Aspect Separated from Prefixes and the Secondary Imperfective Suffix in Russian and Czech
Petr Biskup

Goal: This paper proposes an Agree analysis of aspectual properties of verbal predicates and nominalizations in Russian and Czech.

The pattern: The aspectual interpretation of a predicate depends on aspectual morphology and is determined by the lastly-attached aspectual morpheme. Almost always, simplex verbs are imperfective and prefixation of simplex predicates brings about perfectivity (e.g. Vinogradov 1952, Karlík *at al.* 1995); see (1a-b) and (2a-b).

(1) a. motat'^{IPF} b. na-motat'^{PF} (R)   (2) a. čist^{IPF} b. se-číst^{PF} (CZ)
    wind   on-wind   read   with-read
    'wind'   'wind sth. on sth.'   'read'   'add'

Prefixed verbs can be imperfectivized by the **secondary imperfective** (SI) **suffix**, as in (3a) and (4a). **Lexical prefixes** (LPs) always attach before the secondary imperfective suffix, as evidenced by the unacceptable (3b) and (4b) (*čitat* is grammatical only with the meaning 'read repeatedly' because Czech, contrary to Russian, still has the productive iterative affix -(*v*)*a*-).

(3) a. na-mat-yva-t'^{IPF} b. mat-yva-t' (R)   (4) a. s-čit-a-t^{IPF} b. čit-a-t (CZ)
    on-wind-SI-INF   wind-SI-INF   with-read-SI-INF   read-SI-INF
    'wind'   only arch.: 'wind repeatedly'   'add'   only: 'read repeatedly'

Superlexical prefixes (SPs) are different. Some of them attach to the stem before the SI suffix; compare (5a) and (6a) with (5b) and (6b), with completive *do-*. This ordering is again supported by the fact that the forms in (5c) and (6c) can only have the iterative meaning, not the progressive one.

(5) a. do-rabot-a-t'^{PF} b. do-rabat-yva-t'^{IPF} c. rabat-yva-t'^{IPF} (R)
    to-work-TH-INF   to-work-SI-INF   work-SI-INF
    'complete working'   'complete working'   'work repeatedly'

(6) a. do-prac-ova-t^{PF} b. do-prac-ová-va-t^{IPF} c. prac-ová-va-t^{IPF} (CZ)
    to-work-TH-INF   to-work-TH-SI-INF   work-TH-SI-INF
    'complete working'   'complete working'   'work repeatedly'

Other SPs cannot attach to a (certain) predicate before adding the SI suffix. The inceptive *za-* attaches to the imperfective *guljat'* in (7a) but in the next step, the imperfectivized form in (7b) cannot have the inceptive meaning (for *za-* below SI see e.g. Tatevosov 2013). Similarly, attaching the SI suffix (8b) is not possible after merger of the distributive *po-* in (8a).

(7) a. za-gul-ja-t'^{PF} b. za-gul-iva-t'^{IPF} (8) a. po-mrz-nou-t^{PF} b.* po-mrz-a-t^{IPF}
    behind-walk-TH-INF behind-walk-SI-INF   on-freeze-TH-INF   on-freeze-SI-INF
    'start walking'   *'start walking' (R)   'freeze one by one'   (CZ)

If the prefixes attach after the SI suffix (added to a prefixed perfective verb), the results is grammatical; see the inceptive *za-* in (9a), derived from (9b), and the distributive *po-* in (10a), attached to (4a). (9c) and (10b) show that *za-* and *po-* are indeed added after the SI suffix.

(9) a. za-ot-kry-va-t'^{PF} b. ot-kry-va-t'^{IPF} c.* za-ot-kry-t'^{PF} (R)
    behind-away-cover-SI-INF   away-cover-SI-INF   behind-away-cover-INF
    'start opening'   'open'

(10) a. po-s-čit-a-t^{PF} b.* po-se-čis-t^{PF} (CZ)
    on-with-read-SI-INF   on-with-read-INF
    'add one by one'

Analysis: The system deriving aspectual properties is as minimal as possible. There is only downward Agree, no m-command and only one Asp(ectual) head responsible for interpretation (note that biaspectuality is a rare phenomenon that typically occurs with loanwords because they do not have a stable place/features in the aspectual system yet), which

has an unvalued asp-feature. Prefixes (both LPs and SPs) bear a valued pf-feature and the SI suffix a valued ipf-feature. The root ($\sqrt{}$, and the verbalizing v) do not have an asp-feature (with the exception of perfective unprefixed cases like *dat'* 'give') and the default interpretation of Asp is imperfective. This brings about imperfectivity with unprefixed predicates. Assuming a correspondence between the time of the attachment of a morpheme and its structural position, the hierarchy looks like (11). Then, aspectual properties of (1-10) are derived by minimality, i.e. determined by the element that is structurally closest to Asp.

(11) $[\text{Asp}_{\text{unval asp-f}} [\text{SP}_{\text{val: pf}} [\text{SI}_{\text{val: ipf}} [\text{SP}_{\text{val: pf}} [\text{LP}_{\text{val: pf}}]]]]]$

Since there is no m-command Agree, the SI marker cannot represent Asp: we could not derive perfective predicates with SP higher than $-((y)v)a$- like (9a) and (10a) (in addition, we would need overwriting of the aspectual value of Asp). Thus, also all prefixes must be lower than Asp. Romanova (2004) and Tatevosov (2016) argue that $-((y)v)a$- merges inside vP in Russian. In Czech, scopal facts also argue for a position of $-((y)v)a$- below the projection with the agent: (12a) is derived by attaching cumulative *na*- after $-((y)v)a$- in (12b), not before it, as in (12c). Further, *na*- quantifies over the object (12a), but not over the subject; see (13), where singular is also possible. Hence, SPs like cumulative *na*- merge below the head introducing the agent and above $-((y)v)a$-.

(12) a. na-s-bír-a-t$^{\text{PF}}$ něco/jablka/*jablko b. s-bír-a-t$^{\text{IPF}}$ c.   * na-se-br-a-t$^{\text{PF}}$
          on-with-take-SI-INF sth./apples/apple   with-take-SI-INF   on-with-take-TH-INF
          'pick amount of sth./apples/*apple'   'pick'   (CZ)

(13) Soused(i)   něco nasbíral(i). (14) a. za-bol-e-va-t'$^{\text{IPF}}$ b. vy-prac-ová-va-t$^{\text{IPF}}$
        Neighbor(s).NOM sth. picked   behind-pain-TH-SI-INF   out-work-TH-SI-INF
        'The neighbor(s) picked amount of sth.'   'become ill' (R)   'work out'   (CZ)

The head introducing the agent is not v: 1. since categorizing heads standardly merge immediately above the $\sqrt{}$. 2. The theme vowel (TH) provides information about the syntactic category and determines the conjugation class, so it is treated as v. And TH is closer to $\sqrt{}$ than $-((y)v)a$-; see (14) (but see Matushansky 2009). Thus, the relevant piece of structure looks like (15), with the higher SPP for SPs like the cumulative *na*- in (12), and the lower SPP for SPs like the completive *do*- in (5) and (6). The comparison of the inceptive *za*- in (9) and (14) shows that there is not universal hierarchy between (certain) SPs and $-((y)v)a$-; cf. also the ipf. (6b) with the completive pf. *do-vy-pis-ova-t* 'complete writing out' (CZ), both containing SI.

(15) $[_{\text{AspP}} \text{Asp}_{\text{u asp-f}} [_{\text{VoiceP}} \text{Ag} [\text{Voice} [_{\text{SPP}} \text{SP}_{\text{pf-f}} [_{\text{SIP}} \text{SI}_{\text{ipf-f}} [_{\text{SPP}} \text{SP}_{\text{pf-f}} [_{v\text{P}} v [_{\sqrt{}\text{P}} \sqrt{} [_{p\text{P}} \text{LP}_{\text{pf-f}}]]]]]]]]]]$

I employ the standard head movement, with dominating heads being closer to Asp than morphemes adjoined to them by head movement. (As to linearization of SPs, there are at least two possibilities, syntactic: right adjunction of the attracted head (similarly for the Czech negation) or PF: linearization to the left (no local dislocation)). Asp is not present in all structures (Schoorlemmer 1995, Gehrke 2008, Tatevosov 2011 for Russian participles and nominalizations, Procházková 2006 for Czech); see the grammatical prefixed (16).

(16) načal   na-pisa-n-ij-e   (17) začal   vy-pis-ová-n-í$^{\text{IPF}}$ /   * vy-ps-á-n-í$^{\text{PF}}$
        started PF-write-N/T-NOUN-ACC   started out-write-SI-N/T-ACC   out-write-TH-N/T.ACC
        'started writing' (Tatevosov 2011)   'started writing out'

Contrary to (16), since Czech complex event nominals have Asp, features of aspectual morphemes value it and bring about semantic aspect; compare $^{\text{OK}}$(16) with $^{*/\text{OK}}$(17). (15) predicts that lower SPs should be possible if SI is present. The repetitive ipf. *přepisování* 'rewriting' shows that this is correct. Tatevosov (2011) uses cases like (16) as an argument for severing perfectivity from prefixes. If it is correct that prefixes are prepositions (e.g. Matushansky 2002) that incorporate into the predicate (e.g. Biskup 2019), then the same argument can be done e.g. with Czech result *-ní* nominals and zero nominals, which lack Asp. See the prefixed (so formally pf.) *nákup* 'shopping', possible in *nákup začal* 'shopping started' and compare it with $^{\text{OK}}$*nakupování*$^{\text{IPF}}$ *začalo* 'buying started' and **nakoupení*$^{\text{PF}}$ *začalo*.