Bound Ability Readings of Imperfective Verbs

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Temporal *for*-adverbials and *in*-adverbials are commonly used as a diagnostics for distinguishing between perfective and imperfective aspect, respectively. We observe that in Czech imperfective verbs may combine with *in*-adverbials as long as the resulting reading is a *bounded ability* reading. We argue, in line with van Geenhoven (2004); Zucchi and White (2001), that there is no intrinsic grammatical incompatibility of imperfective verbs and *in*-adverbials. The seeming ungrammaticality stems from pragmatic oddness of the obtained reading. Once an appropriate context is provided, the utterance becomes felicitous. As for the obligatory ability reading, we argue that it results from incompatibility of an episodic reading and the imperfective morphology.

The puzzle It is usually assumed that an episodic reading is not available for an utterance with an imperfective verb modified by an *in*-adverbial, as in (1). (We translate this type of examples by English progressive.) However, there is a(n) – often unnoticed – *bounded ability* reading under which the combination of the imperfective morphology and an *in*-adverbial is felicitous, as in (2). The relevant reading may be paraphrased as 'There was a time in the past in which Petr was able to finish reading of War and Peace in two hours'. As (3)–(4) show this reading is available for any Tense and for both transitive and intransitive verbs.

On top of the unusual combination of an imperfective verb with an *in*-adverbial, the pattern presents two additional puzzles. First of all, bounded events are ambiguous between an ability reading and an episodic reading. However, if a bounded event is realized by an imperfective verb and and *in*-adverbial, only the ability reading is possible. Second, the reading in question has an obligatory actuality entailment (Bhatt, 1999; Hacquard, 2006) which may be absent in ability readings and bounded events.

The proposal Crucially, for an imperfective event to be changed into a bounded event, the interpretation on the VP level must be of an accomplishment (we assume that accomplishments sum two atomic events – an activity and a result state – into a new singular event, as in (5) after Rothstein 2004). We argue that the bounded reading is a result of a combination of the lexical semantics of *in*-adverbials (defined after the pluractionality operator of van Geenhoven 2004, as in (6)) with the lexical semantics of accomplishment verbs. The role of the operator is both to induce the bounded reading and to introduce the possibility of plurality of the event. Furthermore, the operator is an existential operator. It is the existential closure part that yields the actuality entailment (see also Hackl 1998 for a discussion of the relation between actuality entailments and accomplishments). We argue that *in*-adverbials are quantifiers ranging over times and not predicates over the event argument of the verb (in similar vein as Dowty 1979 and Moltmann 1991) and because there is a maping between temporal trace of the events and events, the quantification of bounded time variables leads to pluralization of events. As for the ability reading, we argue that the ability reading is caused by a pragmatic strengthening stemming from the competition between perfective and imperfective morphology for marking of an episodic reading. We adopt a realizational view of morphology (Halle and Marantz, 1993, among others) modified by an economy component (Katzir, 2008). In particular, we assume that if a certain morphological realization carries a presupposition, it is this morphological realization that must be used if the presupposition is justified (in line of Maximize Presupposition; Heim 1991; Sauerland 2002 and subsequent work). In case of the episodic reading, the relevant morphological realization is perfective. Since an episodic reading may be morphologically realized as perfective, an episodic reading *must* be morphologically realized as perfective. Thus if a bounded event is realized by imperfective morphology, the episodic reading is excluded because it would violate the Maximize Presupposition principle. As a result, if a bounded event is realized by an imperfective verb modified by an *in*-adverbial, the structure must obtained an ability reading because it is only the ability reading that survives the competition.

(1) #Petr   četl   Vojnu a   mír za dvě hodiny.
    Petr.Nom read.Imperf War   and Peace in two hours
    'Petr was reading War and Peace in two hours.'

(2) Když Petr studoval rychločtení, tak četl   Vojnu a   mír za dvě hodiny.
    when Petr studied   fast-reading then read.Imperf War   and Peace in two hours
    'When Petr took a course in fast-reading, he was reading War and Peace in two hours./. . . he was able
    to read War and Peace in two hours.'

(3) a. Když byl Petr mladý, tak rovnal   podkovy   za deset minut.
        when was Petr young then straightened.Imperf-he horse-shoes in ten   minutes
        'When Petr was young, he was straightening/was able to straighten a horse-shoe in ten minutes.'
    b. To bude   věkem. Jeho syn Jarda rovná   podkovy   za deset minut.
        it will-be by-age his son Jarda straightens horse-shoes in ten   minutes
        'His son Jarda is straightening/able to straighten a horse-shoe in ten minutes.'
    c. A   když bude jeho syn Franta trénovat, tak bude taky rovnat   podkovy   za deset minut.
        and if   will his son Franta practice then will also straighten horse-shoes in ten   minutes
        'If his son Franta practices, then he will be straightening/will be able to straighten a horse-shoe
        in ten minutes as well.'

(4) a. Když jsem byl mladý, prádlo schlo   za dvě hodiny. Dneska to trvá   týden.
        when was been young laundry dried.Imperf in two hours   today   it takes week
        'When I was young, laundry got dried/was able to dry in two hours. These days it takes a week.'
    b. V téhle místnosti prádlo schne   za dvě hodiny.
        in this room   laundry dries.Imperf in two hours
        'In this room laundry gets dry/is able to dry in two hours.'
    c. Když tu   uděláme nové topení, tak prádlo bude schnout za dvě hodiny.
        when here make-we new heating then laundry will dry   in two hours
        'If we get a new heating, then laundry will get dry/will be able to get dry in two hours.'

(5) (after Rothstein 2004, p. 105, (30))
    $\lambda e. \exists e_1 \exists e_2 [e =^S (e_1 \sqcup e_2) \land (ACTIVITY(P))(e_1) \land (BECOME(P'))(e_2)]$

(6) (after van Geenhoven 2004, p. 158, (60))
    $\maltese^t V(x) \ at \ t = 1 \Longleftrightarrow \exists t'(t' \subseteq t \land V(x) \ at \ t' \land number(t') > 1 \land \forall t'(t' \subseteq t \land V(x) \ at \ t' \rightarrow \exists t''(t'' \subseteq t \land (t'' > t' \lor t'' < t') \land V(x) \ at \ t'' \land \exists t'''(t' < t''' < t'' \lor t' > t''' > t'' \land \neg V(x) \ at \ t'''))))$

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