrases behave like indefinites in as much as they introduce a variable that ends up unselectively bound by sentential operators.

2.1 Some problems with such an analysis

A first argument against the proposal to consider *todo* an indefinite is that it does not explain why *todo N* is not licensed in episodic sentences and why it cannot occupy the object position. If *todo* is an indefinite why should it not occur in episodic sentences? If it is an indefinite why should it be impossible in object position? Negrão (2002), in an attempt to explain these facts, claims that *todo* cannot occur in episodic sentences, because it carries the feature [+universal]: “The operators binding the variable introduced by *todo* DQP need to have a meaning compatible with the feature [+universal] of *todo*. This is why when it is in an object position of an existentially quantified VP, the sentence becomes ungrammatical.”⁶ (Negrão, 2002: 203). This is not a totally satisfactory answer, however. First, because it seems rather contradictory to claim that *todo* is an indefinite and simultaneously carries the feature [+universal]. If it is an indefinite, then it should occur in episodic sentences and in object position, with an existential reading.

Second, because sentence (22) is not an episodic sentence; it may certainly be interpreted as a generic sentence, but *todo N* is not allowed. Curiously, we found many examples of *todo* in object position in our survey of oral and written corpora. Most of them occur in generic sentences. Here are two examples:

- (27) Empacado desde 1995, o projeto veda toda disposição sobre a adoção de tutela ou guarda em conjunto, mesmo que filhos de um parceiro. (*Folha de São Paulo*, 31 de março de 2002).
‘Held up since 1995, the project prohibits every disposition concerning the adoption or joint custody, even in cases of children of a spouse.’
- (28) Ela (Helen Keller) foi uma daquelas pessoas que teriam todas as razões para amaldiçoar a vida, mas que escolhem o caminho contrário e acabam superando todo obstáculo. (*Super Interessante*, junho 2002, p.24)
‘She was one of those people who would have all the reasons to curse life, but who have chosen the other way and wind up overcoming every obstacle.’

How do we explain that sentence (22) is unacceptable while sentences (27) and (28) are fine?

Moreover, although Negrão claims that *todo* cannot occur in existential sentences, our survey showed examples of *todo* in existential contexts if the universal phrase is modified. Sentence (29) is fine because *todo N* is modified by a relative clause:

- (29) Toda criança que veio para a festa está brincando.
UQ child singular who came to the party is playing
‘Every child who came to the party is playing.’

⁶ My own translation: “Os operadores prendendo a variável introduzida pelo *todo* DQP precisam ter significado compatível com o traço [+ universal] de *todo*. É por isso que, quando em posição de objeto de um VP quantificado existencialmente, a sentença torna-se inaceitável.” (Negrão 2002: 203)

The same happens with respect to the possibility of BUP occupying the object position: it is allowed in such a position if it is modified. Notice that in (27) the bare phrase is modified by the specification of the type of disposition. In (28) although there is no explicit restriction, it is easily recovered from the linguistic context: all of the obstacles that they met in life.

There is a sharp contrast between the sentences below:

- (30) * João leu todo livro.
 João read UQ book singular
 ‘João read every book.’
- (31) João leu todo livro que caiu em suas mãos.
 João read UQ book that fell into his hands.
 ‘João read every book that came into his possession.’

Once again, out of the blue sentence (30) does not work. However, the insertion of a relative clause modifying the universal phrase makes the sentence acceptable. One should notice that both (29) and (31) exemplify very special types of episodic sentences, because they seem to state a possibility within a given temporal interval. In (31) the speaker is not asserting that John read all possible books, but rather that he read every possible book which was available to him. The same is true with respect to (29): the speaker is not asserting that all children in the universe are playing – an obviously false statement, but rather that all children who possibly came to the party were playing.

If Negrão’s claim concerning the feature [+universal] were right, then sentences (29) and (31) should both be unacceptable, since there would be a conflict between incompatible features: verb morphology would carry the feature [+existential] while *todo*, the feature [+universal]. But they are both acceptable.

Finally, if we substitute the universal quantifier by an indefinite article such as *um* (*a*), we get a totally different interpretation: the resulting sentence only accepts a so-called “pure” existential reading. Thus, the substitution for an indefinite does not yield a generic interpretation:

- (32) João leu um livro que caiu em suas mãos.
 João read indefinite book that fell into his hands.
 ‘João read a book that came into his possession.’

Why in (31) do we get a “universal interpretation” though in an episodic context, whereas with an indefinite, sentence (32), the only possibility is an existential reading? If *todo N* were an indefinite it should behave as an indefinite, and be ascribed only an existential reading, but that does not seem to be the case.

Summarizing: to attribute distinct semantic structures to BUP and DUP may explain some facts about universal phrases in BP, but not all of them. In particular it does not explain why BUP cannot be the object position. The hypothesis that *todo* in structures like *todo N*, BUP, is not a quantifier, but an indefinite is puzzling because if it were so then it should occur in the object position, and be possible in episodic sentences. Thus, postulating a feature [+universal] seems not only to be a rather *ad hoc* solution, but also an inadequate one. Finally, *todo* may occur both in episodic statements and in object

position given that it is modified by a relative clause. Within such contexts it is interpreted as some sort of temporalized “universal”.

3. Is *todo* a universal quantifier?

Dayal’s (1998) analysis of the Free Choice Item (FCI) *any* in English may be of some help to solve our issue concerning *todo N*; first because there has been some discussion about whether *any* is an indefinite or a universal, a debate that is of utmost interest to us. Second because, as the author shows, *any* may occur in affirmative episodic sentences if it is modified by a relative clause. Here is the main contrast she works with:

- (33) * John talked to any woman.
 (34) John talked to any woman who came up to him.

There is a close parallel to *todo N* in BP, as the translations with the evaluations concerning BP clearly show:

- (35) * John conversou com toda mulher.
 John talked to UQ woman.
 (36) John conversou com toda mulher que ele encontrou.
 John talked to UQ woman that he met.

According to Dayal, licensing by a subordinate clause was named “subtriggering” by LeGrand. She adheres to this terminology and we will adopt it as well. The author claims that subtriggering and modality challenge the view that *any* is an indefinite, and support her thesis that *any* is after all a quantifier. If her reasoning is plausibly applied to BP data, then our thesis that *todo N* is a universal may find some support, while the hypothesis that it is an indefinite is falsified. We will restrict our analysis to the cases of subtriggering, and ignore the problem of modality because it does not seem to affect *todo N*, though more research is needed.

The possibility of subtriggering challenges the hypothesis that *any*, and in our case *todo*, is an indefinite because an indefinite in such a position should not have universal force, as was shown in sentence (32). But both (34) and (36) have “universal” force. They may be roughly paraphrased by: if something is a woman who is in a situation of meeting John, then John talked to her. Notice that none of the sentences assert that there is actually a woman who John talked to, but rather they state a conditional: if there is a woman who John meets, then he will talk to her. Thus, it seems that the hypothesis that *todo N* denotes a variable which may be bound by a generic operator given by tense-aspect morphology is challenged, because if it were so, then in contexts like (34) and (36) it should receive an existential reading.

Dayal also claims that only universals, not indefinites, can take modifiers like *almost* and *absolutely*, and that only universals are compatible with exception phrases. Once again, if this is so, then *todo N* should be considered a universal, since it may combine with *quase* (almost), sentence (37), it admits exceptions, sentence (38), and it may be modified by *certamente* (*absolutely*), sentence (39):

- (37) Quase todo menino brinca.
Almost UQ boy play
'Almost every boy plays.'
- (38) Todo menino exceto o João brinca.
UQ boy except João play
'Every boy except João plays.'
- (39) Certamente todo menino brinca.
Certainly UQ boy play.
'Certainly, every boy plays.'

There are some doubts about the *almost* and *absolutely* tests, but Dayal claims that “the possibility of modification by exception phrases remains significant because they have been shown to exclusively involve universals” (Dayal, 1998: 438-439). Thus, we must conclude that *todo* is a universal quantifier.

Any, shows Dayal, cannot combine with pre-nominal modification, whereas it is fine with post-nominal modification:

- (40) * Mary talked to any angry student.
(41) Mary talked to any student who was angry.

“What we have captured here is a way of deriving the generalization that postnominal modification is sufficient to license *any*. However, prenominal modifiers (or even occasionally unmodified nouns) are sometimes able to license *any*.” (Dayal, 1998: 455) Surprisingly, the same phenomenon is found in BP, though we cannot describe it as pre- and post-nominal modification, since both (42) and (43) show post nominal modifications, but with different structures:

- (42) * João conversou com todo aluno bravo.
João talked to UQ student angry.
'John spoke with every angry student'
- (43) João conversou com todo aluno que estava bravo.
João talked to UQ student who was angry.
'John spoke with every student who was angry'.

Dayal's explanation for the contrast between (40) and (41) is absolutely plausible as an explanation for (42) and (43) in BP, and it points towards considering *any* and *todo* as quantifiers. Roughly speaking, quantifiers are tripartite structures. In sentences (40) and (42) there is only one situation variable given by the main verb, which implies that John spoke with every possible student who was angry, which is a patently false statement. It is simply impossible that all possible student situations extend into a situation that falls within the interval denoted by the main predicate. In (41) and (43), there are two situation variables, one introduced by the main predicate, and the other by the relative clause, as shown by the formula in (44) below.

In order to clarify her reasoning, we must introduce Dayal's account of *any*. Within this approach, *any* is a quantifier, and thus, engenders tripartite structures

independently of the tense-aspect of the main verb. Semantically, a speaker who chooses *any* commits herself to every possible situation, this is why, according to the author, it is not licensed in episodic sentences. Sentences (33) and (35) are unacceptable because of a conflict of presupposition, since the speaker would at the same time be talking about every possible situation and a particular situation. Sentences like (34) and (36) are acceptable because they are about all possible situations that may happen in temporally closed intervals. This is the reason why *any* is said to be inherently modal.

If this analysis is correct, then sentence (41) asserts that all possible student situations that extend into a student situation in which they are angry and fall within the interval denoted by the main predicate are students in a situation where Mary talked to them. Thus, according to it, *any* is a universal determiner the domain of quantification of which is not a set of particular individuals but the set of possible individuals of the relevant kind. Sentence (41) would then be attributed, according to Dayal's analysis, to the following semantic structure:

$$(44) \quad \forall s, x [\text{student}(x, s) \ \& \ C(s) \ \& \ \exists s'' [s < s'' \ \& \ P(s'') \ \& \ \text{angry}(x, s'')]] \\ \exists s' [s < s' \ \& \ \text{talk}(m, x, s')]$$

This says that all possible student situations extend to a situation located at a particular interval of time where students are angry, which extends to a situation where Mary talked to all of them. This explains why in interpreting sentences such as (39) we have a universal reading of a temporal sentence.

The hypothesis that *any* is inherently modal explains why it cannot occur in episodic sentences, but may occur in episodic contexts if it is modified by a relative clause. Three other properties of *any* are, according to Dayal, a direct consequence of its inherent modality: essentiality, counterfactual inferences, and lack of existential commitments. These are also properties that characterize *todo N*. In this section, we will only deal with essentiality, and consider counterfactuality and lack of existential commitments in section 4.

Dayal claims that if we compare *any* and *every* we find that *any* requires an essential reading while *every* is compatible with an accidental interpretation. The author maintains that *any* differs from *every* because it denotes a relation between sets of intensions, rather than inclusion of sets. *Any* is then treated as creating an intensional context, rather like *necessarily all*.

Though the tests proposed by Dayal to isolate essential from accidental readings are not conclusive, at least with respect to BP, they show that BUP, if compared to DUP, requires an essential reading:

- (45) a. ?? Aconteceu de todo aluno votar no Lula.⁷
Happened that UQ student vote for Lula.
'What happened is that every student voted for Lula.'
- b. Aconteceu de todos os alunos votarem no Lula.
Happened that UQ definite article plural students voted for Lula
'What happened is that all the students voted for Lula.'

⁷ Sentence (43) is possible if *todo aluno* is contextually restricted.

- c. Aconteceu da alunada votar no Lula.
Happened that group of students voted for Lula.
'What happened is that the entire group of students voted for Lula.'
- (46) a. ?? Toda mulher embaixo da árvore é amiga da Maria.
UQ woman under the tree is Maria's friend.
'Every women under the tree is Maria's friend.'
- b. Todas as mulheres embaixo da árvore são amigas da Maria.
UQ definite article plural women under the tree is Maria's friends
'All the women under the tree are Maria's friend.'
- c. Toda a mulherada embaixo da árvore é amiga da Maria.
UQ definite article group of woman under the tree is Maria's friend.
'The whole group of women under the tree is Maria's friend.'

If we compare sentences (47) and (48), we see that sentence (47) is ambiguous between a future and a conditional interpretation, whereas sentence (48) may only be ascribed a conditional reading. This difference seems to be due to the fact that (47) may receive an accidental reading while (48) only has an essential interpretation:

- (47) João vai participar de todas as instituições.
João will participate in UQ plural plural definite article institutions.
'João will participate in all the institutions.'
- (48) ?? João vai participar de toda instituição.
João will participate in UQ institution.
'João will participate in every institution.'

Thus, *todo N* is a universal, and also has a modal character. This analysis is supported by Vazatta-Dias (2001) whose main hypothesis is that *todo N*, if compared to *todos os N*, expresses essentiality, is counterfactual, and lacks existential commitment. The author claims that *todo N* is lawlike, which indicates that it has a modal character.

3.1 Saeboe's analysis of free choice items

Though Saeboe (2001) argues that Dayal's proposal is incorrect, because "it seems wrong to ascribe an inherent modality to *any*" (Saeboe, 2001: 770), he agrees that *any* is a universal quantifier, and that sentences with *any* are modal. Their divergence concerns how they analyze the modal aspect. According to Saeboe *any* is a universal quantifier that has to quantify into modal contexts. The author gives several arguments sustaining the thesis that *any* is a universal quantifier rather than an indefinite. Some of them were already stated by Dayal, but here are some others that reinforce the idea that *todo* is a quantifier.

The author's first argument concerns the validity of inferences such as the following one:

- (49) a. Ela pode cantar toda canção desse álbum.
She can sing every/any song of this album
'She can sing every song in this album.'

- b. *Aquarela do Brasil* é uma canção desse álbum.
Aquarela do Brasil is a song from this album
'*Aquarela do Brasil* is a song from this album.'
- c. Ela pode cantar *Aquarela do Brasil*.
She can sing *Aquarela do Brasil*.
'She can sing *Aquarela do Brasil*.'

Perhaps it is not surprising that this reasoning is possible with *todo N*, since it is considered a universal quantifier. The point of the argument, however, is the following: if the quantifier *todo* is substituted in the first premise for an indefinite such as *uma* (*a*), the generic reading vanishes, and the inference is no longer valid. Thus the quantificational force must be located in the universal quantifier *todo*, and not in the morphological system.

Any can have inverse scope over other quantifiers. Saeboe argues that this property shows that *any* is a quantifier, since this fact is "consistent with the hypothesis that FCIs can undergo Quantifier Raising (or be subject to some other scoping mechanism)." (Saeboe, 2001: 761) If Saeboe's reasoning is sound, then *todo* should be a quantifier, since it may have inverse scope over other quantifiers:

- (50) Duas pessoas podem usar todo programa que a loja comprou.
'Two people can use every program bought by the store.'

Sentence (50) has two readings, depending on the relative scope of the *todo* phrase and the quantifier phrase *duas pessoas* (*two people*). It is controversial to maintain that sentence (50) may have two readings, since Negrão (2002), as we mentioned in section 2, claims that differently from *cada* (*each*) *todo* cannot have inverted scope reading. She gives the following example:

- (51) a. Maria tem um vestido para cada ocasião.
'Mary has a dress for each occasion.'
- b. Maria tem um vestido para toda ocasião.
'Mary has a dress for every occasion.'

Sentence (51.b), according to Negrão, says that Maria has just one dress which she wears at all the parties she goes to. Thus, it cannot be interpreted as claiming that for every occasion there is a dress that Mary wears. This is so, because *todo* cannot move to a position from which it may have an object phrase under its scope. But informally checking the interpretation of sentence (51.b) with native speakers, we found that some of them do attribute a distributive reading to it. Thus, it seems that *todo N* may undergo Quantifier Raising.

Finally, Saeboe (2001) reproduces one of Dayal's arguments in favor of the hypothesis that *any* quantifies. The example is translated below to BP:

- (52) a. Um leão é geralmente majestático.
'A lion is usually majestic.'
- b. Todo leão é geralmente majestático.
'Every/all lion is usually majestic.'

(52.a) allows an individual-level interpretation of *majestático* (*majestic*), i.e. it is generally the case that lions are majestic. Sentence (52.b), however, only allows a stage-level interpretation of *majestático* (*majestic*). “The reason may be that *a lion* has a bound interpretation where *usually* quantifies over lions, whereas *any lion* is itself quantificational, quantifying over possible lions, so that there are only occasions left for *usually* to quantify over” (Saeboe, 2001: 762). The same reasoning and interpretation applies to BP. Thus, one must conclude that *todo* has a quantificational force of its own.

Saeboe warns, “In claiming that FCIs are quantifiers with universal force, I am not claiming that they are ordinary universals. (...) ignoring the possibility that FCIs might be universal with special traits” (Saeboe, 2001: 757). *Any* is a special type of universal because it requires a modal context. This is what explains its impossibility in sentences such as (33) and (40). According to the author there are two ways to facilitate a modal reading of a sentence: “the verb may carry a presupposition which can be accommodated into the restrictor of the operator; second, a modified NP can provide material for a restrictor” (Saeboe, 2001: 746). The latter gives a different, though compatible, explanation than Dayal’s for subtrigging: modification may provide more descriptive material, which help to partition the sentence into restrictor and nuclear scope of an overt or covert operator. Saeboe argues “that the relative clause facilitates a reading of the sentence as a conditional through the interpretative mechanism known as Semantic Partition (Krifka, 1995)” (Saeboe, 2001: 744).

The first way to engender modality explains a fact which was not discussed by Dayal, but which also happens in BP, which is that some verbs admit *todo N* in the object position even if it is not modified. This seems to be the case of:

- (53) Fracassei em todo curso.
‘I failed in every/all course.’

It is acceptable because a presupposition raised by the main verb, may be accommodated into the restrictor: one has to take some course, and may or may not fail it.

Thus, both Dayal’s and Saeboe’s analyses of *any* if applied to BP show not only that *todo* is a quantifier, and not an indefinite, but that it carries some trait of modality. We will not compare Dayal’s and Saeboe’s solutions for *any*, but rather take the supposition that they both share: the fact that *any* is a universal but not an ordinary universal. For Dayal, it is not ordinary because it is inherently modal; for Saeboe it requires the presence of a modal in the scope of the universal quantifier. Thus, they both agree that *any* sentences are modal, but modality enters the story by very different means. One way to perceive the differences is to look at how subtrigging is interpreted in each of these proposals. In Dayal’s proposal, it saves the statement, made intensional by the FCI, from being trivially false. In Saeboe’s proposal, it helps to transform the extensional context into an intensional one, by allowing a tripartite structure.

4. What is a quantifier after all?

We have shown that a difference between BUP, *todo N*, and DUP, *todos os N*, is that BUP only expresses essentiality, whereas DUP may have an accidental reading. Another important distinction, which is closely related to the problem of modality, is that *todo N* necessarily involves a lack of existential commitments, while DUP may be interpreted as triggering a presupposition of existence. Traditionally, standard universal

quantification is vacuous if the domain is the empty set. Thus, it is generally held to carry the presupposition that the domain is not empty. Nonetheless, Vendler (1967) argues that a sentence like (54) “will not be rendered false even if no one ever enters the premises” (Vendler, 1967: 87):

- (54) Anybody trespassing on the premises will be prosecuted.

Vendler claims that *every*, differently from *any*, presupposes existence. If we compare BUP with DUP we see that *todos os N* may be interpreted both accidentally (in that case it presupposes existence) or essentially, but BUP can only be interpreted in the latter sense. Thus it must involve lack of existential commitment.⁸ Let’s make this point.

Differently from the English *every*, the bare universal in BP cannot quantify over contextually specified subsets. It can never have a partitive reading. Imagine the following context, which was taken from Matthewson (2001), who argues for a specific reading of *every*: “There were many linguists and philosophers at the party last night...” Within such a context, one may say (55) felicitously, but (56) is unacceptable:

- (55) Todos os lingüistas ficaram bêbados.
UQ definite article plural linguists get (past) drunk
‘All the linguists got drunk’
- (56) * Todo lingüista ficou bêbado.
UQ linguist get (past) drunk
‘Every linguist got drunk.’

The impossibility of sentence (54) shows that *todo* lacks existential commitment.

According to Milsark’s (*apud* Enç 1991) criterion of definiteness both BUP and DUP should be considered strong determiners, since neither can occur in existential contexts. It is not possible to say, out of the blue, the following sentences:

- (57) * Tem toda a criançada (no prédio).
There is UQ definite article child collectively (in the building)
‘There is the entire group of children in the building.’
- (58) * Tem toda criança (no prédio).
There is UQ child collectively (in the building)
‘There is every child (in the building).’

This fact endorses our main thesis that *todo* is a quantifier, since strong determiners are thought to be quantificational. However, it is a widely held belief in the literature that strong quantifiers cannot occur in existential sentences precisely because they presuppose existence. This cannot be the case, unless our analysis of *todo N* as well as Dayal’s and Saeboe’s analyses are false, since it would imply the impossibility of a quantifier which lacks existential commitment.

This widespread belief became a strong generalization in Enç’s claim that “all quantifiers are specific” (Enç, 1991: 11). If, as we have shown, *todo* cannot be specific,

⁸ The same reasoning is found in Vazatta-Dias (2001).

then we should conclude that it is not a quantifier. We are then back to our original problem: is *todo N* a quantifier? Are all quantifiers specific? Do they all presuppose existence? If our description of the data concerning *todo* is correct, then we should conclude that Enç's generalization is too strong. Moreover, it would be wise to keep apart the notions of quantification and presupposition of existence (specificity). Such a proposal has the advantage of explaining why sentence (57) is possible if it is in context, whereas sentence (58) is simply unacceptable. Suppose we are talking about a building on fire, and someone asks whether there is someone still inside. Within such a context, (57) is acceptable. Notice that it is then a partitive: from a previous set of people within the building on fire it states that a portion of the set (all the children) is still in the building. Nonetheless, (58) is simply not possible, because it cannot be a partitive.

Sentences such as (31), repeated here for convenience:

- (31) João leu todo livro que caiu em suas mãos.
 João read UQ book that fell into his hands.
 'João read every book that came into his hands.'

do not challenge our proposal, because, if our analysis is correct, it does not state that there is a book that João read, but states a hypothesis. It could well be the case that the presupposition of existence, which is present in sentence (59) below, is due to the definite article, which would reinforce the semantic structure we have ascribed to it. Remember that in our analysis *os livros* is an individual.

- (59) João leu todos os livros que caíram em suas mãos.
 'João read all the books that fell into his hands.'

Though *todo N* is a strong determiner, it cannot be specific in Enç's sense, because it lacks existential commitment. Our proposal is to separate the notions of quantification and specificity, allowing the possibility of non-specific quantifiers, of which *todo N* is a prototypical case.

5. Conclusion

We have shown that several structural differences between *todo N*, named BUP, and *todos os N*, DUP, may be explained by Matthewson's (2001) suggestion concerning the structure of *every* and *all*. This hypothesis led us to evaluate whether *todo N* was a quantifier, since this could well be the case, as it is in fact stated in Matthewson that there is an empty determiner in the *every* phrase. Moreover, Negrão (2002) argues that *todo N* is an indefinite in Heim's sense, not a quantifier. Dayal's (1998) and Saeboe's (2001) analyses of *any* were used to show that *todo N* is a universal, not an indefinite. Moreover it is a modal; either intrinsically modal, as Dayal suggests, or according to Saeboe's theory, it needs a modal under its scope. We have made no argument in favor of any of these theories. Our aim was simply to show that *todo* is a universal with a modal trait. The discussion of Enç's generalization was raised in order to show that if it is better to consider *todo* as a quantifier, then Enç's generalization needs to be reconsidered, since the bare phrase in BP cannot be specific. We then proposed the possibility of a class of non-specific (perhaps modal) quantifiers, of which *todo N* is a central example.

Nothing was raised about whether *todo N* could be considered a free choice item. This would be a natural question raised by our argument which is parallel to the analysis of the free choice *any* in English. If by FCI we understand universality plus modality, then *todo N* is a FCI. But Vendler (1967) also pointed out that FCI carries the instruction “choose one”. If this is so, then *todo* is not a FCI, but *qualquer N* is.⁹ Another difference is that *qualquer* may receive specific readings, thus if it has a modal trait it cannot come from the quantifier itself. This raises a whole other area of investigation: the interaction between modality and universal quantifiers. An investigation of this topic must be the aim of another paper, the title of which could well be “modality and universals in BP”.

References

- BACH, Emmon, Eloise JELINEK, Angelika KRATZER, Barbara H. PARTEE. 1995. *Quantification in Natural Languages*. Dordrecht: Kluwer Academic Publishers.
- DAYAL, Veneeta. 1998. Any as inherently modal. *Linguistics and Philosophy* 21: 433-476
- ENÇ, M. 1991. The semantics of specificity. *Linguistic Inquiry*. Vol. 22. n. 1 1-25
- GIL, D. 1995. Universal Quantifiers and distributivity. In Bach, E. et alii (eds). *Quantification in Natural Languages*. 321-362.
- GOMES, Ana Paula. 2002. O papel das entradas lexicais dos quantificadores do PB “todo N” e “cada N” em seu comportamento quanto à distributividade e à genericidade. Trabalho inédito apresentado no GEL – São Paulo.
- GUIMARÃES, Márcio. 1995. Sobre o comportamento semântico de qualquer. Revista *LETRAS*, n. 44. 59-66.
- HEIM, Irene & Angelika KRATZER. 1998. *Semantics in Generative Grammar*. Massachusetts: Blackwell Publishers.
- MATTHEWSON, Lisa. 2001. Quantification and the nature of cross-linguistic variation. *Natural Language Semantics*.
- MÜLLER, Ana. 2001. Genericity and the denotation of common nouns in Brazilian Portuguese. In Adam Weeler & Ji-Young Kim (eds). *The Semantics of Under-Represented languages in the America*. U. Mass. Occasional Papers 25: 72-80. Amherst, USA.
- NEGRÃO, E.V. 2002. Distributividade e genericidade nos sintagmas introduzidos por **cada e todo**. *Revista do GEL*. n. especial, 185-205.
- PIRES DE OLIVEIRA, Roberta. 2002a. Aspectos da quantificação universal no PB. Trabalho não publicado apresentado no GEL – São Paulo.
- 2002b. Aspectos sintático-semânticos da quantificação universal no PB. Trabalho não-publicado apresentado na ANPOLL – Gramado.
- SAEBOE, Kjell Johan. 2001. The Semantics of Scandinavian free choice items. *Linguistics and Philosophy* 24: 737-787.
- VAZATTA DIAS, Juçá F. 2001. *Sentenças com Quantificação Universal no Português do Brasil*. Tese de Doutorado.
- VENDLER, Z. 1967. Each and Every, Any and All. *Linguistics in Philosophy*. Ithaca. 70-96.

⁹ See Guimarães (1995).

Roberta Pires de Oliveira
pires@cce.ufsc.br
Universidade Federal de Santa Catarina
Departamento de Língua e Literatura Vernáculas
Cx.P. 5242
88040-970 – Florianópolis – SC
Brasil