

## TWO TYPES OF DISPOSITIONAL ADJECTIVES<sup>1</sup>

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**ABSTRACT:** This paper investigates a class of adjectives in Brazilian Portuguese formed with the suffix *-vel*. I will refer to them as dispositional adjectives. An interesting property of these adjectives is related to their different semantic interpretations, specifically with the (un)availability of a possibility modal reading. The aim of this paper is to provide a better understanding of what sets these two classes apart. I propose to analyze the suffix *-vel* as a type of dynamic modal operator relativized to a modal base comprised of properties, not propositions, following Brennan (1993). I argue that the nature of the properties in question, subjective or objective, and the manifestation of dispositions are the source of the aforementioned semantic contrasts in modality, which are also related to eventivity and stativity.

**KEYWORDS:** Modality; dispositions; deverbal adjectives.

### 1. INTRODUCTION

This paper investigates a class of adjectives in Brazilian Portuguese formed with the suffix *-vel*. I will refer to them as dispositional adjectives<sup>3</sup>. An interesting property of these adjectives is their different semantic interpretations, which is related to the (un)availability of a possibility modal reading (cf. Pires & Ngoy, 2007; Oltra-Massuet, 2010, 2013), as illustrated in (1) below. In (1a) and (1c) the possibility modal reading is unavailable; in (1b) and (1d) in turn this reading is available:

- (1) a. *admirável*: merecedor de admiração

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<sup>3</sup> The adjectival suffix *-vel* originates in the Latin form *-bilis*, which also derives *-able/-ible* adjectives in English, *-ble* adjectives in Catalan and Spanish, and *-bile* adjectives in Italian. The term *dispositional* is meant to cover this class.

- admirable*: deserving respect and approval
- b. *audível*: o que pode ser ouvido<sup>4</sup>  
*audible*: able to be heard
- c. *deplorável*: que desperta aversão  
*deplorable*: deserving strong condemnation
- d. *quebrável*: o que pode ser quebrado  
*breakable*: capable of being broken

Pires & Ngoy (2007) propose an analysis that distinguishes between adjectives expressing possibility, such as *punível* (*punishable*), and adjectives expressing a moral obligation or necessity, such as *louvável* (*laudable/commendable*). This contrast is attributed to the combination of the suffix with different verb types: when derived from a transitive verb, the adjective conveys possibility; whereas when derived from a propositional attitude verb, the adjective expresses a necessity. The question is why such verb combinations should trigger a difference in modal force?

In a similar direction, Oltra-Massuet (2010, 2013) identified two classes of *-ble* adjectives, one class expresses what the author called potential modality (*modifiable*, *translatable*), and the other class expresses an appreciative or evaluative judgment (*admirable*, *credible*). The analysis is developed within the framework of Distributed Morphology and the proposal is that the two semantic classes correlate with two different structures. Roughly, adjectives expressing potential modality are deverbal, and adjectives expressing an evaluative judgment (or non-potential adjectives) are root-derived. The question is why the proposed structures do not always correlate with the semantics in a direct way? There are deverbal adjectives with the semantics of evaluative adjectives, such as *readable* and *drinkable*, paraphrased as *enjoyable* or *pleasant*, and root-derived adjectives with at the semantics of potential adjectives, such as *audible* and *potable*.

The aim of this paper is to provide a better understanding of what sets these two classes apart. The background for the analysis is provided by Kratzer's theory of modality (1977, 1981, 1991), according to which modal expressions are relative. I propose to analyze the suffix *-vel* as a type of dynamic modal operator relativized to a modal base comprised of

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<sup>4</sup> In this paper I will address deverbal adjectives only. Root-derived adjectives are also interesting and display the same contrasts: compare *audible*, *potable*, *edible* with *formidable*, *affable*, *horrible* (see Moreira, forthcoming).

properties, not propositions, following Brennan (1993). I argue that the subjective or objective nature of the properties involved is the source of the aforementioned contrasts. This explains why adjectives formed from psychological verbs or verbs of perceiving, sensing and judging are incompatible with a possibility modal reading — what previous analyses have called *necessity*, *moral obligation* or *evaluation*. I will establish a distinction between states that are manifested and states that are not manifested, and show that the semantic contrasts these adjectives exhibit are related to this distinction, which also correlates with eventivity and stativity.

The paper is organized as follows: after this *introduction*, section 2. presents *The modality of -vel*; section 2.1 *'In view of' and 'in virtue of' phrases* discusses different kinds of modal bases; section 3. *The manifestation of dispositions* discusses the source of the contrasts exhibited by *-vel* adjectives and how they are related to eventivity and stativity; section 4. provides the final remarks.

## 2. THE MODALITY OF -VEL

There are many definitions of modality: (i) “Modality has to do with necessity and possibility” (Kratzer, 1991: 639); (ii) “Modality allows us to talk about events that may not have happened, but are desired or required” (Hacquard, 2006: 11); and (iii) “modality is the linguistic phenomenon whereby grammar allows one to say things about, or on the basis of, situations which need not be real” (Portner, 2009: 1). It is undisputed that the adjectival suffix *-vel* has modal content, the question is how to capture its modal flavor? In this section, I claim that *-vel* adjectives should be analyzed as dispositional adjectives expressing dynamic modality.

Palmer (1979), citing Von Wright (1951), discusses the concept of dynamic modality, which is concerned with abilities and dispositions. Palmer questions whether dynamic modality should be treated as modality at all, since modality is, as proposed by Lyons (1977: 452 *apud* Palmer, 1979: 2), concerned with “opinions and attitudes of the speaker”. Palmer (1979: 2) argues that, when used as a dynamic modal, *can* is not related to the speaker at all, since it refers to characteristics of the subject of the sentence, as in (2) below:

- (2) John can speak German.

Nevertheless, Palmer (1979) justifies the treatment of dynamic modality in the typological study of modality more generally on morphosyntactic basis: the same modal word, *can*, is used to refer to ability. Interestingly, in Portuguese the abilitative use of *poder* (*can*) is not natural. In this case, the verb *saber* (*to know*) is used instead<sup>5</sup>, as illustrated below in (3b)<sup>6</sup>:

- (3) a. # João pode falar inglês<sup>7</sup>  
       ‘John can speak English’  
       b. João sabe falar inglês  
       ‘John knows English’

The same is reported for French, Greek and Bulgarian (cf. Hackl, 1998). The French example below in (4) is from Hackl (1998: 26):

- (4) a. # Jean peut nager  
       ‘Jean can swim’  
       b. Jean sait nager  
       ‘Jean knows swimming’

Nevertheless, the modal *poder* appears in the paraphrases for (a subclass of) *-vel* adjectives, as shown below in (5):

- (5) a. *quebrável*: o que PODE ser quebrado  
       *breakable*: capable of being broken  
       b. *congelável*: o que PODE ser congelado  
       *freezable*: capable of being frozen  
       d. *lavável*: o que PODE ser lavado  
       *washable*: capable of being washed

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<sup>5</sup> The verb *conseguir* (*to manage*) is also used, but it implies an effort, or an accomplishment, as in (i) “Joma consegue andar de bicicleta sem as mãos” (*Joma can ride no handed on a bike*); and “Fernanda consegue nadar 500m” (*Fernanda can swim 500m*). This discussion is an interesting one, but it is outside the scope of this paper.

<sup>6</sup> The most salient reading for (3a) is deontic (my judgment).

<sup>7</sup> I use ‘#’ to show that the sentence is good in a deontic reading, but not with the intended ability reading (my judgements).

The adjectives in (5) do not involve ability, if we understand that ability involves an agentive subject, as shown below in (6) (Giannakidou & Staraki, 2011: 1).

(6) Ariadne can solve this problem.

I propose that *-vel* adjectives are best understood as involving dispositions. Dispositions are “those properties picked out by predicates like ‘is fragile’ or ‘is soluble’, or perhaps more accurately by sentences of the form ‘x is disposed to break when struck’ or ‘x is disposed to dissolve when placed in water’” (Maier, 2014: 1). In this sense, *-vel* adjectives are dispositional: they express susceptibilities and tendencies (cf. Brennan, 1993: 3).

## 2.1 ‘IN VIEW OF’ AND ‘IN VIRTUE OF’ PHRASES

Modal expressions vary in force (possibility or necessity) and in flavor (epistemic, deontic, dynamic, etc.). The richness of possible interpretations for modal expressions in natural languages is a well-known fact. In Kratzer’s (1977, 1981, 1991) theory of modality, the meaning of modal words is relative. In her system, a modal expression is relative to two conversational backgrounds: the accessible worlds from the modal base and the ordering source<sup>8</sup>.

In order to be interpreted, modal words need a specification of the kind of modality involved, which is done by “in view of phrases” (Kratzer, 1991: 640). When this phrase is missing, the modal flavor is provided by a conversational background – formally represented as a function from worlds to sets of propositions. These propositions are responsible for determining the modal flavor (cf. Hacquard, 2009: 11). According to Kratzer (1977: 342), “relative modal phrases like ‘must in view of’ and ‘can in view of’ should be considered as the foundation of the modals ‘must’ and ‘can’, respectively”. The meaning of *must* shifts according to the different ‘in view of’ phrases, as shown below in (7):

(7) Pedro must be at work

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<sup>8</sup> According to Kratzer (1991: 644), the modal base is responsible for determining the set of accessible worlds (for a given world), and the ordering source imposes an ordering on this set.

In view of what is known, Pedro must be at work. *epistemic interpretation*

In view of the rules, Pedro must be at work. *deontic interpretation*

The modal base is a contextually variable element that determines the different interpretations of modals. Given that the modal base is a fundamental parameter in the formal treatment of modality, one question that arises is what kind of modal base is involved in the interpretation of dynamic modals. Brennan (1993: 120) proposes that dynamic modals relate properties and individuals. In Brennan's work, dynamic modality is specified by "in virtue of phrases", as shown below in (8) (Brennan, 1993: 141):

(8) Joan can sing arias  
In virtue of her natural ability *dynamic interpretation*

This proposal nicely captures the idea that dispositional adjectives express "essential, non-accidental properties" (Oltra-Massuet, 2013: 58), as shown in (9):

(9) Este vaso é quebrável  
'The vase is breakable'  
In virtue of its physical properties *dynamic interpretation*  
? In virtue of being placed on the edge of the table  
? In virtue of my physical strength

Following Brennan (1993), I propose that *-vel* is a dynamic modal relativized to certain properties of the object of the verb from which the adjective is derived. In the next section, I will show how the nature of the properties in question and the manifestation of the state allow us to derive the semantic contrasts these adjectives exhibit, as discussed in the introduction. I will also show how they correlate with eventivity and stativity.

### 3. THE MANIFESTATION OF DISPOSITIONS

Consider example (6), repeated below in (10):  
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(10) Ariadne can solve this problem.

Giannakidou & Staraki (2011: 1) argue that Ariadne's ability to solve the problem does not entail that she did solve the problem, this is why "pure ability is nonveridical". According to Maier (2014, p. 1), dispositions "are like abilities in many significant respects, in particular in the fact that they can exist even when not manifested". This property can be seen for a dispositional adjective such as *quebrável* (*breakable*), illustrated below in (11). The adjective *quebrável* does not entail the state *quebrado* (*broken*):

(11) O vaso é quebrável, mas não está quebrado.

'The vase is breakable, but it is not broken'.

On the other hand, adjectives like *amável* (*lovable*) exhibit a different entailment pattern, as shown in (12):

(12) ?? Mimi é amável, mas não desperta amor/afeição.

'Mimi is lovable, but does not inspire love/affection'.

The adjective *amável* in (12) entails a "loving state". Crucially, this state is not held by *Mimi*, the *target of emotion*, but is related to the subject experiencer, the *state holder*<sup>9</sup>. I claim that the manifestation of the state is fundamental to understand the modality of dispositional adjectives. A possibility modal reading is available for adjectives derived from eventive verbs (such as *quebrável* 'breakable', *lavável* 'washable', *congelável* 'freezable'). These adjectives involve objective properties and the final state may hold for the object of the verb (*quebrado* 'broken', *lavado* 'washed', *congelado* 'frozen'). This state is not manifested. The possibility modal reading is unavailable for adjectives derived from stative verbs (*amável* 'lovable', *adorável* 'adorable', *notável* 'notable'). These adjectives involve subjective properties and the state holds for the subject of the verb (an experiencer). This state is manifested (veridical).<sup>10</sup>

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<sup>9</sup> According to Pesetsky (1995: 56), the target argument is evaluated by the experiencer as part of the emotional episode.

<sup>10</sup> This contrast can be nicely captured in a system like Ramchand's (2008), which represents event decomposition in the syntax. Eventive verbs such as *quebrar* (break) contain three subevental components, *init*

The behavior of dispositional adjectives derived from stative verbs parallels that of ability *can* with stative verbs. Consider the English data in example (13) below, from Palmer (2001: 75):

- (13) I can see the moon  
I can hear a funny noise  
I can smell something burning  
I can taste salt in this  
I can feel something hard in here

According to Palmer (2001), “all of these indicate that the speaker has the sensation, not that he has the ability to have it”. In a similar direction, Vendler (1957: 148) shows that *could* and *would* are interchangeable when related to states:

hence the airy feeling about “I can know”, “I can love”, “I can like”, and so forth. (...) while to be able to run is never the same things as to run or to be able to write a letter is by no means the same as to write it, it seems to be the case that, in some sense, to be able to know is to know, to be able to love is to love, to be able to see is to see.

English illustrates nicely how the two types of dispositional adjectives are related to the presence of a subject understood as some kind of experiencer or affected agent (Marantz, 2009), in (14) and (15)<sup>11</sup>:

- (14) a. A supply of *drinkable* water  
b. A very *drinkable* red wine  
(15) a. A *readable* interface  
b. A *readable* book

In (14a) and (15a), the adjectives *drinkable* and *readable* are compatible with a possibility interpretation (*potable* and *legible*), and only objective properties are being considered. In (14b) and (15b), the adjectives are used subjectively: “a tasty red wine” and “an enjoyable book”.

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(initiation), *proc* (process) and *res* (result), predicting that the theme of the verb can fill the positions of *undergoer* of the process and *resultee*. Stative verbs contain only *init*, so the theme of the verb is a *rheme*, part of the event description (cf. Ramchand, 2008).

<sup>11</sup> These subjects can also be understood as evaluators, in the sense of Pesetsky (1995).

#### 4. FINAL REMARKS

In this paper I have looked at two types of dispositional adjectives, such as *quebrável* ‘breakable’ and *amável* ‘lovable’. I focused on the semantic contrasts related to the (un)availability of a possibility modal reading. Following Brennan (1993), I proposed to analyze the adjectival suffix *-vel* as a type of dynamic modal operator relativized to a modal base comprised of properties. I argue that the nature of the properties in question, subjective or objective, and the manifestation of dispositions are the source of the aforementioned semantic contrasts in modality, which are also related to eventivity and stativity. A possibility modal reading is available for adjectives derived from eventive verbs (*break/breakable*). These adjectives involve objective properties and the final state may hold for the object of the verb (*broken*); though this state is not necessarily manifested. The possibility modal reading is unavailable for adjectives derived from stative verbs (*love/lovable*). These adjectives involve subjective properties and the state holds for the subject of the verb (an experiencer or state holder). This state in turn is manifested (veridical).

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**RESUMO:** Este artigo investiga uma classe de adjetivos em português formada pelo sufixo *-vel*. Ao longo deste artigo, adjetivos em *-vel* são denominados disposicionais. Uma propriedade interessante desses adjetivos diz respeito a suas diferentes interpretações semânticas, especificamente à presença ou à ausência de uma leitura modal de possibilidade. O objetivo deste artigo é apresentar uma análise que dê conta dos fatores que determinam a divisão dessas duas classes. Proponho analisar o sufixo *-vel* como um tipo de operador modal relativizado a uma base modal composta de propriedades, não proposições, seguindo Brennan (1993). Proponho, ainda, que a natureza das propriedades em questão, subjetivas ou objetivas, bem como a manifestação de disposições são a fonte dos contrastes semânticos observados, que também estão relacionados a eventividade e estatividade.

**PALAVRAS-CHAVE:** Modalidade; disposições; adjetivos deverbais.