Perfectivity in Russian, Czech, and Colloquial Upper Sorbian

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In the talk, I reemphasize the importance of paths for aspect semantics (Filip 2008; Gehrke 2008; Kagan 2016) by discussing aspect use in colloquiual Upper Sorbian (CUS), as described in Breu (2000) and Scholze (2008), from the point of view of inner-Slavic variation (Dickey 2000; Petruchina 2000). Specifically, I will compare CUS to Czech (CZ) and Russian (RU).

The use of Russian perfective verb forms conveys discourse connectedness (Barentsen 1995; Dickey 2000). This notion more or less equals target state relevance, which, following Grønn (2004), can be modelled as a pragmatic implicature arising from the semantic condition of target state validity (the reference time has to end when the target state is in force). Given that there can be only one reference time per clause, target state validity explains the inapplicability of Russian perfectives in iterative contexts like in (1), as event iteration leads to more than one target state (the systematic exception being the 'summative reading' which establishes compatibility with the PFV condition by summing up several events to produce a single target state, see Zaliznjak & Šmelev 1997:19). The situation is different in Czech, where both pf and ipf aspect are possible in pluractionals (Dickey 2000; Petrukhina 2000; Gehrke 2002), the actual choice being dependent on pragmatic factors (Dübbers 2015), see (2). This suggests that target state validity is too strong a semantic requirement for Czech perfectives. A weaker notion of perfectivity builds on maximality (Filip 2008; Altshuler 2014), which says that perfective verbs denote sets of events which include only maximal event stages. Since maximality is reconcilable with plural event denotation, the possibility of perfectives like (2) is expected. Maximality (totality) for Czech perfectives and target state relevance (connectedness) for Russian perfectives has been argued to explain differences in aspect usage also in historical present (Stunová 1993, 1994) and general-factuals (Mueller-Reichau 2016). But most importantly for this talk, both these notions of perfectivity explain why perfectives disallow the expression of "ongoingness", i.e. the expression of an internal viewpoint (Smith 1991) on the event, with the reference time being properly included in the event time, cf. (3),(4).

While Colloquial Upper Sorbian shares with Czech the possibility of perfectives in iterative contexts, as shown in (5), it crucially differs from Russian and Czech in that ongoingness may be expressed by (what looks like) perfective aspect, see (6) (judgments and orthography as in the sources indicated; the prefix "še-" is a contracted version of "pře"). To explain data like (6), the mentioned authors argue that CUS "perfectives" express terminativity, loosely defined as the action having an inherent goal/telos (\approx telicity). The proposal accounts for many of the reported facts, but it falls short of explaining the use of imperfective verbs in distributives that do have an inherent goal, as the one in (7). It likewise cannot explain in cases like (8), where it would be difficult to deny the presence of a telos. Another issue is why the generic (9) is perfective, whereas the one in (10), which does not seem to differ much as far as telicity is concerned, is imperfective.

Toops (2001) proposes that apparent perfectives express determined actions, which he characterizes as "one-time goal-directed". And indeed, if we sharpen Toops' proposal defining determinedness (following Krifka 1989 and Zwarts 2005) as in (11), we get an explanation for (7), as distributivity violates unidimensionality. Moreover, (8) makes sense now because the process of learning a poem usually goes in cycles, thus violating directedness (this pragmatic analysis implies that the star before *nawukne* is actually too strong, which informants seem to confirm). Wrt (9) we can argue that the interpretation of the speed adverbial presupposes a determined path (because $v = \frac{s}{t}$).

The PFV-operator of CUS should thus be stated as in (12). Note that, once the definition of DET has been solved in accordance with (11), quantification over p is not vacuous, as it might seem at first sight.

The overall picture that is emerging shows an increase in semantic content of perfectivity in the different Slavic languages. The notion of a bounded path found in colloquial Upper Sorbian is fundamental to all perfectives. Czech perfectives in addition include a maximality requirement. On top of that, Russian perfectives entail target state validity.

- (1) On často prodaval^{IPFV} tol'ko odnu knigu. (*prodal)

 'He often sold only one book.'

 RU
- (2) *Často prodal*^{PFV} *jen jednu knihu*.

 'He often sold only one book.'
- (3) Kogda ja prišel, on perevel PFV tekst. not: 'When I arrived, he was translating a text.'
- (4) Když jsem přišel, přeložil^{PFV} text.
 not: 'When I arrived, he was translating a text.'
- (5) Wón je husto jenož jednu knihu předat^{PFV}.

 he AUX often only one book sell.PST

 'He often sold only one book.'
- (6) Jurij jo rune jen text šełožit^{PFV}, hdyž sym ja nutř šišoł.

 J. AUX rune one text translate.PST when AUX I in go.PST

 'Jurij was translating a text, when I came in.' (Scholze 2008:233)

 CUS
- (7) Ja šedawam^{IPFV} rune peć knijow.'I am selling five books now.' (Breu 2000)CUS
- (8) *Tón wukne*^{IPFV} rune tón basejn. (*nawukne)

 'He is learning the poem now.' (Scholze 2008)

 CUS
- (9) Tón basne chětř nawukne PFV . (*wukne) 'He learns poems quickly.' (Scholze 2008)
- (10) Wón šedawa^{IPFV} awta.

 'He sells cars (= is a car seller).'

 CUS
- (11) a. **Determinedness:** $\forall P.DET(P) \leftrightarrow \forall e.P(e) \rightarrow UNI(e) \land DIR(e) \land BND(e)$ [A predicate P is "determined" if it characterizes a set of unidimensional, directed, and bounded events]
 - b. Unidimensionality: $\forall e.UNI(e) \leftrightarrow \forall e'.e' \leq e \rightarrow \exists p. \texttt{TRACE}(e') \leq p \land \neg \exists p'. \texttt{TRACE}(e') \leq p' \land p \neq p'$ [An event e is "unidimensional" if the paths of all of its stages are subpaths of one and the same path]
 - c. **Directedness:** $\forall e.DIR(e) \leftrightarrow \forall p \forall q.p \leq \text{TRACE}(e) \land q \leq \text{TRACE}(e) \land \neg p \bigcirc q \rightarrow \text{SPACE}(p) \neq \text{SPACE}(q)$ [An event is directed if there are no two non-overlapping subpaths that would cover the same space]

- d. **Boundedness:** $\forall e.BND(e) \leftrightarrow \forall p.\mathsf{TRACE}(e) = p \rightarrow \neg CUM(p)$ [An event is "bounded" if its path is not cumulative (CUM(ulativity) being defined as in Zwarts 2015:751)]
- (12) $PFV_{CUS} \Rightarrow \lambda P \lambda t \exists e \exists p. P(e) \land DET(P) \land t \bigcirc \tau(e)$
- (13) $PFV_{CZ} \Rightarrow \lambda P \lambda t \exists e \exists p. P(e) \land DET(P) \land t \bigcirc \tau(e) \land t \supseteq \tau(e)$
- (14) $PFV_{RU} \Rightarrow \lambda P \lambda t \exists e \exists p. P(e) \land DET(P) \land t \bigcirc \tau(e) \land t \supseteq \tau(e) \land f_{end}(t) \subseteq f_{target}(e)$

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