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Default aspect based on state change

The paper shows that a single aspect operator successfully generates the interpretations of Russian perfective and imperfective forms, if the following requirements are met. First, the default aspect operator has to be based on the notion of state change. Secondly, the output of the operator is filtered by semantic and morphological blocking constraints.

Key words: verbal aspect, default operator, event realization, state change, contextual interpretation

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Дефолтный аспект, основанный на смене ситуации

В данной статье мы показываем, как интерпретации видовых форм русского глагола успешно порождаются с помощью только одного аспектуального оператора. Для этого требуется, чтобы оператор дефолтного аспекта был основан на понятии смены ситуации, а выпуск оператора ограничивался двумя прагматическими фильтрами: семантической и морфологической блокировкой.

Ключевые слова: вид глагола, оператор дефолтного аспекта, смена ситуации, частные значения видов глагола

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1. Introduction

The term "default aspect" [Bohnemeyer, Swift, 2004] refers to approaches that seek to derive the interpretations that (im)perfective forms display in a language by means of a single zero operator that applies obligatorily at a certain point in the verbal derivation.[1] Later in the derivation, and outside of the scope of this paper, overt morphology may introduce additional operators to override the default output. Bohnemeyer and Swift (2004) make their default aspectual operator sensitive to the feature of telicity. I will reject this theoretical decision, arguing that replacing telicity by state change produces correct results for Russian.

The following assumptions will be taken for granted:[2] Besides Davidsonian eventualities, natural language ontology includes eventuality kinds [Gehrke, 2019]. Eventuality kinds are basically frames [Irmer, Mueller-Reichau, 2018], which can be of 1-state or 2-state content [Klein, 1994], whereby a predicate of 2-state content describes a Complex frame in which two frames are related via 'precedes' [Ruppenhofer et al., 2016, p. 83ff]. The two subframes correspond to Klein's source state and target state, see my definition of 'precedes' in (1).[3]

(1) a. Let F_1 and F_2 be two subframes of a complex frame F.
If PRECEDES(F_1,F_2), then SS(F, F_1) $\wedge$ TS(F, F_2).

b. Let F, F_1, F_2 be frames and e, e_1, e_2 Davidsonian eventualities.
If e INST F $\wedge$ e_1 INST F_1 $\wedge$ e_2 INST F_2 $\wedge$ SS(F, F_1) $\wedge$ TS(F, F_2),
then $\tau(e_1) < \tau(e_2) \wedge e_1 \supset\subset e_2$

[1] Apart from Bohnemeyer and Swift (2004), I am aware of only one further work that approaches Russian aspect from a default aspect perspective, i.e. Ramchand (2008). Filip (2008) likewise assumes only one zero operator, but in her theory imperfective meanings result from the non-application of that operator.

[2] Limitations of space prevent me from introducing these assumptions more carefully.

[3] J. Ruppenhofer et al. write about precedes that "[t]his relation occurs only between two Component frames of a single Complex frame [...]. It specifies the sequence of states and events that are definitional for a certain state-of-affairs." [Ruppenhofer et al., 2016, p. 84].

Russian verb formation proceeds in at least two derivational stages, a lexical stage followed by a second syntactic (superlexical) stage.[4] Verbal roots denote properties of eventuality kinds (2a).[5] So-called internal prefixes apply at the first stage to modify the eventuality kind supplied by the root, turning it into a Complex frame of 2-state content[6] – reminiscent of [Krongauz, 1998, p. 243f.] "script hypothesis" (2b). Secondary imperfective suffixes ("YVA") likewise attach low within the lexical stage.[7] Their impact consists in "recategorizing" [Lehmann, 1997] the stem as belonging to the class of 1-state-predicates. In the formalism used here, this is achieved by marking the discourse marker F_2 as truth-conditionally irrelevant, i.e. by deleting it from the DRS-universe (2c).

(2) a. [[*pis*-]] = λF [| WRITE(F)]

b. [[*podpis*-]] = λF [F_1, F_2, X, Y, Z | SIGN(F), WRITE(F_1), WRITTEN(F_2), SS(F,F_1), TS(F,F_2), AUTHOR(F,X), NAME(F,Y), FORM(F,Z)]

c. [[*podpisyva*-]] = λF [F_1, X, Y, Z | SIGN(F), WRITE(F_1), WRITTEN(F_2), SS(F,F_1), TS(F,F_2), AUTHOR(F,X), NAME(F,Y), FORM(F,Z)]

Against this theoretical background, I propose that the product of verb formation at the lexical stage is obligatorily subject to a zero operator DASP, very much in the sense of [Bohnemeyer, Swift, 2004].

2. Default aspect according to Bohnemeyer and Swift (2004)

On Bohnemeyer and Swift's (2004) account, zero coded predicates, i.e. predicates free of morphemes carrying aspectual meaning sensu stricto, trigger the application of a default aspectual operator, called DASP (3a), whose interpretation is subject to the principle of Event realization [Bohnemeyer, Swift, 2004, p. 286] (3b).

[4] The first stage is reminiscent of what Lehmann (1997, i.a.) or Mende et al. (2011) call the domain of alpha-verbs, or what Ramchand (2004, 2008) calls first-phase syntax.

[5] For purposes of formalization, I use compositional Discourse Representation Theory (DRT) enriched with a typed λ-calculus [Grønn, 2004, p. 48]. Frames and Subframes are represented as discourse markers F or F_n, respectively. Relations among (sub)frames, such as "SS" or "TS", correspond to conditions imposed on these discourse markers. Frame elements are likewise represented as discourse markers in the DRS-universe, their symbols being capital X, Y... Properties of Frame elements correspond to semantic restrictions put on these discourse markers, stated in the condition set.

[6] Only in rare cases, a non-prefixed stem has a 2-state-content, e.g. *bros*-.

[7] I am grateful to Gillian Ramchand for making that clear to me.

(3) a. DASP $\Rightarrow \lambda P\, \lambda t_{TOP} \exists\, e\, .\, REAL_E(P, t_{TOP}, e)$
b. A predicate P is realized by event e at topic time t_{TOP} iff at least the run time of a subevent e' of e that also falls under the denotation of P is included in t_{TOP}.

The output of DASP will differ for telic and atelic predicates. Telic predicates do not have the subinterval property. Therefore, to meet (3b), e' must be identical to e. If e' was some proper part of e, and if P was telic, P cannot be true of e and of e'. It follows that, with a telic predicate, no part of e smaller than e itself can be included in t_{TOP}. Accordingly, telic predicates express the temporal relation $\tau(e) \leq_T t_{TOP}$. Unlike telic predicates, atelic predicates have the subinterval property. As a consequence, event realization allows t_{TOP} to include not only the whole event e, but also a subinterval of e. Bohnemeyer and Swift's (2004) argue that the first option (e' = e) is pragmatically blocked for atelic predicates because this interpretation is what the alternatives, telic predicates, are specialized for expressing. Taken together this means that atelic predicates are predicted to express $t_{TOP} <_T \tau(e)$. The conditions imposed on interpretation by DASP match the conditions that [Bohnemeyer, Swift, 2004, p. 280] associate with aspectual operators in general (4).

(4) a. PFV $\Rightarrow \lambda P\, \lambda t_{TOP}\, \exists e\, .\, P(e) \wedge \tau(e) \leq_T t_{TOP}$
b. IPFV $\Rightarrow \lambda P\, \lambda t_{TOP}\, \exists e\, .\, P(e) \wedge t_{TOP} <_T \tau(e)$

Wrt aspectual coding, the theory makes correct predictions: Simplex verbs are (im)perfective depending on the (a)telicity of their root (5a). Prefixed verbs are perfective due to the telicizing impact of prefixation (5b).[8] YVA introduces IPF (4b) directly [Bohnemeyer, Swift, 2004, p. 274], deriving the imperfectives in (5c).

(5) a. *brosit'*: telic → pf; *pisat'*: atelic → ipf; *znat'*: atelic → ipf; ...
b. *vybrosit'*: telic → pf; *zapisat'*: telic → pf; *uznat'*: telic → pf; ...
c. *vybrasyvat'*: ipf; *zapisyvat'*: ipf; *uznavat'*: ipf; ...

Wrt the interpretation of Russian forms, however, Bohnemeyer and Swift (2004) analysis faces a problem. The IPFV-relation $t_{TOP} <_T \tau(e)$ rules out the possibility of letting the topic time properly include the event time, contra to fact:

(6) Ty kogda-nibud' vybrasyvala[IPF] televisor iz okna nomera,
kak Kit Ričards?
'Have you ever thrown a TV out of the window of your hotel room,
like Keith Richards?' (blognews.am/rus)

[8] Verbs like *zaviset'* or *vygljadit'* behave exceptionally because they are prefixed but imperfective, but there is reason to view them as exceptions that actually support the rule (cf. [Zaliznjak, Šmelev, 1997, p. 68]).

(7) Ne nado! Ja uže perevoračival[IPF] blin.
'No need. I already turned the pancake.' (constructed)

(6) and (7) represent the general-factual interpretation of the Russian imperfective. The temporal relation is $\tau(e) <_T t_{TOP}$, but this relation is orthogonal to the condition that Bohnemeyer and Swift's (2004) link to imperfectivity. To overcome this problem, I propose to base default aspect on state change instead of on telicity.

3. Default aspect based on state change

Taking a Kleinian state to be a subframe F_n of an eventuality kind F, I restate the principle of event realization as in (8b). If there are no subframes F_n (i.e. with 1-state predicates), the single eventuality kind F will count as final.[9] DASP can be adopted in its original version (3a), merely equipped with eventuality frames and adjusted to the formalism of DRT (8a).

(8) a. DASP $\Rightarrow \lambda P\, \lambda t_{TOP}$ [e, F | e INST F, $REAL_E(P, t_{TOP}, e)$]
b. A predicate of eventuality frames $\lambda F.P(F)$ is realized by eventuality e at topic time t_{TOP} iff the run time of that part of e that instantiates the final eventuality kind of F overlaps t_{TOP}.

3.1. DASP applied to 1-state predicates

If DASP applies to a 1-state-predicate like (2a), the result will be (9).

(9) λt_{TOP} [e, F, X, Y | WRITE(F), e INST F, AUTHOR(F,X), TEXT(F,Y), $\tau(e) \circ t_{TOP}$]

Figures 1 to 4 indicate the four logical possibilities of how the temporal overlap relation ("○") may manifest itself contextually.[10]

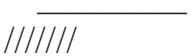

Fig. 1

Fig. 2

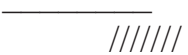

Fig. 3

Fig. 4

[9] The predicate 'instantiate' in (8b) corresponds to Carlson's (1980) realization relation. The renaming appears necessary to avoid confusion with the notion of "event realization".

[10] In Figures 1–16, solid horizontal lines will symbolize $\tau(e)$ for a declared eventuality token e; ///////// will be for the topic time; a vertical line will demarkate the moment when two eventuality tokens abut; a dotted line will indicate that the eventuality frame is uninstantiated.

I take two additional background assumptions to be operative. For one thing, I assume that, whenever ///////// (the topic time interval) transgresses the edge of the solid line (the run time of the eventuality token), this will imply the existence of a neighboring eventuality token e' (≠ e), cf. [Šatunovskij, 2009, p. 33]. Furthermore I assume that particular interpretations that the application of DASP allows for in principle may be filtered out by "semantic blocking" [Dowty, 1980; Kiparsky, 2005; Deo, 2012]: given a context in which two forms may be used, the expressive device which imposes more constraints on interpretation will win the competition.[11]

3.1.1. Ingressive reading (Figure 1)

Figure 1 draws the transfer from a time where the eventuality token e does not hold to a time where it holds. If the input was supplied by *pis-*, the interpretation would amount to the onset of a writing event. In Russian texts, now, the verb *pisat'* by itself will never be found to express 'start writing'. Arguably, the reason for this gap is the availability of a syntactic construction specialized in expressing onsets of processes, i.e. the phase verb *načat'* 'begin' plus an imperfective infinitive complement (19). I thus claim that a bare 1-state verb (e.g. *pisat'*) is semantically blocked from expressing the meaning of Figure 1.[12]

(10) Orlov načal pisat' pis'mo, a Grejg zakuril svoju trubku i molča ždal, poka graf zakončit.
'Orlov started writing a letter, and Greig lighted his pipe, waiting in silence until the count would have finished.' (RNC[13])

3.1.2. Progressive reading (Figure 2)

The interpretation of Figure 2 corresponds to the "progressive reading". The topic time is properly included in the time of the eventuality token, giving rise to the internal viewpoint effect. Modifying (10), we get (11)

[11] "If a language has two (equally simple) types of syntactic structures A and B, such that A is ambiguous between meanings X and Y while B has only meaning X, speakers should reserve structure A for communicating meaning Y (since B would have been available for communicating X unambiguously and would have been chosen if X is what was intended)" [Dowty, 1980, p. 32].

[12] Besides the phase verb construction, there is another systematic means of expressing the start of a process in Russian: prefixation by means of ingressive *za-*. A case in point is the verb *zakuril* in (10). Like the periphrastic *načat' kurit'* 'begin to smoke', the verb *zakurit'* 'start smoking' is specialized in expressing the meaning depicted in Figure 1. In the specific case of *pisat'*, it happens that the meaning 'start writing' is obviated for the form *zapisat'* by that this form lexically expresses the sense 'record'. I have nothing to say about when expressions like *zakurit'* are preferred over expressions like *načat' kurit'*, or vice versa.

[13] Russian National Corpus (http://ruscorpora.ru/).

as illustration, which is about a situation throughout which Greig was waiting and the count was writing. Both *ždal* and *pisal* actualize the interpretation in Figure 2.

(11) Grejg ždal molča, poka graf pisal pis'mo.
'Greig was waiting in silence while the count was writing a letter.'

3.1.3. Egressive reading (Figure 3)

In Figure 3, the topic time exceeds the right edge of the time of e. This reading will thus convey the message that the final stage of e has been left behind.

This case represents the mirror image of 3.1.1. And just like in that case, Russian provides grammatical means which serve the special function of expressing precisely the interpretation relevant to the issue. For one thing, Russian makes systematic use of the phase verb *končit'* 'finish' in combination with imperfective infinitives like, for instance, *pisat'*. Moreover, the completive prefix *do-* may productively be used to form perfective verbs like *dopisat'* ('finish writing'). Again I argue that these explicit means of expressing event termination semantically block the egressive reading from actualizing in the morphologically unmarked case, where there is no phase verb or *do*-prefix.

3.1.4. General-factual reading (Figure 4)

The predicate (9) also allows for the interpretation in Figure 4. In this case the topic time properly includes the whole time of the eventuality token. This implies two changes, the first leading from the non-existence of the eventuality token to its existence, the second from its existence to its non-existence.

Unlike the case discussed in 3.1.3, the interpretation in Figure 4 is attested for 1-state verbs. It is known as the "general-factual" meaning. (12) and (13) show well-known examples (cf. [Zaliznjak, Šmelev, 1997, p. 25]):

(12) Ja Vas ljubil.
'I once loved you.'

(13) Na ėtoj stene visela kartina.
'There was a picture hanging on this wall.'

3.2. DASP applied to 2-state predicates

When the meaning of a 2-state predicate like *podpisat'* (2b) serves as the input of DASP, it will be mapped onto (14).

(14) λt_{TOP} [e, e_1, e_2, F, F_1, F_2, X, Y, Z | SIGN(F), WRITE(F_1), WRITTEN(F_2), SS(F,F_1), TS(F,F_2), AUTHOR(F,X), NAME(F,Y), FORM(F,Z), e INST F, e_1 INST F_1, e_2 INST F_2 , $\tau(e_2) \circ t_{TOP}$]

The eventuality kind F associated with *podpisat'* involves a Kleinian source state (F_1) and a Kleinian target state (F_2). Each frame is instantiated in that a corresponding eventuality token (e, e_1, e_2) is declared in the universe of the DRS. The following Figures represent all of the logically possible relations that the general relation $\tau(e_2) \circ t_{TOP}$ may boil down to given the aspectual meaning in (14).

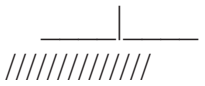

Fig. 5

Fig. 6

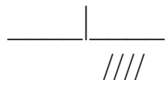

Fig. 7

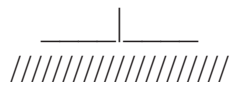

Fig. 8

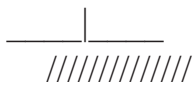

Fig. 9

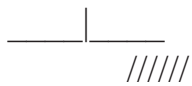

Fig. 10

3.2.1. Concrete-factual reading (Figure 5)

The "concrete factual" reading is described in [Švedova et al., 1980, p. 604] as expressing reference to a single situation presented as a concrete whole fact limited by a boundary ("konkretnyj celostnyj fakt, ograničennyj predelom"). This is just what is depicted in Figure 5: The "whole fact" corresponds to e_1 being fully embedded within the topic time; the "limitation by a boundary" to that the topic time ends within the time of e_2, thus entailing a change from e_1 to e_2. A classic example is (15).

(15) Prišel, uvidel, pobedil.
'Veni, vidi, vici.'

3.2.2. Culmination-in-focus (Figure 6)

The interpretation depicted in Figure 6 differs from the one in Figure 5 in that the begin of the e_1 lies outside of the topic time interval. This means that the coming into being of the Kleinian source state is outside of "the time interval for which an assertion is made" [Klein, 1994], i.e. outside of what the utterance is about. A verb interpreted in accordance with Figure 6 will thus exclusively be about the change from e_1 to e_2. Such a reading is pragmatically

licensed as an answer to an (implicit or explicit) question that queries about whether e_2 has, or has not, been reached within t_{TOP}, presupposing e_1.[14]

(16) a. Nu, kak, nadumal?
'And, have you come up with an idea?'

b. Da, nadumal.
'Yes, I have.' (RNC)

3.2.3. Perfect reading (Figure 7)

Figure 7 shows the interpretation known as perfect reading ("perfektnoe značenie"). The meaning of the verb entails a change to e_2, but the moment of change lies before and therefore outside of the topic time. Since t_{TOP} ends when the instantiated target state, e_2, is still in force, the utterance is about the presence of the target state at topic time. Examples from [Švedova et al., 1980]:

(17) Ščі ostyli.
'The shchi is cold now.'

(18) On postarel, raspolnel i obrjuzg.
'He is old, fat and bloated now.'

3.2.4. Pluperfect readings (Figures 8, 9 and 10)

The Figures 8 to 10 arguably imply a potential conflict. On the one hand, the entailment of a target state token will direct attention to the conditions of this state. This arguably follows from a general pre-linguistic bias towards goal-attainment [Dickey, 2006, p. 8]. On the other hand, the topic time does not end when the target state is instantiated as e_2 (as it does in Figures 5 to 7). Instead, the topic time exceeds e_2, inviting the inference that what deserves attention is not the world at the target state time, but at a later time when the target state conditions are no longer valid. Thus, in Figures 8 to 10, two different times compete for prominence. This conflict can, however, be avoided to arise.

Often, the phase particle *uže* ('already') comes to the rescue. The semantics of *uže* is such that it contrasts two temporal phases: a phase at which the property (delivered by the predicate with which the particle combines) is asserted to hold, and a later phase at which the same property is presupposed to hold (cf. [Ippolito, 2007]). Applied to our case, the relevant property is the conditions of the target state. Presupposed and thus expected to hold

[14] Note that in the Russian Academy Grammar this reading is treated as a special case of concrete-factual. The same holds for the perfect reading (cf. [Švedova et al., 1980, p. 605–606]).

at the end of the topic time, the target state conditions are asserted hold earlier than expected. The earlier time is usually explicated, as in (19) (*v 1960 godu*).

(19) Postojanno pričisljaemyj k “sestidesjatnikam”, ja i sam sebja takovym sčital, poka vdrug ne vspomnil, čto v 1960 godu mne uže ispolnilos’ dvadcat’ vosem’.
‘Always being taken for a sixty, I myself also took me to be one, not remembering that in 1960 I had already reached the age of 28.’ (RNC)

Figures 8 to 10 express pluperfect (past perfect) readings. (19) exemplifies Figure 8. The pluperfect version of the “culmination-in-focus” reading (Figure 9) may arguably be exemplified by (20), where the time of the unexpectedly early birth is supplied by the subordinate clause. (21), finally, shows a pluperfect construal of the perfect reading. The speaker informs that her being tired of playing tennis held earlier than was to be expected, already in 2012.

(20) Kogda vrač prišel, ona uže rodila.
‘When the doctor arrived, she had already given birth.’ (babyblog.ru)

(21) V 2012 godu ja uže ustala ot tennisa i rešila zakončit’.
‘In 2012 I was already tired of tennis and decided to quit.’ (sports.ru)

3.3. DASP applied to 2-state predicates marked by YVA

Recall from above that YVA marks the Kleinian target state of the input predicate as truth-conditionally irrelevant. Technically, this is achieved by the deletion of the discourse marker F_2 from the DRS-universe. Since F_2 is not declared, the part of e which instantiates the final Kleinian state is no longer e_2, but e_1. Given the way the principle of Event realization is defined in (8b), it is therefore e_1 which is required by DASP to overlap the topic time. From (2b), the meaning of the stem *podpisyva-* will thus differ only in that the universe of the DRS no longer contains F_2 (2c). DASP will map (2c) onto (22).

(22) λt_{TOP} [e, e_1, F, F_1, X, Y, Z | SIGN(F), WRITE(F_1), WRITTEN(F_2), SS(F,F_1), TS(F,F_2), AUTHOR(F,X), NAME(F,Y), FORM(F,Z), e INST F, e_1 INST F_1, $\tau(e_1) \circ t_{TOP}$]

Depending on context, the relation $\tau(e_1) \circ t_{TOP}$ may manifest itself in one of the following ways. In each case the topic time /// overlaps the final instantiated Kleinian state, which now is the source state.

Fig.11

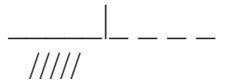

Fig. 12

Fig.13

Fig.14

Fig. 15

Fig.16

3.3.1. Ingressive reading (Figure 11)

In Figure 11, we revisit the ingressive reading, this time based on a 2-state predicate. Again I argue that verbs like *podpisyvat'*, *vybrasyvat'*, *otkryvat'* etc. do not show up in this reading, because its realization is semantically blocked by the availability of the respective phase verb construction, as in (23).[15]

(23) Odin iz nich ostorožno postučal v tret'e kupe i načal otkryvat' dver'.
'One of them carefully knocked at the cabin No. 3 and started to open the door.' (Vysockij)

3.3.2. Progressive reading (Figure 12)

Secondary imperfectives often actualize the progressive reading, represented by Figure 12. Note that the existence of e_2 (the instantiation of the Kleinian target state) is not entailed in (34), but merely implicated. This is a welcome result as it avoids the otherwise arising problem of the imperfectivity paradox ([Dowty, 1979], cf. [Ramchand, Minor, 2019]). See (24) for a relevant example.

(24) [A]kter [...] perechodil^{IPF} ulicu, kogda na nego naechal avtomobil'.
'The actor was crossing the street when he was hit by a car.'
(dni.ru)

[15] Another form that competes for the expression of the meaning given in Figure 11 results from attachment of ingressive *za-*. This case is illustrated in (i) from [Tatevosov, 2015, p. 471].
(i) ..., vydavilsja poslednij vozduch iz legkich, i mal'čiška zaotkryval rot, kak ryba.
'... the last air was squeezed out and the little boy started opening his mouth like a fish'.

3.3.3. An impossible reading (Figure 13)

As for Figure 13, I claim that this case will never realize, and here is why: The topic time is the "time about which an assertion is made" [Klein, 1994]. According to Figure 13, the topic time will have to overlap the time of the Kleinian target state, which is, however, uninstantiated and therefore provides no time with which the topic time could overlap. To get the interpretation shown in Figure 13 run, therefore, there is no way round inferring the existence of e_2. This reasoning may be stated as a general rule:

(25) Overlap of the topic time with an uninstantiated eventuality will automatically trigger the instantiation of that eventuality.

Now see that by drawing the inference that e_2 exists we end up with the same interpretation as in Figure 6. Since Figure 6 is taken care of by the same verb without YVA, we arrive at a situation in which there are two candidate verbs for the same interpretation, *podpisat'* and *podpisyvat'*, one being structurally more complex than the other. In such a situation the pragmatic mechanism of "morphological blocking" [Kiparsky, 2005; Deo, 2012] will filter out the more complex expression.[16] Applied to our case, the impact of morphological blocking will prevent secondary imperfectives from expressing culmination-in-focus (Figure 6). Figure 13 turns out to be no option for secondary imperfectives.

3.3.4. Annulment-of-result (Figure 14)

In Figure 14, the time of the Kleinian target state is properly included in the topic time. Again, by (25), this requirement invites the inference that the Kleinian target state is instantiated as e_2. Unlike Figure 13, however, Figure 14 wants the topic time to end at some time after e_2.

Now the question arises: Isn't the interpretation shown in Figure 14 equal to Figure 9? If so, it should be ruled out by morphological blocking. The answer is: No. While Figure 9 involves a conflict, as described in 3.2.4, Figure 14 does not. The reason is that, in the case of Figure 14, but not of Figure 9, YVA explicitly marks the Kleinian target state as truth-conditionally irrelevant. Since it is explicitly signaled that "goal orientation" is not intended, the road is free for an assertion about an event which at some moment brings about a particular state that at some later moment ceases to exist. What Figure 14 designates is the annulment-of-result interpretation, where the topic time includes both the begin and the end of e_2 (cf. [Grønn, 2004]). Here is an example:

[16] This blocking mechanism is often stated in terms of an economy constraint. In the wording of Le Bruyn (2007): "Avoid complexity: All other things being equal less complex expressions are preferred over more complex expressions".

(26) Esli celyj den' nas ne bylo, a skaner pokazal, čto kto-to otkryval sejf. Kto ėto byl?
'If we were out the whole day, and the scanner showed that someone opened the safe. Who could it be?' (tophotels.ru)

3.3.5. Another impossible reading (Figure 15)

For Figure 15 to make sense, the existence of e_2 must be inferred via (25). What we arrive at will completely match Figure 5. Since Figure 5 is taken care of by a 2-state predicate without YVA, Figure 15 is no interpretive option for a secondary imperfective, due to morphological blocking.

3.3.6. General-factual reading (Figure 16)

In Figure 16, t_{TOP} properly includes the time of e_1 (whose existence is entailed), and it properly includes the time of the Kleinian target state F_2. By (25) the inference is drawn that F_2 is instantiated as e_2. This gives us the interpretation that we missed under Bohnemeyer, Swift's (2004) theory, the one illustrated in (6) and (7).

The conflict described wrt Figure 8 is no issue wrt Figure 16. Since YVA explicitly marks the target state as truth-conditionally irrelevant, it is unequivocally signaled that goal-orientation, or target state relevance, is not intended. The sentence expresses that the topic time overarches the whole event time with the issue of the target state being irrelevant to what the speaker wants to convey [Švedova et al., 1980, p. 611; Grønn, 2004; Mueller-Reichau, 2018].

4. Summary

In this paper, I presented a theory that links verb forms to the spectrum of aspectual interpretations that they in fact actualize in Russian texts. Based on [Bohnemeyer, Swift, 2004], the analysis exploits just a single aspectual operator DASP to correctly distribute perfective and imperfective forms among contexts.

The scope of the paper was on the lexical stage of Russian verb formation, i.e. the domain of lexical/internal prefixes and so-called secondary imperfective suffixes ("YVA"). I gave a DRT-analysis of lexical prefixation deriving 2-state from 1-state predicates, and of YVA marking the target state of a 2-state predicate as "invisible" for DASP. On my account, both verbal prefixes and suffixes do not by themselves express perfective or imperfective meanings (semantic aspects), but "merely" manipulate the input of the aspect operator. To this end, the story told here is in line with Tatevosov (2018).

The aspect operator DASP is stated in the spirit of Klein (1994), as establishing a relation between topic time and eventuality time. DASP is stated such that the instantiation of the final state (the target state in 2-state predicates and the only state in 1-state predicates) has to overlap topic time. This gives us precisely what we observe: 2-state predicates without YVA yield perfective meanings, while 1-state predicates and 2-state predicates with YVA yield imperfective meanings. "Perfective meanings" are those where the utterance is about the conditions of the instantiated target state. In the canonical case the topic time ends when the target state is in force (cf. [Grønn, 2004]). A variation on the theme are those pluperfect readings where the part of the topic time which goes beyond the end of the target state is backgrounded. "Imperfective meanings" are all those meanings that are not about the conditions of the target state.

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