FLAVORS OF INTENSITY AND EMPHASIS: THE CASE OF *MUITO* IN BRAZILIAN PORTUGUESE

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ABSTRACT

This paper focuses on an emphatic use of the prototypical intensifier *muito* in Brazilian Portuguese (BP). Despite its use as an intensifier as in *muito alto* 'very high', *muito* has been recently used associated to emphasis as in *muito golpe* 'really a coup'. The analysis proposed in this paper adopts a scalar semantics framework (cf. Kennedy (1999), Kennedy and McNally (2005), a.o.) and invests in a unified lexical entry that is adequate to capture both intensive and emphatic uses. The formal proposal is based on a semantic step that shifts the type of nouns such as *golpe* from <e,t> to <d,<e,t>> and provides them a scale of precision (based on Morzycki (2011)). The descriptive meaning of emphatic phrase is that the noun is interpreted in its maximum precision. On the pragmatic level, the analysis considers *muito* as a mixed intensifier that presents an expressive counterpart that manifests an emotional effect captured by a use-conditional based approach (cf. Gutzmann (2019)). The discussion adds facts and arguments to a body of publication on intensifiers in BP (cf. Guimarães (2007), Quadros Gomes (2011), Quadros Gomes and Sanchez-Mendes (2015), Quadros Gomes (2018), Pires de Oliveira and Souza (2018), Quadros Gomes et al. (2021)).

Keywords: formal semantics, intensifiers, scales, degrees, Brazilian Portuguese

RESUMO

Este artigo enfoca um uso enfático do intensificador prototípico *muito* em português brasileiro (PB). Além de seu uso como intensificador em expressões como *muito alto*, *muito* tem um emprego recente associado à ênfase, como em *muito golpe*. A análise proposta neste artigo adota uma abordagem da semântica escalar (cf. Kennedy (1999), Kennedy and McNally (2005)) e investe em uma entrada lexical unificada que é adequada para capturar ambos os usos de intensificação e ênfase. A proposta formal é baseada numa etapa semântica que muda o tipo semântico de nomes como golpe de <e,t> para <d,<e,t>> e fornece-lhes uma escala de precisão (baseada em Morzycki, 2011). O significado descritivo do sintagma modificado é que o nome é interpretado em sua máxima precisão. No nível pragmático, a análise considera *muito* como um intensificador misto que apresenta uma contraparte expressiva que manifesta um efeito emocional capturado por uma abordagem baseada em condições de uso (cf. Gutzmann, 2019). A discussão adiciona fatos e argumentos a um corpo de publicações sobre intensificadores em PB (cf. Guimarães (2007), Quadros Gomes (2011), Quadros Gomes and Sanchez-Mendes (2015), Quadros Gomes (2018), Pires de Oliveira and Souza (2018), Quadros Gomes et al. (2021)).

Palavras-chave: semântica formal, intensificadores, escalas, graus, português brasileiro

1 THE ISSUE

This paper discusses a topic that has been recently drawing the attention of semanticists: the fact that some modifiers can convey both notions of intensity and conversational uses that have been designated as emphasis (see, e.g. the overview presented in Beltrama and Trotzke (2019)). More specifically, this work addresses this issue investigating *muito* in Brazilian Portuguese in examples such as the ones in (1) bellow (spontaneous data from Twitter adapted with introspective judgement) expressing something related to certainty in contrast with its prototypical use as a quantifier and an intensifier in a wide range of domains (2):

(1)   a.   Foi muito golpe.   'It was really a coup'
      b.   Vai ter muita Copa, gente!   'The World Cup will really happen.'
      c.   Tá tendo muito greve sim!   'It is really happening a strike.'

(2)   a.   Tem muito copo na mesa.   'There is a lot of glasses on the table'   COUNT-SG
      b.   Tem muitos copos na mesa.   'There are many glasses on the table'   COUNT-PL
      c.   Tem muita cerveja na mesa.   'There is a lot of beer on the table'   MASS
      d.   João é muito alto.   'João is very tall'   ADJECTIVE
      e.   João estudou muito.   'João studied a lot'   VERB
      f.   João correu muito rápido.   'João ran very fast'   ADVERB

Descriptively, examples in (1) do not indicate intensity but express a type of pragmatic content of confirmation conveying roughly that the speaker is sure about the content in the declarative statement. This behavior is not a novelty in natural languages. In French, for example, degree modifiers can be used to express the commitment to speech acts (3).

(3)   A: Elle est superbe!   FRENCH
           'She's superb!'
      B: Complètement! Tout à fait!
           'Completely! Absolutely!'

(CAUDAL; NICOLAS, 2005, p. 282)

Similarly, in Italian, the suffix *-issimo*, prototypically used as an intensifier in adjectives such as *bella / bellissima* ('beautiful / extremely beautiful'), can be used in non-gradable adjectives like *primo* 'prime' to express certainty.

(4)   A: 7 è un numero primo?   ITALIAN
           'Is 7 a prime number?'
      B: Prim-issimo! // ??Molto primo!
           'Absolutely prime! // Very prime'

(BELTRAMA; BOCHNAK, 2015, p. 854)

Curiously, in Washo (an endangered language isolate spoken on the western of the USA), the intensifier *šému* has a similar behavior as *muito* intensifying gradable adjectives (compare 5a and 2d) and expressing a kind of a certainty with nouns (compare 5b and 1a-c).

(5) a. t'é:liwhu ʔil-téteb-iʔ   **šému**-yi.   WASHO
       man   ATTR-fat-ATTR   ŠÉMU-IMPV
       'The man is very fat.'
    b. t'é:liwhu dókto   **šému** k'-éʔ-i.
       man   doctor   ŠÉMU   3-COP-IMPV
       'The man is a real doctor.'

(BELTRAMA; BOCHNAK, 2015, p. 847, 850)

The pragmatic use of *muito* focused on this paper is also similar to intensifiers in English that can be associated to the speaker's commitment, such as *totally* (BELTRAMA, 2018). Both pragmatic *muito* (BP) and *totally* (Eng) convey that the speaker is fully/highly committed with the true of the sentence. They can both be paraphrased by *unquestionably* (in 6a). Moreover, pragmatic *muito* (BP) and *totally* (Eng) have in common the fact that they are susceptible to sociolinguistic variation. That is why for many speakers of Brazilian Portuguese this emphatic *muito* sounds like a slang or as a marked use of young speakers in non-monitored colloquial situations. Other intensifier in English that share this property is the so called "drama SO" in colloquial English in sentences like (6b-c) (cf. Bylinina (2011), Irwin (2014)).

(6) a. You should totally click on that link! It's awesome.   (BELTRAMA, 2018, p. 2)
    b. Yeah, that's so Obama!   (BYLININA, 2011, p. 1)
    c. Jamie has **SO** dated that type of guy before.[1]   (IRWIN, 2014, p. 30)

Then, this behavior of *muito* is similar to *complètement* in French, suffix *-issimo* in Italian, *šému* in Washo (BELTRAMA and BOCHNAK, 2015) and *so* (IRWIN, 2014) and *totally* (BELTRAMA, 2018) in English, in the sense that they all are intensifiers that can be applied under certain circumstances to predicates that are not grammatically gradable displaying some sort of emphatic content. Therefore *muito* belongs to a group of intensifiers whose analysis posits classical questions on the modification investigation such as: (i) given its broad distribution, how to formally capture both its syntactic distribution and semantic interpretations?; (ii) given its non-obviously associated different interpretations, how to encode its semantic and pragmatic content as well as its discourse implications? (see, e.g., the considerations in McNally and Kennedy (2008)). This paper aims to address these questions by firstly discussing previous works on *muito* and then by adding these data concerning certainty into the debate with a unified semantic analysis.

The first question rose by the data in (1) and (2) is if there are two related but different meanings for *muito* (one for emphasis (1) and one for quantity and intensive readings (2a – 2f)) or if they have the same semantic core that can derive these variants. Rainer (1983) pursued the first option by positing two lexical entries to the suffix *-issimo* in Italian. The second option can either assume one lexical entry for the modifier and consider that the flavors of modification are due the modified expression (as Beltrama (2018) for *totally* in

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1 Irwin (2014) indicates prosody prominence by capital letters.

English) or postulate one single compositional analysis for all the uses (as Beltrama and Bochnak (2015) for -*issimo* in Italian and *šému* in Washo adopting a degreeless approach).

As it will be shown, I agree with Bylinina (2011, p. 2) that "we are not dealing with an accidental phenomenon". Then, I assume it is worthy to bet in a unified analysis. More specifically, in this paper I argue in favor of an analysis for *muito* based on one lexical entry in the same path as Beltrama and Bochnak (2015) for Italian and Washo, but in a Scalar Semantics framework (cf. Kennedy (1999), Kennedy and McNally (2005), Kennedy (2007), a.o.). Before showing the proposed lexical entry for *muito* as a degree modifier that captures all its uses, I'm going to discuss previous proposals for its intensifier function.

2 PREVIOUS PROPOSALS FOR *MUITO*

The use of *muito* across domains in Brazilian Portuguese has been topic of research by formal semanticists at least since Guimarães (2007) who dealt with both quantificational (2a-2c) and intensive (2d-2f) contexts. Since then, intensive *muito* has been analyzed both by scalar proposals (cf. Quadros Gomes (2011), Quadros Gomes and Sanchez-Mendes (2015), Quadros Gomes (2018), Quadros Gomes et al. (2021)) and Delineation Semantics (cf. Pires de Oliveira and Souza (2018)). All these studies have in common both the general idea that *muito* is an intensifier that boosts the standard value and the attempt to capture the wide range of readings associated with sentences in which it occur; with the latest publications focusing specially on the verbal domain (in examples such as 2e and other verbal classes). The difference among the previous papers relies on the formal tools employed.

Quadros Gomes (2011), Quadros Gomes and Sanchez-Mendes (2015), Quadros Gomes (2018) and Quadros Gomes et al. (2021) base the analysis on a Scalar Semantics that assume degrees on the ontology and then analyses *muito* and other intensifiers in BP as degree modifiers that saturate a degree variable of modified gradable predicates that are divided according to their scale structure and their relation to a standard of comparison (cf. Kennedy (1999), Kennedy and McNally (2005), Kennedy (2007), a.o.).

The first publication on this framework, Quadros Gomes (2011) explores the difference between *muito* and *bem* on the adjectival domain. In examples as (7), the positive form of the adjective *satisfeito* 'satisfied' is a predicate whose standard of comparison is fixed (the maximum value of satisfaction) (see Kennedy and McNally (2005)). When it is modified by *bem* the information that the client is satisfied in emphasized. But according to Quadros Gomes (2011), since *muito* is a standard booster, the parameter of *muito satisfeito* could not be the same as the unmodified form of the adjective, otherwise the result would be logically unattainable since it is not possible to increase the distance of a fixed (maximum) degree. Then, according to this analysis, the result is a relativization of the gradable predicate: *muito*

satisfeito means a great amount of satisfaction according to a contextual standard (that can be 88%, for instance) but still less than the maximum.

(7)   O cliente está (muito / bem) satisfeito.
      'The client is (very / well) satisfied.'

(QUADROS GOMES, 2011, p. 382-383)

This reasoning in Quadros Gomes (2011) is in accordance with what is stated about the behavior of *very* in English. In sentences like (8), the use of the intensifier reinforces imprecise uses of adjectives with fixed standard values. Crucially, *very empty* and *very full* implies not empty/full in (8a). That is why sentence (8b) is not adequate in contexts that do not tolerate imprecision such as a laboratory (Kennedy and McNally (2005)).

(8)   a.   The theater is very empty/full tonight.
      b.   #Whoops! This beaker is very full. I'd better pour out some of that liquid.

(KENNEDY; MCNALLY, 2005, p.371)

Quadros Gomes (2011) doesn't show examples in which imprecision is inconceivable such as the one above, but she shows that in a context of a person in a bar that does not want to drink much, a glass that is *muito cheio* 'very full' is similarly to its English translation with *very*: it is not completely full but has a degree of occupation what is considered a lot for a standard contextually given.[2] Quadros Gomes and Sanchez-Mendes (2015) preserve the same idea that on the adjectival domain, *muito* products a non-fixed standard (relative) phrase.

In order to deal with a broader use of *muito*, Pires de Oliveira and Souza (2018) assume a delineation semantics (cf. Klein (1980) and Burnett (2014)) that proposes that intensifiers are applied on the positive extension of an ordered domain of individuals that is split on a positive, a negative and (potentially) neutral extension.

Pires de Oliveira and Souza (2018) support their proposal by comparing *muito* on the nominal and the adjectival domains. Following Burnett (2015) they assume that *copo(s)* 'glass(es)' and *cerveja* 'beer' are structured on a semi-lattice and can be partitioned in the same way as adjectives such as *intelligent*. Then the proposal assumes that predicates in (9a-9d) are of the same type and *muito* in Portuguese acts like *many*, *much* and *very* in English selecting the positive extension of the partitioned predicate.

(9)   = (2)
      a.   Tem muito copo na mesa.   'There is a lot of glasses on the table'   COUNT-SG
      b.   Tem muitos copos na mesa.   'There are many glasses on the table'   COUNT-PL
      c.   Tem muita cerveja na mesa.   'There is a lot of beer on the table'   MASS
      d.   João é muito alto.   'João is very tall'   ADJECTIVE

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2 There is a theoretical difference between considering the intensifier as an imprecision regulator of absolute predicates (as Kennedy and McNally (2005) for *very*) and assuming it as producing relative predicates (as Quadros Gomes (2011) for *muito*). This difference is not relevant at this point in which I'm dealing with the interpretations produced by the intensifiers (by not attaining the maximum value of a maximum standard predicate). This topic will be adequately addressed on the section on the formal proposal for *muito*.

The authors expand their proposal to the verbal domain considering that the event ontology can also be ordered according to a contextually given standard. Then *muito* applies to the positive extension in the same way it does with nouns and adjectives. The difference is that besides the expected interpretations of frequency, duration, and intensity that intensifiers usually have on the verbal domain (10a-b in English and French for instance), *muito* can also display an interpretation of quality (10c), especially relevant for the topic under discussion in this paper.

(10) a. She dances **a lot**.   (frequency, duration)[3]
    b. Elle dance **beaucoup**.   (frequency, duration)
    c. Ela dança **muito**.   (frequency, duration, quality)
      'She dances a lot/very well.'[4]
    d. Ele engordou **muito**.   (scalar, frequency)
      'He gained a lot of weight.' Lit.: 'He got fat a lot.'
    e. Ela ama **muito** ele.   (intensity)
      'She loves him a lot.'

(PIRES DE OLIVEIRA; SOUZA, 2018, p. 224-228)

Following a delineation semantics, Pires de Oliveira and Souza (2018) propose that the set of individuals and events are ordered and the restriction on the positive extension of these domains could easily provide the proper interpretation for the cases of frequency on the verbal domain in the same way of quantity on the nominal one. According to the authors, duration can also be captured by a selection on an ordered domain from events with smaller to events with bigger duration.

In a big picture, according to the authors the difference of interpretations on the verbal domain is due semantic indeterminacy. The scalar notion in (10d) for instance would be due a particular property encoded in the predicate's lexicon. Nevertheless, they do not argue in favor of an analysis based on indeterminacy as a scalar technical property (as, for example, Kennedy and McNally (2005)). As stated before, they pursue a delineation semantics based on a comparison class. Their analysis is based more on lexical aspects of different predicates rather than on their grammatical ones (cf. Pires de Oliveira (2018, p. 228)).

On the verbal domain, more recently, Quadros Gomes (2018) and Quadros Gomes et al. (2021) follow the same general idea presented in Quadros Gomes (2011) and Quadros Gomes and Sanchez-Mendes (2015) that *muito* produces relative standard (open scale) predicates. That would explain its selection for sentences with atelic predicates or imperfective aspect (11a-c) and its blocking with single events (11d).

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3 These are the interpretation provided by the authors for English and French examples.

4 Pires de Oliveira and Souza's (2018) paper is written in Portuguese. The translations are mine based on their discussion of the data.

(11) a. João fuma **muito**.   ACTIVITY
          'João smokes a lot.'
     b. João construiu (***muito**) esta ponte.   ACCOMPLISHMENT
          'João built (*a lot) this bridge.'
     c. Pedro alcançou (***muito**) o topo da montanha.   ACHIEVEMENT
          'Pedro reached (*a lot) the top of the mountain.'
     d. João assistiu **muito** ao seu espetáculo de dança favorito (*hoje).
          'João watched a lot your favorite dance show (*today).'
                                       (examples adapted from Quadros Gomes (2018, p. 203-205))[5]

By this overview on the papers on *muito* in Brazilian Portuguese, one can notice that much effort was dedicated to analyzing its use as an intensifier. Other notions associated to this modifier was always considered as lower priority. The notion of quality in (10c repeated below) for instance is explained by Pires de Oliveira and Souza (2018) by a covert adverb *bem* 'well' on the logical form that is restricted to some activity verbs. A difference on the prosody would signalize that there was an elided phrase. The notion of quality or emphasis that *muito* can get is not addressed.

(12) Ela dança muito.   = (10c)
     'She dances a lot/very well.'

Curiously, *bem* was compared to *muito* in Quadros Gomes (2011) indicating emphasis on the adjectival domain – as discussed in (7) repeated in (13a), *bem satisfeito* = 'satisfied + emphasis'. There is, the fact that *muito* can express emphasis in other domains is not discussed. On the verbal domain, in turn, Quadros Gomes et al. (2021) briefly discussed cases in which *bem* is associated to a quality notion. According to the authors, in sentences like (13b), the speaker commits to a positive evaluation and the sentence has an expressive flavor effect.

(13) a. O cliente está (**muito** / **bem**) satisfeito.   = (7)
          'The client is (very / well) satisfied.'
     b. Pollock pintou **bem** o seu quadro "No. 5".
          'Pollock well painted his painting #5'

                                                            (QUADROS GOMES et al., 2021, p. 98)

This paper does not focus on *bem*, but the new thoughts on the uses of *muito* as conveying emphasis that was absent on the papers on the topic can shed light to the difference between *muito* and *bem* in further research. Given this review, the next section presents the analysis for *muito* that covers its uses both as an intensifier and a confirmative mark.

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5 The paper was written in Portuguese, the translations to English are mine.

3 A UNIFIED PROPOSAL FOR *MUITO*

This section shows a proposal for *muito* based on a unified lexical entry following previous proposals such as Beltrama and Bochnak (2015) for Italian and Washo and Beltrama (2018) for English. However, the analysis detaches from Beltrama and Bochnak (2015) since it assumes a Scalar Semantics (following Quadros Gomes (2011), Quadros Gomes and Sanchez-Mendes (2015), Quadros Gomes (2018) and Quadros Gomes et al. (2021) for Portuguese). The proposal goes in the direction of Beltrama's (2018) analysis for *totally* but it has some adjustments that deal with some differences between *muito* and *totally*.

Considering the contexts, according to Beltrama (2018), *totally* is used in situations in which the speaker is adding an information that they usually do not take for granted including cases of outlandish statements. That's why (14a) is odd but (14b) is adequate. (14c) shows that the tentative translation of (14a) with *muito* leads to an unusual sentence that is adequate only in strange scenarios in which Luke got married many times when he was 12.

(14) a. ? Luke **totally** got married at 25.
     b. Luke **totall**y got married at 12.
     c. Luke se casou **muito** aos 12.
        'Luke got married many times at 12.'

(BELTRAMA, 2018, p. 12)

Additionally, *muito* is not related to subjectivity in the same sense *totally* is. In (15), for example, *totally* selects evaluative adjective and subjective modals strengthening the speaker's commitment to the meaning of the sentence.

(15) a. Skiing around Salt Lake City is **totally** awesome.   (BELTRAMA, 2018, p. 6)
     b. You should **totally** click on that link! It's awesome.   (BELTRAMA, 2018, p. 2)

Muito, in turn, only expresses intensity in these environments (16). Even with modal verbs that seems to not allow intensification, the sentence can be translated to something related to intensity (16b)[6] but in contexts with the polysemic verb *dever* only its non-modal readings are available (16c-d).

(16) a. A viagem foi **muito** incrível.   'The trip was very awesome.'
     b. Você deve **muito** ler este livro.   'It is highly recommended that you read this book.'
     c. Ela deve **muito** a ele.   'She owes him a lot.'
     d. Isso se deve **muito** ao governo.   'This is largely due to the government.'

Considering the distribution observed in (14)-(16), it is plausible to state that pragmatic *totally* has a different use than emphatic *muito* in the sense that *totally* can easily get an interpretation deviant from its degree modification use. This paper focuses on examples in

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6 This was pointed out by an anonymous reviewer to whom I thank very much. Investigating if, in these sentences with modals, *muito* also strengthens the speaker's commitment in the same way *totally* does is a topic for further research.

which *muito* does not have an intensifier interpretation but is used when the speaker wants to emphasize their certainty about the proposition as in examples in (17) (spontaneous data). These examples show that emphatic *muito* has a similar content of Verum focus expressions (cf. Romero and Han (2004) for epistemic *really* (18)).

(17) a. Vai ter **muita** Copa, gente!   'The World Cup will really happen.'
     b. Tá tendo **muita** greve sim!   'It is really happening a strike.'

(18) Does John **really** drink?
    Negative epistemic implicature: The speaker believed or at least expected that John does not drink.

<div align="right">(ROMERO; HAN, 2004, p. 625)</div>

Nevertheless, *muito* is not entirely like Verum focus expressed by *really*. *Really* is used only in epistemically biased contexts such as *Are you sure that "p"?*, whereas *totally* and *muito* can also be used in unbiased contexts without necessarily questioning how certain the speaker is (19) (see Beltrama (2018) for discussion for *totally*).

(19) a. Vai ter Copa?   'Will the World Cup happen?'
     b. Vai ter **muita** Copa![7]   'The World Cup will really happen.'

So *muito* has a similar contribution as Verum focus but a distribution comparable with an intensifier such as *totally* – with a smaller set of enviroments. Then its adequate analysis might combine these two characteristics. To capture this behavior, I'm going to invest in an analysis that considers that in its emphatic use *muito* operates in a scale of precision (following Morzycki (2011)).

3.1 FORMALIZING THE PROPOSAL

To formalize *muito*'s meaning I follow Beltrama's proposal to *totally* in the sense that the emphatic use of *muito* has also a pragmatic effect. Nevertheless, although emphatic *muito* and *totally* have a similar interpretation that can be summarized as "unquestionably" they differ in the sense that *totally* is a modifier that seeks upper-bounded scale predicates and has itself a semantics of fulfillment whereas *muito* is semantically a prototypical intensifier that boosts the standard of comparison associated to the modified predicate. Since *totally* is a maximizer and *muito* is not, the present proposal explores an idea that was sketched before by Pires de Oliveira and Souza (2018) that different interpretation of modified phrases with *muito* are due possibilities given by the modified predicate. Nevertheless, I'll offer a different and original formal analysis based on scalar semantics to capture this notion.

7 An anonymous reviewer pointed out that it is interesting that in these contexts *muito* gets its feminine form as in the quantificational use (muita criança 'a lot of children'). Investigating how are the syntactic impact of this property is beyond the scope of this paper.

Then, the purpose of this work is to present a semantic analysis for emphatic *muito* that is derived from the same formal mechanism as the interpretation of gradable predicates. In a scalar semantics framework, intensifiers like *very* (Eng.) and *muito* (Port.) expressing intensity of relative predicate are analyzed as modifiers that denote an increase of the property in relation to a contextual standard (cf. Kennedy and McNally (2005)). Thus, *muito alto* 'very tall', for instance, designates individuals who have the property of height to an even higher standard than *alto* 'tall'.

The use of *muito golpe* 'really a coup', on the other hand, does not raise the standard of comparison of the property, but it seems to achieve a degree of confirmation that must be given by the noun. In order to capture this notion, the scalar analysis proposed here stipulates a type-shifting function that makes words like *golpe* 'coup' scalar so that they can be modified by *muito*. The scalar version of *golpe* is not a relative predicate (such as *alto* 'tall') that would have its property increased when modified, but represents an absolute predicate that, when modified by *muito*, will have the denotation that the maximum degree of confirmation has been reached. To formalize this idea, I assume a scale of (im)precision that was proposed by Morzycki (2011) to explain metalinguistic comparatives in sentences such as (20) that expresses a comparison of precision.

(20) George is more dumb than crazy.   (MORZYCKI, 2011, p. 40)

The precision scale is provided through the alternatives generated by the approximation relation $\approx$ (given by a degree of similarity) and which can, in principle, be interchangeable.

(21) $\alpha \approx_{d,C} \beta$ iff, given the ordering imposed by the context **C**, **α** resembles **β** to (at least) the degree d and **α** and **β** are of the same type.

(MORZYCKI, 2011, p. 51)

The bigger the degree of precision, the smaller the number of possible alternatives (illustrated as a set in (22)). When the degree of imprecision is maximum, the predicate can be associated to any predicate of the relevant semantic type (22a). And when the degree of precision is maximum, the noun needs to be interpreted precisely (22d).

(22) a. $[\![\text{dumb}]\!]^{0,C} = D_{<e,<s,t>}$
      b. $[\![\text{dumb}]\!]^{0.8,C} = \{$dumb, ignorant, dopey, foolish, slow-witted, confused, incurious, intellectually-lazy, criminally-reckless…$\}$
      c. $[\![\text{dumb}]\!]^{0.9,C} = \{$dumb, ignorant, dopey, foolish, slow-witted, …$\}$
      d. $[\![\text{dumb}]\!]^{1,C} = \{$dumb$\}$

(MORZYCKI, 2011, p. 52)

The scalar analysis I propose stipulates a type-shifting function adapting PREC operator (23) that makes words like *golpe* ('coup') gradable in order to be available by modification by *muito* (24).

(23) $[\![\text{PREC } \alpha]\!]^{d} = \lambda d' . [\![\alpha]\!]^{d'}$ (MORZYCKI, 2011, p. 64)

(24) a. $[\![Deg_{noun}]\!] = \lambda P_{<e,t>} \lambda d \lambda x. P(x) \wedge$ "precision$_p$" $(x) = d$
  b. $[\![golpe_{deg}]\!] = \lambda d \lambda x.$ coup$(x) \wedge$ "precision$_{coup}$" $(x) = d^8$

As stated earlier, the gradable version of *golpe* in (24b) is not a relative predicate (such as *tall* or *intelligent*) that would have its property increased when modified by *muito*, but represents an absolute predicate that will have the denotation that the maximum degree of precision has been reached when modified by *muito* - similar mechanism to the one found in the interpretation of *this glass is totally full* which designates that the occupation property has reached its maximum degree.

Then, I'm going to be engaged in a proposal that considers *muito* as a degree modifier whose interpretation is dependent on the scale of the modified phrase (following Sanchez-Mendes (2015)). Formally, I propose that *muito* is a degree modifier that is context-sensitive in the same sense as the **pos** morpheme is dependent on the scale encoded by the adjectives used in positive form (cf. Kennedy (2007)). This property is captured by **s** that is a context-sensitive function that returns a standard of comparison based on properties of both the target phrase **G** and on the context of assertion. Crucially, **ds** is the relevant degree depending on the modified predicate based on the its cutoff point: (i) if the modified predicate is relative, **ds** is the standard degree; (ii) if the predicate is absolute with a maximum standard, **ds** is the maximum degree.

(25) $[\![muito]\!] = \lambda G \lambda x. \exists d [G(d)(x) \wedge d \geq ds]$

In its intensifier use, *muito* is applied to a gradable predicate and boosts its property. In its emphatic use, on the other hand, it is applied to a closed scale predicate that is associated to a maximum of precision from which the emphatic effect of *muito* arrises. The derivation of both uses is given in (26). In (26), line 3, **ds** is the standard degree of beauty and in (27), line 3, **ds** is the maximum degree of precision for *golpe* 'coup'.[9]

(26) João é muito bonito.
  'João is very beautiful.'
  1. $[\![muito\ bonito]\!] = [\![muito]\!]([\![bonito]\!])$
  2. $[\![muito\ bonito]\!] = \lambda G \lambda x. \exists d [G(d)(x) \wedge d \geq ds] (\lambda d \lambda x.$ "beauty" $(x) = d)$
  3. $[\![muito\ bonito]\!] = \lambda x. \exists d [$"beauty" $(x) = d \wedge d > ds]$

(27) Foi muito golpe.
  'It was really a coup.'
  1. $[\![muito\ golpe]\!] = [\![muito]\!]([\![golpe]\!])$
  2. $[\![muito\ golpe]\!] = \lambda G \lambda x. \exists d [G(d)(x) \wedge d \geq ds] (\lambda d \lambda x.$ coup$(x) \wedge$ "precision$_{coup}$" $(x) = d)$
  3. $[\![muito\ golpe]\!] = \lambda x. \exists d [$coup$(x) \wedge$ "precision$_{coup}$" $(x) = d \wedge d = ds]$

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8 An anonymous reviewer pointed out that the formula doesn't capture the fact that *golpe* 'coup' is an event noun. The absence of an event variable is not relevant for the purposes of this paper that doesn't compare the precise uses of non-event nouns.

9 I assume a type-driven interpretation framework (cf. Heim and Kratzer (1998)). Functional application is the only semantic rule used in this paper.

By asserting that a noun such as *golpe* is being used in its maximum precision the speaker is implying then that they have no doubts that the best way to designate the process under evaluation is by the word *golpe*. This makes explicit the metalinguistic effect associated to precision scales that is crucial to encode the meaning of emphatic *muito* (MORZYCKI, 2011).

Then, the proposal gives a semantics for emphatic *muito* from which the pragmatic contend can be derived. This makes it different from Bertrama's (2018) analysis for *totally* that posit that it is an attitude level modifier that does not affect the truth conditions of the sentence, which is in consonance with its subjective and outlandish expression. In order to analyze *totally* in accordance with its use as an intensifier of predicates that are associated to upper-bounded scales (e.g. *totally full,* cf. Kennedy and McNally (2005)), Beltrama (2018) proposes that the modifier can be applied to a scale based on the speaker's commitment that is equally upper-bounded. According to Beltrama (2018), the contribution of emphatic *totally* is to strengthen the speaker's commitment by adding the proposition to the common ground (28). This idea is formally captured in (28b) in which the maximalization idea is encoded by the universal quantification of words w' belonging to Conv$_S$ that is the set of worlds that fulfill speaker's conversational goals, and of words w'' that belong to the projected Common Ground (PPG) that is part of PS, the set of CGs the assertion projected.

(28) a. ASSERT(totally(p)) = The speaker believes that there should be no option other than adding p to the CG.

      b. ASSERT(totally(p)) = λw.$\forall$w'$\in$Conv$_S$(w)[$\forall$PCG$\in$PS(Ass(p))(w')[$\forall$w''$\in$PCG]]: p(w'')=1 (BELTRAMA, 2018, p. 26-27)

As we saw, differently from *totally*, *muito* doesn't necessarily require a strengthen of the speaker's commitment that the content in p need to be added at the common ground. What *muito* does is reinforcing is the speaker's commitment to the truth of p. And since the maximalization idea cannot be derivate from *muito*, it was represented by the totally closed scale of precision in the analysis proposed. This precision scale however is not enough to capture the notion of certainty that emphatic *muito* convey. In this paper this pragmatic effect is explained by expressive attitude present in some intensifiers in natural languages. The analysis is based on Gutzmann's (2019) proposal to mixed expressive intensifiers in German examples such as (29). The mixed contribution is detailed in (29a-b). It is possible to notice that *sau* has both an intensifier and an expressive meaning.

(29) Du hast gestern eine sau coole Party verpasst.   GERMAN
       you has yesterday a   EI   cool   party missed.
       'Yesterday, you missed a **EI** cool party.'

      a. Descriptive meaning: "Yesterday, you missed a very very cool party."
      b. Expressive meaning: "The speaker is emotional about how cool the party was."

                                       (GUTZMANN, 2019, p. 134)

I consider the same is true for emphatic *muito*. However, in its descriptive level, instead of a prototypical intensification, there is the precision scale derived from type-shifting triggered by the intensifier that was described before.

(30) Foi muito golpe
'It was really a coup'
   a. Descriptive meaning: "It was a coup in its maximum precision interpretation."
   b. Expressive meaning: "The speaker is emotional and absolutely sure that it was a coup."

The formal representation of the expressive content is given in (31) based on McCready (2010) for mixed expressions. The denotation on the left of the diamond represents the descriptive semantic of the intensifier (formally given earlier in 25). On the right of the diamond, the representation of the expressive meaning is based on a use-conditional (rather than the typical truth-condition on descriptive level).

(31) muito = λGλx.int(G)(x) : <<d,<e,t>>,<e,t>> ♦ λGλx.emo(G)(x) : <<d,<e,t>>,<e,u>>
   a. ⟦ int ⟧ = λG λx. there is a degree d, such that d meets the maximum standard given by the precision scale associated to G and x is G to degree d : <<d,<e,t>>,<e,t>>
   b. ⟦ emo ⟧ = λGλx. the speaker is sure about the fact that there is a degree d such that d meets the maximum standard given by the precision scale associated to G and x is G to degree d : <<d,<e,t>>,<e,u>>

This section showed a formal analysis for emphatic *muito* based on both a semantic descriptive step based on a type-shifting and a precision scale and a use-conditional level based on expressive function of natural language intensifiers. Next section details some consequences of the proposal defended here.

4 FINAL REMARKS

This paper presented an analysis to emphatic *muito* based on a scalar semantics and expressive function of intensifiers. The scalar proposal was based on the fact that despite having intensifiers that freely applies to gradable predicates of any kind (as Italian and Washo, cf. Beltrama and Bochnack (2015)) scale structure seems to be even more important in a language as Brazilian Portuguese (differently from Italian and Washo analyzed in a degreeless semantics in Beltrama and Bochnack (2015)). The scale of precision associated to nouns such as *golpe* could provide a maximum degree for the modification since maximalization could not rely on the modifier lexicon (differently from *totally* and *really* in English, for instance).

The given proposal has some consequences for the scalar analysis for *muito* that has been conducted by Quadros Gomes (2011), Quadros Gomes and Sanchez-Mendes (2015), Quadros Gomes (2018), Quadros Gomes et al. (2021). In section 2, we saw that *muito* is analyzed as acting as a relativization on the adjectival domain. Emphatic *muito* in turn discharges the maximum degree of the precision scale. This suggests that lexical upper closed scales are different from the ones provided by context due modification (*muito cheio* 'very full' is relative whereas *muito golpe* 'really a coup' is absolute). This analysis is in accordance with the general idea that nouns are susceptible to imprecision rather than vagueness (typically

associated to adjectives) indicating that they are absolute rather relative predicates (KENNEDY, 2007; MORZYCKI, 2009).

Additionally, scalar proposals have been showing that while open scales are prototypically adjectival, noun scales are associated to closed/bounded scales (DOETJES, 2008). These arguments go in favor of a scalar proposal and against Beltrama's (2018, p. 37) defense of avoiding "positing the presence of an arbitrary pragmatic scale isomorphic to the degree scales encoded by gradable predicates". The scale proposed was not arbitrary nor pragmatic but based on metalinguistic comparison (MORZYCKI, 2011).

Crucially, the emphatic use of *muito* is in accordance with the general idea presented in McNally (2016) that modifiers that have pragmatic uses (not affecting the at-issue content) are applied to saturated expressions (individuals and propositions). Then it makes sense to posit an expressive function exactly on the level of precision/individual scale. Nonetheless, this is based on use-conditional semantics, rather than in Pragmatics as a standard analysis.

The proposal suggested in this paper can be useful for future proposal on other degree modifiers in Portuguese. Quadros Gomes and Delduque (2019), for instance, notice that *pouco* 'few/little' does not have its prototypical minimizer interpretation in (32) but can be used to express non typicality.

(32)   Baleias são (*pouco) mamíferos.
          Whales are (*few/little) mammals.
          Derived meaning: Mammals are not the typical mammals.
                                                          (QUADROS GOMES; DELDUQUE, 2019, p. 1507)[10]

According to the authors, this sentence can be saved in a context in which what is being evaluated is the "typicality", on the authors' words. Nevertheless, they assume that this is a pragmatic interpretation rather than a semantic one. I believe that with the notion of a precision scale we can explain examples like this considering *whales* as displaying a degree below the standard (namely the maximum) in the scale of precision associated to the nominal predicate *mamífero* 'mammal'.

Lastly, I consider that the discussion promoted on this paper can give more facts and arguments to stimulate the debate on intensifiers in Brazilian Portuguese – whose survey was presented in section 2. Particularly this paper gave some toughs to invest in a unified analysis to their uses.

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10 The paper was written in Portuguese. The translation in mine. The authors put the * mark to indicate that the there is no measure available for modification, but they agree that the sentence can be used in context in which what is being modified is the typicality of the mammal property. I think a # should be used instead.

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