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Title: *Distinguishing between the aspectual categories '(a)telic', '(im)perfective' and '(non)bounded'*

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ABSTRACT:

The linguistic literature often makes use of the terms '(im)perfective', '(a)telic' and/or '(non)bounded' (as well as other terms like 'terminative', 'conclusive', etc.). However, there is a lot of confusion about the definitions as well as the applicability and relevance of these concepts. In this article we aim to resolve this confusion. We will argue that, at least in English, these distinctions are a matter of 'grammatical aspect', 'ontological (lexical) aspect' and 'actualization aspect', respectively. We will define these categories carefully and show the relevance of each of them by identifying the level of analysis on which they are operative.

The three aspectual categories all somehow have to do with the presence or absence of reference to a terminal point of a situation type or of the actualization of a situation on some linguistic level. On the morphological level, there is grammatical aspect (signalled by the verb form), which involves the distinction between perfective and imperfective aspect. In English this distinction happens to coincide with the distinction between nonprogressive and progressive aspect, respectively, because progressive aspect is the only kind of imperfective aspect that can be expressed by a special verb form. On the level of the conceptualization of situation types there is the distinction between telic and atelic situation-templates (which are verbs, verb phrases or larger predicate constituents) and between telic and atelic situation types. On the level of reference to actualization of situations there is the distinction between bounded and nonbounded clauses and between bounded and nonbounded actualizations of situations.

The article shows not only how the three aspectual categories should be kept apart but also how they interact to constitute the aspectual interpretation of a sentence.

DISTINGUISHING BETWEEN THE ASPECTUAL CATEGORIES ‘(A)TELIC’, ‘(IM)PERFECTIVE’ AND ‘(NON)BOUNDED’¹

Renaat Declerck

The linguistic literature contains a huge amount of articles, books and dissertations on one or more of the aspectual categories ‘(im)perfective’, ‘(a)telic’ and ‘(non)bounded’. However, there is a lot of confusion about the definitions as well as the applicability and relevance of these concepts. In this article we aim to resolve this confusion. We will argue that, at least in English, these distinctions are a matter of ‘grammatical aspect’, ‘lexical (ontological) aspect’ and ‘actualization aspect’, respectively. We will define these categories carefully and see on which levels of analysis they are operative. We will also show how the ultimate aspectual interpretation of a sentence depends on an interaction between these three aspectual categories.

The proposed definitions are not new. They are basically the definitions proposed by Garey (1957) (in connection with telicity), Comrie (1976) (in connection with perfectivity) and Declerck (1991: 119–123, 2006: 72–80) (in connection with boundedness). However, these definitions have often been misunderstood, so that for many linguists the boundaries between the categories are rather fuzzy. This means that a clear presentation of the definitions and the linguistic levels they pertain to is urgently needed.

The need for clarification can be illustrated by referring to a couple of instances of confusion. The telic / atelic distinction is very seldom distinguished from the bounded / nonbounded distinction – I myself failed to do so in Declerck (1979) and only later realized that the former is a semantic distinction whereas the latter is a pragmatic one. In Quirk et al. (1985), which was THE standard English grammar until Huddleston & Pullum (2002) was published, ‘perfective’ is used in the sense of ‘perfect’, which is a serious confusion between aspect and tense. Terms like ‘terminative’, ‘perfective’, ‘telic’, ‘conclusive’, ‘accomplishment’ and ‘bounded’ are sometimes used interchangeably, or one or more of them are picked out randomly when the idea of termination of a situation is somehow present in the mind of the speaker. For Comrie (1976) ‘terminative’ denotes a kind of grammatical aspect, whereas for Verkuyl (1972) it means the same thing as ‘telic’, which is a kind of lexical (ontological) aspect. And many more examples of confusion could be given.

Section 1 of this article is a brief terminological introduction. In sections 2, 3 and 4 we discuss grammatical aspect, ontological aspect and actualization aspect, respectively. In section 5 we examine how these types of aspect interact to produce the aspectual interpretation of the clause. Section 6, finally, illustrates the linguistic relevance of the three distinctions.

In order to keep the presentation lucid, we will not refute the views of others. In fact, we will hardly refer to the relevant literature at all, because it is neither necessary nor feasible to do so. The literature is so huge that referring to it extensively, let alone exhaustively, is impossible for practical reasons. At the same time it would be an arbitrary, and hence unfair, decision to

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refer to some works only. Furthermore, as already said, digressions into the literature would hamper a clear presentation of our views.

1. Some necessary preliminaries

We use *situation* as a cover term for the various possible referents of clauses, i.e., as a cover term for anything that can be expressed by a clause, namely an action, an event, a process or a state. The verb *actualize* will be similarly used as a cover term for the predicates that are typically associated with one of these situation types. Thus, when it is irrelevant whether a clause refers to the performance of an action, the happening of an event, the existence of a state, etc. we can say that the clause in question refers to the *actualization* of a situation. (Note that in this sense *actualize* is an intransitive verb: an action that is performed ‘actualizes’.)

We analyse a prototypical *clause* as consisting of a subject NP and a *predicate constituent*. The latter consists of the verb phrase (VP) and the optional adverbial(s), if any. The *verb phrase* consists of the verbal group (= verb + auxiliaries, if any) + the complements (= direct object, indirect object, subject complement, object complement, prepositional object (= object of a prepositional verb) + necessary adverbial(s), if any). Thus in *John put the book on the table this morning*, the subject NP is *John*, the VP is *put the book on the table*, and the predicate constituent is *put the book on the table this morning*.

A verb like *walk* has a denotation (lexical meaning). This denotation can be called a *simple situation-template* because by combining other constituents (minimally a subject) with the verb we can build a clause denoting a situation, as in *John walked* or *John walked to the church*. A ‘simple situation-template’ (denoted by a verb) can be turned into an *enriched situation-template* by the addition of one or more complements or adverbials to the verb. Multi-word predicate constituents like *walk to the church* or *walk to the church at five p.m. yesterday* denote a situation-template which contains more information than the simple situation-template denoted by *walk*. The denotation of such a complex predicate constituent is determined in the first instance by the meanings of the verb and of the other components of the predicate constituent and the semantic relations between them. The referent of a verb, VP or predicate constituent is an *abstract situation type*. By ‘abstract’ we mean that there is no reference to an actualizing situation: an abstract situation type is a mental construct, a type of situation as it is conceptualized by the speaker without reference to any concrete actualization.

The denotation of a clause is a situation. The referent of a clause that is uttered is a/the actualization of the situation in question.

What has been said so far is summarized in the following chart:

<i>linguistic expression</i>	<i>denotation of the linguistic expression</i>	<i>referent of the linguistic expression when uttered</i>
verb (e.g., <i>walk</i>)	simple situation-template	abstract type of situation
verb phrase (e.g., <i>walk to the church</i>)	enriched situation-template	abstract type of situation
predicate constituent (e.g., <i>walk to the church merrily</i>)	further enriched situation-template	abstract type of situation
finite clause (e.g., <i>On Sundays they walk to the church merrily.</i>)	situation	actualization of a situation

In sum, VPs denote rather abstract schemata for situations, which we refer to as ‘situation-templates’, and refer to abstract (i.e., mentally conceived but not actualizing) situation types. By contrast, clauses denote situations and, when they are finite and used in an utterance, refer to particular actualizations of situations. That is, *walk* and *walk to the church* each denote a schematic sort of situation, which has particular semantic characteristics so that it can be classified, for example, in Vendler’s (1967) terms as an ‘activity’ in the first case and an ‘accomplishment’ in the second case. But both lack some information (such as a subject and a tense) necessary to denote a situation proper, and consequently neither can be used to refer to any particular instance of actualization, whereas *John walked to the church*, having a location in time and a subject, denotes a complete situation and can thus be used to refer to the actualization of a situation.

Any verb or verb phrase denotes a (simple or enriched) situation-template. The nature of the template is determined by the lexical contents of the verb or verb phrase in question. For example, *know* represents the situation type referred to as having the features [+ static], [– agentive], [+ homogeneous], [– transitional], [+ durative], [– telic] and [– evolving].² These various features are inherent in the lexical semantics of the verb *know* and form part of a mode of categorization which is known as *lexical aspect*, *Aktionsart*, or *ontological aspect*.

Because the above features are inherent in the lexical meaning of the verb *know*, they are present in any predicate constituent using *know* as head of its VP. The features are therefore typical, not only of the simple situation-template of the verb *know* but also of all more enriched situation-templates using this verb (i.e., VPs and predicate constituents). Moreover, despite the fact that features such as [± static], [± agentive], [± homogeneous], [± transitional], [± durative], [± telic], etc.³ actually apply at the level of verbs (and, by extension, VPs and predicate constituents), rather than clauses, it is traditional to talk of these features as defining ‘(abstract) types of situations’ or *situation types* rather than ‘types of situation-templates’, so that people talk of ‘static situations’, ‘agentive situations’ etc., rather than ‘static situation-templates’, ‘agentive situation-templates’ and so on.

² There is a certain hierarchy in this list of features. For example, [+ static] automatically entails a positive value for all the other features mentioned.

³ The meaning of the ± sign is not ‘more or less’ but ‘either + or –’, i.e., the feature may or may not be present.

However, this practice has sometimes proved a source of confusion in the past, because the term ‘situation type’ is often used in a sense different from ‘abstract type of situation’, viz. to refer to types of actualizing situations as they are denoted by clauses. For example, Lyons’ (1977) categorization of situation types into states, actions, processes (= developments) and events is often applied to actualizing situations on the plea that the nature of a category can be determined by any constituent of the clause, including the subject. Thus, depending on the nature of the subject referent, which may be [+ human] or [– human], the actualizing situation denoted by a clause using *break* can be either an ‘action’ (i.e., a dynamic situation whose actualization is caused by a consciously acting agent, as in *John broke the window*) or an ‘event’ (i.e., a dynamic situation which simply happens, without there being an identifiable agent, as in *The key broke in the lock*).

In order to avoid any confusion it is advisable to speak of ‘type of situation’ in connection with the referent of a verb (e.g., *hit*), verb phrase (e.g., *hit someone*) or predicate constituent (e.g., *hit someone suddenly*) only. In other words, ‘type of situation’ is short for ‘abstract type of situation’. The term ‘type of actualization’ can then be applied to the referent of a full clause, which is an actualizing situation.

2. Grammatical aspect

‘Grammatical aspect’ refers to the possibility of using special grammatical forms (more specifically: verb forms) to express various meanings which have to do with how the speaker wants to represent the internal temporal structure of a situation. Grammatical aspect is therefore a pairing of a particular form of the verb with a particular aspectual meaning.

Semantically, aspects are different ways of viewing a situation. These different ways are grammatically expressed by different markers on the verb (i.e., suffixes, auxiliaries or a combination of the two, as in the English progressive form), although not all languages have a marker for every one of the aspectual meanings. In principle, a speaker may use a special verb form to refer to a situation in its entirety (*perfective aspect*), or he may use forms which represent it as beginning (*ingressive aspect*), or as ongoing (*progressive aspect*), or as ending (*egressive aspect*). (As we will see, the latter three options represent the possibilities of *imperfective aspect*.) The speaker may also use a form which specifically represents the situation as actualizing once (*semelfactive aspect*) or a form which represents the situation as a ‘hypersituation’ consisting of a repetition of the same situation (*repetitive aspect*). English also makes use of the distinction between *habitual* and *nonhabitual* aspectual meaning. (A habit is a situation type that is characteristic of the referent of the subject NP over an extended period of time, for example, *John smokes a pipe*, *Bill can be very clever*, etc.)

The following sentences illustrate the only two aspects that are expressed by special verb markers in English. In *I’m writing a book* the verb form, which is a combination of a form of the aspectual auxiliary *be* and the present participle form of the lexical verb, expresses progressive aspect: the situation is represented as being in its ‘middle’, as ongoing. In *I used to go to the office by car*, the auxiliary *used to* expresses habitual aspect.

In sum, grammatical aspect concerns the way in which the verb form represents the actualization of a situation (e.g., as perfective or imperfective). If we disregard the auxiliaries

used to and *would* (expressing a past habit), the only aspectual distinction that is grammatically marked in English is that between perfective and imperfective meaning.

Following Comrie (1976), we speak of *imperfective aspect* when the speaker uses a verb form which explicitly refers to the internal temporal structure of the situation, i.e., a verb form which does not refer to the entire situation, but only to its beginning, middle or end. In English, there are no special markers on the verb to express ingressive or egressive aspect. The only kind of imperfective meaning that can be grammatically expressed is therefore progressive aspect, which is grammatically expressed by the progressive form. Thus in *I was writing an essay [when Henry came in]*, the form *was writing* is interpreted as ‘was in the middle of writing’. However, in the same way as a nonprogressive verb form can sometimes be used in a sentence receiving a progressive interpretation (see the next paragraph), a sentence receiving a nonprogressive interpretation may sometimes make use of a progressive verb form, as in [*Gosh, you are dirty!*] *What have you been doing?* (said to someone who has just come in).

In English, *perfective aspect* is expressed when the verb form used reflects the fact that the speaker wants to refer to the actualization of a situation in its entirety. This means that the speaker does not refer to the situation as having an internal temporal structure (with a beginning, middle and end). This is the case, for example, in *I wrote an essay last night* and *I will write an essay tomorrow*. In these sentences, the forms *wrote* and *will write* convey a perfective meaning. However, because in English the perfective / imperfective distinction coincides with the nonprogressive / progressive distinction, it seems advisable to apply to *wrote* and *will write* the label ‘nonprogressive verb form’ rather than the less specific label ‘perfective verb form’. This practice appears to be all the more commendable because there are cases in which the forms in question do not actually receive a perfective interpretation. For example, in [*They decided to write a letter.*] *Jane dictated while Mary wrote*, the nonprogressive form *wrote* is assigned a progressive (i.e., imperfective) meaning. Since the name of a form should be invariant (i.e., not dependent on the meaning it happens to express) we will call a form like *wrote* a ‘nonprogressive form’ even if it receives a progressive interpretation, as in the above example. This practice is also in keeping with the fact that aspect (like tense) is a pairing of a particular form with a particular meaning (see above). It follows that when using the terms ‘progressive’ and ‘nonprogressive’, we should always be careful to make it clear whether we are referring to the form of the verb or to a particular kind of aspectual meaning.

In the literature, perfective meaning (‘perfectivity’) is often defined in terms of reference to a *complete* situation. There is nothing wrong with this as long as one is aware of the fact that *complete* does not necessarily mean the same thing as *completed* (i.e., finished). The two notions only coincide for situations that are completely over at the time of speech and are referred to as a whole (e.g., *He crossed the street*). In sentences like *Here comes the winner!*, *Owen races towards the goal!* or *I will write a novel*, the situation is not yet completed at the time of speech, but it is referred to in its entirety. In *At the time, I was writing a novel [which was published a year later]*, it is clear that the novel-writing must have been completed at some time, otherwise the novel could not have been published; however, the situation that the speaker actually refers to with *I was writing a novel* is not a complete situation but a situation in progress – he only considers the ‘middle’ of the situation.

3. Types of situation-templates: ontological aspect

3.1. *Ontological aspect (lexical aspect, Aktionsart)*

In order to understand the meaning and use of certain tenses and of (non)progressive forms, it is necessary to classify templates for describing situations on the basis of whether or not they represent the type of situation as having particular ontological features, such as ‘static’, ‘durative’, ‘telic’, etc. The set of features that are attributed to a kind of situation by the VP representing it constitute a sort of ‘aspect’, i.e., a particular way of representing a situation in terms of its internal constitution. This kind of aspect is known as *lexical* or *ontological aspect* (or *Aktionsart*). It is the expression of inherent characteristics, such as (non)staticness, (non)durativeness, etc., of a kind of situation-template as it is linguistically represented by a VP that has not yet been marked for progressive or nonprogressive aspect. (By ‘inherent’ we mean that the situation-template necessarily has the features in question, irrespective of the context in which it is used.) The proviso in connection with (non)progressive aspect is necessary because grammatical aspect may sometimes overrule the ontological aspect of the unmarked VP. Thus, while walking is typically conceived of as dynamic, the sentence *John walks to work* is interpreted as referring to a state (more specifically, a habit, i.e., a type of situation that is characteristic of the referent of the subject NP over an extended period of time – see section 2.). This static interpretation is due to the use of the nonprogressive form of the present tense: the corresponding progressive sentence *John is walking to work* denotes a dynamic (= nonstatic) situation.

Some of the lexical-aspect features of a verb, VP or predicate constituent are purely a question of representation, whereas others are more closely linked to the ontological status of the situation type in the real world. The latter possibility is illustrated by the verb *drive* (when used as a one-word VP), which can only be the linguistic representation of a situation having the features [– static], [+ agentive], [+ homogeneous], [– transitional], [+ durative], [– telic]. However, the features [± telic] and [± homogeneous] are often merely a question of linguistic representation. For example, the VPs *drink*, *drink gin* and *drink a glass of gin* can in principle all be used in sentences describing one and the same real-world situation. (Thus, if John claims to be a teetotaler but I saw him drink a glass of gin last night, I can report what I saw him do by means of *John drank last night!*, *John drank gin last night!* or *John drank a glass of gin last night!*) The former two sentences represent the situation type as atelic (= not tending towards a necessary point of completion – see section 3.2) and homogeneous (= unchanging throughout its duration – see section 4.2), whereas the third represents the situation type as telic (= tending towards a necessary point of completion – see section 3.2) and nonhomogeneous (= consisting of phases of a different kind – see section 4.2).

3.2. *‘Telic’ versus ‘atelic’ ontological aspect*

One of the relevant ontological distinctions is that between ‘telic’ and ‘atelic’. A situation-template is *telic* when it represents the kind of situation which the speaker has in mind as tending towards a natural (inherent) point of completion, i.e., a necessary terminal point, without which the situation is not complete and at which it naturally comes to an end. In sentences like *Mr Harris is writing another book* or *Hyacinth sang a line or two of the aria*, the

VP each time represents a type of situation as telic, because the situation-template involves reference to a point of completion beyond which the situation (as described by the VP) cannot continue. Thus, once Hyacinth has sung a line or two of the aria, the kind of situation described by the VP *sang a line or two of the aria* is complete and cannot continue, irrespective of how many more lines of the aria Hyacinth goes on to sing.

A situation-template is *atelic* if it does not represent the kind of situation referred to as telic. In other words, ‘atelic’ means ‘nontelic’. Thus, in sentences like *John drove the car* or *Betty ran*, the VP can be said to represent a kind of situation as atelic, because it does not refer to a natural (inherent, automatic) point of completion.

A reliable diagnostic test for distinguishing between a ‘telic VP’ (i.e., a VP representing a kind of situation as telic) and an atelic VP is that only telic VPs can be used as complements of the verbs *complete* or *finish*. Thus, we can say *He will {finish / complete} writing the report tonight* (since *write the report* is a telic VP), but not **He will {finish / complete} writing tonight* (since *write* is an atelic verb). (In the latter case reference to termination of the situation will be made by the use of a verb indicating an arbitrary endpoint (rather than a natural point of completion), e.g., *stop*: *He will stop writing tonight*.)

It is important to see that there is a difference between conceptualizing an abstract *kind* of situation as *tending towards a natural point of completion* and representing an *actualizing* situation as *reaching a terminal point* (whether this is a natural point of completion or not). The former is a question of ontological aspect, viz. telicity, whereas the latter is a question of ‘actualization aspect’, more specifically ‘boundedness’ (see section 4.1). Both *John drank vodka yesterday* and *John drank a bottle of vodka yesterday* represent the actualization of the situation referred to as bounded (i.e., as coming to an end, as reaching a terminal point), but the latter contains a telic situation-template (because *drink a bottle of vodka* implies a natural point of completion, viz. when the bottle is empty) whereas the former does not (because *drink vodka* does not indicate a boundary). In both *John wrote a book* and *John was writing a book* the reference is to the actualization of a situation that is of the telic kind, i.e., involving a development towards a natural point of completion, but only the former sentence represents the actualization of the situation as bounded (in this case: as having come to an end, hence as ‘completed’). In other words, the ontological aspect category [\pm telic] has to be distinguished not only from the grammatical aspect category [\pm progressive] but also from the actualization aspect category [\pm bounded].

Because (a)telicity has nothing to do with actualization, we apply the terms *telic* and *atelic* to situation-templates (denoted by verbs, VPs and predicate constituents) and, in a derived use, to the abstract types of situations distinguished on the basis of the (a)telicity of the template used. Strictly speaking, we should not apply the terms to clauses or sentences, which refer to the *actualization* of a kind of situation. In practice, however, it may sometimes be difficult to avoid speaking of ‘telic situation’ or ‘telic clause’ because ‘actualization of a situation referred to by a clause involving a telic situation-template’ and ‘clause with a telic situation-template’ are very unwieldy expressions. Still, one should always keep in mind that only the latter two formulations are really accurate.

As noted above, a reliable test to distinguish between telic and atelic VPs is to try using the gerund form of the VP as direct object of *complete* or *finish*, which refer to the natural point of completion of an action. Only telic VPs can be used in this way. (The gerund form of an atelic

VP, and of a telic one too, can depend on the verb *stop*, which refers to an arbitrary endpoint.) Another test is that only the infinitive form of a telic VP can follow a string of the type *It {took / will take} me an hour to...* (which measures the duration of the actualizing situation up to its inherent point of completion).

We have already stressed that (a)telicity is not a characteristic of sentences (since the nature of the subject does not play a part in making the distinction)⁴ but of verbs and VPs. In fact, various constituents of the VP can determine the (a)telic nature of the situation-template. For example, *walk* is an atelic verb, but *walk a mile* and *walk for two hours* are telic situation-templates. In the latter case, the ‘telicizing’ constituent (*a mile, for two hours*) ‘measures’ the length of the conceptualized kind of situation. Measuring the duration of a kind of situation naturally means considering the situation from beginning to end. A measuring VP therefore naturally represents a kind of situation as having a point of completion, i.e., as telic. (At least, this is the case as long as there is no reference to actualization, i.e., as long as the VP is used in isolation, as an infinitival form, and not as the inflected VP of a tensed clause – see below.) In *write a book*, the ‘telos’ (point of completion) is implied rather than indicated by a phrase with a definite meaning, but there is measuring in the sense that a book is typically conceived of as having an end and as constituting a unit of writing. In this case the idea of a ‘telos’ is what Grice (1975) calls a ‘conventional’ (= noncancellable) implicature of the infinitival VP *write a book*. (The difference between explicit measuring and implicit measuring is reflected in the fact that *write a book* can combine with an inclusive duration adverbial like *in two hours*, whereas *write for two hours* cannot. A sentence cannot contain more than one kind of duration-measuring adverbial.)

From a pragmatic point of view, there are only two kinds of VP that can measure a type of situation. One is exemplified by *write a book* or *build a wall*, in which the point of completion is conventionally implicated, but remains indefinite (i.e., writing a book and building a wall take up a certain amount of time, but the precise duration differs according to the length of the book or the size of the wall and is unspecified when the VP *write a book* or *build a wall* is used). The other kind of measuring VP consists of VPs which specify the exact location of the point of completion in time or space, as when we use a VP like *walk for two hours* (which involves an adverbial indicating a specific duration), *walk a mile* (which involves a specific indication of distance) or *go into the church* (which involves an adverbial specifying a goal that is reached).

If the speaker uses a telic VP in a clause referring to the present or future, the point of completion is not yet reached at speech time. This means that reference to the precise length (i.e., duration or distance) of the situation, as in *She is walking for two hours*, is pragmatically possible only if the speaker knows in advance what the length of the situation is going to be. This is a very important point (also made in Depraetere 1995), which is often neglected because the vast majority of examples adduced to illustrate claims in connection with (a)telicity are in

⁴ Not only in *John walked* but also in *Three people walked* the VP is atelic. It is irrelevant to this whether the three people walked together or one after another. Since *walk* is atelic, the situation of the third person walking has no inherent point of completion, and so the cumulative hypersituation of three people walking cannot have an inherent point of completion either.

the past tense. A sentence in the past tense typically refers to a ‘bounded’ situation,⁵ more particularly to a situation whose actualization terminated before the time of speech. This is the case irrespective of whether the VP is telic (e.g., *John went to London yesterday*) or atelic (e.g., *John was in London yesterday*). Conclusions drawn from examples in the past tense therefore often concern boundedness rather than telicity. To illustrate the (a)telic nature of a situation-template it is therefore better to use the VP in a present tense sentence in the progressive form. Examples with a telic VP like *John is running two miles*. [*He is nearly half-way now.*] or *John is running for 45 minutes*. [*He is nearly half-way now.*] are acceptable only if the speaker knows in advance what the length of the complete situation is going to be. Only in that case is it pragmatically possible for him to use a telic VP specifying the precise length (i.e., duration or distance) of the conceptualized kind of situation (whose actualization is represented as still incomplete).

On a higher level than the VP, viz. on the level of the clause (which refers to actualization), the indication of the full length of a situation can also be the result of measuring the situation when the endpoint of the actualization is reached, as in *He had walked for two hours* [*before he reached the village*]. However, what is measured here is not a kind of situation but a particular instance of actualization. As we will see in section 4.4, when an adverbial like *for two hours* is the result of this kind of measuring, it renders the clause (and the situation referred to) bounded, but it does not affect the atelic nature of the type of situation referred to by the VP (*walk*). In other words, *for two hours* is then a ‘bounding’ constituent, but not a ‘telicizing’ one. A measure phrase is telicizing only if it indicates the pre-determined length of a kind of situation. In that case the speaker is able to indicate that length because he knows in advance what it is going to be, as in the following:

- (1) John is going to walk a mile tomorrow.
- (2) This time tomorrow John will be walking a mile.
- (3) John was walking for two hours [when he had a heart attack].

In these examples *a mile* and *for two hours* indicate the natural terminal point of a pre-determined telic situation type: the description of the kind of situation is not *walk* (which is atelic) but *walk a mile* or *walk for two hours*.

4. Actualization aspect: ‘bounded’ versus ‘nonbounded’

4.1. Definition

This is a kind of aspect which is not concerned with how a *kind of* situation is conceptualized and lexicalized (= ontological aspect), nor with the question how the internal temporal structure of a particular situation is grammatically represented (= grammatical aspect), but rather with a distinction between two possible ways of representing or interpreting a particular instance of *actualization* of a situation. On this level of *actualization aspect* we must distinguish between

⁵ As we will see in section 4.1, a situation is bounded if its actualization is represented as coming to an end at some time.

bounded and *nonbounded* representations of actualizing situations. An actualizing situation is (represented as) bounded if the clause describing it represents the situation as *reaching* a (natural or arbitrary) terminal point, i.e., as coming to an end. Otherwise it is nonbounded.

- (4) Tonight I will drink champagne! (*nonbounded: no reference to a terminal point*)
- (5) Tonight I will drink five glasses of champagne! (*bounded: the action will terminate when the fifth glass is empty*)
- (6) Tonight I will drink a lot of glasses of champagne! (*nonbounded: since the number of glasses is not specified, there is no reference to a terminal point: I may in principle drink any number of glasses of champagne.*)

The above three sentences can all be used to announce the actualization of the same situation in the projected real-world. This means that the actualization of a situation is not inherently bounded or nonbounded; it is *represented as* bounded or nonbounded by a particular clause. For this reason we apply the labels *bounded* and *nonbounded* both to clauses and to situations. (By ‘situation’ we really mean ‘actualization of a situation as represented by an utterance, i.e., as denoted by a clause’.) A *bounded situation* is a situation whose actualization is represented as bounded by a clause. A *bounded clause* is a clause which represents the actualization of a situation as bounded. If the clause constitutes a sentence, we can also speak of a *bounded sentence*.

However, in some cases (non)boundedness is a question of *interpretation* rather than *representation*. A clause like *John was in the library* is normally understood as ‘meaning’ that John is no longer in the library at the time of speech. However, this meaning is only implicated (i.e., invited for pragmatic reasons): it can be cancelled by the context, as in *Two minutes ago John was in the library, so you will probably find him there*.⁶ In sum, *John was in the library* is a nonbounded linguistic *representation* of (the actualization of) a situation but is, in the default case, pragmatically *interpreted* as referring to a bounded situation. To distinguish between these two, we can refer to the former as ‘*L-nonbounded*’ (i.e., not *linguistically* represented as bounded) and to the latter as ‘*W-bounded*’ (i.e., pragmatically interpreted as bounded in the *world* that is being referred to). However, since interpretations are usually determined by representations, the default meaning of ‘bounded’ is ‘represented as bounded’, i.e., ‘*L-bounded*’. Unless we are explicitly distinguishing between interpretation and representation, a sentence like *John was in the library* will be referred to as ‘nonbounded’.

As will be stressed below, one of the major factors inducing nonboundedness is the use of a verb form with progressive meaning. Since progressive aspect means that the speaker focuses on the middle of the situation and disregards its end, a situation that is presented as in progress

⁶ This boundedness implicature of the past tense is due to the Gricean Maxim of Relation (better known as the Maxim of Relevance). Other things being equal – more specifically: if the clause is not couched in a piece of discourse about the past – the present is more relevant to the speaker than the past. This means that a situation whose actualization time includes the time of speech will not normally be represented as lying in the past. By locating a situation in the past when the discourse is not currently ‘about’ the past, the speaker suggests that it is a past situation, not a present one. Thus, when used in isolation, *Two minutes ago John was in the library* suggests that the proposition ‘John be in the library’ *only* applies in the past and not in the present, i.e., that the situation is no longer actualizing at the time of speech.

is automatically not presented as coming to an end. However, as is clear from examples (4)–(6), progressive aspect is not the only possible factor that can induce nonboundedness. (See also section 4.4 below.)

4.2. ‘Nonbounded actualization’ = ‘homogeneous actualization’

A clause that does not represent the actualization of a situation as bounded (and which is thus L-nonbounded) invariably represents (the actualization of) its situation as both durative and homogeneous, whereas a durative bounded clause automatically represents the situation referred to as heterogeneous. (The feature [\pm homogeneous] is not applicable to nondurative clauses.)

Homogeneous here means that the actualizing situation is (represented as) remaining essentially unchanged from beginning to end. This means that the same description (clause) can be used to refer to (the actualization of) the situation as a whole and to any (representative) part of it. Thus, any clause that represents a particular situation as nonbounded can also be used to refer to portions of that situation. For example, if we can use the clause *John was at school* to report where John was from 2 to 4 p.m., we can also use this clause to report where he was between 2 o’clock and 3, or to report where he was between 2:30 and 3:30, etc. In other words, the tensed proposition *John was at school* is true at any (relevant, i.e., representative) portion of the interval taken up by its actualization.

Bounded clauses, on the other hand, refer to heterogeneous situations. That is, if the clause can be used to denote the actualization of a situation as a whole, it cannot be used to refer to any part of this actualization. Thus, if we can use *John wrote six letters* to report what kept John occupied from 2 to 4, we cannot use this sentence to report what kept him occupied between 2 and 3, or to report what kept him occupied between 2:30 and 3:30, etc. Similarly, if Kelly was in the kitchen from eight a.m. to ten, the clause *Kelly was in the kitchen from eight a.m. to ten* can only refer to the (actualization of the) situation as a whole. The statement cannot be true of any point or subinterval of the period indicated.

The distinction between bounded and nonbounded clauses is similar to the distinction between count and mass nouns. Like bounded clauses, singular count nouns (e.g., *table*, *printer*) represent their referents as delimited; neither nonbounded clauses nor mass nouns (*water*, *honesty*) represent their referents as having boundaries. It follows that both bounded situations and countable entities are heterogeneous (nonhomogeneous), whereas nonbounded situations and uncountable (= mass) entities are both homogeneous. The difference between bounded clauses and singular count nouns, and between nonbounded clauses and mass nouns, is the kind of bounding involved: the actualizing situations referred to by bounded clauses have temporal boundaries, whereas singular count nouns usually refer to entities that have spatial boundaries (although some refer to a restricted quantity or amount). In connection with (representations of) actualization, ‘(non)bounded’ means ‘represented as (non)bounded *in time*’.

A formal test to distinguish between bounded and nonbounded clauses is the addition of a particular type of duration adverbial. A *noninclusive* duration adverbial (answering the question *For how long?*) can be added to nonbounded clauses only, while (barring an inchoative interpretation) an *inclusive* duration adverbial (answering the question *Within what time?*) can only be added to bounded clauses. In the linguistic literature, this (im)possibility of collocating with a (non)inclusive adverbial is usually considered to be a test for (a)telicity rather than

(non)boundedness: it is claimed that telic VPs and atelic VPs are only compatible with inclusive and noninclusive adverbials, respectively. That there is some truth in this becomes clear when we consider VPs in isolation. *Walk three miles* is a telic VP, and in isolation the VP *walk three miles in an hour* makes sense, while *walk three miles for an hour* does not. Similarly, *be upset* is an atelic VP, and we can easily conceptualize *be upset for an hour* as a kind of situation, but not *be upset in an hour* (barring an inchoative interpretation). However, there are also sentences in which an inclusive adverbial comfortably combines with an atelic VP, as in *Within the last week John has received three visitors* and *Within the last week John hasn't been at home at all*. In these examples the VP is not telic,⁷ but the situation (which is a hypersituation consisting of a series of subsituations) is bounded because the speaker 'measures' it: he is concerned with the number of actualizations there have been in the period identified by the inclusive adverbial. Self-evidently, 'measuring' the actualization of a situation means considering it from beginning to end. Nonbounded (actualizations of) situations cannot be measured. It is in keeping with this that the presence of a *within*-adverbial does not entail boundedness in sentences whose purpose is not to measure a (hyper)situation: *Within three weeks after his accident he was out of hospital*. The *within*-adverbial is used here as an adverbial indicating a specific time rather than as an inclusive adverbial.

It is also important to see that the rationale of the test is not that a nonbounded clause cannot *contain* an inclusive adverbial but rather that an inclusive adverbial cannot *be added to* a nonbounded clause. This means (amongst other things) that if an inclusive adverbial has been added to a bounded clause with a telic VP, we can still render that bounded clause (including the inclusive adverbial) L-nonbounded by making the verb form progressive:

- (7) I am going to walk three miles in an hour.
 (8) I was walking three miles in an hour [when I sprained my ankle].

The first example is a bounded sentence with a VP that is telic because the length of the walk is pre-determined – see section 3.2. In (8), the VP is also telic because the distance is again predetermined – it has been determined before the walking started – and because *in an hour* forms part of the situation-template (VP). However, the sentence is L-nonbounded because the progressive form *was walking* only refers to some middle part of the actualization of the situation.

4.3. Bounded ≠ telic

The bounded / nonbounded distinction is sometimes identified with the telic / atelic distinction. However, there is clear evidence that these two distinctions represent two quite different parameters. (A)telicity is a question of VPs (situation-templates) whereas (non)boundedness is a question of clauses. Put differently, (a)telicity has to do with whether the speaker *conceptualizes* a kind of situation as *having a natural point of completion* or not, whereas (non)boundedness

⁷ The VP of a sentence referring to (the actualization of) a hypersituation consisting of a number of atelic subsituations following each other cannot be telic, because the last subsituation is atelic. The VP is atelic not only in *John walked* but also in *Three people walked*. (As explained in footnote 4, it is irrelevant to this whether the three people walked together or one after another.)

has to do with whether the speaker *represents* the *actualization* of a situation as *reaching* a (natural or arbitrary) *endpoint* or not. A VP like *run five miles* is telic (because *five miles* implies a natural point of completion), but it can be used both in a bounded clause (*Bill ran five miles*) and in a nonbounded one (*Bill was running five miles*). This shows how grammatical aspect can interact with ontological aspect to determine actualization aspect: *run five miles* is a telic VP, but since the progressive form only refers to a portion of the middle part of the actualizing situation, the sentence does not represent the actualization of the situation as bounded, i.e., as reaching the natural point of completion. (In fact, since the sentence only makes a statement about a portion of the middle part of the actualizing situation and not about the actualization as a whole, it leaves vague whether or not the natural point of completion was eventually reached in the actual world.)

The main reason why (non)boundedness is often confused with (a)telicity is that both pairs involve the ‘homogeneous’ versus ‘heterogeneous’ distinction. Telic and atelic VPs describe types of situations and are heterogeneous and homogeneous expressions, respectively. Bounded and nonbounded clauses refer to actualizations of situations and are heterogeneous and homogeneous expressions, respectively. The difference between the two becomes clear when a heterogeneous (telic) VP like *run five miles* is used in a homogeneous (nonbounded) clause, as in *Bill was running his usual five miles [when he sprained his ankle]*. As is clear from this example, ‘telic’ means ‘nonhomogeneous’ on the level of situation-templates (i.e., descriptions of conceptualized kinds of situations) whereas ‘bounded’ means ‘nonhomogeneous’ on the level of clauses (i.e., descriptions of actualizations of concrete situations).

4.4. Bounding and unbounding clause constituents

Any argument constituent of a clause may or may not add the idea of a right temporal boundary (= terminal point) and can thus either render the clause L-bounded (= linguistically represented as bounded) or leave it L-nonbounded:⁸ Thus, *{A litre / three litres} of water ran out of the tap* is L-bounded because the quantifier in the subject NP specifies a precise quantity, thus indicating the natural boundary where the situation comes to an end. The same is not true in *{Water / litres of water} ran out of the tap*, which is therefore L-nonbounded.⁹ (Note that *run out of the tap* is anyhow an atelic VP. This means that, contrary to what Depraetere (1995) argues, the subject cannot determine (a)telicity, although it can determine (non)boundedness.) The sentences *Bill read a poem last night* and *Bill read three poems last night* are L-bounded, the boundary being specified by the quantified count NP functioning as direct object. By contrast, *Bill read poetry last night* is L-nonbounded, because the unquantified mass NP functioning as direct object does not specify a boundary.

⁸ Only nonprogressive examples are given here, because the progressive form as a rule expresses progressive meaning, in which case it renders the representation of the situation nonbounded. This is because progressive aspect means that the speaker picks out a moment or interval from the middle of a situation and disregards its end.

⁹ However, since there is an implicature that, when used in a context which is not about the past, a situation referred to in the past tense is normally interpreted as being over at the time of speech (see footnote 6), this sentence is normally interpreted as ‘W-bounded’ (see section 4.1), even though it is not L-bounded (i.e., linguistically represented as bounded).

Adverbials that indicate duration or distance and which ‘measure’ the actualization of a situation, either beforehand or at (or after) the terminal point of the actualization, may or may not have a *bounding* effect. Thus, *I am going to run the marathon for another twelve years* is L-bounded because the reference is to a repetitive hypersituation whose terminal point is specified by the definite duration adverbial *for another twelve years*. By contrast, *I am going to run the marathon for many more years* is L-nonbounded: because of the indefiniteness of *many more*, the duration adverbial *for many more years* indicates a period of indefinite length and therefore does not specify the terminal point of the period (though it implies the existence of a terminal point); this means that in this example the actualization of the repetitive situation, whose duration is indicated by the adverbial, is not represented as L-bounded, though it is pragmatically interpreted as ‘W-bounded’ because everybody knows that there is an age at which people are no longer able to run a marathon. The sentence *Until a couple of years ago I knew the answer to that question* is rendered L-bounded by the temporal adverbial, which specifies the endpoint of the actualization of the situation. In *John was in his study from two to five* and [*Melissa drove, and*] *John sulked from France to the Hungarian border*, the adverbial specifies the two temporal boundaries (beginning and end) of the actualization of the situation, which is therefore L-bounded. Finally, *He’s only published three novels in eleven years* is L-bounded because of the inclusive adverbial *in eleven years*, which specifies a period leading up to speech time, and because of the fact that the speaker measures the number of subsituations making up the repetitive hypersituation.

In the preceding paragraph it was pointed out that *I am going to run the marathon for many more years* is L-nonbounded because of the indefiniteness of the duration adverbial. However, the sentence to which the adverbial is added (viz. *I am going to run the marathon*) is itself L-bounded if it refers to the complete actualization of a single telic situation. This means that the addition of *for many more years* to *I am going to run the marathon* has an *unbounding* effect because it induces a nonbounded-repetitive interpretation. This follows from the fact that it does not refer to, or imply, a well-defined endpoint of the actualization of the repetitive hypersituation.

5. The aspectual interpretation of a clause

The aspectual interpretation of a clause depends on an interaction between ontological aspect, grammatical aspect and actualization aspect.

An example of interaction between ontological aspect and grammatical aspect is the interpretation of sentences like *He is being a fool* (= ‘He is behaving foolishly’). The verb *be* usually refers to a state, and static ontological aspect is normally incompatible with progressive aspect. When *be* is nonetheless used in the progressive form, the progressive grammatical aspect overrides the static ontological aspect and results in a dynamic (nonstatic) representation of the situation.

An example of interaction between ontological aspect, grammatical aspect and actualization aspect is the interpretation of the actualization of situations described by sentences with a telic VP in the progressive form. This interpretation is determined by the second of the following regularities:

- (a) telic VP + nonprogressive aspect = L-bounded clause
- (b) telic VP + progressive aspect = L-nonbounded clause

A telic VP (e.g., *draw a circle*) represents a situation as having (and tending towards) a natural and necessary point of completion. The use of a nonprogressive form in the description of an actualization of this situation results in an L-bounded representation of the situation (e.g., *Jenny drew a circle on the blackboard*): the actualization of the situation is represented as coming to an end when the inherent point of completion is reached. However, the use of the progressive form (e.g., *Jenny was drawing a circle on the blackboard*) means that the natural terminal point is not referred to: the speaker only refers to (some part of) the middle of the situation. It follows that, though the kind of situation is still telic, its actualization is not represented as bounded: the (actualization of the) situation is not represented as actually reaching a terminal point.

6. The linguistic relevance of the aspectual categories

It is already clear from regularities like ‘telic VP + progressive aspect = L-nonbounded clause’ that all three aspectual categories are linguistically relevant. Further illustrations of this are (a) the fact that only telic VPs can function as complements of *finish* or *complete*, (b) the fact that in *John is drawing a circle* we cannot substitute the nonprogressive form *draws* for the progressive form *is drawing* if the reference is to be to a single present actualization, and (c) the fact that *He said...* can only be followed by a nonbounded *that*-clause if that clause is to be interpreted as referring to a situation that is simultaneous with the saying: in *John said that he felt sick* the (actualizations of the) two situations can be interpreted as simultaneous with each other, while that is not possible in *John said that he was elsewhere for ten minutes* (where *was* has to be interpreted as ‘had been’). The reason for this is that, whereas *he felt sick* is nonbounded (homogeneous), *he was elsewhere for ten minutes* is bounded (nonhomogeneous) because *for ten minutes* is L-bounding. Needless to say, a (more or less) punctual situation like saying something cannot be simultaneous with (in the sense of ‘coincide with’) a longer situation as a whole, but it can be simultaneous with a point of a longer situation. However, this interpretation is only possible if the longer situation is homogeneous – see section 4.2 above.

There are many other data illustrating the theoretical necessity of the category ‘actualization aspect’ (i.e., the bounded / nonbounded distinction), which we cannot go into here for lack of space. (For example, Declerck (1991: 119–132) discusses cases in which it is the bounded or nonbounded nature of the clauses forming a sequence that determines the temporal order in which the situations referred to are interpreted.)

7. Concluding remarks

In a sense, the aim of this article has been a modest one. We have tried to show that a distinction between three aspectual categories is linguistically indispensable and that it is very important to keep them apart, i.e., to define them in a rigid way and see which level of analysis they pertain to. (The linguistic literature reveals that the concepts are often mixed up and that there is a bewildering terminological confusion.) The three aspectual categories all have to do with the presence or absence of reference to a terminal point of a kind of situation or the actualization of

a situation on some linguistic level. On the morphological level, there is grammatical aspect (signalled by the verb form), which involves the distinction between perfective and imperfective aspect. In English this distinction happens to coincide with the distinction between nonprogressive and progressive aspect, respectively, because progressive aspect is the only kind of imperfective aspect that can be expressed by a special form of the verb. On the level of the conceptualization of situation types there is the distinction between telic and atelic situation-templates (which are verbs, verb phrases or larger predicate constituents) and between telic and atelic abstract situation types. On the level of reference to actualization of situations there is the distinction between bounded and nonbounded clauses and between bounded and nonbounded actualizations of situations.

Needless to say, it would be a great step forward if everybody used the terms ‘(im)perfective’, ‘(a)telic’ and ‘(non)bounded’ as they have been used in this article. If people insist on using one of these terms differently, or to use other terms, like ‘terminative’, ‘conclusive’, ‘accomplishment’, etc., they should make it quite clear which of the three aspectual meanings (if any)¹⁰ they assign to the term in question.

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¹⁰ For example, Quirk et al. (1985) use ‘perfective’ to denote the meaning that is common to the perfect tenses.