

# Aspect and pragmatics in Polish with a view to Sorbian

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#### **Abstract**

In this paper, I discuss the meaning of the perfective aspect in Polish by taking a look at the so-called general-factual contexts, i.e., contexts that refer to completed events. Slavic languages rely on both perfective and imperfective aspect in such cases but differ concerning specific restrictions on aspect choice (Altshuler 2014; Dickey 2000; Gehrke 2022, 2023; Grønn 2004; Klimek-Jankowska 2020, 2022; Łaziński 2020; Mehlig 2011; Mueller-Reichau 2018; Wiemer 2001, 2008, among many others). Whereas speakers of East Slavic languages mostly choose the imperfective aspect in general-factual contexts, speakers of West Slavic languages face a stronger competition between imperfective and perfective forms. This paper highlights the role of pragmatics in aspect choice in general-factual contexts in Polish. It makes use of the notion of pragmatic contract (Israeli 1996 for Russian) and argues that, while the presence of a contract correlates with a preference for the perfective aspect, the absence of a contract triggers a preference for imperfective forms. These assumptions are verified with data from the *Narodowy Korpus Języka Polskiego* (Przepiórkowski et al. 2012). The paper further shows that the pragmatic contract does not influence aspectual distribution in Upper Sorbian, pointing to a difference in the aspectual systems of the two West Slavic languages and confirming the status of Polish as transitional between East and West Slavic.

**Keywords:** aspect; pragmatics; Polish; West Slavic

### 1. Introduction

The presence of grammatical aspect in the verbal (and non-verbal) domain is a typical trait of Slavic languages including Polish (cf. Cetnarowska 2017; Długosz-Kurczabowa and Dubisz 2001; Filip 2005; Isačenko 1962; Młynarczyk 2004; Rozwadowska 2000; Rozwadowska and Willim 2004; Wierzbicka 1967, among many others). This means that verbs build aspectual pairs, triplets, quadruples, etc., consisting of imperfective and perfective lexemes, as shown in

the following Polish examples. The imperfective usually has an ongoing (1) or a habitual interpretation (3), whereas the perfective introduces a temporal delimitation of an event (2).

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(1) Iza czytała gazetę / jadła tosta,
Iza read.IPFV.PST newspaper.F / eat.IPFV.PST toast.M

którą / którego wciąż czyta / je.

which.F / which.M still reads / eats

'Iza was reading a newspaper / eating a piece of toast, and she is still reading / eating it.'
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(2) Iza przeczytała gazetę / zjadła tosta,
Iza read.PFV.PST newspaper.F / eat.PFV.PST toast.M

# [którą / którego wciąż czyta / je].
which.F / which.M still reads / eats

'Iza has read a newspaper / eaten a toast, # and she is still reading / eating it.'
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(3) *Iza czyta wieczorami / mało je.*Iza read.IPFV.PST evenings.on / a little eat.IPFV.PST 'Iza usually reads in the evening / doesn't eat much.'

The meaning of the Slavic perfective in general and of the Polish perfective in particular has been extensively discussed. The essence of perfectivity can be established by studying the so-called general-factual contexts, i.e., contexts in which, in a nutshell, imperfective and/or perfective verbs can be used to refer to events located/localizable in the past; cf. (4) for Polish and (5) for Russian. However, as illustrated in the following examples, Slavic languages differ as to the preferred aspectual choice in these contexts (Altshuler 2014; Dickey 2000; Gehrke 2022, 2023; Grønn 2004; Klimek-Jankowska 2020, 2022; Mueller-Reichau 2018, among others), a fact which used to be traced back to the heterogeneous meanings of either the imperfective or the perfective.

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(4) Jako dziecko spadłam z drzewa.
as child fall.PFV.PST from tree
'As a child I (once) fell from a tree.'
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(5) Ja padala s dereva.

I fall.IPFV.PST from tree
'I (once) fell from a tree.'

Mueller-Reichau (2018: 292), my glossing

General-factual contexts constitute the main focus of the present paper. I will contribute to the ongoing discussion by showing that, in such contexts, the meaning of the Polish perfective

Past tense is used in the first two examples since it is the only morphological tense available for both the imperfective and the perfective. In example (3), the present tense form, in combination with the adverbials *wieczorami* and *mało*, gives rise to a habitual interpretation of the respective events. This interpretation is less common in the case of perfective derivatives (but see Boneh and Jędrzejowski 2019 for the respective examples and for a discussion about the relationship between perfectivity and habituality); the use of perfective verbs in the morphological present tense form usually yields future reference with the entailment of an event being about to be complete at some point after the utterance time.

and especially its restrictions in use are mainly determined by pragmatics. I apply the notion of pragmatic contract (Israeli 1996 for Russian) to Polish and show that the presence or absence of a contract systematically disambiguates between the preference for the perfective (in the former case) or the imperfective aspect (in the latter case). Importantly, I treat acceptability as a gradual and not a binary phenomenon here. This is a crucial assumption because it indicates that the two aspects are in a contrary and not a contradictory relationship to each other, meaning that a given aspectual form is hardly ever completely ruled out (but see Klimek-Jankowska 2022).

I further apply the notion of the pragmatic contract to Upper Sorbian and show that it does not determine the aspectual choice in this language. Thus, perfective as an indicator of a contract works for Russian (East Slavic) and Polish (West Slavic) but not for Upper Sorbian (West Slavic). This indicates similarities between the West and East Slavic perfectives and differences within the West Slavic perfective, and it justifies the placement of Polish in the transitional zone (Dickey 2000).

In this paper, I restrict myself to so-called (resultative) existential general-factuals. Their main characteristic is that they assert but do not presuppose the existence of an event in question (Klimek-Jankowska 2022 for Polish; cf. section 2.2.). Furthermore, the focus is on the result of a general-factual event (in contrast to the neutral variant, where there is no such focus). They need to be distinguished from actional, anaphoric, or presuppositional general-factuals (Grønn 2004; Mehlig 2011; Mueller-Reichau 2018; Padučeva 1996, among others).

An existential general-factual event would be *Czytałam ten esej o Polsce* 'I have read.ipfv this essay about Poland'. The verbal predicate asserts the existence of at least one event of reading a particular essay about Poland at some undefined time in the past. The event of reading took place on one or more occasions and it was probably completed each time (see also Klimek-Jankowska 2022). Further instances of existential general-factual events are illustrated in examples (4) and (5) above; it is being asserted that an event of falling from a tree happened to the speaker in an undefined past time. A presuppositional general-factual event would be *To Matejko namalował ten obraz* 'It was Matejko who painted.pfv this painting'. In this case, the existence of an event of painting is presupposed; a typical context for uttering the above sentence would involve people standing in front of the painting in a museum and wondering about who painted it. In the above Polish examples, the imperfective is the preferred choice in the existential general-factual context and the perfective appears in the latter case. In line with Mueller-Reichau (2018) and Klimek-Jankowska (2022), I assume that aspectual preference across different types of general-factual contexts should be investigated separately.

### 2. Existential general-factuals across Slavic: Current state of research

### 2.1. General-factual imperfective or general-factual perfective?

The fact that in East Slavic languages the imperfective aspect tends to be considered the strongly preferred option in general-factual contexts (but see Israeli 1996) has led to a broad adoption of

the term 'general-factual imperfective' (based on Maslov's 1959 *obščefaktičeskoe*; see also Padučeva 1996, among others). However, the heterogeneous distribution of (im)perfective forms across East and West Slavic languages in general-factual scenarios has disproven the 1:1 relationship between general-factuals and imperfective aspect. An extensive study on such a distribution was done by Dickey (2000). Dickey (2000: 5, 102) locates Polish on the transitional zone between East and West Slavic, where the usage of imperfective achievements in the context of general-factuals is 'very uncommon' or 'colloquial', but still possible. This usage is assumed to be typical for East Slavic and ruled out for West Slavic. Dickey (2000: 95, 106) proposes that the Western imperfective refers to quantitative temporal indefiniteness, meaning that a situation verbalized by the perfective verb must be assignable to more than one point in time.

A similar observation was made by Wiemer (2001), who pointed out the complementary distribution of (im)perfective achievements or punctual verbs like 'lose' in general-factual contexts in Polish and Russian, with the former calling for the perfective and the latter for the imperfective aspect. An analogous aspectual opposition between Polish and Russian occurs when the perspective switches from narration to retrospection, as observed by Łaziński (2020: 130). Cases of a less visible competition between the two aspects in Polish general-factuals are discussed in Wiemer (2008).

The idea that it is distinct meanings of the perfective and not the imperfective that are responsible for the heterogeneous distribution of aspectual forms in general-factual contexts across Slavic has been proposed by Mueller-Reichau (2018). According to his analysis, in West Slavic languages (Polish, Czech, Sorbian), the perfective aspect is supposed to express AspPuniqueness: uniqueness at the level of the aspectual phrase (Mueller-Reichau 2018: 300). This means that all events that are non-unique at the level of the verbal phrase (VP) can be represented as unique via the choice of the perfective aspect. This is why, when referring to an accidental event, the perfective is the preferred choice in Polish but not in Russian; cf. (4) vs. (5). An accidental event is unique in contrast to a non-accidental event because the former is less likely to undergo repetition. Importantly, according to the author, if a general-factual event is unique at the level of the event description in West Slavic, the imperfective is ruled out, see (6) for Polish, which speaks in favor of the "general-factual perfective" in this branch of Slavic languages. The event in (6) is VP-internally unique because it cannot happen more than once that one cuts down that same flower in that particular house; it can happen many times that one falls from the same tree though. In that sense, both events are unique, but only the former is VPinternally unique; this is why aspectual choice should only be possible in the latter case.

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(6) Jako nastolatka ścięłam jedyny kwiat rosnący w domu.
as teenager fell.PFV.PST only flower grow.PTCP.PRS in house
'As a teenager, I cut down the only flower that was growing in the house.'

Inspired by Mueller-Reichau (2018: 301)
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However, I assert that if the context at least implicates the plurality of VP-internally unique events, the imperfective takes over. I assume that iterativity is a licensor for general-factual imperfectives in the case of VP-internally unique events in Polish (cf. also Gehrke 2023 for Russian). This means that there is no semantic blocking for the imperfective and that its distribution is governed by pragmatics. This observation is crucial for the present paper.

(7) Jako nastolatka ścinałam jedyny kwiat domu rosnący teenager fell.IPFV.PST only flower grow.PTCP.PRS in house as przeprowadzce. zaraz po right after move 'As a teenager, I cut down the only flower that was growing in the house right after the move (every time

### 2.2. Context-dependent general-factual (im)perfective

we moved).'

Klimek-Jankowska (2022) conducted an extensive experimental study on aspectual choice in general-factual contexts in Polish.<sup>2</sup> One hundred twenty-five (125) participants were instructed to fill in the missing verb in different contexts by translating the respective English infinitive form given in brackets. Having the English lexeme provided, participants automatically had to make an aspectual choice while translating it into Polish. Four types of scenarios were investigated, two of which are of relevance to the present paper: the neutral existential, (8), and the resultative existential scenario, (9):

(8)To nie wielki wyczyn użyć nowoczesnej kosiarki trawnika. jest NEG modern lawnmower for lawn big achievement use prawdziwą Ciekawe Jan kiedyś ... (mow.pst)<sup>3</sup> trawnik kosą?4 interesting if Jan ever lawn real scythe

'It is not a big achievement to use a modern lawnmower. I wonder whether Jan has ever mowed.(i)pfv the lawn with a real scythe?'

Klimek-Jankowska (2022: 29), my glossing and translation

(9) Widzę, żе krowa jest jakaś niespokojna. nasza see.IPFV.PRES.1SG that our some restless cow ... (milk.pst)? Jesteś pewna, żе ją dzisiaj be.PRES.2SG sure that her today

'Our cow seems restless today. Are you sure that you milked.(i)pfv her today?'

Klimek-Jankowska (2022: 29), my glossing and translation

<sup>&</sup>lt;sup>2</sup> For further discussion of these results in Czech and Russian speakers, see Klimek-Jankowska (2022).

<sup>&</sup>lt;sup>3</sup> This is not exactly the way in which the items were presented in the experiment, but it mirrors the strategy of combining Polish sentences with a placeholder for a critical verb followed by the respective English infinitive in brackets. For the details of the experimental design, see Klimek-Jankowska (2022).

An anonymous reviewer asks about the contribution of the interrogative mood. Both assertions and question constructions can host or relate to a general-factual event. This applies to an existential and a presuppositional subtype. Regarding the interaction with the pragmatic contract, an interrogative mood of a general-factual phrase indicates that the pragmatic contract is not fulfilled (yet) or that one of the interlocutors aims to find out the epistemic state of mind of another interlocutor concerning the fulfillment of the contract. A declarative mood indicates that the state of mind about the (non-)fulfillment of the contract is being asserted. These distinctions play an important role in the aspectual distribution as indicated in section 4.3. In questions, the validity of the contract is marked by the imperfective, temporally non-restricted marking of phrases like 'as I (have) asked you to'. In assertions, however, the perfective marking is preferred in phrases like 'as you (have) asked me to' since the asking doesn't remain valid at the time of utterance (the decision about the fulfillment of the contract is being announced).

In the case of existential neutral contexts like (8), the result of the past event (past events are marked grey in the above examples) is not connected in any way to the previously mentioned context sentence (Klimek-Jankowska 2022: 16), which was supposed to trigger the choice of the imperfective. In contrast, in the case of existential resultative contexts, the result of the past event might be causally related to the context sentence, which was expected to lead to the preference for the perfective.

It was shown that existential neutral contexts almost exclusively triggered the imperfective, whereas existential resultative contexts rather triggered the perfective, but in a 60% vs. 40% distribution. According to Klimek-Jankowska (2022: 26), potential causality makes the temporal location of an event pragmatically specific (in line with Ramchand 2008a, 2008b), which leads to the preference for the perfective aspect. Accordingly, in (9), the question under discussion (QUD) is whether the cow had been milked before she became restless, or, more precisely, whether non-milking caused her to be restless. In my view, potential causality is an important but not the most crucial factor for triggering the perfective in the case of existential resultatives. I assume that na pewno 'certainly' / 'really', included in four out of five test sentences, might have been the actual trigger for the preference for the perfective. This is because na pewno introduces the presence of an agreement about something or the presence of a task that was previously assigned to the hearer/interlocutor by the addressee/interlocutor, i.e., it comes with the expectation of the fulfillment of an action. This expectation has been referred to as a pragmatic contract (Israeli 1996) and has been shown to determine the aspectual choice in Russian general-factuals. I assume that the pragmatic contract governs the aspectual distribution in Polish too.

An anonymous reviewer points out that the Polish na pewno can have two different meanings. It can function as an epistemic adverb 'certainly' or as a commitment adverb 'really'. The question remains as to which type of na pewno triggers the preference for the perfective aspect in general-factual contexts in Polish. The second type involves the speaker's commitment to the truth of the proposition and is therefore incompatible with uncertainty, as indicated by the reviewer; this is not in line with the use of *na pewno* in questions, which is why I do not consider this type responsible for the general-factual perfective. I assume that, in general-factual contexts, na pewno functions as an epistemic discourse marker (not necessarily an adverb) or as an epistemic particle of a "confident" subtype (following Rozumko 2016). According to Wierzbicka (2006: 291), typical epistemic adverbs are incompatible with questions and must include the components 'I think' and 'I don't say I know' in their semantic representation. As mentioned above, questions are a common environment for a general-factual na pewno. In questions, na pewno implies a lack of certainty on the speaker's part. In assertions, however, it can appear in contexts where the semantic requirement 'I don't say I know' is not met: Marek na pewno wydoił krowę - sam widziałem 'Marek certainly milked the cow – I saw it myself'. (In contrast to typical epistemic adverbs: Marek chyba wydoił krowę - #sam widziałem 'Marek probably milked the cow - #I saw it myself. But consider also: Marek na pewno wydoił krowę, a przynajmniej tak mi się wydaje 'Marek certainly milked the cow, at least it seems to me that he did', where na pewno is compatible with uncertainty). General-factual na pewno seems to open up a scale with different degrees of certainty. Furthermore, the commitment responsible for the choice of the

perfective aspect in general-factual contexts isn't based on the speaker's commitment but on the agreement between the interlocutors (that can but does not have to involve the speaker): Czy Marek na pewno skosił trawę? Wiem, że obiecał to Janowi 'Is it certain that Marek mowed the lawn? I know that he promised this to Jan'. In line with Wierzbicka (2006: 287), the non-necessity of speaker-orientedness is a characteristic feature of (epistemic) discourse markers/particles that distinguishes them from epistemic adverbs. To sum up, I assume that the general-factual na pewno has an epistemic base, but that it's not a typical epistemic adverb. A more elaborate investigation will be the subject of my future research. In the following, I will describe the notion of a pragmatic contract in more detail.

### 3. Pragmatic contract in Russian

As mentioned above, according to Israeli (1996), aspectual choice in Russian general-factuals can be determined by the presence or absence of a pragmatic contract, meaning that, even in Russian, general-factuals are not restricted to the imperfective aspect. Israeli applies this condition to non-creativity verbs like 'read' and claims that the perfective is mandatory if there is a pragmatic contract between discourse participants.<sup>5</sup>

Israeli (1996: 15) refers to a relationship between the speaker (P<sup>s</sup> <sub>1</sub>), the participant of the narrated event (P<sup>n</sup>), and/or the interlocutor(s) (P<sup>s</sup> <sub>2</sub>) as a contractual relationship if there is an understanding between P<sup>s</sup> <sub>1/2</sub> and/or P<sup>n</sup> that the performance of the action was expected (cf. also 'expectedness presupposition' in Leinonen 1982: 90). Accordingly, the imperfective is used if there is no contract or if the speaker thinks that the contract has been broken; otherwise the choice tends to be the perfective. Example (10) is an instance of the absence of a contract.

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(10) Vy čitali Vojnu i mir?
you read.IPFV.PST War and Peace
'Have you (ever) read War and Peace?'
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Israeli (1996: 16), my glosses

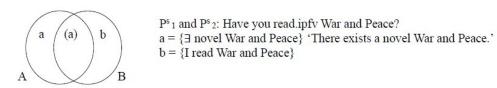
In (10), there is an interaction between two speakers, hence  $P^n = P^s_2$ . Since there is no prior agreement that the addressee is obliged to or would for some specific reason read War and Peace, the imperfective is used. In contrast, if someone has received a book as a gift, they are supposed to read it, i.e., the successful event of gifting creates a contract between the giver and the recipient, (11), with  $u\check{z}e$  being optional.

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(11) Vy uže pročitali knigu, kotoruju ja vam podarila? you already read.PFV.PST book which I you gave 'Have you already read the book that I gave you?'
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Israeli (1996: 19), my glosses

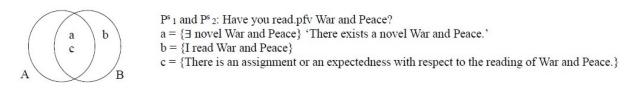
It needs to be pointed out that, in Russian, in contrast to Polish, the status of the target state validity strongly restricts the availability of the perfective in general-factual contexts and thus the applicability of the pragmatic contract. For instance, the sentence 'Did you open the window?' cannot be verbalized by the perfective if the window is closed at the speech time because the target state does not hold true (Mueller-Reichau 2018 among others).

In a discourse situation, contract-related differences between the imperfective and the perfective can be illustrated via Venn diagrams, where circles A and B represent the sets of knowledge of P<sup>s</sup> <sub>1</sub> and P<sup>s</sup> <sub>2</sub>, respectively, and variables a, b, and c represent pieces of information. We can start with the imperfective, Figure 1.



**Figure 1**: The representation of knowledge sets in the absence of a pragmatic contract indicated by the use of the imperfective aspect; '(a)' means that the existence of the novel can belong to the intersection of the knowledge sets of  $P^s$  and  $P^s$  (common ground), but it does not have to (scheme based on Israeli 1996: 18)

In Figure 1, the existence of the novel can, but does not have to, belong to the common ground between speaker and hearer (marked with '(a)'). The answer to the question belongs to the hearer's knowledge set. The perfective, Figure 2, introduces a shared expectedness about the instantiation of an event (a pragmatic contract) as part of the common ground, 'c'; the fact that a pragmatic contract holds makes 'a' an obligatory part of the common ground as well.



**Figure 2**: The representation of knowledge sets in the presence of a pragmatic contract indicated by the use of the perfective aspect; 'a' and 'c' both belong to the common ground (scheme based on Israeli 1996: 19)

We have just seen that the perfective, in contrast to the imperfective, signals the presence of a pragmatic contract between the interlocutors. Additionally, the imperfective aspect is obligatory with so-called reminders (Israeli 1996: 21), which highlight the presence or suggest the breaking of a contract: *Ja ved' govoril* 'I did tell.ipfv you', *Ja ved' prosil* 'I did ask.ipfv you', *Ja ved' napominal* 'I did remind.ipfv you'. In the next section, I will show that the same distribution of the two aspects can be observed in Polish.

### 4. Pragmatic contract in Polish

Polish general-factual sentences can be verbalized using both perfective and imperfective aspect, depending on, among other things, whether the speaker aims to present an event as episodic (former case) or potentially repeatable (latter case), or whether they indicate a possible causal relation between two events, as observed by Klimek-Jankowska (2022).

Essentially, only the perfective aspect is felicitous under a pragmatic contract, (12). The reminder verb is preferably marked for the imperfective aspect (the crucial aspectual combination is marked grey). The choice of the temporally unrestricted imperfective indicates that the question is still valid at the utterance time (i.e., that the pragmatic contract remains in force). The event of walking the dog in (12) is verbalized using the perfective aspect because

its result (completion) matters for the fulfillment of the contract (in line with the preference for the perfective if the focus is on the result, as discussed in Klimek-Jankowska 2022). A possible context for (12): A and B are sitting in the kitchen; their dog is lying next to the radiator. A asks B to quickly walk the dog and leaves the house to get groceries. A comes back and sees the dog in the same place as before. A says to B [disappointed]:

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(12) #Wyprowadzałeś<sup>6</sup> / wyprowadziłeś psa, tak jak cię prosiłam? walk.IPFV.PST.2SG / walk.PFV.PST.2SG dog so how you asked.IPFV 'Did you walk the dog, as I (have)<sup>7</sup> asked you to?'
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If there is no contract, the imperfective is the preferred choice. Consider (13) as A's question to B in the following discourse situation. A comes back after a trip and is happy to see B. A notices their dog lying next to the radiator and asks B:

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(13) Wyprowadzałeś / ?*wyprowadziłeś psa? Jak nie, to chętnie to zrobię. walk.IPFV.PST.2SG / walk.PFV.PST.2SG dog If not, I will be happy to do it. 'Did you walk the dog?'
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# 4.1. Strong indicators of the presence of a contract: Parenthetical constructions with speechact verbs

Example (12) consists of a general-factual sentence modified by a parenthetical structure containing a speech-act verb 'ask somebody to do something'. I assume that speech-act verbs are strong indicators of the presence of a pragmatic contract, meaning that the imperfective is ruled out there; see (12) and (14) below. More precisely, the presence of a parenthetical structure with a speech-act verb indicates that the event to which a general-factual sentence refers has been previously discussed by the interlocutors. This means that there has been an utterance in which the speaker asked/requested that the hearer do something, i.e., change the

<sup>&</sup>lt;sup>6</sup> The imperfective is the only choice once there is explicit reference to multiple events of walking the dog in a row (A was away for ten days and asked B to walk the dog during her absence). This indicates a strong correlation between imperfective aspect and iterativity in Polish (cf. also Gehrke 2023 for Russian).

<sup>&</sup>lt;sup>7</sup> The English translation with the present perfect implies that the asking has happened more than once. The translation with the simple past indicates that the asking happened once or possibly more than once during a past time period. Both situations and thus the respective translations can apply to Polish, which is why I have put the auxiliary 'have' in brackets. I won't discuss this issue in more detail.

<sup>8 &#</sup>x27;?' indicates that the respective form is not completely ruled out but is clearly dispreferred compared to its aspectual counterpart.

An anonymous reviewer alternatively proposes treating the parenthetical construction as a modifying clausal adjunct consisting of the adverb *tak* 'so' modified by the relative *jak*-clause specifying the content of what *tak* should refer to. When investigating the status of these clauses, one needs to pay attention to the following contrast: *Skosileś trawę*, *(tak) jak cię prosilem*? 'Have you mowed the lawn as I (have) asked you to?' vs. ... *tak*, *jak cię prosilem*? '... the way I (have) asked you to {only in the middle and not at the back of the garden}'; the second structure seems to presuppose that the garden has been mowed somehow and the question remains as to how. In both readings, the pragmatic contract is in force, and the perfective aspect is the preferred option. A detailed investigation of the syntactic status of these clauses will be the subject of future research.

reality in a certain way. Making the addressee perform a particular action results in the realization of the perlocutionary act (Austin 1962). In that sense, if a parenthetical construction contains a speech-act verb (for instance *kazać*, *nakazać*, *przykazać*, *rozkazać* 'tell/order sb to do sth', *prosić*, *poprosić* 'ask'), it indicates an expectation of the performance of an action (the instantiation of the perlocutionary act). This shows that the pragmatic contract is in force, which triggers the choice of the perfective aspect within the general-factual clause. Parenthetical constructions containing speech-act verbs are strong indicators of the presence of a contract because speech-act verbs make the contract explicit.

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(14) #Otwierałeś / otworzyłeś tu jakieś okno, open.IPFV.PST.2SG / open.PFV.PST.2SG here some window tak jak cię prosiłam / tak jak ci kazałam? so how you asked.IPFV / so how you order.(I)PFV<sup>10</sup> 'Did you open a window here, as I (have) asked you to?'
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(15) is an instance of the lack of a pragmatic contract and the clear preference for the imperfective aspect. Imagine the following scenario: It is winter and it is cold outside. A enters the room, B is inside the room. A realizes that the heating is not working and utters (15) to B [laughing]. The fact that the heating hasn't been working is part of the common ground between A and B. It follows from the context that, besides the absence of a contract, the result does not matter in the current discourse in any way, since the speaker does not expect the answer to be positive.

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(15) Otwierałeś / ?otworzyłeś tu jakieś okno? open.IPFV.PST.2SG / open.PFV.PST.2SG here some window 'Did you open a window here?'
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### 4.2. Weak indicators of the presence of a contract: Na pewno, rzeczywiście

Slightly weaker indicators of the presence or validity of a contract and thus the preference for the perfective in existential-resultative contexts in Polish are markers like 'certainly' that indirectly signal expectedness. Four out of five test sentences used in Klimek-Jankowska (2022: 29) include the marker *na pewno* 'certainly' / 'really' or its sentential variant *być pewnym* 'be sure', which might have triggered the choice of the perfective aspect independently of/in addition to the causal relation between a general-factual event and a contextually given event.

```
(16) Widzę że zwiędły kwiatki na parapecie.
see.IPFV.PRES.1SG that wilted.PFV.PST.3PL flowers on windowsill
Czy ty na pewno je dzisiaj podlałeś?¹¹
if you for sure them today water.PFV.PST.2SG
'It seems that the flowers have wilted on the windowsill. Are you sure that you watered them today?'

Based on Klimek-Jankowska (2022: 29), my glossing and translation
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<sup>&</sup>lt;sup>10</sup> *Kazać* is a biaspectual verb in Polish.

The introduction of a general-factual sentence with *czy ty* 'if you' seems to implicate the presence of an arrangement too.

Without 'for sure' the imperfective is the preferred option despite a probable causality.

```
(17) Widzę że zwiędły kwiatki na parapecie.

see.IPFV.PRES.1SG that wilted.PFV.PST.3PL flowers on windowsill

Podlewałeś je dzisiaj?

water.IPFV.PST.2SG them today
```

Compare also the contrast between (18) and (19): both signal a possible causal relation between the contextually given and the general-factual event, but only the former example indicates the presence of a contract. The lack of a contractual relationship between interlocutors automatically results in the favoring of the imperfective, (19).

```
(18)
                                nasza krowa jest jakaś niespokojna.
      Widzę
                          że.
      see.IPFV.PRES.1SG that our
                                                    some restless
                                               is
                                       cow
      Jesteś
                    pewna, że
                                  ją
                                        dzisiaj? wydoiłaś?
      be.PRES.2SG sure
                             that her today
                                                milk.PFV.PST.2SG
      'Our cow seems restless today. Are you sure that you milked her today?'
                                        Based on Klimek-Jankowska (2022: 29),12 my glossing and translation
```

```
(19) Widzę że nasza krowa jest jakaś niespokojna. see.IPFV.PRES.1SG that our cow is some restless Doiłaś ją dzisiaj? milk.IPFV.PST.2SG her today
```

Following this line of reasoning, the preference for the imperfective aspect in existential neutral contexts might have been triggered by the absence of a contract and not (only) by the lack of a causal relation between two events. In the next section, I will present my corpus study on the relationship between pragmatic contract and aspect choice in Polish by investigating contexts with strong indicators.

### 4.3. Corpus study on Polish

I investigated the distribution of imperfective and perfective aspect within the contractual and the reminder phrase (strong indicators: speech-act embedding) in the *Narodowy Korpus Języka Polskiego* 'National Corpus of Polish' (NKJP; Przepiórkowski et al. 2012). The goal was to verify whether the perfective dominates within the former and the imperfective within the latter phrase, and what the quantitative distribution of the two aspects looks like within the two phrases. I looked up all occurrences of sequences containing an arbitrary verb (except for a modal) in the form of an l-participle (contractual phrase) that is embedded under an imperfective or a perfective speech-act verb like *kazać*, *nakazać*, *przykazać*, *rozkazać* 'tell/order sb to do sth', *prosić*, *poprosić* 'ask', or *instruować*, *poinstruować* 'instruct' in the form of an l-participle and introduced by *jak* 'how' (reminder phrase). The relevant aspectual

<sup>&</sup>lt;sup>12</sup> Klimek-Jankowska (2022) does not provide information about the acceptance rates of single lexemes but rather of entire condition groups.

realizations of *kazać* 'tell/order sb to do sth' had to be listed one by one to filter out lexemes like *okazać* 'turn out' that aren't speech-act verbs. The exact query looked as follows (the search was conducted with the full NKJP corpus, 21/01/2024):

[pos=praet & base!="musieć|móc|chcieć"] []{,6} jak [pos!="interp|conj" & base!=by]{,6} [base="nakazać|przykazać|rozkazać|kazać|.\*prosić|.\*instruować" & pos=praet] []\* [orth="[?]"] within s

Eighty-two (82) examples in total were identified by the search engine as matching the above-mentioned pattern. After a manual re-examination, 25 examples were proven to fit into the contractual frame "did x v.pst, as ... y ask.pst / instruct.pst / tell.pst to?" Doublings, deviating syntax-semantic frames, and non-contractual uses were filtered out of the database. Of the 25 purely contractual uses, 19 (76 %) contained the perfective aspect, and 6 (24 %) the imperfective aspect within the contractual phrase (Figure 3). Within the reminder phrase, Figure 4, there were 12 instances of the imperfective aspect (48 %), 5 of the perfective aspect (20 %), and 8 (32 %) of the biaspectual verb *kazać* (annotated as 'perfective' in the corpus). Since *kazać* does not have a predefined aspectual value, I treat it as neither imperfective nor perfective. The consequence of biaspectuality is that, independently of whether the telling remains valid at the speech time or not, there is no way for the speaker to fall back on the imperfective verb.

The results confirm that the contractual phrase tends to be realized by the perfective and the reminder phrase by the imperfective aspect. In questions, the choice of the imperfective within the reminder phrase indicates that the contract remains valid at the utterance time. The perfective within the contractual phrase signals that the focus is on the result (the presence of the result matters for the fulfillment of the contract).

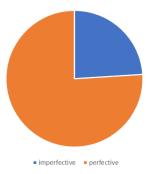


Figure 3: Aspectual distribution within the contractual phrase in past contexts in Polish.

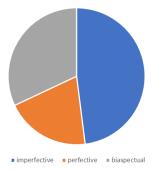


Figure 4: Aspectual distribution within the reminder phrase in past contexts in Polish.

Next, I would like to comment on cases that deviate from the above-described pattern and at the same time validate the main assumptions. Four out of six uses of the imperfective aspect within the contractual phrase are iterative or distributive uses; there is also one manner reading and one instance of the past  $by\dot{c}$  'to be' that does not have a perfective twin. This distribution confirms the correlation between imperfectivity and iterativity, which, in the case of general-factual readings, manifests itself in the repetitive character of contractual events:

```
(20) myślisz, że ja dawałam tę D3 tak
think that I give.IPFV.PST this D3 such
jak mi kazali?
how me order.(I)PFV.PST
'Do you think that I was giving this {vitamin} D3 {to my child} the way they told me to?'
The full NKJP corpus, internet forum (22/04/2004)
```

Four out of five perfectives within the reminder phrase appear in cases where the contractual agent is not available at the time of utterance (biblical characters; several derivatives of  $kaza\hat{c}$ ). The remaining case occurs in the context of the non-validity of the contract at the utterance time, (21).

```
(21) Czy graliście tak, jak nakazał wam w szatni trener?

if play.IPFV.PST such how order.PFV.PST you in locker.room coach

'Did you play the way your coach ordered you to play in the locker room?'

The full NKJP corpus, Dziennik Bałtycki (14/10/2000), Polskapresse
```

All the above observations confirm that the imperfective within the reminder phrase indicates the validity and verifiability of the contract at the speech time. Crucially, there is no perfective variant of *prosić* 'ask for' within the reminder phrase; speakers seem to generally prefer the imperfective if the respective aspectual form is available for the given lexeme.

A very interesting change in the aspectual distribution can be observed within assertive contractual phrases, i.e., phrases that appear in the declarative form "x (neg) v.pst (neg), as ... y ask.pst / instruct.pst / tell.pst to. [...?]". Here, perfective verbs and the biaspectual *kazać* are almost the only choices within the reminder phrase. The only imperfective case among the ten assertive contractual examples is one in which the fulfillment of the contract is being questioned, but not completely denied, (22). The data suggest that the preference for the perfective within the reminder phrase correlates with the non-validity of the contract at the time of utterance, meaning that the asking/requiring, etc., does not remain valid, (23), or cannot be instantiated, (21), at or after the speech time.

```
(22)
      No i
                       przedstawił
                                              "<sup>13</sup>Pan wartości jednostki,
                nie
                                                                individual.GEN
           and NEG present.PFV.PST.3SG man
                                                      values
      SO
                         jak
                              jest Pańskim
      jak
            prosiłam,
                                               zdaniem?
      how asked.IPFV how is
                                    your.INS opinion
      'So, you didn't present the values of an individual, as I (have) asked you to; would you agree?'
                                                          The full NKJP corpus, internet forum (18/12/1999)
```

<sup>&</sup>lt;sup>13</sup> The quotation marks appeared in the actual corpus example. They do not contribute to the meaning of the sentence.

```
(23) Zmieniłem sygnaturkę jak mnie o to poprosiłeś. exchange.PFV.PST.1SG bell how me for it asked.PFV 'I exchanged the bell, as you (have) asked me to.'
```

The full NKJP corpus, internet forum (28/01/2006)

In the last section, I will briefly discuss Upper Sorbian, where the pragmatic contract is not in force.

## 5. (No) pragmatic contract in Upper Sorbian?

This section aims to show that the presence or absence of a pragmatic contract can be used as a diagnostic to differentiate between East and West Slavic types of aspect. According to Dickey (2000: 5), Sorbian is a 'typical' member of the West Slavic group, thus it should call for the perfective in the case of general-factuals. Dickey's chapter on general-factuals (Dickey 2000: 95) does not discuss Sorbian examples though. Targeted data elicitation with a native speaker of Upper Sorbian revealed that the perfective is the only choice within the phrase that refers to a contractual event, independently of the presence or absence of a contract. However, the imperfective is the preferred choice within the reminder phrase. This suggests that, in Upper Sorbian, there are no aspectual minimal pairs that would depend on the presence or absence of a contract (in contrast to in Russian and Polish), but that the aspectual distinction remains between the contractual (perfective) and the reminder phrase (imperfective), even though both refer to past events. (24) is a non-contractual question about the potential performing of an action 'walking the dog' at some undefined past time before the utterance time. In contrast to Polish, in Upper Sorbian, the perfective is not only the preferred option but is even the sole option in this case.

```
(24) Sy ty psa wuwjedł?
be.2SG you dog walk.PFV.PST.2SG
'Did you walk the dog?'
```

Example (25) additionally includes the parenthetic construction *kaž sym Će prosył* 'as I asked you to', a strong indicator of the presence of a pragmatic contract. The perfective is also the only option here, which, however, cannot be traced back to the presence of a contract; there is no aspectual difference between (24) and (25).

```
(25) Sy Ty psa wuwjedł, każ sym Će prosył?
be.2SG you dog walk.PFV.PST.2SG how be.1SG you asked.IPFV
'Did you walk the dog, as I (have) asked you to?'
```

The lack of aspect-driven opposition also holds for the past event of opening the window, as examples (26) and (27) illustrate. In both the neutral (26) and the contractual use (27), a general-factual event can only be expressed via the perfective verb.

```
(26) Sy wokno wočinił?
be.2SG window open.PFV.PST.2SG
'Did you open the window?'
```

(27) Sy wokno wočinił, kaž sym Će prosył?
be.2SG window open.PFV.PST.2SG how be.1SG you asked.IPFV
'Did you open the window, as I (have) asked you to?'

In my future work, a more elaborate study on the aspectual distribution in general-factual sentences in Upper Sorbian is planned. I will investigate different semantic groups of verbs in combination with diverse indicators of contract. Furthermore, non-contractual uses will be tested in more detail to make sure that the imperfective is ruled out there independently of verb semantics, argument structure, or the properties of the object. The initial evidence provided in this paper suggests that the contract is not in force.

### 6. Conclusion

This paper aimed to demonstrate that aspectual choice in Polish resultative general-factual contexts is mainly determined by pragmatics. More precisely, I applied the notion of the pragmatic contract to Polish (Israeli 1996 for Russian) and showed that the perfective is the preferred choice if a contractual relationship holds between interlocutors. If there is no contract or if the contract explicitly requires the instantiation of multiple events, the imperfective takes over. In the case of reminders, i.e., phrases that indicate the presence of a contract, the imperfective is the preferred choice in questions. It emphasizes that the asking, requiring, ordering, etc., remain valid at the speech time, i.e., that there is no evidence that the contract has already been fulfilled. In assertions, the choice of the perfective within the reminder phrase signals the non-validity of the contract at the utterance time, which essentially translates to the confirmation that the contract has been fulfilled. The theoretical assumptions made above were verified through a corpus study with the Narodowy Korpus Języka Polskiego 'National Corpus of Polish', where natural language examples served as evidence for the aspectual distribution within the contractual and the reminder phrases. I further briefly compared Polish to Upper Sorbian and showed that the pragmatic contract does not determine aspectual choice in Sorbian the way it does in Polish, which confirms the placement of Polish in the transitional zone between East and West Slavic. In both Polish and Sorbian, an aspectual distinction is made between a contractual event (perfective) and a reminder (imperfective) if the contract can still be fulfilled at or after the speech time.

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