

Aspect Use in General-Factual Contexts in Slavic-Relevant Accounts

Subjects: [Linguistics](#)

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The group of Slavic languages is divided into three subgroups: **South Slavic**, consisting of Bosnian, Croatian, Montenegrin, Serbian, Slovene, Bulgarian, and Macedonian; **West Slavic**, consisting of Czech, Slovak, Sorbian, Polish, and Kashubian; and **East Slavic**, consisting of Russian, Ukrainian, and Belarusian.

Slavic

languages

1. General Background

In Slavic languages, when a speaker talks about a completed event, he or she chooses a perfective form of a verb. In certain contexts, however, imperfective aspect is used despite reference to a completed event, as presented in (1), (2), and (3) for Polish, Czech, and Russian, respectively.¹

Polish

(1)	Marysia:	Jaki	piękny	kolor	ornamentu
	Mary:	what	nice	color	ornament.gen
	na	ścianie.			
	on	wall			
	Chciałabym	mieć	taki	sam	w salonie.
	want.cond	have	such	same	in room
	Czy	możesz	mi	powiedzieć,	jaką
	Q	can.2sg	me	tell	which
	farbą	go	malowałaś ¹ .		
	paint.INSTR	it.acc	painted.ipfv.2sg.f		

Czech

(2)	Marie:	To je	ale krásná	barva	ornamentu
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Mary:	It is	such nice	color	ornament.gen
na	stěně.			
on	wall			
Chtěla bych	mít	stejnou	ve svém obýváku.	
want.cond	have	same	in my room	
Můžeš	mi	říct,	jakou	barvou
can.2sg	me	tell	which	paint
jsi	ho	<i>malovala</i> ¹ ?		
be.2sg	it.acc	painted.ipfv.f		

(3)	Maria:	Kakoj	krasivyj	cviet	ornamenta
	Mary:	what	nice	color	ornament.gen
	na	stienie.			
	on	wall			
	Ja by	ľotiela	imiet'	takoj že	v mojej gostinoj.
	I COND	want	have	such	in my room
	Podskaži,	kakoj	kraskoj	ty jeho	<i>risovala</i> ¹ .
	tell	wich	paint	you it.acc	painted.ipfv.f
'Mary: What a beautiful color of an ornament on your wall.					
I would love to have one in my living room.					
Can you tell me which paint you <i>painted</i> it with?'					

In this context, the speaker expresses his or her appraisal of the beautiful color of the ornament on the wall and asks the hearer about the paint used to paint the ornament. It is evident that the past event of painting the ornament reached the result state and the event was completed because the holder of the result state is available in the current conversation. In spite of that, imperfective aspect can be used (interchangeably with perfective aspect). This use of imperfective is only attested in Slavic languages, but not in Spanish, French, or Italian (cf. [Cipria and Roberts 2000](#); [Hacquard 2006](#); [Deo 2009](#)). These contexts are called *general-factual* and they are challenging for all the semantic theories of perfective and imperfective aspect aiming at formulating its invariant semantics that will cover all of its possible uses and attempting to distinguish it from the semantics of perfective aspect. [Grønn \(2004, p. 81\)](#) points out that one of the criteria defining factual imperfective contexts is the use of

telic events.² Following [Grønn \(2015\)](#), these complete events were treated as those that produce a relevant result (though he admits that this assumption is a working hypothesis). Most scholars dealing with this issue state that in general-factual contexts, emphasis is shifted away from the result (see [Swan 1977](#); [Comrie 1976](#); [Grønn 2004](#); [Mueller-Reichau 2018](#)).

The choice of imperfective in these contexts is a strategy used to avoid perfective. In other words, even though reference is made to a completed event in general-factual contexts, something prevents the use of perfective aspect. The questions that arise are: *What prevents the use of perfective in general-factual contexts? If it is not the result that is stressed in general-factual contexts, what is stressed instead?* According to [Grønn \(2004\)](#), when the focus is on the existence of an event within an extended indefinite assertion time, the target state validity of telic predicates is less relevant, and imperfective is preferred (it comes to existential factual imperfective contexts) (see also [Mueller-Reichau 2014](#)). When the assertion time is narrow and specific, the target state validity of telic predicates is relevant and the perfective is more likely to win the competition. Finally, the most important question is how to differentiate between the semantics of perfective and imperfective aspect if both can be used to talk about completed events. A slightly different, though potentially related, explanation is given by [Śmiech \(1971, p. 44\)](#) who suggested that imperfective aspect can be used in place of perfective aspect in general-factual contexts when the result of an action is known or when it is possible to infer from the surrounding discourse that the result of the action was achieved. It may be the case that there are different reasons for why imperfective is used in different types of general-factual contexts. In fact, [Padučeva \(1996\)](#) and [Grønn \(2004\)](#), in their discussion of factual imperfective contexts in Russian, distinguish between two kinds of factual imperfective contexts: (i) **existential** and (ii) **presuppositional**, which are exemplified for Russian in (4), (5), and (6), respectively.

(4)	Ja vaši	očerki	o Sibiri	<i>čital^l</i> ,
	I your	essays	on Siberia	read.ipfv.3sg
	mne oni	očen'	<i>nravjatsja^l</i> .	
	me.dat they	very	appeal. ipfv.3pl	
	'I have <i>read</i> your essays on Siberia. I <i>like</i> them a lot.'			
(5)	A	deti	kričali:	papa, papa!
	and	children	cried	dad dad
	Za	čto	<i>umer^P?</i>	
	for	what	die.pfv.3sg	
	'And the children cried out: Dad, dad ... Why did you <i>die</i> ?'			
	Pri,	Tovarišči,	no počemu	že ko mne?
	well	friends	why	to me

	Čem	tut	ja?	
	what	did	I	
	'Well, my friends, why are you asking me? I've nothing to do with it.'			
P	Ja,	čto li,	ubival'?	
		I		
	Me,	what	killed.ipfv	.5
	'Did I <i>kill</i> him?'			
				Grønn (2004, p. 25) (Uppsala Corpus)
(6)	Zimnij	Dvorec	stroil'	Rastrelli.
	winter.acc	palace.acc	built.ipfv	Rastrelli
	'It was Rastrelli who <i>built</i> the Winter Palace.'			
				(example quoted by Gehrke forthcoming a from Glovinskaja 1982)

approached to the use of imperfective aspect in general-factual contexts will be discussed in order to create a proper background for the analysis of the results of study.

2. Aspectual Cometition in General-Factual Contexts

In order to account for the use of imperfective aspect to refer to completed events in general-factual contexts, [Grønn \(2004\)](#) assumes a very weak semantics of imperfective aspect where the event time overlaps the reference time ($e \circ t$) (in the spirit of [Klein 1995](#)), and this underspecified semantics can be contextually strengthened to encode either $e \subseteq t$ (to refer to unbounded single ongoing or plural events) or $t \subseteq e$ (to refer to completed events when perfective aspect is for some reason inappropriate). [Grønn \(2004\)](#) accounts for it by resorting to aspectual competition between perfective aspect and the strengthened variant of imperfective, whose semantics are in fact analogous to perfective. He suggests that different factors underly this aspectual competition in existential and presuppositional factual contexts. In existential factual imperfective contexts, imperfective is preferred when the focus is on the existence of an event within an extended indefinite assertion time and the target state validity of telic predicates is less relevant. Existential factual imperfectives usually contain vague adverbs such as *earlier*, *once*, *never*, *ever*, which do not locate the event at a narrowly specified time. [Grønn \(2004, pp. 273–74\)](#) suggests that perfective aspect “explicitly requires the target state to be valid at the end point of the assertion time. Aspectual competition gives rise to a pragmatic implicature saying that factual IPFV is used by the speaker either in order to convey the message that the target state has been cancelled, or in case the validity of the target state is irrelevant in the discourse situation”.

3. Aspect and Rhetorical Relations in General-Factual Contexts

Similarly, [Altshuler \(2014\)](#) proposes a weak semantics of imperfective aspect, which can be contextually strengthened. He argues that aspectual operators are functions from a set of VP events to a set of VP-event-parts whose location is relative to: (i) temporal information and (ii) discourse connectivity. Regarding imperfective aspect, [Altshuler \(2014\)](#) describes it as a weak partitive operator referring to a partial event e' in world w^* that is part of (\sqsubseteq) the whole event e in world w , as defined in (7).

(8)	[[STAGE(e' , e , w^* , w , P)]] ^{w,g} = 1 iff a–d are satisfied:			
a.	the history of $g(w)$ is the same as the history of $g(w^*)$ up to and including $\tau(g(e'))$			
b.	$g(w)$ is a reasonable option for $g(e')$ in $g(w^*)$			
c.	[[P]] ^{w,g} = 1			
d.	$g(e') \sqsubseteq g(e)$			

As a result of strengthening, imperfective may obtain a proper part reading $g(e') \sqsubset g(e)$ (in contexts which refer to unbounded eventualities) or whole event reading $g(e') = g(e)$ (in general-factual contexts referring to completed events). Moreover, [Altshuler \(2012\)](#) suggests that the choice of an aspectual form is determined by how it interacts with coherence relations in constraining the ordering of eventualities in discourse. He claims that Russian imperfective is incompatible with the Narration (his Occasion) relation, as illustrated in (9).

(9)	a.	Roditeli	<i>ispugalis</i> ^P ,	dumaja,	čto s nix
		parents	got.scared.pfv.3pl.rfl	thinking	that from them
		trebujut	oplatu		
		require	payment		
		'The parents <i>became scared</i> , thinking that they were required to pay.'			
	b.	V panike	oni	{ <i>pozvonili</i> ^P / <i>#zvonili</i> ⁱ }	nam...
		in panic	they	called.pfv.3pl/ called.ipfv.3pl	us
		'Panicking, they <i>called</i> us...'			
		Altshuler (2012, p. 38) (Russkij doctor v Amerike, Goljaxovskij)			

relation) or overlaps (under an Elaboration or Background relation) with the event mentioned in the previous utterance. An example of an Explanation relation in Russian is provided in (10).

(10)	a.	Niedielju nazad	Marija	<i>pocelovala</i> ^P	Dudkina.
		week ago	Maria	kissed.pfv.3sg.f	Dudkin

‘A week ago, Maria kissed Dudkin.’				
b.	On	darilʹ	jej	cviety
	he	gave.ipfv.3sg	her	flowers
‘He had given her flowers				
c.	i	priglašalʹ	jejo	v teatr.
	and	invited.ipfv.3sg	her	to theater
and had invited her to the theater.’				
Altshuler (2012, p. 45)				

An example of an Elaboration relation in Russian is in (11).

(11)	a.	V ètoj	posternoj	ja napisal^P	pervoe
		in this	tavern	I wrote.pfv.1sg	Dudkin
		ljubovnoe	pis'mo	k Vere	
		love	letter	to Vera	
	'In this tavern, I wrote my first love letter to Vera.'				
	b.	Pisal^I	karandaš-om.	jej	cviety
		wrote.ipfv.1sg	pencil.inst		
	'I wrote it in pencil.'				
	c.	i	priglašal^I	jejo	v teatr.
		and	invited.ipfv.3sg	her	to theater
	and had invited her to the theater.'				
Forsyth (1970, p. 86)					

In (11), the second event described by means of imperfective aspect is a sub-event of the first event that was expressed by means of perfective aspect. Altogether, imperfective aspect is suitable in contexts involving an Explanation, Elaboration, or Background relation, but not in Narration (Occasion) contexts.

4. Fake Imperfective in General-Factual Contexts

[Grønn \(2015\)](#) argues that imperfective aspect is ambiguous and it can express both imperfective (the reference time is part of the event time) and perfective semantics (the event time is part of the reference time), as shown in (12).

- (12)
- a. $[[\text{PFV}]] = \lambda t \lambda e. e \subseteq t$
 - b. $[[\text{IPFV}_{\text{ongoing}}]] = \lambda t \lambda e. t \subseteq e$
 - c. $[[\text{IPFV}_{\text{factual}}]] = \lambda t \lambda e. e \subseteq t$ 'fake IPFV'

al-factual
s win the

competition with perfective aspect (for example, in contexts in which the narrative use of perfective is not justified). As [Grønn \(2015\)](#) himself admits, he does not make it clear why the speaker should prefer the imperfective over the perfective in contexts of aspectual competition. He also correctly states that the differences in the interpretation of perfective and imperfective aspect can be extremely subtle, especially in the case of the presuppositional imperfective, where perfective can be used almost interchangeably with imperfective.

Additionally, [Grønn \(2015\)](#) draws an analogy between the semantics of tenses and nouns. In most Slavic languages there is no overt $[\pm\text{def}]$ marking on nouns that are ambiguous with respect to the $[\pm\text{def}]$ semantics. [Grønn \(2015\)](#) claims that such an ambiguity is present also in the temporal domain. In his account, [Grønn \(2015\)](#) builds on [Partee \(1973\)](#), who proposes that tenses in natural languages are not operators but pronouns and there is a division of labor between the English morphological tense (*-ed*), which is anaphoric (definite), and temporal auxiliaries (*have P-ed*, *will P*), which are indefinite. Concerning Russian, [Grønn \(2015\)](#) proposes that the deictic past tense has the following semantics $[[\text{PAST}^*]] = \lambda t. t < s^*$ (s^* = the speech time) and it comes with a covert indefinite or definite article. Both times and events may be definite (discourse old) or indefinite (discourse new) and an indefinite tense or event introduces a new discourse referent, while a definite tense is anaphoric to an old discourse referent. According to [Grønn \(2015\)](#), existential imperfective contexts display an indefinite tense and indefinite aspect, whereas presuppositional imperfective contexts display a definite tense and definite aspect.

5. The Anaphoric Nature of Aspect in General-Factual Contexts

[Gehrke \(forthcoming_b\)](#) argues against the 'fake' imperfective view and shows that it is possible to account for the use of imperfective aspect to refer to completed events by using a standard, unified semantics of the imperfective. Regarding existential factual contexts, [Gehrke \(forthcoming_b\)](#) claims that imperfective is preferred because the event is iterative and imperfective is used to refer to a plural event (see also [Klimek-Jankowska et al. forthcoming](#); [Klimek-Jankowska and Błaszczak 2021](#)). This is compatible with the view that Russian perfective has to do with event uniqueness (see [Mueller-Reichau 2018](#) and [Gehrke \(forthcoming_a\)](#) this volume for a similar conclusion). Concerning presuppositional imperfective contexts, [Gehrke \(forthcoming_b\)](#) proposes that in such contexts, imperfective is anaphoric to a completed event that is part of the common ground and the imperfective elaborates on it by zooming in on a narrower reference time. [Gehrke \(forthcoming_b\)](#) discusses one of the examples from her joint corpus research with Olga Borik ([Borik and Gehrke 2018](#)) in which they focus on imperfective past passive participles (PPPs) in Russian, which are often claimed not to exist but, in spite of that, are attested in corpora under a factual imperfective meaning. The context in question is illustrated in (13).

Russian

(13)	Čto	kasaetjsa	platy	deneg,	to <i>plačeny</i> ^l	byli
	what	concerns	payment	money.gen	so paid.ipfv	were
	naličnymi	šest'	tysjač	rublej		
	in-cash	six	thousand	Rubles		
'What concerns the payment: 6000 Rubles were <i>paid</i> in cash.'						

In (14), the payment event (e_1) is introduced by means of a nominalisation, *plata* 'payment', and the imperfective past passive participle, *plačeny*^l 'paid', used in the main clause introduces the second event (e_2) that is anaphorically related to the already introduced payment event. [Gehrke \(forthcoming b\)](#) builds on [Altshuler's \(2014\)](#) partitive semantics for the imperfective aspect where the reference time t is part of the run time of e_2 ($t \subseteq \tau(e_2)$). As pointed out by [Gehrke \(forthcoming b\)](#), the intuition that the payment event e_1 (and thereby also e_2) was 'completed' follows from the discourse structure. More specifically, event completion information is already given in e_1 (its run time falls within the first reference time t_1). Since e_2 is identical to e_1 , the event completion reading of e_2 follows from its anaphoric link with e_1 . The second reference time, t_2 , is part of the run time of e_2 , and, by identity with e_1 , it is also part of e_1 . As a result of this anaphoric link between e_1 and e_2 , the process of interpretation leads to zooming in on a narrower reference time within a bigger reference time. Consequently, imperfective used to express e_2 expresses a standard relation $[[\text{ipfv}]]: \lambda t \lambda e. t \subseteq e$ and the completion reading follows from the anaphoric relation of e_2 with e_1 , where e_1 is completed. This proposal allows [Gehrke \(forthcoming b\)](#) to maintain a uniform semantics of imperfective verbs. However, it is not clear how this solution would address the observation that in presuppositional imperfective contexts perfective is often freely interchangeable with perfective. If the anaphoric link is always there in presuppositional factual contexts, why would some speakers opt for perfective aspect at all? It is also not clear how this analysis would capture the variation in the use of aspectual forms in factual contexts in different Slavic languages.

6. General-Factual Perfectives

[Mueller-Reichau \(2018\)](#) focuses on the contexts in which Czech displays general-factual perfectives, whereas the eastern language of Russian displays general-factual imperfectives and shares Polish patterns with Czech. His analysis is based on existential factual contexts with the temporal adverbial *ever*, wherein the imperfective is preferred in Russian when the reference is made to a completed past tense event vaguely located in time. In fact, imperfective is obligatory when achievement predicates are used in Russian, as shown in (14).

Russian

(14)	Ty kogda-libo	<i>terial</i> ^l	<i>*poterial</i> ^P	kliuchi?
	you ever	lost.ipfv	lost.pfv	keys

‘Have you ever *lost* keys?’

The same context strongly prefers the use of perfective in Polish and Czech, as shown in (15) and (16), respectively (see [Dickey 2000](#)).

Polish

(15)	Czy	kiedykolwiek	<i>zgubiłeś^P</i>	<i>??gubiłeś^I</i>	klucze?
	Q	ever	lost.pfv	lost.ipfv	keys

Czech

(16)	<i>Ztratil^P</i>	<i>/??ztrácel^I</i>	jsi	kdykoliv	klíče?
	lost.pfv	lost.ipfv	be.2sg	ever	keys
‘Have you ever <i>lost</i> keys?’					

The punctual achievement *lose* can be assigned to a single (unique) point in time. According to [Mueller-Reichau \(2018\)](#), this contrast follows from the different semantics of Czech, Polish, and Russian perfective aspect. More precisely, Czech and Polish perfective is used whenever the speaker wants to refer to an event that is completed and unique in the relevant context, whereas Russian perfective more strongly encodes target state validity (which implies event completion and uniqueness), as follows from the semantics in (17) and (18).

(17)	PFV _{Czech} \rightsquigarrow completedness + uniqueness	ows from dity is not
	$[[PFV_{Czech}]] = \lambda P \lambda t \exists e [P(e) \wedge e \subseteq t \wedge \neg \exists e' [P(e') \wedge e' \neq e]]$	
(18)	PFV _{Russian} \rightsquigarrow completedness + uniqueness + target state validity	END TARGET(e). To
	$[[PFV_{Russian}]] = \lambda P \lambda t \exists e [P(e) \wedge e \subseteq t \wedge \neg \exists e' [P(e') \wedge e' \neq e] \wedge f_{END}(t) \subseteq f_{TARGET}(e)]$	

meet the condition of target state validity, the event has to have a specific reference time. This is incompatible with general-factuals, which require the event to be located in a reference time that is “big and floating”. [Mueller-Reichau \(2018\)](#) (quoted after [Grønn 2004](#)) focuses only on variation in aspect choices in existential factual contexts in Polish, Czech, and Russian.

7. Discourse-Level Information and Temporal (In)definiteness in General-Factual Contexts

Another recent study that addressed the issue of variation in the distribution of aspect in general-factual contexts is [Klimek-Jankowska \(2020\)](#), who investigated the preferences in aspect choices in existential and presuppositional factual contexts in eastern and western Poland. For this goal, she conducted an online questionnaire in which the participants from western and eastern Poland were asked to fill in the missing verbs in presuppositional and existential factual contexts involving an Elaboration coherence relation (in which the result holder, i.e., the subject

(20) The council built the bridge (e_1). The best architect drew up its project. (e_2). explained in (19) in accordance with [Lascanides and Asner \(1997\)](#), who observed that temporal relations are calculated not only on the basis of the time of the event, but also on the basis of the type of the event. In other words, it is possible to use imperfective aspect for the complete event of drawing the plan in the next example in (21).

(20)	Elaboration (1,2): 2's event is part of 1's event (perhaps by being in the preparatory phase or result of 1's event)				
	<i>Polish</i>				
(21)	Zarząd	<i>wybudował^P</i>	most (e_1).		
	Council	built.3sg.pfv	bridge.acc		
	Najlepszy	architekt	<i>sporządził^I</i>	jego	projekt (e_2).
	best	architect	drew_up.3sg.ipfv	its	project.acc
	'The council built the bridge. The best architect drew up its project.'				

[Klimek-Jankowska \(2020\)](#) shows that perfective aspect is preferred in presuppositional factual contexts and imperfective is preferred in existential factual contexts, but perfective is generally more often used in both types of factual contexts in western Poland than in eastern Poland. What is more, it seems to be the case that in presuppositional factual contexts involving an Elaboration relation the choice of imperfective aspect depends on whether the focus is on the initiator, the process, or the result sub-event. Imperfective is more often used when the focus is on the initiator or process sub-event.

In her account of the observed patterns of variation in aspect use, she relies on [Ramchand's \(2008b\)](#) formal framework of aspect and temporality. Based on the central idea of the Distributed Morphology (DM) (see [Halle and Marantz 1993](#)), [Ramchand \(2008b\)](#) postulates the existence of the event phase of the derivation (the first-phase syntax), which consists of three sub-events: a causing (initiation) sub-event, a process sub-event, and a sub-event corresponding to a result state. Each of these sub-events is represented as its own projection, ordered hierarchically, and each of them has an event participant projected in the specifier position. The initiation sub-event is a causational projection (vP in the recent literature) with an external argument referred to as the INITIATOR. The initiation sub-event e_1 leads to the process sub-event e_2 that is present in every dynamic verb. The process sub-event e_2 corresponds to the VP projection with the UNDERGOER in the specifier position. The process sub-event may optionally lead to the result phrase corresponding to the result state of the event with the RESULTEE (the holder of a 'result') in the specifier position. In this chain of events, e_1 causally implicates e_2 and e_2 causally implicates e_3 . [Ramchand's \(2008b\)](#) first phase syntax is embedded under the second phase where temporal variables are introduced. The first phase introduces an event variable and the time variable is introduced at the level of AspP in the second phase of the derivation. The event variable and the temporal variable are related formally by a temporal trace function $\tau(e)$ that maps an event to the 'timeline' that it occupies. Next, the tense head of TP combines with AspP to bind the time variable and relate it with respect to the speech time. In [Ramchand's \(2008a\)](#) proposal, the reference time introduced in Asp is a time instant (not an interval). Her proposal is that perfective events introduce a definite reference time (a specific moment within the temporal trace of the event) while imperfective events introduce an indefinite reference time (an arbitrary moment within the temporal trace of the event). More precisely, when the result sub-event is present in the first phase syntax, the time

variable t must be part of the process sub-event and part of the result sub-event, which boils down to the placement of the time variable at the single unique transition point between the two sub-events. By contrast, imperfective aspect in [Ramchand's \(2008a\)](#) system specifies that the time variable is situated at an arbitrary point within the run time of the process part of the event.⁷

To sum up, in [Ramchand's \(2008a\)](#) system, there are two kinds of (in)definiteness of the temporal variable: (i) (in)definiteness with respect to the temporal trace of an event [INDEFINITENESS AT THE MICRO-LEVEL] and (ii) (in)definiteness of t with respect to the utterance time [INDEFINITENESS AT THE MACRO-LEVEL]. In her discussion of aspect choices in presuppositional factual contexts involving an Elaboration discourse relation, [Klimek-Jankowska \(2020\)](#) argues that when the event is complex in the first phase syntax and it consists of all the three sub-events, the placement of the temporal variable with respect to the temporal trace of an event depends on whether the focus is more on the initiation, process, or result sub-event. When the focus is on the result sub-events, it is more likely to lead to the placement of the temporal variable at the transition point between the process and result sub-event (leading to definiteness with respect to the temporal trace of an event), but when the focus is more on the initiation or process sub-events, it is more likely to lead to the placement of the temporal variable at an arbitrary point within these two sub-events (leading to indefiniteness with respect to the temporal trace of an event). In the latter case, even though imperfective is used, the result sub-event is understood to be a necessary consequence of the initiation and process sub-events due to the availability of the holder of the result state in the current conversation. This is how event completion reading is inferred in these special Elaboration presuppositional contexts.

Regarding existential factual contexts containing explicit markers of indefiniteness of the temporal variable such as *once*, *ever*, indefiniteness with respect to the utterance time may encourage language users to place the temporal variable at an arbitrary point within the temporal trace of an event, thereby leading to its indefiniteness with respect to the runtime of an event. This leads to more frequent choices of imperfective aspect in these special contexts. It appears that in existential factual contexts, the issue of the past event reaching the result sub-event is less relevant than the fact that the event happened at an indefinite time with respect to the utterance time, and the issue of whether the event was completed or not remains implicit during the interpretation process. [Klimek-Jankowska \(2020\)](#) suggests that in existential factual contexts, there is a competition between the choice of perfective and imperfective aspect and the ultimate choice depends on whether the speaker chooses to put more emphasis on the definiteness of the temporal variable with respect to the temporal trace of a decomposed complex event or on the indefiniteness of the temporal variable with respect to the moment of speaking. In [Ramchand's \(2008a\)](#) formalism, the spell-out domain is either vP or CP (see ^[4] ^[5] [2005b](#)). Since both types of (in)definiteness are specified before CP (at the level of AspP and TP), the phonological realizations associated with them in the form of perfective and imperfective Vocabulary Items compete for insertion at the level of CP. The choice of the aspectual form may depend on very subtle nuances of context and on what kind of (in)definiteness is more relevant in a given scenario. According to [Klimek-Jankowska \(2020\)](#), in some Slavic languages the definiteness of the temporal variable with respect to the temporal trace of an event wins over the indefiniteness of the temporal variable with respect to the moment of speaking (leading to the choice perfective aspect), and in other

Slavic languages it is the other way around. In Polish, there is a stronger preference to express the definiteness of the temporal variable with respect to the temporal trace of an event in western Poland than in eastern Poland.

8. Motivation for the Planned Study

All these studies agree that the choice of imperfective aspect in general-factual contexts that refer to completed events is determined by discourse-level information (information structure and rhetorical relations) and the extent to which the result state of the past complex event is relevant in the current discussion. This is consistent with the results of a recent psycholinguistic study conducted by [Hye-yeon and Kaiser \(2021\)](#). They pose an independent set of questions that appear to be very relevant to the discussion of the use of imperfective aspect to refer to event to their self-paced reading experiment. [Hye-yeon and Kaiser \(2021\)](#) investigated how quickly comprehenders read linguistic material associated with potential change-of-state inferences in contexts with change-of-state oriented agent-oriented QUDs, as well as with manner verbs and manner verbs in condition with change-of-state oriented QUDs. According to the study, participants read the target word equally quickly in the manner verb and the regular verb conditions. This suggests that even if the verb does not semantically entail a change of state, the presence of a change-of-state oriented QUD makes participants more likely to construct a representation where the object undergoes a change of state. In other words, when the QUD indicates that the inquiry is about the (changed) result state of the predicate, the event representation can be enriched to include a portion of a changed state even though this is not included in the lexical semantics of manner verbs. This shows that discourse-level information exerts an influence on the mental representation (which object states situations event comprehension). An interesting question to be addressed regarding general-factual contexts is how QUDs that are related but unrelated to the result state of the past complex event affect the choice of perfective or imperfective aspect referring to completed events (is not defeasible), as shown in (22b).

[Klimek-Jankowska \(2020\)](#) provides preliminary evidence that imperfective is more frequently used in

(22)	a. Mary hit the window, but it didn't break.	[manner verb]	ation sub-
	b. # John shattered the window, but it didn't break.	[result verb]	nted, and

hence potentially makes the change of state of the past event more relevant. Analogously to [Hye-yeon and](#)

[Kaiser \(2021\)](#), people may ask whether discourse-level information interacts with verb-level information to guide the representation of past complex events. More specifically, do creation verbs such as *build*, *bake*, *embroider*, *sew*, which lead to the existence of the object make the result state more relevant than verbs that only affect the object, e.g., *iron*, *water*, *comb*, *wash*, *repair*. If so, does it depend on whether the QUD is agent-oriented or result state-oriented? Regarding existential factual contexts, are aspect choices affected by whether the current QUD relates more to the outcome of the past event rather than its indefinite temporal location? Finally, will these factors influence aspect choices to the same extent in Polish, Czech, and Russian? As argued by [Dickey \(2015\)](#), East Slavic languages license more uses of imperfective aspect in general-factual contexts than west Slavic languages, with Polish, Serbian, and Croatian being in an intermediate zone. [Mueller-Reichau \(2018\)](#) in his study of the aspectual behavior of Polish, Czech, and Russian in general-factual contexts argues that Polish is not 'in between', but rather follows the Czech pattern. [Dickey's \(2015\)](#) and [Mueller-Reichau's \(2018\)](#) research set

new important trends, but many of their generalizations are made based on random data. The goal in this study is to verify the micro-typology of aspect proposed by [Dickey \(2015\)](#) based on more data and replicable procedures.

Notes

- 1 Importantly, in most tested factual contexts, both perfective and imperfective forms are possible. Hence, this study is mainly about preferences in aspect choices in factual contexts.
- 2 Following [Padučeva \(1996\)](#); [Gehrke \(forthcoming a\)](#) points out that there are also general factual imperfective with atelic events which are ignored in the literature related to the distribution of aspect in general factual contexts as the main focus is on the question of why imperfective aspect is used to refer to past completed events.
- 3 [Heim \(1987\)](#) analyzed *ever* as meaning ‘at least once’, and having alternatives meaning ‘at least n times’, where $n > 1$.
- 4 Pragmatic presupposition is understood as as in [Stalnaker \(1973\)](#).
- 5 See also [Zinova and Filip \(2014\)](#) and [Frąckowiak \(2015\)](#) for a related discussion on the pragmatics of aspect in Slavic.
- 6 It is possible to use imperfective aspect to refer to completed events in presuppositional *when*-questions which suggests that their temporal location may be focused (part of new information).
- 7 [Klimek-Jankowska \(2020\)](#) assumes following [Tatevosov \(2011, 2015, 2020\)](#) that the aspectual operators IPFV and PFV act at the level of AspP (and are phonologically null) and their morphological exponents merge lower in the hierarchy.

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