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## DEGREE VERBS. A contrastive Russian – English analysis

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### 1. Theoretical issues

#### 1.1. Introduction \*

As is often the case in linguistic matters, a terminological clarification is in order. The type of predicates to be discussed in this paper have received different designations, among which: ‘degree achievements’ (Dowty (1979), ‘Ø-bounded predicates’ (Declerck 1986), ‘gradual completion verbs’ (Bertinetto & Squartini 1995), ‘gradual verbs’ (Jezek 2001). Here the term *degree verbs* (henceforth DVs<sup>1</sup>) will be used on the analogy (to be justified below) with the long-established term “degree words”. Indeed, although Dowty’s proposal has enjoyed vast popularity, it is misleading because, unlike true achievements, DVs are inherently durative. As for Declerck’s proposal, it has an undesirably large coverage, for it was intended to refer to any predicate oscillating between ACC and ACT reading (e.g., *to read a book* [ACC] vs *to read books* [ACT]).

DVs designate events such as *grow*, characterized by the fact that – like telic verbs (i.e., ACCs and ACHs) – they gradually evolve towards a goal, but – unlike telics – do not necessarily imply the existence of a (pragmatically salient) final stage. Indeed, the final stage might even not be easily definable. The following two predicates show the fundamentally ambivalent nature of DVs (Abusch 1986):

- (1) α. The temperature *has increased* ↷ the temperature is high [= non-final stage]  
β. The grass *has dried* → the grass is dry [= final stage].

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<sup>1</sup> The following abbreviations will be used: ACC = accomplishment; ACH = achievement; ACT = activity; DV = degree verb, H-ACT = hybrid activity; IPF = imperfective; MULT = multiplicative; P-ACT = pure activity; PF = perfective. In addition, the terms ‘perfective’ / ‘imperfective’ (and their abbreviations ‘PF’ / ‘IPF’) will be inserted into simple quotes whenever they refer to the specific morphological implementation that these notions take up in the Slavic languages.

For this reason, Bertinetto & Squartini (1995) distinguished between  $\alpha$ -verbs (e.g., *grow*, *lower*, *complicate*, *lengthen*, *heat*, *encrust*, *fatten*, *widen*, *increase*, *deepen*) and  $\beta$ -verbs (e.g., *darken*, *clear*, *dry*, *ripen*, *open*, *straighten*). As shown in (1), the former do not allow the sort of entailment that the latter admit. In practice, however, the distinction is not sharp, for many DVs allow both readings depending on the context <sup>2</sup>:

- (2)  $\alpha$ -reading: The water *has warmed up*, but it is still too cold to swim.  
 $\beta$ -reading: The water *has warmed up*, we can finally swim.

Needless to say, the latter sentence does not mean that the highest possible temperature has been reached, but it nevertheless states that the contextually relevant standard of heat has been attained. This brings about another relevant point, namely the distinction between absolute vs relative final stage (see the notions of maximal and standard telos as defined in § 1.3).

Although the  $\alpha$ - and  $\beta$ -readings divide has not been directly addressed by all scholars, one can infer not less than three positions from the literature:

- (3) A.  $\alpha$ -DVs as atelic,  $\beta$ -DVs as telic (Abusch 1986; Hay et al. 1999)  
 B. Both  $\alpha$ - and  $\beta$ -DVs as atelic (various scholars)  
 C. Both  $\alpha$ - and  $\beta$ -DVs as telic (Bertinetto & Squartini 1985).

Hypothesis (A) reduces the ambiguity in (2) to an instance of *actional hybridism* (as in the example of *read* at the end of the first paragraph above). Hypotheses (B-C), by contrast, consider DVs in general as a subclass of predicates entirely confined within one and the same class. Before addressing the issue of the proper classification of DVs, one has to note that cases of true hybridism involving DVs with respect to other well-established Vendlerian classes can independently be discerned. In (4a), *lengthen* is an ACC (unlike 4b) for it does not imply gradual approach to the intended goal, but rather a set of strategically connected actions leading up to the intended result. This allows the entailments in (4a'-b'). Similarly, (5a) features the sudden attainment of the event goal, while (5b) depicts a step in a gradually developing process:

- (4) a. ACC: The tailor *lengthened* my pants. [Kearns 2007, ex.26]  
 b. DV: The boy *lengthened* the rubber band as much as possible.  
 a'. Jo was lengthening my pants  $\rightsquigarrow$  (at reference time) my pants were longer  
 b'. Jim was lengthening the rubber band  $\rightarrow$  (at reference time) the band was longer

<sup>2</sup> Rothstein (2007:19-20) denies such ambiguity, claiming that DVs are ACTs derived from ACHs by means of “a set of instantaneous changes”. As will be shown in §1.2, however, DVs do not behave like ACTs nor like ACHs. They build up a specific actional class with peculiar properties.

- (5) a. ACH: The door suddenly *opened*.  
 b. DV: Slowly and gradually, the door *opened* further.

The next section will attempt at providing a consistent definition of DVs in relation to the major Vendlerian classes. In so doing, the divide between  $\alpha$ - and  $\beta$ -reading will be further qualified.

## 1.2. Diagnostics

In order to address this problem, one can exploit – as usual in verb semantics – the diagnostics consisting of syntactic tests measuring the compatibility with selected adverbials. Needless to say, these tests should be used with caution, for contextual factors often interfere, as indeed some of the examples below will show.

The first two tests involve well-known adverbials. Examples (6) show that DVs behaves like ACTs and partly like ‘reversible’ ACHs. The latter are verbs such as *leave* as opposed to *die*, i.e. verbs which admit the reversal of the situation (indeed, one can leave and come back, while resurrection is not normally available<sup>3</sup>). Thus, (6c) states that Mary was back after one hour and the adverbial measures the duration of this interval. (6d) features, as often stated in the literature, a detelicized ACC: the sentence is only grammatical under the assumption that the telos was not reached. (6e-f) show that DVs share in part the behavior of ACTs and in part that of reversible ACHs. As in all examples to follow, the  $\alpha$ - and  $\beta$ -readings of DVs have been pointed out, obviously focusing on the predicate’s contextual rather than inherent interpretation. Thus, (6e) indicates that the room was warmer than before but did not reach any final stage, while (6f) suggests that after two hours the previous situation was restored. Examples (7), by contrast, indicate that DVs behave like telic verbs, notoriously compatible with *in X TIME* adverbials in contrast to atelic verbs. Indeed, as one can gather from (7a-b), this adverbial brings about a compulsory  $\beta$ -reading (at least with respect to relative telos):

- (6) *for X TIME* [DVs = ACTs and reversible ACHs]  
 a. ACT: Mary *watched* the stars for 20 minutes.  
 b. ACH [irrev]: \* Mary *found* a shell on the beach for one hour.  
 c. ACH [rev]: Mary *left* for one hour.  
 d. ACC: Mary *read a book* for three hours.  
 e.  $\alpha$ -DV: Mary *heated* the room for half an hour.  
 f.  $\beta$ -DV: The sky *cleared* for two hours.

<sup>3</sup> The notion irreversible should be intended with caution. The predicate in (6b) apparently allows its reversal, for one can lose what has been previously found. However, as the example shows, the ‘linguistic’ logic is different.

- (7) *in X TIME* [DVs = telic verbs]  
 a.  $\beta$ -DV: Mary *heated* the room in half an hour.  
 b.  $\beta$ -DV: The sky *cleared* in two hours.

The previous examples underline the ambivalent nature of DVs, which share properties of both ACTs (atelic) and ACCs/ACHs (telic). The following examples add further facets to this picture. At first sight, (8) proves the solidarity of DVs (in the enforced  $\alpha$ -reading) with ACTs, but in fact the interpretation of *a lot / a little* is crucially different, for with DVs they refer to the intrinsic dynamics of the event. This is an important point that will be duly highlighted in §1.3. Although the divergence with ACHs is expected (here and in general) due to the non-durative nature of the latter predicates, the contrast with ACCs is rather surprising, for they refer (like DVs) to events that progressively develop towards their inherent telos. Examples (9-10) bring about new important details. In both cases, DVs contrast sharply with ACHs, while they share some similarity with ACCs in the  $\beta$ -reading. Actually, the situation in (10) is more nuanced, for ACTs, ACHs and  $\alpha$ -DVs may receive a counterfactual reading; e.g., (10a) means that Mary was on the verge of crying, although she managed to control herself<sup>4</sup>. Whatever the case, the fundamental proximity of DVs (both  $\alpha$  and  $\beta$  in this case) and ACCs is supported by (11) with adverbs such as *gradually / little by little* and the like, although sentences (11g-k) highlight the existence of possible pragmatic restrictions due to the actual event granularity of the individual ACCs (e.g., a cherry can hardly be eaten gradually by a grown-up, whereas it may be quite a challenge for smaller beings<sup>5</sup>):

- (8) *a lot / a little* [DVs  $\neq$  telic verbs and deceptively similar to ACTs]  
 a. ACT: % Mary *watched* the stars a lot / a little. [= duration reading]  
 b. ACT: % Mark *ate* a lot / a little. [= quantity reading]  
 c. ACH: \* Mary *found a shell* a lot / a little.  
 d. ACC: \* Mary *read a book* a lot / a little.  
 e.  $\alpha$ -DV: The situation *deteriorated* a lot / a little. [= measure-of-change reading]
- (9) *completely* [partial convergence of  $\beta$ -DVs with ACCs]  
 a. ACT: \* Mary *has completely cried*.  
 b. ACH: \* Mary *has completely found a shell*.  
 c. ACC: ? Mary *has completely read the book*.  
 [better: ... has read  $\square$ all the book / the book until the end $\square$ ]

<sup>4</sup> A sentence such as *The situation almost deteriorated* seems to suggest that some DVs may support the counterfactual reading. One can surmise, however, that *deteriorate* is an actionally hybrid verb oscillating between ACH (*The situation suddenly deteriorated*) and  $\alpha$ -DV (*The situation gradually deteriorated*).

<sup>5</sup> According to Braginsky & Rothstein (2008, ex.50), there is a difference between: *Iván postepénno* ‘IPF’ *činil kompjúter* ‘Ivan gradually repaired the computer’ and ?? *Iván* ‘IPF’ *činil kompjúter detál’ za detálju* ‘Ivan repaired the computer part by part’. As the same authors admit, however, the second sentence can be accepted in the appropriate pragmatic conditions, i.e. depending on the specific operations involved in the act of repairing.

- d.  $\alpha$ -DV: \* The boy *has* completely *fattened*.
- e.  $\beta$ -DV: The situation *has* completely *deteriorated*.

- (10) *almost* [partial convergence of  $\beta$ -DVs with ACCs]
- a. ACT: % Mary almost *cried*. [counterfactual reading]
  - b. ACH: % Mary almost *found a shell*. [counterfactual reading]
  - c. ACC: Mary has almost *read the book*.
  - d.  $\alpha$ -DV: % The tree almost *grew*. [counterfactual reading]
  - e.  $\beta$ -DV: The grass almost *dried*.

- (11) *gradually / little by little* [DVs = ACCs]
- a. ACT: \* Mary gradually *worked*.
  - b. ACH: \* Mary gradually *borrowed a book*.
  - c. ACC: Mary gradually *solved the problem*.
  - e.  $\alpha$ -DV: The customers gradually *increased*.
  - f.  $\beta$ -DV: The grass gradually *dried*.
  - g. ACC: ? Mary gradually *ate the cherry*.
  - h. ACC: The {ant / little baby} gradually *ate the cherry* (bit by bit).
  - i. ACC: ? Mary gradually *read the tale*.
  - j. ACC: The little girl gradually and laboriously *read the tale*, word by word.
  - k. ACC: Day after day, the grand-mother gradually *read that long tale*.

The examples seen so far suggest that the deep nature of DVs lies in their being durative and telic verbs, since they share more features with ACCs than with any other class of predicates. What remains to be understood, however, is the specific difference with respect to ACCs and the partial resemblance with ACTs. A possible answer is that DVs possess both telic and atelic features, which suggests the puzzling (and, as will be shown below, unsatisfactory) conclusion that they form a hardly definable, mixed type. Bertinetto & Squartini (1985) actually proposed that DVs are uniquely selected by a special class of inherently comparative adverbs such as *by a lot / by a little*, to be found in many languages (cf. Rus *namnógo / ne namnógo*; It *di molto* [or *di parecchio*] / *di poco*; Gm *um Vieles / um Weniges*; no such adverbs in Spanish, however). Although these authors were on the right track in pointing out the inner comparative nature of DVs, this fails to be the desired litmus test to delimit the class of DVs, for not all of them react positively to this type of adverbs. Rather than isolating DVs as such, these adverbs appear to separate  $\alpha$ - from  $\beta$ -DVs: indeed, they are much more compatible with the former than with the latter, although no sharp divide can be established due to the subtle nature of the grammaticality judgments involved. Precisely for this reason, the examples in (12) are offered in the native language of the present authors with literal (rather than idiomatic) English translation:

- (12) a. Il ragazzo è *dimagrito* di parecchio (rispetto all'anno scorso)  
 'The boy *has slimmed* by a lot (with respect to one year ago)'  
 b. \* L'erba è *seccata* di parecchio (rispetto al mese scorso)  
 The grass *has dried* by a lot (with respect to one month ago)'  
 c. Vesnó j úroven' vodý v reké namnó go 'PF' *vo zró s* (po sra vnéniju s zimó j).  
 'In spring, the water level has grown by a lot (with respect to winter).'  
 d. \* {Mrámor/ listó k} namnó go 'PF' *po želtél*.  
 '{The marble / the leaf} has grown yellow by a lot'.

The English comparative adverb *further* is only apparently more effective in the task of segregating DVs, for its polysemous nature overlaps the semantic territory of *longer*, *again* and the like as in (13a) (cf. Rus *ból'se, dál'se, eščě, eščě ból'se*; It *ancora, oltre, di nuovo, più a lungo*). Fortunately, the class of intrinsically comparative adverbs is much larger and yields excellent candidates such as: *perceptibly, noticeably, by some measure* etc. as shown in (14) (cf. Rus *porjádóčno, značitel'no, néskol'ko, na porjádok, oščutímo, zamétno*; It *percettibilmente, sensibilmente, di un tot, di una qualche misura*):

- (13) *further* [DVs as a class of their own?]  
 a. ACT: % Mary *played further*. [= for a longer time]  
 a'. % Maríja 'IPF' *igrála dál'se* (Maríja vsjó 'IPF' *igrála*).  
 b. ACH: \* Mary *left further*.  
 b'. \* Maríja 'PF' *ušlá dál'se*.  
 c. ACC: \* Mary *read the book further*.  
 c'. \* Maríja 'PF' *pročítála knígu dál'se/ eščě ból'se*.  
 d.  $\alpha$ -DV: The tree *grew further*. [= w.r.t. a previous stage]  
 d'. Dérevo eščě ból'se 'PF' *výroslo*.  
 e.  $\beta$ -DV: The grass *dried further*.  
 e'. Travá eščě (ból'se) 'PF' *výsoxla*.
- (14) 'comparative adverbs' [DVs as a class of their own]  
 a. ACT: \* Phil *has* {perceptibly / noticeably} *laughed*.  
 a'. \* Filípp {oščutímo / zamétno / porjádóčno} 'IPF' *smejálsja*.  
 b. ACH: \* Phil *has* {perceptibly / noticeably} *arrived*.  
 b'. \* Filípp {oščutímo / zamétno / porjádóčno} 'PF' *priéxal*.  
 c. ACC: \* Phil *has* {perceptibly / noticeably} *written a paper*.  
 c'. \* Filípp {oščutímo / zamétno / porjádóčno} 'PF' *napisál statjú*.  
 d.  $\alpha$ -DV: The tree *has* {perceptibly / noticeably} *grown*.  
 d'. Dérevo {oščutímo / zamétno / porjádóčno} 'PF' *výroslo*.  
 e.  $\beta$ -DV: The grass *has* {perceptibly / noticeably} *dried*.  
 e'. Travá {oščutímo / zamétno / porjádóčno} 'PF' *výsoxla*.

This unmistakably reveals the inherently comparative nature of DVs (thus justifying the denomination adopted) and suggests an obvious explanation for the apparent paradox noted above with respect to the ambivalent nature of DVs in their relation to ACTs and ACCs. Rather than a subspecies of these two classes of predicates, or a mixed category sharing a bit of each, DVs turn out to be a completely independent class with specific semantic properties. The comparison with gradable adjectives in (15-16) proves the point by using both the just mentioned set of comparative adverbs and the more specific comparative locution (*by*) X MEASURE (Rus *na* X). Although (16e) warns that the latter adverbial does not work with all DVs, (16f) suggests that this does not depend on their belonging to the  $\beta$ -type, but rather on lack of specifiable granularity with some of them <sup>6</sup>:

(15) comparative adverbs [similarity of DVs and gradable adjectives]

- a. Ted is {perceptibly / noticeably} *higher* than Bill.
- a'. Ted {oščutímo / zamétno / néskol'ko} *výše* Bílla.
- b. My cup of tea *is* {perceptibly / noticeably} *warmer* than yours.
- b'. Mojá čáška čája {oščutímo / zamétno / néskol'ko} *teplée* tvoěj.
- c. This house *is* {perceptibly / noticeably} *older* than that one.
- c'. E'tot dom {oščutímo / zamétno / néskol'ko} *staréje*, čem tot.

(16) (*by*) X MEASURE [similarity of DVs and gradable adjectives]

- a. ACT: \* Mary *played tennis* by three sets.
- a'. \* Maríja 'IPF' *igrála* v ténnis na trí séta.
- b. ACH: \* Mary *returned the loan* by 100 dollars.
- b'. \* Maríja 'PF' *vernúla dolg* na 100 dóllarov<sup>7</sup>.
- c. ACC: \* Mary *read the book* by 10 pages.
- c'. \* Maríja 'PF' *pročítála knígu* na 10 stráníc.
- d.  $\alpha$ -DV: Little Tess *has grown* 5 cm as compared with last year.
- d'. Tess 'PF' *výrosla* / 'PF' *podroslá* na 5 sm po sravnéniju s prošlym gódom.
- e.  $\beta$ -DV: \* The sky *cleared* by seven clouds (with respect to one hour ago).
- e'. \* Nébo 'PF' *posvetlélo* / 'PF' *rasčístilos*' na sem' tuč.

<sup>6</sup> The adverbs *more / less* can easily collocate with many ACTs, but – similar to the situation noted in example (8) – the meaning is different as compared with DVs. With the latter, these adverbs directly refer to the dynamic progress of the event, whereas with ACTs they may receive different interpretations (duration, intensity, quantity). At any rate, the contrast between DVs and telic predicates is striking:

- (i) ACT: Jack *works* more than Jim. / Džek 'IPF' *rabótaet* ból'se Džima.
- (ii) ACH: \* Rosy *lost the ring* more than Ed. / \*Róza 'PF' *poterjála* kol'có ból'se, čem Ed.
- (iii) ACC: ?? Mary *read the book* more than Jim. / ?? Maríja 'PF' *pročítála* knígu ból'se, čem Džim.  
[rather: 'Mary read *more of* the book than Jim' (Kennedy 2010, ex. 29-30) / 'Maríja 'PF' *pročítála* iz knígi ból'se, čem Džim', or: 'Mary read *three pages more of* the book than Jim' / 'Maríja 'PF' *pročítála* iz knígi na trí stránky ból'se, čem Džim']
- (iv) DV: This wall *darkened* more than that. / Éta stená 'PF' *potemnėla* ból'se, čem ta.

<sup>7</sup> Occasionally, however, this sort of adverbs can be used with ACHs, as in *The ship entered by half a mile the territorial waters.*

- f. DVs: to fatten by 1 kg, to lengthen the rope by 3 inches, to reduce the dosage by 2 measures ... vs \* to encrust by several rough spots, \* to grow hoary by a few white hairs, \* to rust by 7 oxygen molecules ...
- f'. 'PF' potolstét' na 1 kg, 'PF' udlínít' kanát na 3 djújma, 'PF' uménšít' doziróvku na 2 grámma ... vs \*'PF' rastréskatsja na X tréščin, \*'PF' posedét' na néskol'ko voloskóv, \*'PF' zaržavét' na néskol'ko molékul
- g. ADJ: Little Tess is 5 cm *taller* than little John.
- g'. Tess na 5 sm *výše* Džóna.

### 1.3. DVs as a subspecies of telic predicates

The above analysis proves that DVs form a class of their own. The next task is to assess their position within the Vendlerian framework. As noted, they show more affinities with ACCs than with any other class, but they also present some analogies with ACTs. The point is thus to determine their coordinates with respect to the telicity feature. To this aim, one needs to inspect the inner structure of DVs with the appropriate theoretical tools.

Capitalizing on the formal representations first proposed by Verkuyl (1993) and further refined by Krifka (1989, 1992), it is now widely accepted that the contrast ACT vs ACC is essentially based on the properties of:

- *cumulative*ty, as typical of ACTs
- *quantization*, as typical of ACCs.

Do DVs share the quantization property, as their similarity with ACCs suggests? A hint in this direction stems from the notion of *incremental theme*, introduced by Dowty (1979) and popularized by Krifka's studies. In a nutshell, this concept refers to the gradual approaching to final completion as the defining feature of telic predicates. This is prototypically illustrated, e.g., by the gradual consumption of an apple in the event of *eating an apple*, whereby the event progress coincides with the physical involvement of progressively larger parts of the object. In the course of time, however, the initially strong 'homomorphism hypothesis' was relaxed in favor of a pragmatically more realistic conception, so that the focus was contextually restricted to the *relevant parts* of the object (Kennedy 2010) or of the subject. As an instance of the former case (parts of the object), consider the event of *repairing a computer*, in which only the relevant parts are involved rather than the whole object; as an instance of the latter case (parts of the subject), one can consider the example of *reading a book* suggested by Rothstein (2003), which brings about a gradual change in the agent's mental state. Piñon (2008) proposed a formalization of this concept – in what might be called 'revised homomorphism framework' – by means of the *incremental degree function*, expressing the gradual building of the telos relative to the material constitution of the event. As for DVs, since they intuitively involve the gradual development of the event, it was natural to include the incremental



theme component into their semantics (Kennedy & Levin 2008). This, however, has an immediate theoretical consequence, for it entails the telic option, contrary to hypothesis (3-B) and, partly, (3-A).

Needless to say, once incrementality is taken into account, the pragmatically-sensitive notion of granularity is also implicitly involved, with seemingly contradictory consequences. The following examples illustrate the point:

(17) highly granular ACC:

*read a book* { word by word / paragraph by paragraph / page by page }.

‘IPF’ *čítat’ knihu* { slovo za slovom / paragraf za paragrafom / stránica za stránicj }.

(18) poorly granular ACC:

a. ?? *get old* { wrinkle by wrinkle / white hair by white hair }. [rather: day after day]

a’. \* ‘IPF’ *stárit’sa* { morščína za morščínoj / vólos za vólosom }. [rather: den’ za dněm]

b. \* Phil *wrote his thesis* by 15 pages more. [vs. Phil wrote 15 pages more of his thesis ]

b’. \*Filípp ‘PF’ *napisál statjú* (ból’she) na 15 stránic.

[vs. Filípp ‘PF’ *napisál eščě 15 stránic svoěj statjí*].

c. \* Ted *repaired* the computer by 15 components more.

[vs. Phil repaired 15 components more of the computer]

c’. \*Ted ‘PF’ *počiníl* kompjúter eščě na 15 detálej.

[vs. Filípp ‘PF’ *počiníl eščě 15 detálej kompjútera*]

(19) highly granular DV:

a. The town hall *lengthened* the road by 2 Km.

b’. Mérija ‘PF’ *udliníla* dorógu na 2 km.

(20) poorly granular DV:

b. ?? John *got older* by 3 years. [possible as an elative metaphor: ... *by 10 years*]

b’. ?? Džon ‘PF’ *postarél* na 3 góda. [metaphorically: ... *na céluju žízn’* ‘by a whole life’]

A moment reflection suffices, however, to persuade that the granularity issue is not the core of the problem, for it simply depends on the pragmatic conceptualization of the various events. One and the same event might look completely different to two observers, based on their different approach to the matter. For instance, the event of *becoming encrusted* presents a very low granularity in every day’s experience, but is perfectly granular to the inspection of a chemist using the appropriate metrics (e.g., by measuring the degree of oxidation). Indeed, every incremental event, whatever its granularity – hence, whatever the possibility of verbally expressing its progress in time – is characterized by some kind of gradual development towards the goal. What, however, has not been duly emphasized so far is that, although the incremental theme function is a constitutive feature of both ACC and DV semantics, only DVs (provided they have enough granularity) are compatible with the

explicit indication of the amount of change, as shown by (16) and (21). Even with ‘vague comparison’ adverbs (which provide a convenient way to overcome the granularity limitations) DVs show a clear advantage over ACCs, as shown by (22). This proves once more the inherent inclination of DVs to implicitly compare different stages of one and the same dynamic event:

- (21) a. ACC: \* Mary *has so far painted her flat* by two walls.  
 a’. \* Maríja ‘PF’ *pokrásila svojú kvartíru* na dve stený.  
 b. DV: The water level *has risen* by 10 cm (with respect to yesterday).  
 b’. Úroveň vodý ‘PF’ *výros* na 10 sm (po srovnáníju so včerašním).
- (22) a. ACC: \* Ted *has loaded the truck* by a certain amount of stuff.  
 a’. \* Ted ‘PF’ *nagruzíl gruzovík* na opredelěnnoe količestvo veščěj.  
 b. DV: The town hall *has lengthened* the festival by a certain amount of time.  
 b’. Mérija ‘PF’ *prodlíla* festivál’ eščě na kakóe-to vrémja.  
 c. ACC: ?? Ted *wrote his thesis* somewhat more than Jack.  
 c’. \* Ted ‘PF’ *napisál čut’* ból’še *dissertácii*, čem Džek.  
 d. DV: Fred *got* somewhat *older* this year.  
 d’. Fred néskol’ko / kák-to ‘PF’ *postarél* v étom godú.

We propose to call ‘differential change’ this specific property of DVs, which has received alternative names by various authors: ‘degree of change’ (Kennedy & Levin 2008), ‘measure of change’ (Kennedy 2010), ‘extension’ (Piñon 2008). Any DV implicitly indicates a differential function quite independently of whether or not the final stage has been attained. In fact, although the differential change may be very small (e.g., *The temperature raised by a vanishingly small amount*), it is nevertheless necessarily involved. It does not yield absolute values, but rather the difference between two values indicating the change intervening between two instants, i.e. the contextually relevant beginning and end of the event. These should not be confused with the absolute beginning and end; for instance, although the global growth of a given tree may be from 0 to 20 meters, a contextually relevant event of growing between instant  $t_x$  (beginning) and  $t_y$  (end) may involve a mere 3 cm increment.

The notion of differential change immediately reminds of that of *scale* as involved in the semantics of gradable adjectives: “A scale can be seen as an abstract representation of a set of ordered points, where each point represents a different measure of a single gradable property.” (Hay 1998). Scales can be open or closed, depending on whether they have boundaries: *high*, *heavy*, *young*, *long* etc. are open-scale adjectives, while *closed*, *dry*, *clean*, *absurd* etc. are closed-scale adjectives (compare: \* *the tree is completely high* vs *the door is*

*completely closed*)<sup>8</sup>. Since a number of DVs are deadjectival, these features quite naturally extend to such predicates (or rather, to the relevant subset). Indeed DVs have often been put in relation with gradable adjectives. Hay et al. (1999) claimed that deadjectival verbs are telic or atelic depending on whether they are based on an open- vs. closed-scale adjective. Their diagnostics rested, in particular, on compatibility with the adverbs *completely* and *almost* (possibly combined together):

- (23) a. open-scale adjective: \* {completely / almost} *tall / fast / wide / long / old / hot*  
 a'. \* {sovsém / počtí} *vysókij / býstryj / širókij / dlínnyj / stáryj*  
 b. closed-scale adjective: {completely / almost} *flat / empty / dry / cold / calm / new*  
 b'. {sovsém / počtí} *róvnnyj / pustój / suxój / xolódnyj / nóvyj*  
 c. open-scale DV: \* The valley *has* {completely / almost} *widened*.  
 c'. \* Dolína {sovsém / počtí} 'PF' *rasšírilas* / 'PF' *razroslás*.  
 d. closed-scale DV: The clothes *have* almost completely *dried*.  
 d'. Odězda počtí sovsém 'PF' *výsoxla*.

Positing such a strict analogy between DVs and gradable adjectives raises, however, a number of problems. First (as noted above) deadjectival verbs cover a subset, rather than the whole of DVs. Second, in a number of cases, the relationship between a given DV and the semantically related adjective is only indirect, i.e. non-morphologically based, and it may even give rise to multiple connections (cf. *grow* ~ *tall / big / numerous* ... as opposed to Rus *vysókij* ~ 'PF' *povýsit*, 'PF' *povýsitsja*, 'PF' *výrasti* 'grow (in height)', *bolšoj* ~ 'PF' *uvěličit*, 'PF' *uvěličitsja* 'grow (in dimension)', *mногоčíslennyj* ~ 'PF' *umnóžit* 'grow (in number)', 'PF' *rasšírit* 'grow (in number) / widen'). Third, acceptability may depend on the contextual interpretation of the predicate, as in: \* *This mattress is completely thick* vs *The sauce thickened completely*; indeed, even a sentence such as: ? *The sauce is completely thick* sounds strange, yielding yet another reason for caution.

What one should ultimately retain from the DVs ~ gradable adjectives analogy is the notion of scale, which allows convenient formalizations. The most obvious move consists in assuming a trajectory in the range '0 – 1' to express the progressive change brought about by dynamic events, where 1 stands for attainment of the event's final stage. A semantics of this sort has been adopted, with specific differences that do not concern us here, by scholars such as Kennedy (2007) and Piñon (2008). In such a framework, one might for instance suggest that ACTs, having no upper bound, necessarily correspond to open scales, such that the event implements a value greater than 0 and less than 1. By contrast, ACCs (to the extent that their telicity is fulfilled) and  $\beta$ -DVs would always saturate to 1, for they entail closed scales. Supposing that this is the correct view, the crucial problem is how to treat  $\alpha$ -

<sup>8</sup> Scales are also said to be positive or negative, although this is a rather delicate decision to take. Since, however, this has no impact on the topic at issue, it can be neglected here.

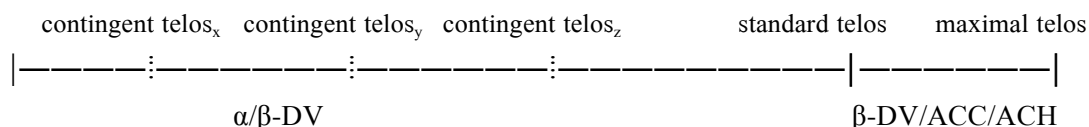
DVs. If level 1 designates attainment of the final telos, they obviously do not saturate to 1; as a consequence, one should regard them as atelic, as suggested by hypothesis (3-A). But is this the only conclusion that one can draw from the linguistic data?

Before addressing this topic, one should best qualify the notion of final stage, or telos. As already pointed out in relation to example (2- $\beta$ ), in order to properly understand this notion one should distinguish between absolute vs relative reference standard. Here is another example: in order for a  $\beta$ -reading sentence like *The sky has cleared* to be true, it is not necessary that there are no clouds at all, it suffices that their number remains below a pragmatically relevant threshold. This may be impossible to define explicitly, but it is nevertheless an inter-subjectively shared piece of experience. The same holds for ACCs: *Ron has finished his paper* may be true (pragmatically speaking) even if some details are not yet perfectly ready (e.g., if a few references need to be checked; cf. *Yesterday I finally ended my paper; today I just added a few references*). This is especially relevant in relation to DVs, because it rules out the unnecessary requirement that the absolute situational standard needs to be reached in order for a  $\beta$ -reading to be activated. Adopting Kearns' (2007) suggestion, the terms *standard telos* and *maximal telos* will be respectively used to designate the notions of relative vs absolute reference standard.

With this in mind, consider now the case of  $\alpha$ -DVs (or rather,  $\alpha$ -readings of DVs). They obviously involve neither the standard nor the maximal telos, for they merely designate a differential change, i.e. a change between two successive points in time to be interpreted according to the lexical meaning of the DV involved. For instance: *The situation has gotten worse* simply means that there is a perceivable deterioration of the situation, but by no means indicates attainment of the utmost worst condition (indeed, as two pessimistic Italian proverbs put it: *There is no limit to the worst*, or: *The bottom can never be reached*). But although no final result (neither standard, nor maximal telos) is attained, a specific result is nevertheless reached in the sense that a change (and an at least potentially gradable one) has occurred, as measured by the difference between the beginning and the end of the given situation. This may be called a *contingent telos*, namely the result of the situationally relevant differential change. While the standard and maximal telos are uniquely definable (the former according to pragmatic parameters, the latter according to objectively definable ones), an  $\alpha$ -reading may imply several contingent telē. For instance, the level of the water in a lake may grow or sink for many successive days, so that each daily increment gives rise to a different contingent telos. Despite this, each contingent telos should be considered as a telos in the proper sense (just as standard/maximal telos are), since each can be assessed by means of an appropriate differential measure. Ultimately, the contrast between contingent telē and standard/maximal telos merely consists in the portion of the  $\beta$ -DV that is actually involved in the given event: standard and maximal telos refer to the terminal portion of the event, whereas contingent telē refer to intermediate stages. This, however, is a purely factual

contrast, rather than a semantically crucial one. The obvious conclusion is that hypothesis (3-C) should be preferred over its competitors.

The following drawing is an iconic representation of the ‘telicity conceptual space’. Any DV involves a potentially infinite number of possible contingent telē, whereas the standard and maximal telos are only involved by predicates referring to the event’s final result:



To substantiate the claim concerning the inherent telicity implied by the contingent telos component of DVs (in both  $\alpha$ - and  $\beta$ -reading), consider the following sentences featuring the contrast between perfective and imperfective tenses. Example (24) shows that the specification of the differential change by measuring either its value or its duration (or else combining these two measures) can only occur in perfective sentences. Since the predicate in (24) is a prototypical  $\alpha$ -DV, the observed aspectual contrast cannot be due to the fact that (b) – in contrast with (a) – entails the attainment of the final telos (standard or maximal), but rather to the fact that any contingent telos presupposes telicity in and by itself. This aspectually-oriented property – surprisingly neglected in the literature – leads to the unavoidable conclusion that the contingent telos component is indeed a telos in the proper sense of this word. This notwithstanding, example (25a) features a situation crucially diverging with respect to the one standardly implemented by the ‘imperfective paradox’, whereby telic predicates undergo contextual detelicization. In the case at stake, at the focalization instant  $t_i$ , presupposed by (24a), a situationally given differential change has occurred, although the final point  $t_n$  (presupposed by [24b]) has not been reached. The only divergence, with respect to (25b), is that the exact measure of the differential change cannot be defined. At first sight, the fact that the same inference obtains for both the imperfective and the perfective sentence is akin to the situation of activity predicates. However, no activity predicate would allow the specification of a differential change, as in (24b). This should thus be interpreted in the sense that DVs constitute a class of their own:

- (24) a. The water level *was increasing* {?? by 40 cm / \* in 3 hours}.
- b. The water level *increased* {by 40 cm / in 3 hours}.
- (25) a. The water level *was increasing*   → at  $t_i$  the level has increased (by an unspecified difference)
- b. The water level *increased*       → at  $t_n$  the level has increased (by a specified difference)

In the light of this conclusion, let us reconsider (6), illustrating the behavior of DVs in conjunction with *for* X TIME adverbials, which are known as perfectively-oriented but telicity-suspending devices (Bertinetto & Delfitto 2000). The provisional inference drawn in

connection with examples (6-7) was that DVs share properties with both ACTs and ACCs. The following set of sentences proves, however, that DVs present characteristics of their own which are compatible with their inherently telic nature. Let us first examine (26a). Since this sentence features a contextually detelicized ACC, one might surmise that the same applies to the DV in (26b), while on the other hand (26c) underlines the DV's telic inclination in conjunction with the strictly telicity-oriented *in X TIME* adverbial. On closer inspection, however, it turns out that (26b) is an ambiguous sentence which can be read in not less than two ways: (i) at the end of the indicated interval the water has reached level *y*, obviously lower than the initial level *x*; (ii) at the end of the indicated interval the water has returned to the initial level *x*, after transiently reaching level *y*. The latter interpretation is ostensibly reminiscent of the reading available to reversible ACHs, as shown in (6c). In both cases, anyway, a telic reading is enforced, in contradistinction with what happens with the ACC predicate in (26a). The contrast with respect to (26c) seems to merely depend on the fact that the latter sentence indicates a well-defined differential change, whereas (26b) is also compatible with the possibility that the lowering went on beyond the indicated interval, so that level *y* needs not be regarded as the final stage attained. Thus, the delimiting adverbial in (26b) only exerts its detelicizing effect on the standard/maximal telos, without affecting the telic nature of the contingent telos (i.e. the contextually given difference).

Further support is provided by (26d), since the only legitimate reading of this sentence is the additive one, according to which the water level lowered by 30 cm on each day. This strongly suggests that the presence of a differential change measure (by 30 cm) makes the DVs' telicity emerge even in conjunction with the delimiting adverbial *for X TIME*. Relevant to the present discussion is also the fact that while in (26a) this adverbial simply measures the temporal trace  $\tau$  of the event, in (26d) it measures, more specifically, the difference's duration, which coincides in an additive way with the day's extension (i.e., 30 cm lowering every 24 hours):

- (26) a. ACC: Vin painted the façade of his house for two hours.  
 b. DV: The water level *lowered* for two days.  
 c. DV: The water level *lowered* (by 30 cm) in two days.  
 d. DV: The water level *lowered* by 30 cm for two days [i.e., two successive days].

Needless to say, this theoretical proposal should best be expressed by means of a full-fledged formalization. This will be the task of a paper currently under elaboration. The limited goal of the present one is to compare English and Russian with respect to the behavior of DVs. To this we turn in the next section.

## 2. Degree verbs in Russian

### 2.1. The structure of the Russian verbal system

The issue of actionality in Russian and its interaction with grammatical aspect has been the subject of an intense debate in the linguistic literature. A number of works have addressed the attuning of the Vendlerian classification to the Russian verbal system, yielding an array of different views. Before proceeding to the analysis of DVs in Russian, a summary of the present authors' position with respect to the general topic of actionality is in order.

We claim that the particular structure exhibited by the verbal lexicon of the Slavic languages, i.e. the opposition of (mostly prefixed) 'perfective' verbs vs (mostly simplex, but occasionally suffixed) 'imperfective' verbs has to a large extent to do with the category of actionality, although it is also connected with aspect in a highly intricate way (Bertinetto 1997; Bertinetto & Delfitto 2000). As the preceding lines show, we insert the terms 'perfective' / 'imperfective' into simple quotes whenever we refer to the specific morphological implementation that these notions take up in the Slavic languages. By this way we draw a distinction with respect to the typologically general meaning of the same terms. Indeed, as is well known, the above terms receive a different interpretation in, e.g., English or Italian as opposed to the Slavic languages. In particular, we claim that Russian presents a highly syncretic system, whereby actional and aspectual values are expressed by the same exponents, namely the lexical contrast 'perfective' / 'imperfective' (Bertinetto & Lentovskaya 2012). In addition, following Janda (2007, 2008), we rely upon the cluster approach to verb classification, which has the advantage of overcoming the traditional pair model, capturing the more complex nature of the actional/aspectual relationships among Russian verbs.

A terminological note is mandatory at this point. In addition to the Vendlerian labels (or even as an alternative to them), a number of semantic labels have been proposed by various scholars. To avoid confusion, we specify at the outset our own terminology, limiting the discussion to the verb types that will actually appear in what follows (thus, for instance, we do not mention stative verbs; as for "ingressive", the label is self-explaining):

- By P-ACTs (= pure-activities) we mean verbs such as 'IPF' *rabótat* 'work' which do not present a telic counterpart.
- By H-ACT (= hybrid-activities) we refer to 'IPF' *pet* 'sing', which has its 'PF' counterpart *spet*'; the important point here is that while 'PF' *spet*' is intrinsically telic, 'IPF' *pet*' derives its telicity value from the context (see the discussion in §2.2).
- By MULT (= multiplicative) we designate verbs such as 'IPF' *kápat* 'drop', namely event-internal pluractional predicates, not to be confused with event-external pluractionals (like 'IPF' *vstrečát* 'meet'), to be regarded as iteratives.

- ACHs are exemplified by verbs like ‘PF’ *vstrétit’* ‘meet’. Although telic, they differ from ACCs in being non-durative. Both types of telic verbs presuppose, as following from their definition, a standard/maximal telos.
- DVs – the specific topic of this paper – may show up in two versions: ‘IPF’-DV and ‘PF’-DV. The former can only support the  $\alpha$ -reading, while the latter, depending on the context, can also support the  $\beta$ -reading. This will be detailed in §2.3.
- DEL (= delimitative) designates verbs such as ‘PF’ *porabótat’* ‘work for a while’ or ‘PF’ *popét’* ‘sing for a while’, namely situations that are bounded in terms of event duration but crucially atelic.

Here follows a description of the cluster system as inspired by Janda’s work. For the sake of clarity, the reader is invited to consult the summarizing table reported below (the clusters’ list is limited to the types relevant to the present discussion; the examples in the various cells do not exhaust the possibilities of the respective types):

<b>P-ACT CLUSTER</b>	PIVOT ‘IPF’ P-ACT <i>rabótat’</i> ‘work’	‘PF’ DEL <i>porabótat’</i> ‘work for a while’	‘PF’ INGR. <i>zarabótat’</i> ‘start working’			SPECIALIZED ‘PF’ <i>obrabótat’</i> ‘treat, process’	SECONDARY ‘IPF’ <i>obrabátyvat’</i> ‘treat, process’
<b>ACC CLUSTER</b>	PIVOT ‘IPF’ H-ACT <i>pet’</i> ‘sing’	‘PF’ DEL <i>popét’</i> ‘sing for a while’	‘PF’ INGRESSIVE <i>zapét’</i> ‘start singing’		‘PF’ ACC <i>spet’</i> ‘sing’	SPECIALIZED ‘PF’ <i>propét’</i> ‘roll out a song’	SECONDARY ‘IPF’ <i>propevat’</i> ‘roll out a song’
<b>DV CLUSTER</b>	PIVOT ‘IPF’-DV <i>želtét’</i> ‘grow yellow’			‘PF’-DV <i>poželtét’</i> ‘grow yellow’			
<b>DV/ACC CLUSTER</b>	PIVOT ‘IPF’-DV <i>lysét’</i> ‘grow bold’			‘PF’-DV <i>polysét’</i> ‘grow bold’	‘PF’ ACC <i>oblysét’</i> ‘become bold’		
<b>ACC/DV CLUSTER</b>	PIVOT ‘IPF’ H-ACT <i>pórtit’</i> ‘spoil, prejudice’	‘PF’ DEL <i>popórtit’</i> ‘spoil for a while’		‘PF’-DV <i>podpórtit’</i> ‘spoil noticeably’	‘PF’ ACC <i>ispórtit’</i> ‘spoil’	SPECIALIZED ‘PF’ <i>perepórtit’</i> ‘spoil around’	
<b>MULT CLUSTER</b>	PIVOT ‘IPF’ MULT <i>kápat’</i> ‘drop’	‘PF’ DEL <i>pokápat’</i> ‘drop for a while’	‘PF’ INGRESSIVE <i>zakápat’</i> ‘start dropping’		‘PF’ SEMELF. <i>kápnut’</i> ‘drop once’	SPECIALIZED ‘PF’ <i>nakápat’</i> ‘instill’	SECONDARY ‘IPF’ <i>nakápyvat’</i> ‘instill’
<b>ACH CLUSTER</b>	PIVOT ‘PF’ ACH <i>dat’</i> ‘give’	‘PF’ DEL <i>podavát’</i> ‘supply for a while’				SPECIALIZED ‘PF’ <i>peredát’</i> ‘pass, communicate’	SECONDARY ‘IPF’ <i>peredavát’</i> ‘pass, communicate’ ‘IPF’ ITER. <i>davát’</i> ‘give’
...							

Table 1. *Partial list of the Russian verb clusters (Lentovskaya 2010).*

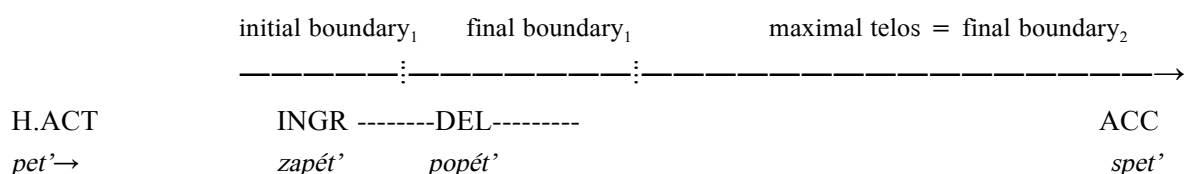
1. Each actional cluster combines several lexically derived members around a simplex verb playing the role of pivot. For instance, the ‘IPF’ MULT *kápat’* ‘drop’ is the pivot of a MULT-cluster, which includes ‘PF’ DEL *pokápat’* ‘drop for a while’, ‘PF’ ingressive *zakápat’* ‘start dropping’, ‘PF’ semelfactive *kápnut’* ‘drop once’. The tentative number of



cluster types seems to be around 14 according to Lentovskaya (2010).

2. The pivot verb conceptualizes the given event in its most general sense and is usually ‘IPF’ except for ACH-clusters (e.g., *dat* ‘give’, whose ‘IPF’ cognate *davát* has the iterative interpretation). The pivot provides the basis for the derivatives. Each verb in a verbal cluster implies a specific type of temporal boundary which may or may not involve the telos (e.g., as noted above, DELs are bounded but atelic).
3. The number of derivatives in a cluster depends on the lexical productivity of the basic stem, which varies from 0 to several dozens in connection with specialized telic ‘perfectives’ and their atelic secondary ‘imperfectives’ (e.g., ‘IPF’ *rabótat* ‘work’, ‘PF’ *výrabotat* – ‘IPF’ *vyrabátyvat* ‘work out, produce’, ‘PF’ *podrabótat* – ‘IPF’ *podrabátyvat* ‘work up’, ‘PF’ *srabótat* – ‘IPF’ *srabátyvat* ‘operate, response’ etc.). The specialized ‘perfectives’ might be regarded as the pivot of a sort of sub-cluster (i.e., ‘PF’ *prorabótat*, with ‘IPF’ *prorabátyvat* ‘work through, look into’ etc.).
4. All verbal clusters belonging to the same type include primary derivatives with a specific actional behavior, although the number and nature of specialized ‘perfectives’ and secondary ‘imperfectives’ can differ.

The following drawing shows the conceptualization of an ACC-cluster. The pivot role is played by a H-ACT, i.e. by a potentially bounded event that most typically expresses its latent telic value through its ACC cognate (e.g. ‘IPF’ *pet* – ‘PF’ *spet* ‘sing’). This example includes in particular (besides specialized ‘perfectives’ and their secondary ‘imperfectives’, not reported here) the ‘PF’ ingressive *zapét* and the ‘PF’-DEL *popét*:



The assessment of ACC (as well as ACH) verbs in Russian, and more generally the very topic of telicity, is a notoriously delicate theoretical matter that deserves careful examination. The following section will briefly address the issue.

## 2.2. The telicity problem

A crucial difference between the English and the Russian (and more generally Slavic) verbal system is the treatment of telicity. Sentence (26a) above showed that Eng *paint the façade* loses its potentially telic meaning due to the delimiting *for X TIME* adverb. This, however, never happens with a Russian ‘PF’ verb. As a consequence, the Russian equivalent of (26a) must feature an ‘IPF’ verb as in (27a), whereas (27b) can legitimately present a ‘PF’ verb because of the presence of the *in X TIME* adverbial:



- b. Iván postepénno ‘PF’ *pročítal knígu* / Iván ‘PF’ *pročítal knígu* stránica za stránicej.  
‘Ivan gradually read the book / ‘Ivan read the book page-by-page’.
- c. \* Iván postepénno ‘IPF’ *guljál* / \* Iván ‘IPF’ *guljál* šag za šágom.  
‘Ivan gradually walked / Ivan walked step by step’.
- d. \* Iván postepénno ‘PF’ *poguljál* / \* Iván ‘PF’ *poguljál* šag za šágom.  
‘Ivan gradually walked for a while / Ivan walked for a while step by step’.

As a consequence, one might concede that the notion of telicity should be connected with what Paducheva regards as ACC pairs (Paducheva & Pentus 2007: 192):

In Russian aspectological tradition, telicity and terminativity are different concepts. Terminativity is a property of a word form or even of an occurrence. Meanwhile telicity is a property of an ASPECTUAL PAIR; for example, in the pair *otkryt’* – *otkryvat’* we have a telic relationship.

However, this has the undesired consequence of excluding from the telicity set any ACH which does not belong to an ‘aspectual’ pair (e.g. *kaznit’* ‘execute’)<sup>10</sup>, in sharp contrast with the widely accepted Vendlerian tradition. Although we would not convey the impression of being exceedingly worried by terminological matters, we believe it preferable to use a metalanguage that is shared by everybody out there. In addition, we think that Paducheva runs into some contradiction, when she states (*ibidem*):

Literal Russian translation for English ‘telicity’ is *predel’nost’*; in fact, *telic* = ‘telos-oriented’, the Greek *telos* meaning ‘aim’, ‘final point’. But looking at the way the term telicity is used, for example, in Krifka 1998, one arrives to the conclusion that telicity means something like TEMPORAL BOUNDEDNESS or TERMINATIVITY. An event is terminative if it ceased to take place (or will; or is bound to cease to take place). Note that terminativity applies also to momentary verbs [...].

As it happens, this definition of telicity is vacuous, for even atelic verbs may “cease to take place”. Besides, terminativity is first used in contradistinction to telicity (first quote) and then as one of its defining properties (second quote).

Summing up the discussion in this section, we would like to point out the following two points. On the one hand, we adhere to the Vendlerian tradition in considering telicity a common property of both ACCs and ACHs. On the other hand, we are aware of the peculiarity of the Slavic verbal system concerning the nature of H-ACTs. Such verbs should be crucially regarded as actionally ambiguous because, over and above their basic atelic meaning, they can also receive a telic reading in the appropriate contexts. Hence our label of hybrid-activities.

With these terminological and theoretical clarifications in mind, the next section will address the specific topic of DVs in Russian.

<sup>10</sup> This is explicitly claimed in Paducheva (2009: 111): “If a verb is momentary it cannot be telic”.

## 2.3. Degree verbs in Russian

Due to the cluster structure of the Russian verbal system, one has to frame the DVs topic in a specifically-attuned way, to account for the existence of both ‘PF’ and ‘IPF’-DVs. Such pairs correspond, *mutatis mutandis*, to pairs consisting of H-ACTs and ACCs (i.e., Paduceva’s ACC pairs)<sup>11</sup>. More Specifically, DVs may belong to three sorts of cluster:

- i. DV-clusters, based on a DV pivot;
- ii. DV/ACC-clusters, i.e. DV-clusters including an ACC member;
- iii. ACC/DV-clusters, i.e. ACC-clusters including a DV member.

The following section is devoted to type (i), while the remaining types will be treated in §2.3.2.

## 2.3.1. Degree verb clusters

DV-clusters are built around an ‘IPF’-DV pivot with its cognate ‘PF’-DV member, possibly accompanied by semantically specific derivatives (31). The examples in (32) correspond to the English sentences in (26b-d) and lead to the same theoretical conclusions arrived at above as for the telic inclination of DVs, with the following additional qualification concerning the correct interpretation of the ‘IPF’ verbs in examples (a) and (c). As a matter of fact, although Russian (and more generally Slavic) ‘IPF’ predicates may often convey an atelic reading, ‘IPF’-DVs should always be regarded as telic with respect to the contextually relevant contingent telos, and can only be viewed as atelic in relation to the standard/maximal telos. Interestingly, a similar interpretation has been put forth, *mutatis mutandis*, with respect to (26b) above:

(31) ‘IPF’-DV *snižát’* – ‘PF’-DV *snízit’*, ‘IPF’-DV *snižát’sja* – ‘PF’-DV *snízit’sja* ‘lower’

- (32) a. ‘IPF’-DV:       Úroveň vodý *snižálsja* dva dnja.  
                          ‘The water level lowered for two days’.
- b. ‘PF’-DV:       Úroveň vodý *snízilsja* na 30 sm za dva dnja.  
                          ‘The water level lowered by 30 cm in two days.
- c. ‘IPF’-DV:       Úroveň vodý *snižálsja* na 30 sm dva dnja.  
                          ‘The water level lowered by 30 cm for two days’.

The discussion in § 1.3 showed that a common constitutive feature of both ACC and DV semantics is the incremental theme function, substantiated by compatibility with adverbs such as *gradually* / *X by X* and the like. This is also true for Russian, where modifiers like *postepénno* ‘gradually’ and *X-za-X* are efficient tests for incrementality (Braginsky & Rothstein 2008) and granularity: in addition to (34), see also (11). While *postepénno* is compatible with both ACCs and DVs (cf. *a* and *c*), compatibility with *X-za-X* modifiers

<sup>11</sup> Indeed, for symmetry reasons, the members of the latter pairs might also be called, respectively, ‘IPF’-ACCs and ‘PF’-ACCs. This, however, would create some confusion whenever verbs such as *čítát* ‘read’ are used intransitively in their purely ACT reading. We thus prefer the Vendlerian-oriented terminology proposed in § 2.1.

depends on the verb's granularity (cf. *b* and *d*). However, as claimed for (21-22), granularity is a mere effect of the pragmatic conceptualization of the event, and thus cannot be considered a characterizing feature:

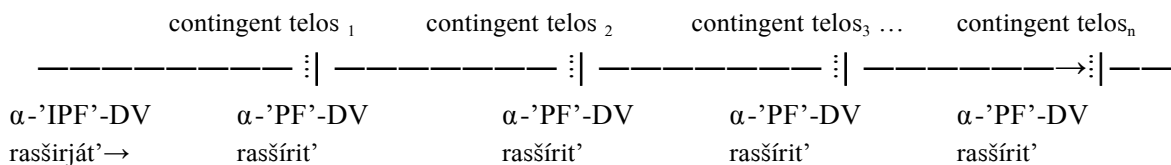
- (34) [ACC cluster]
- a. H.ACT: Iván postepénno 'IPF' *pisál* statjú.  
'Ivan gradually wrote a/the article'.
  - b. H.ACT: Iván 'IPF' *pisál* statjú straníca za stranícej.  
'Ivan wrote a/the article page-by-page'.
  - c. ACC: Iván postepénno 'PF' *napisál* statjú.  
'Ivan gradually wrote the article'.
  - d. ACC: Iván 'PF' *napisál* statjú straníca za stranícej.  
'Ivan wrote the article page-by-page'.
- (35) [highly granular DV-cluster]
- a. 'IPF'-DV: On postepénno *rasširjál* granícy svoegó učástka.  
'He gradually extended the limits of his allotment'.
  - b. 'IPF'-DV: On *rasširjál* granícy svoegó učástka metr za métrom.  
'He extended the limits of his allotment meter-by-meter'.
  - c. 'PF'-DV: On postepénno *rasširil* granícy svoegó učástka.  
'He gradually extended the limits of his allotment'.
  - d. 'PF'-DV: On *rasširil* granícy svoegó učástka metr za métrom.  
'He extended the limits of his allotment meter-by-meter'.
- (36) [poorly granular DV-cluster]
- a. 'IPF'-DV: Svet fonarěj/sad postepénno *želtél*.  
'The lantern light/the garden gradually grew yellow'.
  - b. 'IPF'-DV: ?? Svet fonarěj/sad *želtél* ton za tónom.  
'The lantern light/the garden grew yellow tone-by-tone'.
  - c. 'PF'-DV: Svet fonarěj/sad postepénno *poželtél*.  
'The lantern light/the garden gradually grew yellow'.
  - d. 'PF'-DV: ?? Svet fonarěj/sad *poželtél* ton za tónom.  
'The lantern light/the garden grew yellow tone-by-tone'.

In order to isolate the set of DVs in Russian, however, one should best observe their compatibility with purely comparative adverbials, such as *porjádčno* 'perceptibly', *značitel'no*, *oščutímo*, *zamétno* 'noticeably', *na porjádok* 'by some measure', *něskol'ko* 'somewhat' (cf. examples 14-15). These adverbs explicitly indicate the event's differential change, i.e. its gradual development towards a contingent (or possibly standard/maximal) telos and crucially exclude both H-ACTs and ACCs. Compare (37) with (38-39). It should also be noted that a subset of Russian DVs also admit adverbs like *namného* 'by a lot' and *ne namného* 'by a little', which by and large discriminate  $\alpha$ -IPF/'PF'-DVs from  $\beta$ -IPF/'PF'-DVs, to the extent that a robust distinction between  $\alpha$  and  $\beta$  can be drawn:

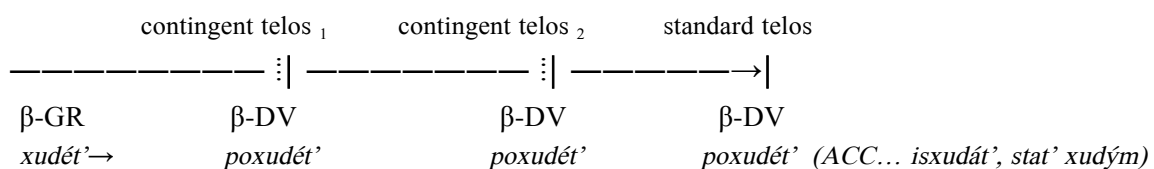
- (37) a. H.ACT: \*Iván □značitel'no / porjádčno / namného □ 'IPF' *čítal* knígu.  
'I. read a/the book □perceptibly / noticeably / by a lot□'.  
b. ACC: \*Iván □ značitel'no / porjádčno / namného □ 'PF' *pročítal* knígu.  
'I. read a/the book □perceptibly / noticeably / by a lot□'.
- (38) [highly granular  $\alpha$ -DV]
- a.  $\alpha$ -IPF'-DV: Vsjákij raz soséd □značitel'no / porjádčno / namného □ *rasširjál* granícy svoegó učástka.

- ‘Each time the neighbor □perceptibly / noticeably / by a lot□ extended the limits of his allotment’.
- a'.  $\alpha$ -‘IPF’-DV: Vsjákij raz soséd □namného / na páru méetrov□ *rasširjál* granícy svoegó učástka.  
‘Each time the neighbor extended the limits of his allotment □by a lot / by a couple of meters□’.
- b.  $\alpha$ -‘PF’-DV: Próšlym létom soséd □značitel’no / porjádóčno / namného□ *rasširil* granícy svoegó učástka.  
‘Last summer the neighbor □perceptibly / noticeably / by a lot□ extended the limits of his allotment’.
- b'.  $\alpha$ -‘PF’-DV: Próšlym létom soséd □namného / na páru méetrov□ *rasširil* granícy svoegó učástka.  
‘Last summer the neighbor extended the limits of his allotment □by a lot / by a couple of meters□’.
- (39) [highly granular  $\beta$ -DV]
- a.  $\beta$ -‘IPF’-DV: Vsjákij raz Ínna □značitel’no / porjádóčno / ??namného□ *xudéla* péréd ekzáménami.  
‘Every time Ínna grew thin □perceptibly / noticeably / by a lot□ before the exams’.
- a'.  $\beta$ -‘IPF’-DV: Vsjákij raz Ínna □na páru kilográmMOV / ??namného□ *xudéla* péréd ekzáménami.  
‘Every time Ínna grew thin □by a couple of kilos / by a lot□ before the exams’.
- b.  $\beta$ -‘PF’-DV: Ínna □značitel’no / porjádóčno / ??namného□ *poxudéla* péréd ekzáménami.  
‘Ínna grew thin □perceptibly / noticeably / by a lot□ before the exams’.
- b'.  $\beta$ -‘PF’-DV: Ínna □na páru kilográmMOV / ??namného□ *poxudéla* péréd ekzáménami.  
‘Ínna grew thin □by a couple of kilos / by a lot□ before the exams’.

As noted in § 1.3, the crucial contrast between  $\alpha$ - and  $\beta$ -DVs is their different inclination to present a virtually endless number of contingent telē, without ever reaching the standard/maximal telos. In (38), for instance, there is no limit to the number of contingent telē, since (pragmatic considerations aside) the extension of an allotment is potentially infinite. The following drawing illustrates the situation:



By contrast, in cases like (39-40), the telos implied by  $\beta$ -DV-clusters can be a contingent one (40a) or the standard/maximal telos (40b). Thus, ‘PF’ *poxudét*’ in (40a) presupposes an endless development of the event, whereas its cognate ‘PF’ *isxudát*’ (40b) is potentially bounded by a virtual end:



- (40) a. V prošlom godú Gleb ‘PF’ *poхудél*, a v étom ‘PF’ *poхудél* eščě ból’še.  
 ‘Last year Gleb grew thin, and this year he grew ~~much~~ thinner’.  
 b. V prošlom godú Gleb ‘PF’ *poхудél*. Skóro on *stánet sovsém xudým* (‘PF’ *isxudáet*).  
 ‘Last year Gleb grew thin. Soon he will become completely thin’.

It is important to realize that the attainment of a contingent telos by a DV should not be confused with the temporal boundary presupposed by DELs. In the former case (41), every differential stage involves a telic change of state, while this does not occur with DELs (42):

- (41)  $\alpha$ -‘PF’-DV: Na prošloj neděle doxódy kompánii *výrosli* na 5 %, \*a potom snóva *stáli* *rastí* s nuljá.  
 ‘Last week the corporate income grew by 5 %, and then started growing again from the initial level’.  
 (42) DEL: Gleb ‘PF’ *počítal* statjú, a potom ‘PF’ snóva náčal čítat’ snačála i ‘IPF’ čítal, poká ne ‘PF’ pročítal do koncá.  
 ‘Gleb read the article for a while, but then started reading it again from the beginning and read it until the end’.

From the morphological point of view, one should notice that  $\beta$ -DVs tend to be deadjectival (cf. *xudój* ‘thin’ ~ ‘IPF’-DV *xudét* ‘grow thin’) and thus presuppose the existence of periphrases like *stat’ xudým* ‘become thin’, which usually accept to be emphasized by *sovsém* ‘completely, at all’ (cf. *stat’ sovsém xudým* ‘became completely thin’). By contrast,  $\alpha$ -DVs may or may not derive from adjectives (cf. *usložnját* ‘complicate’ ~ *slóžnyj* ‘hard, difficult’ vs *prevosxodit’* ‘exceed’ ~ ???). One can reasonably surmise that the adjectives implied by  $\alpha$ - vs  $\beta$ -DVs are, respectively, open-scale vs closed-scale adjectives, but this should best be addressed by further inquiry.

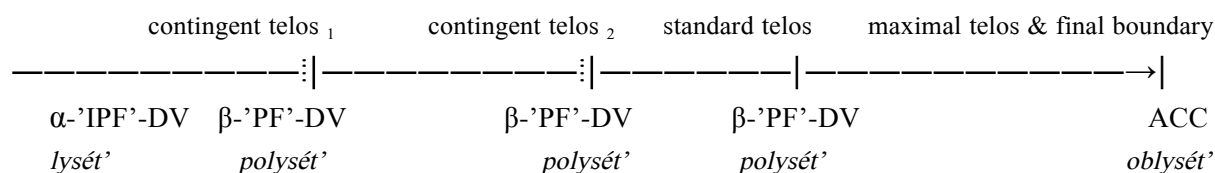
### 2.3.2. Clusters including a degree verb and an accomplishment

English DVs may also correlate with Russian DV/ACC-clusters or with ACC/DV-clusters (cf. types ii-iii in §2.3).

We first analyze the former type. Although these clusters are also based on an ‘IPF’-DV pivot, they differ from DV-clusters (described in the previous section) due to the presence of an ACC member. This has an important consequence, which singles out DV/ACC-clusters even with respect to  $\beta$ -DV-clusters (cf. ex. 39). The latter involve DVs which can designate the standard/maximal telos in the relevant contexts (specially through their ‘PF’ member). DV/ACC-clusters, by contrast, include an ACC member which, in and by itself, necessarily designates the standard/maximal telos. In practice, DV/ACC-clusters include a triple consisting of an ‘IPF’-DV, a ‘PF’-DV and an ACC, all referring to the same lexical concept. The existence of these triples underlines the contrast with respect to the English verbal system; once again, Russian exhibits a higher degree of explicitness in expressing the notion of telicity:

- (43) ‘IPF’-DV + ‘PF’-DV + ACC: ‘IPF’ *tolstét’* – ‘PF’ *potolstét’* – ‘PF’ *rastolstét’* ‘fatten’
- V prošlom měsjače Ínna síl’no *tolstéla*, a v étom eščě silnéj *potolstéla*.  
‘Last month Ínna fattened a lot, and she fattened more this month’
  - V prošlom měsjače Ínna síl’no *potolstéla*, a v étom eščě silnéj *potolstéla* (a pózže okončatel’no *rastolstéla*).  
‘Last month Ínna fattened a lot, and she fattened more this month (and later turned out completely fat)’
  - V prošlom godú Ínna *rastolstéla*, \*a pózže eščě silnéj *potolstéla*.  
‘Last month Ínna got fat, and later she fattened more’
- (44) ‘IPF’-DV + ‘PF’-DV + ACC: ‘IPF’ *tréskatsja* - ‘PF’ *potréskatsja* - ‘PF’ *rastréskatsja* ‘crack’
- V dekabré bak oščutímo *tréskalsja*, a v janvaré eščě sil’nej *potréskalsja*.  
‘The boiler noticeably cracked in December, and got even more cracks in January’
  - V dekabré bak oščutímo *potréskalsja*, i eščě sil’nej *potréskalsja* v janvaré (a potóm sovsém *rastréskalsja*).  
‘The boiler noticeably cracked in December, and got even more cracks in January (and later turned out completely cracked)’
  - V dekabré bak *rastréskalsja*, a \*v janvaré eščě sil’nej *potréskalsja*.  
‘The boiler cracked completely in December, and cracked even more in January’
- (45) ‘IPF’-DV + ‘PF’-DV + ACC: ‘IPF’ *lysét’* – ‘PF’ *polysét’* – ‘PF’ *oblysét’* ‘grow bald’
- V prošlom godú on síl’no *lysél*, v étom eščě silnéj *polysél* (a pózže sovsém *oblysél*).  
‘Last year he lost a lot of hair, and this year he lost even more of it (and later he became completely bold)’.
  - V prošlom godú on síl’no *polysél*, a v étom eščě silnéj *polysél* (a pózže sovsém *oblysél*).  
‘Last year he lost a lot of hair, and this year he lost even more of it (and later he became completely bold)’.
  - V prošlom godú on *oblysél*, \*a v étom godú eščě silnéj *polysél* / \*a v étom godú eščě silnéj *oblysél*.  
‘Last year he became bold, and this year he lost even more hair / and this year he became even more bold’.

The following drawing depicts the semantic space of the triple in (45):



As announced above, Russian DVs may also belong to an ACC/DV-cluster (type iii), in which they emerge as derivatively connected with a H-ACT pivot and its ACC cognate. See, e.g.: ‘IPF’ H-ACT *pórtit’* - ‘PF’-DV *podpórtit’* (or ‘PF’-DV *popórtit’*) - ‘PF’ ACC *ispórtit’* ‘spoil’, or ‘IPF’ H-ACT *tájat’* - ‘PF’-DV *podtájat’* - ‘PF’ ACC *rastájat’* ‘melt’. Here, in contrast to the many similarities observed so far (over and above the ‘PF’ / ‘IPF’ divide typical of all Slavic languages), a sharp difference between the Russian and the English verbal system emerges, as shown by the different reaction to the use of comparative adverbs (46-47). This is perhaps a point that deserves some emphasis. By viewing verbs such as



*podpórtit*’ and *podtájat*’ under this specific light – namely as members of the DV set – their peculiar status in the Russian verbal system seems to stand out in an unprecedented way:

- (46) a. A misunderstanding has noticeably *spoiled* John’s relationship with Ann.  
 b. ‘IPF’ H-ACT ?? Neponimánie značitel’no *pórtilo* otnošénija Džóna s Ánnoj.  
 c. ‘PF’ ACC \* Neponimánie značitel’no *ispórtilo* otnošénija Džóna s Ánnoj.  
 d. ‘PF’-DV Neponimánie značitel’no *podpórtilo* otnošénija Džóna s Ánnoj.
- (47) a. The ice has noticeably *melt*.  
 b. ‘IPF’ H-ACT \* Led porjádóčno *tájal*.  
 c. ‘PF’ ACC \* Led porjádóčno *rastájal*.  
 d. ‘PF’-DV Led porjádóčno *podtájal*.

We would like to conclude our examination with a brief note on the problem of idiosyncratic lexicalization, with an example from Italian, English and Russian. While It *invecchiare* and *diventare vecchio* are ambiguous between  $\alpha$ - and  $\beta$ -reading, English presents two distinct options:  $\alpha$ -DV *get older* and  $\beta$ -DV *get old*, which in addition (and just like It *invecchiare* / *diventare vecchio*) exhibits actional hybridism because of its possible ACH reading. In general, the English and Italian actional hybrids typically correlate in Russian with DV/ACC-clusters, whose members separately lexicalize the DV and ACC readings (cf. Eng *darken*, It *scurirsi* / *diventare scuro*, Rus ‘IPF’-DV *temnét*’ – ‘PF’-DV *potemnét*’ – ‘PF’ ACC *stemnét*’, with the last verb only used in impersonal contexts). However, the situation of *get older* / *get old* is special, because it corresponds to two separate Russian verbal clusters:

- (48) a.  $\beta$ -DV-cluster: ‘IPF’  $\beta$ -DV *starét*’, ‘PF’  $\beta$ -DV *postarét*’ ‘get older’;  
 b. ACC-cluster: ‘IPF’  $\beta$ -DV *stáritsja*, ‘PF’ ACC *sostáritsja* ‘get old’ (cf. *postepénno sostáriljsja* ‘got old gradually’ vs. \* *značitel’no sostáriljsja* ‘got old noticeably’).

This idiosyncratic lexicalization may possibly depend on the fact that *stáritsja* only refers to human beings, whereas *starét*’ may concern any kind of referent.

### Conclusion

The present paper has proposed a comparative analysis of DVs in English and Russian. In the first part, we discussed the special semantic nature of these predicates, providing arguments to view them as inherently comparative words (hence their denomination).

The second part has shown that the peculiar verbal structure of the Russian (and more generally Slavic) verbal system has an impact on the lexicalization of DVs. These may belong to three types of Russian verb clusters: DV-clusters, DV/ACC-clusters and ACC/DV-clusters. One should also observe that Russian exhibits a high degree of productivity in building DVs by means of preverbs, as in *Iván perepíl Márka za dva stakána*

‘Ivan drank two glasses more than Mark’ [lit. ‘I. surpassed M. in drinking by two glasses’]. Although one should best leave these important peculiarities to further research, we hope that the present approach may provide a general framework for the proper definition of DVs in Russian and possibly other Slavic languages.

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