

CHAPTER EIGHT

ANOTHER LOOK AT TELICITY  
AND HOMOGENEITY:  
ASPECTUAL CONSTRAINTS ON WEAK  
READINGS IN TWO ROMANCE LANGUAGES

MARTA DONAZZAN\*  
AND LETÍCIA LEMOS GRITTI\*\*

**1. Introduction**

This paper discusses the distributional restrictions of nominal expressions that can receive a weak indefinite reading in two Romance languages, Brazilian Portuguese and Italian. We analyze weakly referential NPs and DPs as kind-denoting expressions, focusing in particular on their distribution in non-generic (episodic) sentences. We show that the key for understanding their irregular distribution in this context is given by the aspectual properties of the verbal predicates that license them as arguments. The link between aspect and nominal reference is not new to the semantic literature. In recent work, the case of intensional arguments has been brought up in particular with respect to the aspectual notions of telicity and homogeneity (Landman and Rothstein 2010). In our analysis we will probe these two aspectual properties of the VP together with the referential properties of its nominal complement. On the theoretical side, the aim of our comparative analysis is then to provide an empirical ground in order to explore the structural properties and the temporal constitution of verbal predicates in a broader perspective.

Our inquiry is built on the results of two different but related trends in recent semantic literature. On the one hand, our starting point is the

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\* University of Paris 7.

\*\* Federal University of Santa Catarina.

observation that an analysis in terms of kind-level denotation has been defended for most of the weakly referential nominal expressions that we are interested in. Pires de Oliveira and Rothstein (2011, to appear) argue that Brazilian Portuguese Bare Nouns, when unmarked for number, are always kind-denoting expressions.<sup>1</sup> While the status of Bare Nouns as kind-denoting terms in Italian is controversial (Chierchia 1998, Zamparelli 2002), it is also well known that Italian definite DPs can denote kinds in generic statements (Dobrovie-Sorin et al. 2003, 2001, Chierchia 1998); what is controversial, on the contrary, is the hypothesis that they may support a similar analysis in episodic sentences. We will tackle explicitly this latter hypothesis in this paper. On the other hand, the issue of the reference to kinds with respect to the weak interpretation of nominal phrases in non-generic contexts has also been recently raised in the semantic literature, where kind-level NPs are licensed as arguments of VPs in episodic sentences by virtue of a specific verb-object relation (cf., Landman and Rothstein 2010, Aguilar-Guevara and Zwarts 2011, among others). Landman and Rothstein (2010) discuss the issue with respect to the aspectual properties of verbal predicates, and suggest that the nominal complements of telic predicates, such as accomplishments and achievements, must be analyzed as kind-denoting terms when the VP in which they occur receives an atelic interpretation, as it is the case for accomplishments with bare plural arguments in English. In the following discussion, our aim will be to determine the linguistic contexts in which NPs in argument position can receive a weak interpretation in episodic sentences, and to test the aspectual properties of the VP in which they occur. We will develop in this sense the discussion started by Pires de Oliveira and Rothstein (2012) for Brazilian Portuguese Bare Nouns, extending it to Italian definite DPs and Bare Plurals.

The remainder of this introductory section will make clear the definition of ‘weak’ reading that we assume throughout the paper and will give a quick overview of the relevant empirical data. In section 2, we will then lay out the theoretical framework that we assume for the analysis of the temporal structure of VPs.

### **1.1 Weak readings and existential commitment**

In the last thirty years, various studies investigated the semantics and syntax of nominal expressions that, in different languages, can or must convey a ‘weak’ reading.<sup>2</sup> In descriptive terms, a ‘weak’ reading of an NP is the interpretation by which the referent(s) of the linguistic expression fail to be directly introduced in the discourse. Standard linguistic tests for

assessing weak reference include the impossibility of scoping over sentential operators and of being the antecedent of anaphoric pronouns. The indefinite DP *a policeman* in (1) conveys a weak reading when it stays in the scope of the intensional operator. Under a weak reading of the indefinite, the sentence cannot mean that Mary wants to marry a specific policeman (say, Paul), but it rather means that Mary would agree to marry anyone who happens to be a policeman. In the latter case, the indefinite cannot be the antecedent of the anaphoric pronoun in the second sentence.

- (1) Molly wants to marry a policeman<sub>j</sub>. #He<sub>j</sub> lives a few blocks from here.

In his groundbreaking work, Carlson (1977, 1980) developed a semantic analysis by which weak indefinite expressions denote intensional entities that do not apply compositionally to the VP as standard arguments do. The core of this idea is that ‘the VP is the domain of a context-free interpretive mechanism specifying an event-type, which is then the input to the usual context-sensitive propositional semantics generally assumed for all levels of the sentence’ (Carlson 2003).

Specifically, Carlson gives an analysis of English Bare Plurals which aims at explaining the weak reading that the bare plural NPs may have in English in two distinct contexts, namely generic sentences (2) and episodic ones (3).

- (2) Policemen are hired among middle-class youngsters.  
 (3) The Chicago Police Department hired policemen among middle-class youngsters.

Carlson (1977, 1980) proposes an ontology in which the world is sorted in two types of entities of the same ontological type – *kinds* and *objects*.<sup>3</sup> In generic sentences such as (2) the BP denotes a *kind*, and yields a VP which denotes an event-type. On the other hand, in episodic sentences, that is, sentences that cannot be interpreted as generalizations about habits and dispositions but describe episodic occurrences of events, BPs are instantiated as *specimen of the kind* through the existential instantiation of the event denoted by the verbal predicate. For Carlson, the VP *hire policemen* in (3) denotes a set of hiring events whose theme is an instantiation of the *policemen* kind (4).

- (4) [HIRE(e) ∧ INSTANTIATE(x, POLICEMAN<sub>k</sub>) ∧ TH(e) = x]

A number of recent analyses (Landman and Rothstein 2010, Aguilar and Zwarts 2011, Pires et al. 2012) depart from the Carlsonian account and suggest that most weak indefinite nominals should be interpreted as denoting non-instantiated kinds also in episodic sentences. Landman and Rothstein (2010) claim, in particular, that English BPs such as *apples* in the episodic sentence (5) may be ambiguous between an indefinite and a kind-denoting interpretation.

(5) John ate apples.

The idea is that the existential closure on singular events does not guarantee the existential instantiation of individual participants; rather, their existence can sometimes be inferred only indirectly, on the basis of pragmatic reasoning. Landman and Rothstein (2010) base their analysis on the aspectual interpretation of the VP in (5); *ate apples*, despite being derived from a telic accomplishment VP in Vendlerian terms, is interpreted as an atelic VP because of the intensional nature of the thematic argument of the verb. This hypothesis, which establishes a direct link between the aspectual interpretation of the VP and the referential properties of its argument, will be the starting point of our empirical survey and theoretical discussion. We will discuss it in more detail in the following section.

## 1.2 Weak readings and aspectual constraints

Another well-known empirical fact is that weakly referential expressions can be realized by different linguistic expressions within one and the same language. An example is offered again by English, where weak indefinites, in the sense specified above, can be realized not only by indefinite DPs (1), but also by bare plural NPs (6) and definite DPs (7).

- (6) Molly wants to talk to policemen<sub>j</sub>. # She met them<sub>j</sub> yesterday.  
 (7) Molly wants to play the piano<sub>j</sub>. # Unfortunately, it<sub>j</sub> is out of tune.  
 (8) Mary plays the piano. She's very talented.

The bare plural *policemen* in (6) can only scope under the intensional operator, and the sentence cannot mean that Mary wants to talk to some specific policemen that she met yesterday. Similarly, the definite DP *the piano* in (7), besides referring to a specific instrument whose identity is known by speaker and hearer, can refer to any instrument that may serve as a support to Mary for playing, as in the generic sentence in (8). Under

this reading, the definite DP in (7) is infelicitous as antecedent of the anaphoric pronoun in the second sentence.

Weak nominal expressions in Brazilian Portuguese and Italian can also take different forms, ranging from bare singular (9) and bare plural NPs (10a,b) to definite DPs (11).

- |      |   |         |
|------|---|---------|
| (9)  | Maria come melancia.<br>Maria eat watermelon<br>'Maria eats watermelons'        | BrP     |
| (10) | a. Maria come melancias.<br>Maria eat melancia.PL<br>'Maria eats watermelons'   | BrP     |
|      | b. Maria mangia angurie.<br>Maria eat watermelon.PL<br>'Maria eats watermelons' | Italian |
| (11) | Maria mangia le angurie.<br>Maria eat the watermelon                            | Italian |
|      | (i) 'Maria eats watermelons'  |         |
|      | (ii) 'Maria is eating the watermelons'  |         |

The sentences (9)-(11) all convey the interpretation according to which the speaker is not talking about any specific watermelon(s) eaten by Maria; rather, he describes the habit or the activity of eating watermelons. This reading is mandatory for the BrP Count Bare Noun in (9) and for both Italian and BrP Bare plural in (10)a-b, and it is one of the two possible interpretations of the Italian definite DP in (11).

If now we look closely at (11)i-ii in particular, we may note that it is the aspectual class of the verbal predicate and the aspectual modification of the sentence that play a major role for licensing the weak interpretation of the nominal expression. The definite DP in (11) receives an ambiguous interpretation between a weak (i) and a specific reading (ii) depending on the habitual/generic or episodic interpretation of the verbal predicate in the hosting sentence; given that the indicative present in Italian can receive an episodic or habitual reading, the two interpretations follow accordingly. A similar contrast is observable also in (12a), which is in the imperfective past. On the other hand, the same definite DP can only convey a non-ambiguous, specific reading in (12b), where the verb is in a perfective tense.

- (12) a. Maria mangiava le angurie.  
 Maria eat.IMP.F the watermelon.PL  
 (i) ‘Maria used to eat watermelons’  
 (ii) ‘Maria was eating the watermelons’
- b. Maria ha mangiato le angurie.  
 Maria eat.PF the watermelon.PL  
 (i) ‘#Maria ate watermelons’  
 (ii) ‘Maria ate the watermelons’

It has been noted in recent works that also Brazilian Portuguese bare singular NPs, that is, count nouns that lack determiners and number marking (henceforth Count Bare Nouns, CBNs, cf. (9)), have a restricted distribution in episodic sentences, and that their distribution is governed, to a certain extent, by the aspectual properties of the sentence (Bertucci 2012, Donazzan and Gritti 2011, Pires de Oliveira et al. 2010, 2011) The empirical observation is that CBNs are generally acceptable as objects of imperfective predicates, cf. (13a,b),<sup>4</sup> but when they appear as objects of perfective predicates (14), they are acceptable only in certain episodic contexts (14a), while acceptability is degraded in other cases (14b).

- (13) a. João construía casa.  
 João build.IMP.F house  
 ‘João used to build houses’
- b. João lia revista.  
 João read.IMP.F magazine.  
 ‘João used to read magazines’
- (14) a. Ontem, João construiu casa.  
 Yesterday João built.PF house  
 ‘Yesterday João built houses.’
- b. ?Ontem, João leu revista.  
 Yesterday João read.PF magazine  
 ‘Yesterday, João read magazines’

With respect to Brazilian Portuguese, Donazzan and Gritti (2011), and more recently Pires de Oliveira and Rothstein (2012), observe that there are two main factors that seem to play a role. On the one hand,

acceptability seems to depend on the *type of activity* involved (see the contrast between (14a,b), and also (15a,b) below).

- (15) a. João comeu bolo.  
 João eat.PF cake  
 ‘João ate cakes’
- b. ? João costurou blusa.  
 João sew.PF shirt  
 ‘João sewed shirts’

On the other hand, the presence of an *adverbial modifier* like the durational PP *durante X tempo* ‘for X time’ may improve the acceptability of degraded sentences (16a vs. b).

- (16) a. ?? João construiu casa.  
 João build.PF house  
 ‘João built houses’
- b. João construiu casa durante vinte anos.  
 João build.PF house during twenty years  
 ‘João built houses for twenty years’

More generally, then, it is a common property of weak indefinite readings of bare nouns in both Brazilian Portuguese and Italian and of definite DPs in Italian to be subject to specific restrictions in episodic sentences. In this paper, we will address precisely the following questions: (i) what is the relation between, on the one hand, aspectual features and episodic interpretation and, on the other hand, the (un)felicity of weak NPs? And (ii) how is the distributional behavior of weak NPs related to their referential interpretations?

Our strategy will be the following. Starting from the assumption that Brazilian CBNs can be analyzed as kind-denoting expressions (cf. section 1.1), we look more closely at the distribution of CBNs with respect to the perfective/imperfective alternation and the lexical aspect of the verb. In this respect, our empirical survey will be guided in particular by the interpretive constraints following from the modification of the VP with aspectual adverbials (see (16)a-b). We will then compare Brazilian Portuguese CBNs with Italian Bare Plural NPs and definite DPs that receive a weak interpretation in episodic sentences. There is a *caveat* to be underlined, though. We do not expect (un)acceptability to show up in

exactly the same terms in the two languages, for, if Brazilian Portuguese CBNs, by hypothesis, are utterly unacceptable in sentences that do not allow kind-denoting arguments, the relevant contrast for Italian DPs would not concern (un)acceptability but rather the alternation between a ‘regular’ definite and a ‘weak’ indefinite reading. On the other hand, if, as entailed by Landman and Rothstein’s (2009) analysis, the kind interpretation rests on pragmatic licensing, the licensing contexts should be shared across languages, the differences being imputed only to cross-linguistic variation that depends on the linguistic realization of the kind-denoting expression. In this respect, then, we will also check the interpretational constraints of Italian Bare Plural NPs, for which both a kind analysis and an existential one have been proposed.

We therefore will have a ground to check (i) the plausibility of a kind analysis of weak indefinite DPs and Bare Plurals; and (ii) the cross-linguistic differences and similarities in the aspectual features and modifiers constraining the sentence interpretation in the two languages.

The paper is organized as follows. In section 2, we first introduce the theoretical notions that we assume for our analysis of the temporal constitution of predicates and, more importantly, we make clear the interpretation of the aspectual modifiers that we use to test these aspectual properties. In section 3 and 4, we give an overview of the data, focusing on the aspectual constraints that determine the felicity of intensional arguments in the Italian and Brazilian Portuguese. Section 3 will be devoted to the discussion of the semantic interpretation of CBNs developed by Pires de Oliveira and Rothstein (2012); in a parallel fashion, we will discuss the semantic interpretation of Italian bare plurals and definite DPs in section 4, taking up also in this case the discussion developed in the previous literature (Chierchia 1998, Zamparelli 2002).

## **2. Aspect, structural constraints and modifiers**

### **2.1 Aspect and structural constraints**

It is an accepted view in the literature that the notional category of aspect is to be further divided into two major semantic notions, which can be mapped to distinct syntactic areas and grammatical realizations. Of the two, lexical aspect, also called the *Aktionsart* of the verbal predicate, is determined by the lexical properties on the verb and its complements. Lexical aspect depends, in a sense, on the conceptual representation of the eventualities in the denotation of the verbal phrase, and has been described by means of the parametric interaction of a bundle of features, such as



dynamicity, telicity and homogeneity (Smith 1991, Verkuyl 1993, Rothstein 2004, a.o.). In this paper, we describe lexical classes by means of their temporal properties, following the line of analysis started by Bennet and Partee (1978) and developed subsequently by Dowty (1979) and, more recently, Landman (2008). In this framework, the most prominent features which are relevant for construing predicate classes are the *telicity* of the VP and the *homogeneity* of the eventuality structure.

Bennet and Partee (1978), in their seminal work, recast Vendlerian lexical classes into a system which is defined by the temporal constitution of eventualities. The most probing linguistic test on which the classification is construed is based on the possibility of resisting inferences such as the one from (17a) to (17b).

- (17) a. John was sick from Monday to Thursday last week  
 b. → John was sick from Tuesday to Wednesday last week

The possibility of inferring the truth of (17b) from the truth of (17a) shows that the verbal predicate denotes an eventuality that has the property of holding for every sub-interval of the interval instantiating its running time. Thus, the truth of the stative predicate *to be sick*, if true for the time span going from Monday to Thursday, can be checked segmentally down to every sub-part of it. On the other hand, the truth of (18a) does not guarantee the truth of (18b): the accomplishment predicate *eat an apple* cannot be held true of a sub-interval of its entire duration.

- (18) a. John ate an apple from 5 to 5.30  
 b. -/→ John ate an apple from 5.15 to 5.25

On the basis of the sub-interval property, Bennett and Partee (1978) then divide states and activities from accomplishments and achievements.. Dowty (1979) notes subsequently that activities, contrary to states, cannot be segmented down to minimal intervals, but that, being dynamic events, they must be considered as being true down to *minimally extended intervals* in which the type of the activity is established, which qualify as the *onsets* of the activity type. Landman (2008), working this intuition further, proposes then that the dynamicity of events and their property of unfolding in time, rather than holding through time, can be better captured by an analysis that considers the incremental, rather than segmental, homogeneity of the eventuality structure. Checking homogeneity incrementally also accounts for the different truth conditions of sentences

with state or activity verbs. Suppose both (19) and (20) are true propositions.

(19) John has been in Paris from Monday to Thursday.

(20) John has been studying for its bachelor degree from 7am to 9pm

If we discover that John has been to Berlin on Wednesday, the sentence (19) would of course denote a false proposition in the relevant world; however, if I came home at 1pm and found John in the kitchen drinking a glass of water rather than at his desk, this wouldn't probably lead me to say that the proposition in (20) is false. In other words, activities, contrary to states, allow for more flexible conditions; certain temporal gaps can be considered irrelevant to prevent the continuation in the unfolding of the event. The relevance of pauses is however a matter of pragmatic reasoning; drinking a glass of water is not felt as an interruption in an activity of studying that unfolds for many hours, but watching TV for half an hour probably is. In later work, Landman and Rothstein (2010) proposed to define incremental homogeneity through the linguistic tests provided by adverbial modification, focusing in particular on durational prepositional phrases. We will come back to this point in the following section.

Finally, let us briefly discuss the interaction of grammatical aspectual operators with the temporal structure of the eventuality. Grammatical aspect, also called *viewpoint aspect*, can be viewed as the link between the temporal structure of the eventuality described by the VP and the temporal reference of the sentence (Smith 1991). In structural terms, grammatical aspect may also be considered a type-shifter, shifting eventualities of a certain class into eventuality possibly belonging to a different class (de Swart 2001). Applying the imperfective operator to a telic event has the effect of representing its interval of instantiation as being in the middle of its unfolding at Reference Time. In the case of accomplishments, the imperfective thus leads to the inference that the event did not reach its *telos* at RT; in some sense, the imperfective operator 'strips off' the culmination point of accomplishment VPs, making their structure akin to that of atelic activities in terms of homogeneity. While the predicate in (18b) did not resist the inference that checks its subinterval property, the predicate in (21), in an imperfective form, does.

- (21) a. John was eating an apple from 5 to 5.10  
 b. → John was eating an apple from 5 to 5.05

The perfective, on the other hand, does not alter the structural properties of eventualities; states are still homogeneous, whereas accomplishments and achievements, presented as bounded intervals, lead to the inference that their culmination point has been reached, and are thus non-subinterval, non-homogeneous VPs.

Aspectual operators such as perfective and imperfective, being functional operators, belong to the grammar of a language, and thus constitute different systems and take different forms across languages. In Romance languages such as Brazilian Portuguese and Italian, aspect conflates with tense in the verbal paradigm, and tenses possess distinct aspectual properties. In this paper, we will discuss in particular past tenses of the perfective and the imperfective, examples of which are given below. The perfective past that we will consider in Brazilian Portuguese will be the form of the *preterito perfeito* (22b); the imperfective will be represented by the *preterito imperfeito* (22a). In Italian, likewise, the form of imperfect past that we will consider will be mainly the *imperfetto* (23a); as for the perfect, we will rather consider the *passato prossimo* (23b). The (im)possibility of negating that the event reached its culmination point, in the second sentence, is meant to show the aspectual distinction, in terms of (a)telicity, between each pair of tenses (Basso 2007, Bertinetto 1986).

- (22) a. Maria lia um livro (mas finalmente não terminou)  
 Maria read.IMP a book but eventually NEG finish.PF  
 ‘Maria was reading a book (but eventually did not finish it)’
- b. Maria leu um livro (#mas finalmente não terminou)  
 Maria read.PF a book but eventually NEG finish  
 ‘Maria read a book (# but eventually did not finish it)’
- (23) a. Maria leggeva un libro (ma alla fine non l’ha terminato)  
 Maria read.IMP a book (but at-the-end NEG CL finish.PF  
 ‘Maria was reading a book (but eventually did not finish it)’
- b. Maria ha letto un libro (??ma alla fine non l’ha terminato)  
 Maria read.PF a book (but eventually NEG CL finish.PF)  
 ‘Maria read a book (#but eventually did not finish it)’

Besides presenting the event as an unfolding process with respect to a particular reference time, the imperfective past receives in most contexts a

habitual interpretation, which is particularly salient if the sentence lacks an anchoring, cf. (24a,b).

- (24) a. A tarde, depois do almoço, Maria lia uma revista no salão.  
 the evening after of-the dinner Maria read.IMP a magazine  
 in-the drawing-room  
 ‘The evening, after dinner, Maria used to read a magazine in  
 the drawing room’
- b. La sera, dopo cena, Maria leggeva una rivista in salotto.  
 The evening after dinner Maria read.IMP a magazine in  
 drawing-room  
 ‘The evening, after dinner, Maria used to read a magazine in  
 the drawing room’

Given this property of the imperfective past in the two languages, sentences in the imperfect past very often resist the interpretation as descriptions of episodic occurrences of events; for this reason, in the following we will concentrate mainly on perfective sentences, for which the habitual interpretation is harder to obtain, and may be enhanced only by sufficiently extended temporal spans. To this point as well we will come back in the next section, when discussing aspectual modifiers.

## 2.2 Aspect and aspectual modifiers

Nominal phrases such as *two hours* provide the measure of an interval that, when modifying a VP, is understood as the temporal span within which the eventuality described by the VP holds or unfolds. In the case of prepositional modifiers, prepositions give different contributions to the overall modifier phrase. In English, as in Italian and in Brazilian Portuguese, PPs headed by the preposition *in* denote the interval within which the eventuality has to reach its endpoint, and are thus compatible only with predicates whose inherent endpoint is lexically or compositionally given (25a). If this is not the case, an inceptive reading is then forced upon the sentence (25b).

- (25) a. Maria ha letto un libro in poche ore.  
 Maria read.PF a book in few hours  
 ‘Maria read a book in a few hours’
- b. ??Maria è stata malata in poche ore.

Maria be.sick.PF in few hors  
 ‘Maria has become sick in a few hours’

On the other hand, English *for*-adverbials, which correspond to adverbials headed in Italian and Brazilian Portuguese by PPs headed by the prepositions *per/durante*, impose a constraint of homogeneity (Landman and Rothsein 2010), by which the eventuality has to spread within the interval, so to speak, in quite a uniform way. The interesting point, for our present concern, is that, depending on the structural properties of the predicate and on the duration of the time span, the homogeneity of the temporal structure of the event can receive different degrees of granularity, and that these distinctions show up in interpretive differences. We will conduct our analysis by taking this empirical evidence as a start. In the following section, we will espouse in more detail the interpretive distinctions; for the explanatory purpose, we concentrate first on English, and then come back to the two Romance languages in sections 3 and 4.

### 2.2.1 Iterative and continuative readings of activity predicates

We assumed, in section 2.1, that the onset of stative predicates is a minimal interval of time, that is, in an ontology where temporal units are built from punctual intervals, it corresponds to a point in time. Therefore, states are always segmentally homogeneous down to their atomic structure. Activities, on the other hand, may be homogeneous in a coarser way. Activities such as *sleeping* and *waiting* have very short onsets, whose precise definition is not decidable on the basis of the lexical property of the verb; in other words, it is very hard or impossible, to decide what can qualify as the minimal interval that instantiates an activity of sleeping. Therefore, it is safe to say that, if John slept from 5 to 6, he also was sleeping in almost every second between 5 and 6. The onset of running and eating are easier to define (the onset of running is probably the first accomplished step of the runner, and the onset of eating is probably the first chewing and swallowing edible matter), and, accordingly, their homogeneity is coarser. If John ran from 5 to 6, we can’t safely say that he was running down to every second between 5 and 6, because at second 5.05.23” he was just stretching his left leg and lifting his right elbow, an action which does not qualify, by itself, as an instance of running.

Here we will be concerned with activities and derived activities, that is, accomplishments that are shifted into atelic activities by complementing the transitive verb with a proper internal complement. The main relevant

empirical piece of data is the observation that, depending on the granularity of their homogeneity, modification by *for*-phrases yields two distinct interpretations, that we will call the ‘iterative’ and the ‘continuative’ interpretation. These two labels are given for convenience, since, if we consider that all activities develop incrementally from a minimal onset, properly speaking the interpretation is in all cases an iterative one, as far as the minimal onset-type is iterated to produce the unfolding of the event. In our analysis, however, we will consider that iterative readings are those in which the homogeneity of the predicate is obtained by iterating the telic event described by the verbal phrase. Continuative readings, on the contrary, are those in which what is iterated is the onset of the activity described by the verb, which does not correspond to a telic event itself. It will appear in fact that iteration is a rescue strategy for telic VPs, whose onset is given by the denotation of the verbal phrase, and continuation is an effect of the impossibility of defining the proper onsets in the denotation of the activity verb. These differences then correlate with a distinction in the interpretation of the theme complement of the derived activity, which can denote either a count (object-level) or a mass (and kind-level) set of entities.

Achievements and accomplishments modified by the perfective aspect are non-homogeneous VPs, in the sense that their property cannot be verified for any proper sub-interval of their whole running time. Achievements are trivially non-homogeneous, since they have no sensible temporal structure (Filip 2008). When modified by a durative PP, in order to spread homogeneously through the interval, the whole event in the denotation of the VP has to be iterated. Of course, this interpretation is plausible only if the event is repeatable in time or over distinct participants. Therefore, while sentence (26) is odd, because it must be interpreted as describing a situation where John reached the top repeatedly for one hour, the sentence in (27), where the event type has been iterated through mapping onto different participants, is a felicitous utterance.

- (26) #John reached the top for more than an hour.  
 (27) Tourists reached the top for the whole afternoon.

Accomplishments with indefinite or definite countable or quantified complements are also acceptable only if they are interpreted as iterated events. This interpretation is not straightforward, and explicit quantificational operators are needed in the sentence to yield the desired reading. The quantificational adverbial ‘every day’ in (28b) specifies the range of the intervals within which the iteration of the event took place.

- (28) a. #John ate a sandwich for one hour.  
 b. John ate a sandwich every day for many months when he worked in the office.

This iteration effect obtains also when the internal complement of the verb is not a proper ‘quantized’ object in the sense of Krifka (1998). As observed by Zucchi and White (2001), the quantified NP ‘some milk’ in (29), albeit being cumulative and divisive, must be interpreted as a quantized definite, and, accordingly, yields only an iterative interpretation when the VP is modified by a durative PP.

- (29) a. #John drank some milk for a few minutes.  
 b. John drank some milk every now and then for a few hours.

Accomplishments with quantized and countable arguments contrast, in this respect, with accomplishments that are complemented by bare countable and mass NPs. Contrary to the former, VPs with bare arguments do not yield iterative interpretations. This is quite evident for bare mass Ns; the sentence in (30) means most naturally that John drank milk for a few minutes, and that the property of drinking milk can be verified in every sub-interval of those few minutes interval in which it is true, at least, that John drank. That is, in Landman and Rothstein (2010)’s terms, the VP is homogeneous down to the minimal onsets of the activity denoted by the lexical verb. Note that, moreover, no quantificational adverbs are needed for the felicity of the sentence.

- (30) John drank milk for a few minutes.

Landman and Rothstein (2010) note that bare plural (BP) NPs in English behave like mass Ns as far as felicity conditions are concerned. This empirical fact leads the authors to consider that English BPs, just like mass Ns, should be considered intensional entities, which do not always apply compositionally to the verb. Accordingly, sentence (31) can be interpreted in either of two ways: it may describe a situation where John ate repeatedly a specimen of the kind ‘apple’ in an interval of two hours, or it may just signify that John has been in a relation of eating with the kind apple; it is not necessary that John ate one or more whole apples for (31) to be true.

(31) John ate apples for two hours.

The first reading would qualify as iterative in our definition. The second reading is continuative, since it concerns the repetition of the onset of the activity of eating, and not of the accomplishment of eating an apple. The continuative reading, which is less prominent, can be enhanced in specific contexts, such as (32) (cf. Pires de Oliveira et al. 2012).

(32) John ate sandwiches for two hours and won the Big Eater Contest.

If this intuition is correct, the continuative interpretation should be available also for VPs that are complemented by other types of kind-denoting NPs. The relevant case, in English, is that of ‘weak’ definite DPs, such as those discussed by Carlson and Sussmann (2005) and Aguilar-Guevara and Zwarts (2011). Let’s consider the sentence in (33).

(33) John read the newspaper for two hours.

If the definite DP is interpreted as a ‘regular’, D-linked definite, the sentence is odd or utterly unacceptable. However, if ‘the newspaper’ is interpreted as denoting a type of entity rather than a specific object, the sentence is fine if modified by a durative prepositional phrase. In this case ‘reading the newspaper’ is interpreted as an activity rather than an accomplishment, and what are iterated are the onsets of such activity; the sentence would not mean that John read through all the newspaper again and again for two hours.

### 2.3 Aspectual adverbs and habitual and experiential interpretations

Finally, let us point out a further set of adverbial modifiers that, by interacting with the aspectual constitution of the VP, can also interact with the ‘weak’ interpretation of NPs. A relevant case is offered by the adverb *already*, which enhances the experiential reading of the perfective in examples such as (32).

(32) John has already eaten apples.

In (32), the BP is more naturally interpreted as kind-denoting because the sentence receives an experiential reading: at utterance time, John has



had his first experience of eating apples. To make the proposition true, and to witness the eating-apples experience, it would suffice that John ate even just a little slice of apple, or, for what matters, a spoonful of ground apple.

Another context that favors the intensional interpretation of ‘weak’ nominal expressions is that of habitual sentences. While habituality is generally conveyed by imperfective sentences across languages, a habitual reading may obtain also with perfective VPs if the habit itself is considered to have ceased at utterance time. This is particularly true in Romance languages, which do not often make use of aspectual periphrasis such as the English *used to* in order to express habits in the past. Therefore, if a sufficiently large time span is provided, perfective sentences can be quite naturally interpreted as describing past habits. Sentence (33b), rather than describing the episodic occurrence of an event of playing football which lasted for a certain time (33a), conveys the meaning by which Mario has been, for many years, a regular football player.

- (33) a. Mario ha giocato a calcio per tre ore.  
 Mario play.PF to football for three hours  
 ‘Mario played football for three hours’
- b. Mario ha giocato a calcio per molti anni.  
 Mario play.PF to football for many years  
 ‘Mario used to play football for many years’

The distinction between the episodic vs. habitual interpretation of perfective tenses shows up also when the sentence is modified by aspectual adverbs such as Italian and BrP *ancora/ainda*, which may convey a continuative reading, akin to English *still*, or an incremental reading (*again/ no more*), depending on the aspectual features of the sentence and on the referential properties of the internal argument (Donazzan 2008, Tovina and Donazzan 2008).

In this first introduction to the aspectual constraints that guide the ‘weak’ interpretation of NPs, we concentrated mainly on English, on which the existing literature has also focused so far. In the following sections, we will apply the tests of aspectual and adverbial modification to Brazilian Portuguese and to Italian. The distribution of Italian weak nominal phrases has never been analyzed, to our knowledge, from the standpoint of aspectual modification. Brazilian Portuguese has been recently discussed by Pires de Oliveira and Rothstein (2012); for the former language as well, however, we will try to give an accurate analysis

which may complement Pires de Oliveira and Rothstein's account on some points.

### 3. Brazilian Portuguese

#### 3.1 Brazilian Portuguese CBNs as kinds

Brazilian Portuguese is different from other languages of the Romance family insofar as it allows in argument position so-called Count Bare Nouns (CBNs), that is, determinerless count NPs unmarked for number (Munn and Schmitt 1999, Schmitt and Munn 2002).

There is a general disagreement in the literature about the correct semantic interpretation of CBNs. On the one hand, CBNs can be the subject of kind predicates and generic sentences, an empirical fact that suggests their analysis as kind-denoting NPs. CBNs allow generic readings with kind predicates (34), and they appear in subject position with *invent*-type verbs (35) and in other episodic contexts (36).

- (34) Caipim dourado só brota no Jalapão.  
golden straw only grow in Jalapão  
'The Golden Straw only grows in Jalapão'
- (35) Computador foi inventado por Babbage.  
computer invent.PF by Babbage  
'Computers were invented by Babbage.'
- (36) Rato foi introduzido na Austrália em 1770.  
rat was introduced in the Australia in 1770  
'Rats were introduced in Australia in 1770.'

On the other hand, CBNs behave like number-marked bare NPs (37), in that they can occur in argument position in episodic sentences (38). In this case, they receive a 'weak' reading.

- (37) Maria comeu melancias.  
Maria eat.PF melancia.PL  
'Maria ate watermelons'
- (38) Maria comeu melancia.  
Maria eat.PF watermelon  
'Maria ate watermelons'

Following a Carlsonian analysis, Müller suggests that the BP in (37) denotes a semantically plural NP, whereas the CBN in (38), lacking Number morphology, is a number neutral NP, which can denote both pluralities and singularities (cf. Müller 2001, 2002, 2003).

Recently, however, Pires de Oliveira *et al* (2010), Pires de Oliveira and Rothstein (2012) claim that CBNs are not number neutral pluralities, but true mass nouns, and as such they are not ambiguous between an existential and a kind reading as English and Brazilian Portuguese bare plurals are. Departing from the neo-carlsonian analysis assumed in previous studies, the authors claim Brazilian Portuguese CBNs always denote an intensional entity, the *kind*. Pires de Oliveira and Rothstein (2012) base some of their arguments on the constrained distribution of Brazilian Portuguese CBNs in episodic sentences, particularly in sentences modified by the perfective aspect. To explain the weak reading of CBNs, they endorse the analysis developed by Landman and Rothstein (2010) for English BPs, and claim that, in a perfective sentence like (38), the existence of individual watermelon that is actually eaten by Mary is inferred only indirectly, through the instantiation of events of the activity-type of eating watermelons, whose participant is the individual kind.

Consequently, this means that, when the CBN is interpreted as a kind-denoting term, and not as denoting an individual, the events instantiated by the VP may involve only a partial individual; the sentence (38) is predicted to describe a true proposition also when it is only part of a watermelon that is actually eaten by Mary. In the following, we test this prediction against the interpretation of VPs with different aspectual properties.

### 3.2 Aspectual constraints

In section 1, we briefly mentioned the empirical observation (Donazzan and Gritti 2011, Pires de Oliveira and Rothstein 2012) that CBNs are more acceptable in sentences modified by the imperfective aspect (39) than in perfective sentences (40).

- (39) João construía casa.  
João build.IMPF house  
'João used to build houses'
- (40) ?? João construiu casa.  
João build.PF house.  
'João built houses'

With respect to contrasts like (39)-(40), Donazzan and Gritti (2011) and Pires de Oliveira and Rothstein (2011) independently observe that acceptability depends in most cases on the plausibility of the interpretation of the VP as an activity-type. The idea defended in particular by Pires de Oliveira and Rothstein (2012) is that the key notion that explains the distribution of CBNs is the possibility of understanding the perfective VP as a habitual activity. While the imperfective aspect easily conveys a habitual interpretation of the sentence (cf. section 2), CBNs are not always acceptable as complements of VPs modified by the perfective aspect because the sentences in the perfective cannot easily receive a habitual reading. In the latter case, then, habituality should be enforced by the plausibility of understanding the VP as the description of a well-established, conventionally shared activity-type. As a consequence of Pires and Rothstein's analysis, then, in order to be licensed in episodic sentences, VPs with weak complements must also obey a pragmatic constraint: they must denote an activity which is, in a sense, conventionally established as a habit or a recurrent activity, and can be interpreted as belonging to a quite plausible, well-defined activity type.

Additional evidence for the relevance of the pragmatic constraint comes from data drawn from different verb classes. In most cases, CBNs are more easily acceptable as arguments of the VP in perfective than in imperfective aspect, regardless of the aspectual class of the verb, cf. the achievement and accomplishment predicates in (41) and (42-43) and the stative verb in (44a,b).

- (41) a. João perdeu campeonato.  
 João lose.PF championship league  
 'João lost championship leagues'
- b.? João perdia campeonato.  
 João lose.IMP championship league  
 'João used to lose championship leagues'

- (42) a. João abriu porta.  
 João open.PF door.  
 ‘João opened doors’
- b. ? João abre porta.  
 John open.IMP door  
 ‘João open doors’
- (43) João escreve carta.  
 João write.IMP paper  
 ‘João writes letters.’
- (44) ?João ama menina.  
 John love.IMP girl  
 ‘João loves girls’

If we compare (42b) with (44), which are both in the imperfective, we may explain the difference in acceptability by observing that writing letters can be considered as a more plausible activity in which someone may be habitually involved than opening doors. The pragmatic factors that allow VPs to be interpreted as well-established or plausible activity type are very subtle, and may depend on world knowledge, on the context of utterance and can also be determined by information structure. We will not discuss in detail the pragmatic constraints here, but see Donazzan and Gritti (2011), Pires de Oliveira and Rothstein (2012), and also the discussion in section 4, for further details.

### 3.3 Interaction with aspectual modifiers

#### 3.3.1 Prepositional modifiers

As we mentioned in section 1, a further licensing factor for CBNs in episodic sentences is given by the modification of the sentence by durational and aspectual adverbs. In this section, we will give a principled explanation for the data by considering in more detail the distribution of aspectual modifiers. We will focus in particular on adverbial modifiers realized by prepositional phrases.

Remember that, according to most semantic analysis, in the PP modifier *em X tempo* ‘in X time’ the preposition *in* contributes the information that the eventuality has to reach its endpoint within the relevant interval of time (Rothstein 2004). In episodic sentences, then, *in-*

adverbials induce the reading where the CBN is interpreted as a quantized DP, an interpretation that does not match with the intensionality of the NP. Therefore, as predicted, *in*-adverbials are infelicitous when modifying VPs with CBNs, unless the sentence is interpreted with an inceptive meaning.

(45) ??João leu revista em poucas horas.  
Maria read.PF magazine in a few hours

(46) \*João tirou foto em duas horas.  
João make.PF picture in two hours  
'João made pictures in two hours'

On the other hand, durational adverbials in episodic sentences do not interfere with the inherent atelicity of the VP. Rather, when modifying sentences in the perfective aspect, they generally suggest an iterative/frequentative reading (Basso 2007), where the VP may be interpreted as a type of activity. What's more, durational adverbials seem to rescue, in most cases, the acceptability of the CBNs, cf. the unmodified (a) sentence versus the (b) sentence in the examples below.

(47) a. ?João leu livro.  
João read.PF book.  
'João read books'

b. João leu livro desde 1990.  
João read.PF book since 1990  
'João read books since 1990'

(48) a. ?João escreveu carta.  
João write.PF letter  
'João wrote letters'

b. João escreveu carta das 4h às 6h.  
João write.PF letter from-the 4am to-the 6am  
'João wrote letters from 4am to 6am'

(49) a. ? João tirou foto.  
João make.PF Picture  
'João took pictures'

- b. João tirou foto até de noite.  
 João make.PF picture until evening  
 ‘João took pictures until evening’

A special case of durational PPs, discussed extensively in the literature, is that of English *for*-adverbials. PPs headed by the preposition *for* modify predicates which are atelic; moreover, the preposition imposes a constraint of homogeneity, by which the eventuality has to spread uniformly, so to speak, over the whole interval (Van Geenhoven 2004, Rothstein 2004). As predicted by the analysis, then, activity verbs and accomplishment verbs complemented with CBNs should be fine with *for*-phrases, or, more generally, with PPs of this type.<sup>5</sup> In some cases, however, these durational adverbs yield infelicitous sentences, cf. the durational adverb *durante a tarde inteira* ‘for the whole afternoon’ in (50) versus (51).

- (50) João costurou blusa durante a tarde inteira.  
 João sew.PF shirt for the whole afternoon  
 ‘João sewed shirts for the whole afternoon’
- (51) ?? João construiu casa durante a tarde inteira.  
 João build.PF house for the whole afternoon  
 ‘João built houses for the whole afternoon’

Under Landman and Rothstein’s account, the difference between (50) and (51) depends on the structural properties of the predicate and on the duration of the time span denoted by the durational phrase. Given that the homogeneity of the temporal structure of the event can receive different degrees of granularity, the CBN in (50) is not acceptable because the durational adverb specifies a period of time that is contextually too short for establishing the activity type of building houses. It is precisely in this sense that the acceptability of adverbial modifiers is related to the activity type denoted by the VP. Note in fact that, if the PP denotes a potentially longer time span (52), the acceptability of the sentence improves.

- (52) João construiu casa no ano pasado.  
 João build.PF house in-the year passed  
 ‘João built houses last year.’

Finally, let’s consider aspectual adverbs. The adverb *já* ‘already’ in (53b) enhance an experiential reading for the sentence, by which for (53b) to be true it suffices that João had been at least once in a driving relation

with the kind ‘truck’, thus making the sentences acceptable also under the kind interpretation of the NP.

- (53) a. ?João dirigiu carro.  
 John drive.PF car  
 ‘João drove cars’
- b. João já dirigiu carro.  
 João already drive.PF car  
 ‘João already drove cars’

### 3.4 Conclusions

In this section, we have shown that, assuming that Brazilian Portuguese CBNs denote intensional entities, we can explain why they are more acceptable in sentences modified by the imperfective aspect than in perfective sentences. Another consequence of our assumption is that not all verb classes show this contrast, because the type of activity involved seems to influence acceptability. Finally, we discussed the interpretational differences with respect to aspectual modifiers, which we considered as a way to test the temporal constitution of eventualities, casting our analysis in the theoretical framework expounded in section 2. It appears that VPs complemented with CBNs are atelic and have a strongly homogeneous structure, since they denote indirect relations between individuals and instances of the kind. In the following section, we will extend the discussion to Italian, by considering in particular two potential candidates for kind-denoting nominal phrases, namely Bare Plural NPs and dweak definite DPs. If these nominal expressions denote intensional entities, we expect that, in this language as well, they present the same aspectual constraints and interpretational differences observed for Brazilian Portuguese CBNs.

## 4. Italian

### 4.1 Weak indefinites and kinds in Italian

Let’s make clear from the start that Italian, contrary to Brazilian Portuguese, does not allow Count Bare Nouns as arguments (54a); Bare Plurals (54b) and Bare Mass Nouns (BMN) (54c), on the other hand, enjoy a freer distribution.



- (54) a. \*Maria ha letto libro.  
 Maria read.PF book
- b. ??Maria ha letto libri.  
 Maria read.PF book.PL  
 ‘Maria read books’
- c. ?Maria ha letto poesia.  
 Maria read.PF poetry  
 ‘Maria read poetry’

Another difference with respect to Brazilian Portuguese is that Italian BPs (55) and BMNs (56) cannot easily be accepted as the external argument of the verb; they are licensed mainly in governed positions (Longobardi 1999).

- (55) ??Cani abbaiano in cortile.  
 Dog.PL are-barking in yard
- (56) ??Acqua scende impetuosamente dalla collina.  
 Water is-descending impetuously from-the hill

As for definite DPs, besides being interpreted as Russelian definite descriptions, they can receive a kind interpretation in generic sentences (57a) and as arguments of kind-level predicates (57b), cf. also section 1.

- (57) a. I leoni hanno una folta criniera.  
 The lion.PL have a thick mane  
 ‘Lions have a thick mane’
- b. Il leone è quasi estinto.  
 The lion is almost extinguished  
 ‘The lion is on the verge of extinction’

The interesting case for us is however the weak indefinite interpretation of DPs in episodic contexts (58).

- (58) a. Durante il safari, i turisti hanno visto i leoni.  
 During the safari the tourist.PL see.PF the lion.PL  
 ‘In the course of the safari, the tourists saw lions’

- b. I leoni hanno invaso il Serengeti quest'estate.  
The lion.PL invade.PF the Serengeti this summer  
'Lions invaded the Serengeti this summer.'
- c. Gianni dice che l'anno scorso ha incontrato gli alieni.  
Gianni say.PR that the-year past meet.PF the alien.PL  
'Gianni says that he met aliens last year'

This latter case has been discussed in particular by Zamparelli (2002), who argued for a neo-carlsonian analysis in terms of Derived Kind Predication (Chierchia 1998). Zamparelli (2002), *contra* Chierchia (1998), convincingly argues that the only candidate for DKP in Italian are definite DPs, and that BPs (and BMNs) in this language are always existential. Thus, while (59a) and (60a) are interpreted as relating the act by God of creating the species zebra and the liquid matter on Earth, (59b) and (60b) rather convey the meaning that some individuals of the species zebra, and some quantity of water, are instantiated by God's creation.

- (59) a. Il terzo giorno, Dio creò le zebre/la zebra.  
The third day God create.PF the zebra.PL/ the zebra  
'On the third day, God created zebras/the zebra.'
- b. ??Il terzo giorno, Dio creò zebre.  
The third day God create.PL zebra.PL  
'On the third day, God created (some) zebras'
- (60) a. Il secondo giorno, Dio mise l'acqua nel mare.  
The second day, God put.PF the water in-the sea  
'On the second day, God put water in the sea'
- b. Il secondo giorno, Dio mise acqua nel mare.  
The second day, God put.PF water in-the sea  
'On the second day, God put (some) water in the sea'

The existential reading of BPs can be checked by providing sufficient context. Thus, while in (61a) the definite DP allows for the continuation where the kind is mentioned in the second sentence, the BP is odd and almost unacceptable. Conversely, in (62b) the bare plural is more natural, and the definite DP, interpreted as a kind-denoting term, yields a

contradiction with the second sentence, which states that the kind zebra already existed.

(61) a. Il terzo giorno Dio creò le zebre. Mancavano infatti gli equidi nella savana.

The third day God create.PF the zebra.PL/zebra.PL lack in-fact the equines in-the savannah

‘On the third day, God created zebras. In fact, there weren’t equines in the savannah’

b. Il terzo giorno Dio creò #zebre. Mancavano infatti gli equidi nella savana.

The third day God create.PF the zebra.PL/zebra.PL lack in-fact the equines in-the savannah

‘On the third day, God created zebras. In fact, the weren’t equines in the savannah’

(62) a. Il terzo giorno, Dio creò #le zebre. Non ce n’erano infatti abbastanza nella savana.

The third day God create.PF the zebra.PL. Not there Clit-have in-fact enough in-the savannah

(‘On the third day, God created the zebra. In fact, there were not enough of them in the savannah.’)

- b. Il terzo giorno, Dio creò zebre. Non ce n'erano infatti abbastanza nella savana.  
 the third day God create.PF zebra.PL. Not there Clit-have in-fact enough in-the savannah  
 'On the third day, God created (some) zebras. In fact, there were not enough of them in the savannah.'

In the following discussion, we assume that weak definite DPs are kind-denoting, intensional DPs also in episodic sentences, thus departing from Zamparelli's (2002) analysis in this respect. We will then extend Landman and Rothstein's claim about the intensional-existential ambiguity of English BPs to Italian BPs and weak definite DPs. We will test the hypothesis by considering, more specifically, the homogeneity of the VP and the different types of adverbial modifiers that contribute to its aspectual characterization. Our inquiry, besides giving a contribution to the understanding of the semantics of nominal expressions in Italian, will thus take a new standpoint for the analysis of the aspectual contribution of tenses and verbal complements in this language.

## 4.2 Aspectual constraints

### 4.2.1 Grammatical aspect and lexical classes

We observe, in Italian as well, the contrast between perfective and imperfective sentences. BPs are licensed more easily in imperfective sentences (63a,b). The felicity of (64), where the bounded interval delimited by the perfective is extended enough by the modifier as to suggest a recurrent activity, shows that it is habituality which is at issue.

- (63) a. ???Gianni ha scritto lettere.  
 Gianni write.PF the letter.PL  
 'Gianni wrote the letters'
- b. Gianni scriveva lettere.  
 Gianni write.IMP letter. PL  
 'Gianni used to write the letters'

- (64) Gianni ha scritto lettere a sua madre per molti anni.  
Gianni write.PF letter. PL to his mother for many years.  
'Gianni wrote the letter to his mother for many years'

Additional empirical evidence is provided by (65b), which shows that the episodic interpretation of the imperfective past makes the sentence infelicitous.

- (65) a. Gianni scriveva lettere (quando lavorava in comune).  
Gianni write.IMP letter.PL (when (he) work.IMP in town-hall  
'Gianni used to write the letters (when was working for the town hall)'
- b. ??Ieri Gianni scriveva lettere (quando sono arrivato a casa)  
Yesterday Gianni write.IMP letter.PL (when I come.PF home)  
'Yesterday Gianni used to write the letters (when I came home)'

As for weak definite DPs, their licensing conditions are harder to pinpoint. Definite DPs generally are not very natural in imperfective sentences, where they tend to receive a definite, D-linked interpretation, as shown by the contrast between (66a,b).<sup>6</sup>

- (66) a. Gianni scriveva lettere .  
Gianni write IMP letter.PL  
'Gianni used to write letters'
- b. #Gianni scriveva le lettere  
Gianni write.IMP the letter.PL  
(‘Gianni used to write the letters’)

Also in perfective sentences, sentences were the habitual interpretation is enhanced by aspectual modifiers do not suffice, in most cases, to rescue their acceptability (67a vs.b).

- (67) a. #Gianni ha scritto le lettere.  
Gianni write.PF the letter.PL

‘Gianni wrote the letters’

b. ??Gianni ha scritto le lettere per molti anni.  
Gianni write.PF the letter.PL all the day  
‘Gianni wrote the letters for many years’

The acceptability only improves in specific contexts. In imperfective sentences, when the DP is modified by an adjective or a PP that suggests the categorization into sub-kinds (68). In this case, moreover, the sentence is generally understood as embedded in a contrastive context.

- (68) a. Quand’era impiegato in comune, Gianni scriveva le lettere commerciali.  
When be.IMP employed in town-hall Gianni write.IMP the letter.PL business  
‘When he was employed at the town hall, Gianni used to write business letters’
- b. Quando abitavamo in Canada, Gianni scriveva le lettere alla mia famiglia.  
When (we) live.IMP in Canada, Gianni write.IMP the letter.PL to-the my family  
‘When we were living in Canada, Gianni used to write letters to my family’

As for perfective contexts, the episodic interpretation must be implemented even more explicitly with a strong contrastive sense or unexpectedness (69).

- (69) Per questo appalto, Gianni ha scritto le lettere commerciali, perché le lettere ai politici le scriveva il suo capo.  
For this contract, Gianni write.PF the commercial letters, because the letters to-the politicians CL write.IMP the his boss.  
‘For this contract, Gianni wrote commercial letters, since letters to politicians were written by his boss’

This constraint can be explained by a pragmatic factor. When there is contrast or surprise, one may disregard the identity of singular individuals, and the mention of the kind is relevant enough (see also Pires de Oliveira and Rothstein (to appear) for a similar claim). Note that contrast in neither

case implies that the definite DP denotes the maximal sum: Gianni wrote business letters, but he does not need to write all business letters; his colleagues could well have been attributed the same task. This fact, together with the observation that categorization in sub-kinds and contrastive interpretation favor the acceptability of the weak definite DP, can be seen as an argument for an intensional interpretation of the DPs in these episodic sentences.

#### 4.2.2 Interaction with aspectual modifiers

Having established that weak definite DPs can be interpreted as kind-denoting noun phrases and that BPs receive an existential interpretation, we will now test the homogeneity of activity verbs with respect to the iterative and continuative readings conveyed by durational modifiers. The prediction is that kind-denoting DPs should yield the reading that we have defined as ‘continuative’ in section 2.2, whereas VPs complemented by NPs denoting plural sums of individuals should receive an ‘iterative’ reading, where the homogeneity of the structure receives a coarser granularity.

This prediction seems to be borne out. First, let’s look at BPs (70).

- (i) (What did Gianni eat?)
  - (ii) (What did Gianni do at the summer party?)
- (70) (Gianni) ha mangiato angurie.  
 Gianni eat.PF watermelon.PL  
 ‘Gianni/he ate watermelons’

The sentence in (70) is not completely felicitous, unless the NP receives a focused interpretation or the whole VP is in focus, two interpretations that we tried to enhance with the questions in (i,ii).

We may suppose that an activity of eating has a very short onset, which is defined as the minimal ingestion of a certain edible matter. In this sense, the onset of the activity of eating watermelon(s), understood as an activity type, should be attested by a single bite to the fruit. However, the sentences in which the VP has a BP argument have different truth conditions with respect to their minimal onset. The only interpretation we can get for (70) is that Gianni ate more than one whole watermelon. To start with, the sentence is infelicitous if the VP is modified by a durational adverb denoting a rather short time span, in which whole-watermelon eating cannot naturally occur (71).

- (71) Gianni ha mangiato angurie ??per qualche minuto /per tutta la sera.  
 Gianni eat.PF watermelon.PL for few minute/ for all the evening  
 ‘Gianni ate watermelons for a few minutes/ the whole evening’

One way to rescue the sentence may be to give the BP a taxonomic interpretation, and to understand ‘watermelons’ as referring to sub-types of watermelons. But in this case as well, a plurality of subtypes is needed to guarantee the truth of the sentence.<sup>7</sup> In other words, BPs in Italian refer to pluralities, and yield atelic VPs which are the unspecified sum of telic events of eating single instances of the individual denoted by the NP.

Let’s consider now definite DPs, in sentences like (72).

(Gianni normally doesn’t like watermelon, but he really appreciated the fruit salad, even if there was watermelon in it.)

- (72) Davvero! Gianni ha mangiato le angurie?!  
 Really! Gianni eat.PF the watermelon.PL  
 ‘Really! Gianni ate watermelon?!’

In the sentence (72) the definite DP is understood as referring to the kind of fruit ‘watermelon’, and not to a discourse-linked or unique instance of the fruit. This is made clear by the context provided by the utterance in brackets. Besides creating the right context for the interpretation of unexpectedness which we pointed out in the preceding section, it also makes clear that, for (72) to denote a true proposition, it is not necessary that Gianni ate a whole watermelon, but that only a little piece of it in the fruit salad would suffice.

If understood as an instantiation of an activity-type in (72), eating watermelons then only specifies the relation of Gianni with the kind, mediated by an event of eating. Accordingly, durational modifiers are felicitous (73), and weak DPs may be allowed with *in*-adverbials only under a very specific inceptive reading, if the context is specific enough to allow the interpretation by which Gianni took in a few minutes the resolution to try papayas (74).<sup>8</sup>

- (73) Gianni ha mangiato le angurie per tutta l’estate.  
 Gianni eat.PF the watermelon.PL for all the-summer  
 ‘Gianni ate watermelons the whole summer’



- (74) (At first, he was skeptical about those tropical fruits.  
However, even if he did not try passion fruits...)  
??Gianni ha mangiato la papaya in pochi minuti.  
Gianni eat.PF the papaya in few minutes  
'Gianni ate papaya in a few minutes'

Finally, let's point out that the availability of experiential readings also teases apart BPs and definite DPs. While BPs are marginal under an experiential reading enhanced by the adverb *già* 'already' (75), definite DPs, under a weak reading, are perfectly fine (76).

- (75) a. ??Gianni ha già mangiato angurie.  
Gianni already eat.PF watermelon.PL  
'Gianni already ate the watermelons'
- b. ?? Gianni ha già visto balene.  
Gianni already see.PF whale.PL  
'Gianni already saw the whales'
- (76) a. Gianni ha già mangiato l'anguria/ le angurie.  
Gianni already eat.PF the watermelon/the watermelon.PL  
'Gianni has already eaten the watermelon/the watermelons'
- b. Gianni ha già visto le balene.  
Gianni already see.PF the whale.PL  
'Gianni has already seen whales.'

### 4.3 Conclusions

In this section we have shown that Italian BPs and definite DPs receive a different interpretation in episodic sentences. While BPs denote pluralities of object-level entities, 'weak' definite DPs may refer, also in episodic sentences, to the intensional kind. Accordingly, VPs with BPs and 'weak' DPs as arguments display distinct aspectual properties, which match the distinctions observed in the case of Brazilian Portuguese BPs and CBNs in terms of the granularity of the homogeneous structure and the pragmatic constraints for interpretation.

## 5. Conclusions

The main results of our comparative enquiry can be summarized as follows.

On the one hand, our analysis of Italian BPs and ‘weak’ definite DPs confirms, to a certain extent, Pires de Oliveira and Rothstein’s (to appear) hypothesis for Brazilian Portuguese CBNs. We have shown that, assuming that Italian weak definite DPs can denote intensional entities, we can explain their restricted distribution as complements of transitive verbs in episodic sentences, and their distributional and interpretive difference with respect to BP NPs.

On a theoretical ground, we have also shown that the structural notion of homogeneity, at the heart of Landman and Rothstein’s (2010) proposal, is indeed relevant for defining a classification of predicate classes and for probing the temporal properties of eventualities. It appears moreover that aspectual modifiers are a clue to aspectual properties, but cannot be considered a way to define them. The complementation of a VP with an intensional argument does not change the aspectual properties entailed by the lexical class to which it belongs. Telic predicates, such as achievements and accomplishments with kind-denoting incremental themes, allow pseudo-iterative or continuative interpretations when the predicate is bounded by a durative modifier. In both cases, however, the complementation of the predicate with a plural or kind-denoting NP does not change the predicate aspectual type. The denotation of the nominal phrase determines the structural properties of the predicate as far as the definition of minimal events is concerned. This distinction shows up in the property that we have defined, at the descriptive level, the ‘granularity’ of the temporal structure of the event. Achievements and activities with plural arguments denote atelic events whose atomic onsets are defined by a temporally atomic (instantaneous) or compositionally atomic (quantized) event; their atelicity is understood as the result of iteration of sub-events. Activities with intensional complements, on the other hand, have vague atomic onsets, whose definition depends on the lexical entry of the verb and sometimes on pragmatic considerations. In this sense, the granularity of the iteration is finer, and iteration is confounded in most cases with continuation, thus conflating, at the interpretive level, activities and states.

Finally, our survey also gives additional support to the hypothesis, defended explicitly by Depraetere (1995) and de Swart (1998), among many others, that telicity and boundedness are two distinct theoretical notions, which depend on the interplay of a different set of linguistic devices and belong to the sphere of the two aspectual notions often called

lexical and grammatical aspect, respectively. Thus, atelic activities can be bounded by perfective aspect, but their atelicity, and their sub-event structure, are not affected.

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## Notes

<sup>1</sup> But see Munn and Schmitt (1999), Müller (2001, 2002, 2003), Dobrovie-Sorin (2010) for different analyses.

<sup>2</sup> See, among the first theoretical works, Milsark (1974), Carlson (1977), Heim (1982).

<sup>3</sup>As remarked by Pires de Oliveira and Rothstein (2011), existentially instantiated individuals include atomic individuals and sum individuals. For example, in the sentence (i), which has an episodic interpretation, John bought both the atomic individuals and the sum individuals belonging to the typical specimens of flowers.

(i) John bought flowers.

<sup>4</sup> The glosses read as follows (the italicized expression in brackets corresponds to the traditional name of tenses in the verbal paradigm of Brazilian Portuguese and Italian): PF – perfective (BrP *préterito perfeito* and It. *passato prossimo*); PRES – present (BrP/It. *presente*); IMPF – imperfective past (BrP *pretérito imperfeito*; It. *imperfetto*). We will discuss the perfective/imperfective alternation in more detail in section 2.

<sup>5</sup> In the following, we will call ‘durational modifiers’ all adverbial VP modifiers that specify the temporal interval of duration of the eventuality without imposing a telic interpretation to the event. It appears that, in Italian and in Brazilian Portuguese as in many other languages, durational adverbs of this type can be expressed by bare temporal phrases or by PPs headed by different prepositions. The analysis of the contribution of specific prepositions and the distinction

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between bare phrases and PPs is probably a very relevant matter, but it is far beyond our present purposes.

<sup>6</sup> In what follows, we will mark the definite interpretation with a dash #, since it is not the interpretation we are interested in.

<sup>7</sup> The sentence may be felicitously uttered in a context where, for instance, Gianni is trying different types of watermelons during an agricultural exposition.

<sup>8</sup> Of course, the first interpretation of the sentence (74) is the one by which Gianni ate the whole relevant instance of one papaya in a few minutes. But this would qualify as the ‘strong’ reading of the DP, on which we are not interested.