

Right Boundary Achievements under Conative Negation¹

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Right boundary achievements such as ‘find’ and ‘win’ denote an instantaneous end point of an activity aiming at this end point. When being negated, right boundary achievements tend to imply that an activity of trying to achieve the end point is going on at the reference time. For example, when Peter does not find his key, it is implied that he is searching for it. The present paper is to describe the aspectual properties of this kind of conative negation, and the circumstances under which it occurs in German, Czech and Ancient Greek. It will be suggested that conative negation takes narrow scope with respect to viewpoint aspect and that it is located below the aspect phrase in the semantic composition of sentences. A proposal will be made how conative negation can be treated within event semantics.

1. CONATIVE NEGATION IN GERMAN

Achievement verbs can be thought of as denoting instantaneous events. Some achievement verbs may denote instantaneous boundary events, i.e., end points or initial points of certain eventualities (Piñón 1997). The present paper is concerned with a special class of right boundary achievement verbs such as ‘find’, ‘win’ or ‘reach’ which denote end points of activities such as ‘search’, ‘play’ and ‘move’ aiming at the end point.

Right boundary achievements are associated with a preceding activity which is directed towards an end point. In this respect they are similar to accomplishments such as ‘write a letter’ or ‘repair the bike’. Due to this similarity it might appear tempting to regard right boundary achievements just as a special case of accomplishments. However, there are some data indicating significant differences between right boundary achievements and accomplishments. One of the most telling tests for distinguishing achievements from accomplishments concerns the (non-)equivalence of ‘in x time’ adverbials and ‘after x time’ adverbials.² The latter can be seen to situate the beginning of the whole eventuality denoted by the verb immediately after the x time interval. In contrast, ‘in x time’ adverbials can be taken to situate the telic end point of the eventuality denoted by the verb at the very end of the x time interval. In German and Czech, as in many other languages, ‘after x time’ adverbials are not equivalent to ‘in x time’ adverbials when they are combined with accomplishments:

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²Cf. Piñón (1997), Rothstein (2004:42).

- (1) a. *Peter schrieb den Brief in zwei Stunden.* (Ger)
 Peter wrote the letter in two hours
 Peter wrote the letter in two hours.
Peter schrieb den Brief nach zwei Stunden.
 Peter wrote the letter after two hours
 Peter wrote the letter after two hours.
- (2) a. *Opravil kolo během 20 minut (*a trvalo to hodinu).* (Cz)
 repaired_{perf} bike in course of 20 minutes and lasted it hour
 He repaired the bike in 20 minutes (*and it took an hour).
- b. *Opravil kolo po 20 minutách (a trvalo to hodinu).*
 repaired_{perf} bike after 20 minutes and lasted it hour
 He repaired the bike after 20 minutes (and it took an hour).

There is a clear-cut difference in temporal meaning as to whether the whole eventuality denoted by accomplishments is situated after the x time interval or whether the end point of the eventuality is situated at the end of the x time interval. This suggests that accomplishments denote a temporally protracted eventuality. We may think of this eventuality as a compound consisting of a preparatory activity and its telic end point or culmination point. By contrast, with right boundary achievements, ‘in x time’ adverbials are equivalent to ‘after x time’ adverbials:

- (3) a. *Peter gewann das Spiel in zehn Minuten.* (Ger)
 Peter won the game in ten minutes
 Peter won the game in ten minutes.
- b. *Peter gewann das Spiel nach zehn Minuten.*
 Peter won the game after ten minutes
 Peter won the game after ten minutes.
- (4) a. *Našel klíč během 20 minut (*a trvalo to hodinu).* (Cz)
 found_{perf} key in course of 20 minutes and lasted it hour
 He found the key in 20 minutes (*and it took an hour).
- b. *Našel klíč po 20 minutách (*a trvalo to hodinu).*
 found_{perf} key after 20 minutes and lasted it hour
 He found the key after 20 minutes (*and it took an hour).

It makes no difference in temporal meaning whether the whole eventuality denoted by right boundary achievements is situated immediately after the x time interval or whether the end point of this eventuality is situated at the very end of the x time interval. This suggests that right boundary achievements denote an instantaneous eventuality. For only an instantaneous event *e* is likely to possess the very special property that, for the purposes of common sense reasoning, the statement ‘the end of *e* is situated at the end of the interval x’ does not differ significantly from the statement ‘*e* is situated immediately after the interval x’.

Thus both right boundary achievements and accomplishments are somehow associated with a protracted activity directed towards a telic end point, but they differ in the way they are associated with it. The difference may be described as follows. Accomplishments denote a compound eventuality consisting of an activity

and its telic end point. Right boundary achievements denote only the end point while the preparatory activity is conceptually detached from the end point (Smith 1997:31).³ If so, we are faced with the question how it is that right boundary achievements are associated with a preparatory activity if what they denote is only the telic end point. This paper is going to suggest that right boundary achievements can be seen to assert (to primarily denote) the telic end point while the preparatory activity is only in some way presupposed. By contrast, in the case of accomplishments the two eventualities are part of a compound eventuality which is asserted as a whole.

Evidence for this view comes from negation tests which are considered as standard tests for presuppositions. The negation of past tense accomplishments does not imply anything as to whether a preparatory activity took place or not. In (5) it is even more likely that there was no such activity of Peter's unsuccessfully trying to write the letter or to repair the bike:

- (5) a. *Peter schrieb den Brief nicht.* (Ger)
 Peter wrote the letter not
 Peter did not write the letter.
- b. *Neopravil kolo.* (Cz)
 NEG-repaired_{perf} bike
 He did not repair the bike.

This suggests that accomplishments do not presuppose a preparatory activity; for otherwise the presupposition would be expected to be preserved under negation. Instead, the negation of the past tense accomplishments in (5) denies the realization of a compound eventuality; proper parts of that eventuality may or may not be realized. By contrast, the negation of past tense right boundary achievements tends to imply that a preparatory activity took place. In order for the sentences in (6) to be felicitous in standard contexts, Peter must have been unsuccessfully playing the game or searching for the key:⁴

- (6) a. *Peter gewann das Spiel nicht.* (Ger)
 Peter won the game not
 Peter did not win the game.

³One reason for this detachment may be the fact that, in the case of right boundary achievements, it is not entirely within the power of the agent of the preparatory activity to bring about the telic end point. The realization of the end point depends on additional factors not controllable by the agent (see note 10 below). On the other hand, the telic end point of accomplishments can be conceived of as inevitably realizable by carrying out step by step the preparatory activity.

⁴Many languages recognize a non-intentional reading of 'find' which is not associated with a preceding activity aiming at the finding event and which is therefore not an instance of a right boundary achievement verb; e.g., find by chance a treasure when digging in the garden. In this sense, it would be felicitous to say that Peter did not find a treasure although he never searched for one. In the present study, I shall not discuss such non-intentional readings of 'find' (cf. footnote 2 of Piñón's paper in this volume).

- b. *Nenašel svůj klíč.* (Cz)
 NEG-found_{perf} his key
 He did not find his key.

This suggests that right boundary achievements in some way presuppose a preparatory activity which tends to be preserved under negation.⁵ In what follows, we want to observe some temporal and aspectual features of the preparatory activity presupposed by negated right boundary achievements. First we consider the situation in German; in the next section we turn to Czech and Ancient Greek, which possess more morphological means of encoding aspectual features.

Some of the aspectual features of a sentence can be expressed by the relation between the event time and the Reichenbachian reference time. German past tense sentences such as (6a) do not encode strong information with respect to the reference time; it is not determined how the reference time of (6a) is related to the activity of playing which is presupposed by the sentence. Things are different in the present tense. The fact that in present tense sentences the reference time is closely related to the speech time provides more direct information concerning the reference time. For the sake of simplicity, we can assume that in present tense sentences the reference time is identical with the speech time.

Now, the default negation of present tense right boundary achievements does not only presuppose a preparatory activity, but in addition implies that this activity is going on at the speech time (= the reference time). Consider the following sentences as answers to a question such as ‘What happened to Peter, why is he so nervous?’, and suppose they have an unmarked prosody with stress (indicated by capitals) on the direct object:

- (7) a. *Peter findet den SCHLÜSSel nicht.* (Ger)
 Peter find the key not
 Peter does not find the key.
- b. *Peter erreicht seinen CHEF nicht.*
 Peter reach his boss not
 Peter does not reach his boss.
- c. *Peter gewinnt das SPIEL nicht.*
 Peter win the game not
 Peter does not win the game.

In most standard contexts, these sentences are not felicitous when Peter is not engaged in the activity of searching for the key, trying to contact his boss or

⁵One may ask in exactly which sense the activity is presupposed or implicated. One may ask to which extent this presupposition or implicature is brought about by the lexical content of the achievement verb, or by the content of other lexical items, or by the non-linguistic context of the utterance, or to which extent it is cancelable. However, the present study is not concerned so much with the semantic or pragmatic status of this presupposition as with its aspectual features in those contexts where it occurs in a sufficiently clear way. In what follows, I shall use the terms ‘presuppose’ and ‘presupposition’ leaving open the question as to how exactly these are to be understood.

playing the game at the speech time. The preferred reading of all these negated sentences is a reading to the effect that an activity of trying is going on at the reference time. In what follows, this kind of negation will be called conative negation. Conative negation is not the only kind of negation of present tense right boundary achievements. The very same sentences as in (7) do not have a conative negation reading when they are given a marked I-topic prosody such as in (8). Instead, the sentences receive a prospective negation reading which denies the realization of the instantaneous achievement event in the future without stating anything about the realization of a preparatory activity at or after the speech time.⁶ For instance, (8a) does not imply that Peter is searching for the key at the reference time, nor that he will be searching for it after the reference time (though such searching activities are not ruled out):

- (8) a. *PETer findet den Schlüssel NICHT.* (Ger)
 Peter find the key not
 Peter will not find the key.
- b. *PETer erreicht seinen Chef NICHT.*
 Peter reach his boss not
 Peter will not reach his boss.
- c. *PETer gewinnt das Spiel NICHT.*
 Peter win the game not
 Peter will not win the game.

Conative negation readings are not available for negated accomplishments in the present tense:

- (9) a. *Peter schreibt den Brief nicht.* (Ger)
 Peter write the letter not
 Peter does not write the letter.
- b. *Peter repariert das Fahrrad nicht.*
 Peter repair the bike not
 Peter does not repair the bike.

Nor does conative negation occur with any kind of achievements in the present tense. Even with the same unmarked prosody as in (7) there is no conative negation reading available for achievements such as ‘leave’ or ‘stop’:

- (10) a. *Peter verlässt das ZIMMER nicht.* (Ger)
 Peter leave the room not
 Peter does not leave the room.
- b. *Peter hält die MaSCHINE nicht an.*
 Peter hold the machine not on
 Peter does not stop the machine.

⁶This prospective negation reading can be strengthened by the modal adverb *bestimmt* (‘definitely’): *PETer findet den Schlüssel beSTIMMT nicht.*

There is no activity of trying implied in these sentences. Instead, there is an implication to the effect that a certain state of affairs still holds true at the reference time (Peter's being in the room, the machine's working or moving). Achievements such as 'leave' or 'stop' can be seen to denote a right boundary of a state of affairs; this boundary may also coincide with the left boundary of another state of affairs. However, the state of affairs of which 'leave' or 'stop' denote a right boundary is not an activity aiming towards this boundary. This is why 'leave' and 'stop' are not right boundary achievements in the sense in which this term is used throughout this paper.⁷

The difference in conativity between (7) and (10) can also be made clear by paraphrases in terms of 'cannot' in the sense of 'be not able'. Conative negations imply an unsuccessful activity of trying. Since 'unsuccessfully trying to do x' and 'being not able to do x' are rather similar, conative negations can well be paraphrased by 'cannot'. It is quite the same to say that Peter does not find his key and that he cannot find his key. This is not true for non-conative negations. It makes a big difference whether Peter does not leave the room or whether he cannot leave the room; just as it makes a difference whether he does not sleep or cannot sleep, whether he does not write the letter or cannot write it.

Thus the availability of conative negation readings seems to depend crucially on the lexical structure of the verb or of the VP of the sentence. Right boundary achievements are similar to accomplishments in that they are associated with an activity directed towards a telic end point while they differ from them in denoting an instantaneous boundary event. On the other hand, right boundary achievements are similar to achievements such as 'leave' or 'stop' in that they denote an instantaneous right boundary event while they differ from them in being associated with an activity directed towards a telic end point. The data discussed so far suggests that it is only the very special lexical structure of right boundary achievements, their intermediate status between accomplishments and ordinary achievements such as 'leave' and 'stop', that allows for conative negation readings.

2. CONATIVE NEGATION IN CZECH AND ANCIENT GREEK

In Czech, conative negation readings are available for right boundary achievement verbs in the morphological imperfective aspect:

⁷Thus conative negation can be seen as a special instance of a more general behavior of achievements denoting a right boundary of an eventuality. Right boundary achievements in the narrow sense denote end points of directed trying activities. This activity is implied to go on at the reference time when right boundary achievements are negated with unmarked prosody in the present tense. On the other hand, achievements such as 'leave' or 'stop' denote a right boundary of a state of affairs which is not a trying activity. This state of affairs is implied to hold true at the reference time when 'leave' and 'stop' are negated with unmarked prosody in the present tense.

- (11) a. *Petr nenachází svůj klíč.* (Cz)
 Petr NEG-find_{imperf} his key
 Petr does not find his key.
- b. *Petr nenalézá peněženku.*
 Petr NEG-find_{imperf} purse
 Petr does not find the purse.
- c. *Petr nevyhrává boj proti Honzovi.*
 Petr NEG-win_{imperf} fight against Honza
 Petr does not win the fight against Honza.

These present tense sentences have much the same meaning as the German sentences in (7) and imply that Peter is engaged in an activity of trying at the speech time. Now, the important thing to note is that the corresponding present tense perfective verbs do not give rise to a conative negation reading. Instead, they yield the prospective negation reading which is brought about by a marked prosody in the German sentences in (8). That is to say, the instantaneous achievement event is denied to take place in the future without any implications concerning the realization of a preparatory activity at or after the speech time:

- (12) a. *Petr svůj klíč nenajde.* (Cz)
 Petr his key NEG-find_{perf}
 Petr will not find his key.
- b. *Petr nenalezne peněženku.*
 Petr NEG-find_{perf} purse
 Petr will not find the purse.
- c. *Petr boj proti Honzovi nevyhraje.*
 Petr fight against Honza NEG-win_{perf}
 Petr will not win the fight against Honza.

Nor does conative negation occur with imperfective accomplishment verbs in the present tense. Non-negated imperfective accomplishments can be seen to assert that some part of the compound accomplishment eventuality is going on at the reference time. Accordingly, the negation of imperfective accomplishments denies that any part of the compound eventuality is going on at the reference time, which means that there is no activity at all at the reference time:

- (13) a. *Petr dopis nepřepisuje.* (Cz)
 Petr letter NEG-copy_{imperf}
 Peter does not copy the letter.
- b. *Petr své kolo neopravuje.*
 Petr his bike NEG-repair_{imperf}
 Peter does not repair his bike.

Some imperfective verbs such as *přesvědčovat* ('convince') or *dokazovat* ('prove') can, depending on the (non-)linguistic context, have a non-conative or a more

conative negation reading. For example, the following sentences imply or strongly suggest that an activity of trying is going on at the reference time:

- (14) a. *Moc mě zatím nepřesvědčuješ.* (Cz)
 much me so far NEG-convince_{imperf}
 You are not convincing me much so far.
- b. *Tím tuto hypotézu ještě nedokazuješ.*
 by this this hypothesis still NEG-prove_{imperf}
 By this you have not proven this hypothesis yet.

These sentences are similar to the conative negations of right boundary achievements in (11). In other contexts, the same verbs can be used to deny that an activity of trying is going on at the reference time:

- (15) a. *Nikoho tady nepřesvědčujeme pro přechod na Linux.* (Cz)
 nobody here NEG-convince_{imperf} for change to Linux
 We are not trying here to persuade anybody to change to Linux.
- b. *Nesoutěžíme, nikomu nic nedokazujeme, cvičíme jen pro sebe.*
 NEG-compete_{imperf} nobody nothing NEG-prove_{imperf} practice_{imperf} only for ourselves
 We are not competing, we are not trying to show anybody anything,
 we are practicing only for ourselves.

These sentences are similar to the negations of accomplishments in (13) which deny that any activity is going on at the reference time. We may therefore be inclined to think that verbs such as *přesvědčovat* and *dokazovat* are ambiguous between an accomplishment reading and a right boundary achievement reading. However, instead of going into the question whether and, if so, how a precise distinction between achievements and accomplishments can be drawn in Czech I want to turn to the interaction between negation and aspect in cases such as (11) which show a sufficiently clear conative negation reading of right boundary achievements.

We can observe that the imperfective right boundary achievements which yield a conative negation reading in (11) tend to be incompatible with an episodic proper present tense reading without a negation. It is, for example, not easy to come up with contexts in which a sentence such as (16a) would be appropriate to describe an episodic eventuality which is going on at the speech time.⁸ Instead,

⁸There are certain contexts in which sentences such as (16a) may seem to be able to receive an episodic present tense reading. For example, Peter may be a person in a TV film and somebody reports what is going on on TV right now. Or John has hidden Peter's key in a rather sophisticated way so that Peter will find it at a certain time in his car. Now John, while sitting at home, looks at his watch and says *Právě teď Petr nachází svůj klíč*. However, in all these contexts there seems to be a certain distance between the speaker and the situation of Peter's finding the key. An episodic interpretation of *nacházet* would be far less appropriate when the speaker observes the situation directly by immediate perception. We may have the impression that in cases of 'indirect' perception the speaker's report is not a proper present tense report but rather a kind of narrative present tense report in a wider sense. While a more detailed

non-negated imperfective right boundary achievements can receive non-episodic (iterative or habitual) readings such as in (16b) or narrative historical present tense readings such as in (16c):

- (16) a. ?? *Heled', právě teď Petr nachází svůj klíč.* (Cz)
look just now Petr find_{imperf} his key
 ?? Look, Petr is finding his key right now.
- b. *Většinou Petr chyby rychle nalézá.*
usually Petr mistakes quickly find_{imperf}
 Usually, Peter finds the mistakes quickly.
- c. *Petr bojuje, vyhrává a jde.*
Petr fight_{pres.imperf} win_{pres.imperf} and go_{pres.imperf}
 Petr fought, won and left.

The important thing to notice here is that, semantically, the conative negation reading of imperfective right boundary achievements in (11) cannot be regarded as a wide scope sentential negation reading of the corresponding non-negated imperfective achievements. For the wide scope negation of a non-episodic habitual reading such as ‘x is in the habit of doing y’ in (16b) would be ‘x is not in the habit of doing y’, but not the conative negation reading ‘x is unsuccessfully trying to do y’. Nor can a conative negation reading be obtained by applying a wide scope sentential negation to a historical present tense reading such as in (16c). Thus, semantically, the conative negations in (11) do not seem to take wide scope over the non-negated sentence as a whole. In particular, they do not seem to take wide scope over the aspectual properties of the non-negated sentence expressed by the non-negated imperfective achievement verb.

This observation leads to the idea that conative negations take narrow scope with respect to the aspectual properties expressed by the morphological imperfective aspect. If aspectual properties are assumed to be located in an AspP (aspect phrase), then conative negation would be located below rather than above AspP.⁹ By contrast, the prospective negation readings of perfective present tense right boundary achievements in (12) can be regarded as wide scope sentential negations of the corresponding non-negated sentences. In the absence of negation, Czech perfective present tense verbs receive a future tense interpretation stating that the eventuality referred to by the sentence will take place after the speech time. When applying a wide scope sentential negation, the eventuality is denied to take place after the speech time, which is the prospective negation reading in (12).

analysis of this phenomenon is beyond the scope of this paper, it is clear that, in Czech, imperfective achievement verbs are not able to receive an episodic proper present tense reading in the same uncomplicated way as imperfective accomplishments or other imperfective verbs denoting a protracted eventuality.

⁹Several authors have, for several reasons, suggested that some kinds of negation are located below both a TP (tense phrase) and an AspP; see, for instance, Zanuttini (1997:99), Verkuyl (1999:111), Zeijlstra (2004:176-179).

Further evidence for the view that the imperfective aspect takes wide scope over conative negation emerges from the imperfective verb *přesvědčovat* ('convince') which allows for a conative and a non-conative negation reading. Unlike the imperfective right boundary achievements in (11), *přesvědčovat* can receive an episodic proper present tense reading without negation. This is the well-known conative imperfect reading referring to an eventuality of trying (see Forsyth 1970:71ff):

- (17) *Heled', Petr ho přesvědčuje.* (Cz)
 look Petr him convince_{imperf}
 Look, Petr is trying to convince him.

Conative imperfect readings are similar in meaning to conative negation readings in that both refer to an activity of trying. While the difference between the two readings is not easy to make explicit, we may say that conative negation readings suggest that the activity is going to be unsuccessful while the conative imperfect lacks this kind of implication. The similarity in meaning shows that, with respect to semantic composition, conative imperfect readings and conative negation readings are quite different things. The latter cannot be regarded as the sentential negation of the first. For the sentential negation of a conative imperfect reading 'x is trying to convince y' would be 'x is not trying to convince y'. This is the non-conative negation reading of *přesvědčovat* in (15a) which denies that an activity of trying takes place at the speech time. It is, however, not the conative negation reading of *přesvědčovat* in (14a) which strongly suggests (or which is at least compatible with assuming) that an activity of trying takes place at the speech time. Thus the accomplishment-like non-conative negation reading of *přesvědčovat* can be regarded as the sentential negation of the episodic proper present tense conative imperfect in (17). On the other hand, the achievement-like conative negation reading of *přesvědčovat* in (14a) does not seem to be the sentential negation of a corresponding episodic proper present tense reading.

A similar situation can be observed with respect to the imperfect past tense in Ancient Greek. Conative negation readings occur with the morphological imperfect past tense of verbs which, for our present purposes, can be regarded as right boundary achievements (e.g. 'persuade', 'catch', 'find'):¹⁰

- (18) a. πολλὰ πρὸς αὐτὴν λέγων οὐκ ἔπειθε (AGr)
 many to her saying not persuade_{imperf.past}
 For all he said he could not persuade her. (Herodot II, 121)

¹⁰According to Schwyzer (1950:279), conative negation readings in Ancient Greek are confined to activities the completion of which does not depend solely on the agent ('Handlungen, deren Ausführung nicht allein vom Subjekt abhängt'). In the terminology of the present paper, these activities are the preparatory activities aiming at the telic end point denoted by right boundary achievements.

- b. διώκοντες δὲ οὐδένα κατελάμβανον
 pursuing nobody catch_{imperf.past}
 In their pursuit they could not catch anybody.
 (Xenophon, Anabasis III, 3, 8)
- c. οὗτοι πάντα τρόπον ζητοῦντες οὐχ ἠύρισκον σῖτον
 these men in every way searching not find_{imperf.past} food
 These men searching in every way could not find any food.
 (Xenophon, Hellenica 5, 3, 23)

While in these sentences the activity of trying implied by the conative negation reading is explicitly expressed by a present tense participle, conative negation readings are also available without such participles. Some of the verbs showing a conative negation reading ('persuade', 'catch') can receive a conative imperfect reading when they are used without negation in the imperfect past tense:

- (19) a. ἔπειθον ἀποτρέπεσθαι· οἱ δ' οὐχ ὑπήκουον. (AGr)
 persuade_{imperf.past} to turn back they not listen_{imperf.past}
 They tried to persuade them to turn back,
 but they would not listen. (Xenophon, Anabasis 7, 3, 7)
- b. Περιάνδρος μὲν τούτοισι αὐτὸν κατελάμβανε.
 Periander with these [words] him catch_{imperf.past}
 Thus Periander tried to win him. (Herodot, III, 52)
 (As a matter of fact, Periander's attempt was not successful.)

Again, the conative negation readings in (18) cannot be regarded as the wide scope sentential negation of conative imperfect readings such as in (19). Nor is there a reading of the non-negated imperfect past tense from which the conative negation reading could be obtained by means of a wide scope sentential negation. This suggests that conative negation takes narrow scope with respect to the aspectual features expressed by the morphological imperfect past tense in Ancient Greek.

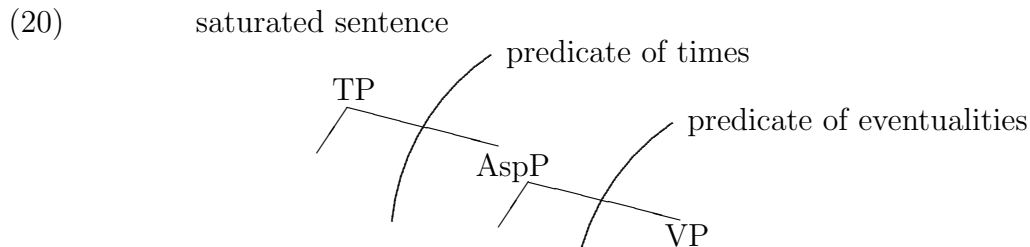
The picture emerging from these considerations can be described as follows. In the semantic composition of a sentence, conative negation is applied to a verb form which is aspectless in that it lacks the imperfective aspectual properties expressed by morphological aspect or tense. Only then are the imperfective aspectual properties applied to the result of applying conative negation to the aspectless verb. If so, we should ask what the result of applying conative negation to an aspectless verb is and what the imperfective aspectual properties that are applied to this result are. I would like to propose that the result of applying conative negation to an aspectless right boundary achievement is an activity of trying and that it is with respect to this activity that the imperfective aspectual properties are licensed. These imperfective aspectual properties can be taken as an imperfective viewpoint aspect which is compatible with a proper present tense reading. Imperfective viewpoint aspects may be characterized as seeing a protracted eventuality from 'the inner perspective' without taking into account its boundaries. Conative negation readings of present tense sentences such as (7) and (11) amount to an

imperfective episodic proper present tense reading with respect to the activity of trying which is going on at the speech time. Conative negation readings of past tense sentences such as (18) amount to an imperfective episodic past tense reading with respect to the activity of trying which is going on at the reference time.

If this is correct, conative negation has an eventuality-type shift function turning the instantaneous event denoted by right boundary achievements into a protracted activity of trying.¹¹ More specifically, conative negation turns the instantaneous right boundary event into the activity of which it is the right boundary. In the next section, I want to propose one way of adopting this explanation of conative negation into the framework of event semantics.

3. CONATIVE NEGATION IN EVENT SEMANTICS

Several authors have suggested a compositional hierarchy of tense, aspect and eventuality-type which can be illustrated by the following diagram:¹²

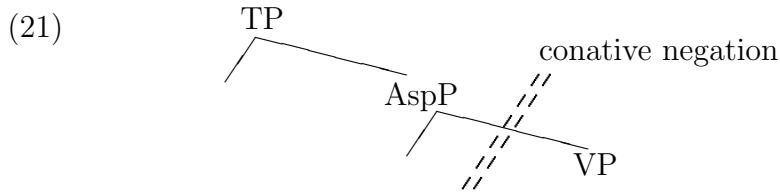


At the VP-level, we are dealing with eventuality structure. VPs are predicates of eventualities and project an eventuality variable e into the aspect phrase AspP. AspP binds the eventuality variable and introduces the reference time t_r . We may say that AspP introduces temporal structure by turning predicates of eventualities into predicates of times. This can be done by introducing an inclusion-relation between the running time of the eventuality e and the reference time t_r . On the one hand, the reference time can be stated to be included in the running time of e . In this case, AspP can be thought of as expressing an imperfective viewpoint aspect viewing the eventuality e from ‘the inner perspective’. On the other hand, the running time of e can be stated to be included in the reference time. In this case, AspP can be thought of as expressing a perfective viewpoint aspect viewing the eventuality e from ‘the outer perspective’. Finally, the time variable t_r projected by AspP is bound in the TP, which yields a saturated sentence with all variables bound by quantifiers.

In the preceding section, I have argued that conative negation takes narrow scope with respect to the imperfective viewpoint aspect. If so, conative negation should be located below AspP:

¹¹Several authors have, for several reasons, suggested that negations can have an aspectual force by turning some eventuality-types into other eventuality-types, especially into states; see Asher (1993:52), Verkuyl (1993:163), Verkuyl (1999:109ff), de Swart (1996:229f), de Swart and Molendijk (1999:5ff).

¹²See for instance Paslawska & von Stechow (2002), Ramchand (2004).



Thus conative negation is applied to a predicate of eventualities. Moreover, I have argued that conative negation brings about an eventuality-type shift turning an instantaneous right boundary event into the activity whose boundary it is. When reconstructing conative negation readings of right boundary achievements within the compositional hierarchy in (20), the VP is a predicate of instantaneous right boundary events. When applying conative negation, this predicate is turned into a predicate of activities of trying to achieve this instantaneous event.

It goes without saying that there is more than one way to make formally explicit the idea of such a type shift. There appear to be at least two strategies. The main part of the labour of shifting the eventuality-type may be done either by the conative negation operator or by the VP to which it is applied. The first strategy, adopted by Piñón in this volume, leads to a rather special conative negation operator and to a more simple VP. The second strategy leads to a rather complex VP and to a more simple conative negation operator. In this paper, I am going to adopt the second strategy. Conative negation will be represented by a rather simple and standard negation operator which is likely to occur also in other than conative contexts. The conative type shift will be brought about by the special lexical structure of the right boundary achievement VP. Thus structural complexity is admitted in lexical items rather than in logical operators. This strategy is in accordance with the observation that conative negation readings seem to be available only with right boundary achievements. When conative negation readings are taken to be brought about by the specific lexical structure of right boundary achievements, this observation receives a straightforward explanation. On the other hand, when they are taken to be brought about by a specific negation operator, it would take some more effort to explain why conative negation readings are not available with other verbs than right boundary achievements.

One of the specific lexical features of right boundary achievements suggested above is that they assert an instantaneous event while they in some way presuppose an activity of trying to achieve the instantaneous event. I shall therefore assume that right boundary achievements in fact carry a lexical presupposition concerning an activity of trying. This presupposition may be a quite complex one determining several aspects of the interrelation between the instantaneous event and the preceding activity. One aspect of this interrelation would be a presupposition to the effect that any realization of the instantaneous right boundary event must be preceded by a corresponding activity whose right boundary it is. Another aspect of the interrelation, I want to suggest, may be a presupposition which brings about a type shift to an activity of trying if the realization of the instantaneous right boundary event is denied by a negation operator below AspP.

In what follows, I shall only be concerned with aspects of the latter kind which are relevant for conative negation readings. The present paper is not intended to give an analysis of the complex lexical structure of right boundary achievements. It only aims to indicate one possible way of making explicit those aspects of the lexical structure of right boundary achievements which are relevant for the type shift involved in conative negation readings.

We are in search of a predicate of an eventuality e such that e is an instantaneous achievement event when the predicate is not negated, while e is an activity of trying when applying a suitable negation operator to the predicate. One way to obtain such a predicate would be to split it into an assertion to the effect that e is an instantaneous achievement event and a presupposition to the effect that e is an activity of trying if it is not an instantaneous achievement event. For example, the complex predicate associated with the right boundary achievement verb ‘find’ would assert that e is an instantaneous finding event and it would presuppose that e is a searching activity if it is not a finding event. In order to distinguish between the assertion and the presupposition, we can use ordered tuples of formulae with the first (upper) formula being the assertion and the the second (lower) one being the presupposition:

$$(22) \quad \left[\begin{array}{c} \text{assertion} \\ \text{presupposition} \end{array} \right]$$

The right boundary achievement verb ‘find’ could then be represented by a predicate such as:

$$(23) \quad \left[\begin{array}{c} \text{FIND}(e) \\ \neg\text{FIND}(e) \supset \text{SEARCH}(e) \end{array} \right]$$

The presupposition can be equivalently reformulated as $\text{FIND}(e) \vee \text{SEARCH}(e)$. Thus the presupposition can be understood as restricting the set of eventualities which are relevant for the right boundary achievement verb ‘find’ to those eventualities which are either finding events or searching activities. If the predicate in (23) is taken as a non-negated VP, then the eventuality e which is projected into the AspP is an instantaneous finding event. For the assertion states that e is a finding event while the presupposition states that e is a finding event or a searching activity. Thus the presupposition is redundant. When combining the information provided by the assertion with the information provided by the presupposition, we obtain the information that e is a finding event.

Let us consider now the case of conative negation, i.e., when the predicate in (23) is negated by a negation operator. Perhaps the simplest and most natural negation operator that can be applied to a complex consisting of an assertion and a presupposition is an operator \neg_{ass} that negates the assertion but does not affect the presupposition:

$$(24) \quad \neg_{ass} \left[\begin{array}{c} A \\ B \end{array} \right] =_{df} \left[\begin{array}{c} \neg A \\ B \end{array} \right]$$

When applying \neg_{ass} to (23) we obtain:

$$(25) \quad \left[\begin{array}{c} \neg\text{FIND}(e) \\ \neg\text{FIND}(e) \supset \text{SEARCH}(e) \end{array} \right]$$

The assertion denies that e is a finding event while the presupposition states that e is a finding event or a searching activity. When combining the information provided by the assertion with the information provided by the presupposition, we obtain the information that e is a searching activity. Thus the eventuality e which is projected by the VP into the AspP is a protracted searching activity.

Now, let us assume that in Czech and Ancient Greek, the morphological imperfective aspect and the imperfect past tense per default license an imperfective viewpoint aspect with respect to the eventuality which is projected into the AspP (see Smith 1997:229f). Given this assumption, the AspP of conative negation sentences such as in (11) and in (18) expresses an imperfective viewpoint aspect with respect to the searching activity e which is projected into the AspP after applying \neg_{ass} to (23). In non-aspect languages such as German, the imperfective viewpoint aspect can be assumed to be triggered by the homogeneity (atelicity) of the predicate of eventualities to which the AspP is applied (see Bohnemeier and Swift 2004), in our case by the homogeneity (atelicity) of the predicate of searching activities. Thus we obtain an imperfective viewpoint aspect reading with respect to a protracted homogeneous (atelic) searching activity, i.e., the reference time is included in the running time of an ongoing searching activity e . This reading is able to receive a proper present tense reading in TP, in which case the speech time is included in the running time of a searching activity.

This would be one way of reconstructing conative negation readings within an event semantics. On the one hand, it is a simple way in that it assumes a standard negation operator. On the other hand, it is a less simple way in that the lexical structure of right boundary achievements is assumed to contain a ‘hidden’ presupposition which is redundant if the VP is not negated, but which guarantees the type shift to an activity of trying if the VP is negated. There are, of course, many alternative ways sticking to the strategy of putting complexity into the lexical structure of right boundary achievements rather than into the negation operator. I conclude by indicating one more of them. Some authors hold the view that a negation operator, when applied to a predicate of eventualities, denies the existence of an eventuality satisfying the predicate (see Ramchand 2001, Zeijlstra 2004:179f). The result of combining this idea with the idea that it is only the assertion which is affected by the negation is an operator such as:

$$(26) \quad \neg_{ass2} \left[\begin{array}{c} A(e) \\ B \end{array} \right] =_{df} \left[\begin{array}{c} \neg\exists eA(e) \\ B \end{array} \right]$$

When applying \neg_{ass2} to (23) we obtain:

$$(27) \quad \left[\begin{array}{c} \neg\exists e\text{FIND}(e) \\ \neg\text{FIND}(e) \supset \text{SEARCH}(e) \end{array} \right]$$

The variable e is bound in the assertion, but it remains free in the presupposition so as to be projected into the AspP. Again, when combining the information provided by the assertion with the information provided by the presupposition, we obtain the information that e is a searching activity.

When using the negation operator \neg_{ass2} , the presupposition can also be modified so that it better reflects the temporal structure of right boundary achievements. We could, for example, assume that any eventuality e which is relevant for the right boundary achievement verb ‘find’ is not a searching activity anymore if and only if there is a find event which is not after e :

$$(28) \quad \neg\text{SEARCH}(e) \leftrightarrow \exists e_1(\text{FIND}(e_1) \wedge e \not\prec e_1)$$

Or equivalently: any relevant eventuality e is a searching activity as long as any find event is after e :

$$(29) \quad \text{SEARCH}(e) \leftrightarrow \forall e_1(\text{FIND}(e_1) \supset e < e_1)$$

Since this bivalence is supposed to hold for any eventuality e which is relevant for the lexical structure of the achievement verb ‘find’, it should in particular hold of the eventuality e which is asserted to be a find event by the non-negated lexical structure of ‘find’. Thus (28) could be taken as a lexical presupposition of ‘find’ and ‘find’ could be represented by the following predicate of eventualities:

$$(30) \quad \left[\begin{array}{c} \text{FIND}(e) \\ \neg\text{SEARCH}(e) \leftrightarrow \exists e_1(\text{FIND}(e_1) \wedge e \not\prec e_1) \end{array} \right]$$

The result of applying \neg_{ass2} to this representation of ‘find’ is:

$$(31) \quad \left[\begin{array}{c} \neg\exists e\text{FIND}(e) \\ \neg\text{SEARCH}(e) \leftrightarrow \exists e_1(\text{FIND}(e_1) \wedge e \not\prec e_1) \end{array} \right]$$

As above, the variable e remains free in the presupposition so as to be projected into the AspP. And again, when combining the information provided by the assertion with the information provided by the presupposition, we obtain the information that e is a searching activity.

REFERENCES

- Asher, Nicholas (1993): *Reference to Abstract Objects in Discourse*, Kluwer Dordrecht.
- Bohnemeier, Jürgen and Swift, Mary (2004): ‘Event Realization and Default Aspect’, *Linguistics and Philosophy* **27**, 263-296.
- Forsyth, J. (1970): *A Grammar of Aspect. Usage and meaning in the Russian Verb*. Cambridge University Press
- Paslawka, Alla and von Stechow, Arnim (2002): *Perfect Readings in Russian*, paper available at <http://vivaldi.sfs.nphil.uni-tuebingen.de>.

- Piñón, Christopher (1997): 'Achievements in an Event Semantics', *Proceedings of SALT VII*. Ithaca, CLC Publications: 273-296.
- Ramchand, Gillian C. (2001): *Two Types of Negation in Bengali*, paper available at: <http://www.hum.uit.no/a/ramchand>.
- Ramchand, Gillian C. (2004): *Time and the Event: the Semantics of Russian Prefixes*, paper available at: <http://www.hum.uit.no/a/ramchand>.
- Rothstein, Susan (2004): *Structuring Events. A Study in the Semantics of Lexical Aspect*, Blackwell Publishing.
- Schwyzler, Eduard (1950): *Griechische Grammatik II. Syntax und Syntaktische Stilistik*, Beck'sche Verlagsbuchhandlung München.
- Smith, Carlota (1997): *The Parameter of Aspect*. 2nd ed., Kluwer Dordrecht
- de Swart, Henriette (1996): 'Meaning and use of not...until.' *Journal of Semantics* 13: 221-263.
- de Swart, Henriette and Molendijk, Arie (1999): 'Negation and the temporal structure of narrative discourse'. *Journal of Semantics* 16, 1-43.
- Verkuyl, Henk (1993): *A Theory of Aspectuality*. Cambridge University Press
- Verkuyl, Henk (1999): *Aspectual Issues. Studies on Time and Quantity*. CSLI, Stanford
- Zanuttini, Raffaella (1997): *Negation and Clausal Structure*, Oxford University Press.
- Zeijlstra, Hedde (2004): *Sentential negation and negative concord*, LOT Utrecht.