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## Factual Imperfective Contexts in Polish

### Abstract

This study aims to account for the microvariation in aspect choices in factual imperfective contexts in Polish. To this goal an online questionnaire was conducted 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. The study shows that perfective aspect is preferred in presuppositional factual contexts and imperfective is preferred in existential factual contexts in both regions. Additionally, imperfective is generally more often used in factual contexts in eastern Poland than in western Poland. The study accounts for the observed preferences by resorting to the interaction between the Elaboration relation and (in)definiteness of the temporal variable (introduced at the level of AspP) with respect to the temporal trace of a complex event decomposed in the first phase syntax.

### Keywords

factual imperfective, imperfective aspect, Elaboration, Polish, microvariation, online questionnaire.

### Streszczenie

W niniejszym artykule przedstawiamy wyniki badań dotyczących różnic w użyciu formy aspektowej czasownika w kontekstach ogólnofaktycznych w języku polskim. W badaniu przeprowadzono ankietę internetową, w której uczestnicy z Polski zachodniej i wschodniej zostali poproszeni o uzupełnienie brakujących czasowników w dwóch rodzajach kontekstów ogólnofaktycznych: (i) w kontekstach, w których wydarzenie jest w presupozycji, oraz (ii) w kontekstach, w których wydarzenie jest w asercji. Zaobserwowano, że aspekt dokonany preferowany jest w kontekstach typu pierwszego, a niedokonany w kontekstach typu drugiego w obu regionach Polski. Ponadto aspekt niedokonany jest częściej stosowany w obydwu typach kontekstów ogólnofaktycznych na wschodzie Polski. W badaniu wyjaśniono zaobserwowane preferencje w użyciu form aspektowych, odwołując się do interakcji

między relacją retoryczną Elaboracji a (nie)określoności zmiennej czasowej (wprowadzonej w reprezentacji składniowej na poziomie frazy aspektowej) w odniesieniu do funkcji mapującej dane wydarzenie względem odcinka czasu, w którym to wydarzenie miało miejsce. Istotną rolę w proponowanej analizie odgrywa teoria dekompozycji wydarzenia w składni pierwszej fazy.

### Słowa kluczowe

konteksty faktualne, aspekt niedokonany, relacja retoryczna Elaboracji, język polski, zróżnicowanie językowe, ankieta internetowa.

## 1. Goal and motivation

Dickey (2000) observed that there are some differences in the use of perfective and imperfective aspect in Slavic languages. According to Dickey (2000), western and eastern Slavic languages (Czech and Russian respectively) should be situated on the opposites sides of the aspectual spectrum and Polish represents an intermediate zone between them (see also Mueller-Reichau 2018). Dickey (2000) focused on the variation in aspect choices in different types of contexts among them being the so called factual imperfective contexts. In these contexts, as argued by Dickey (2000), Russian licenses a maximal usage of general factual imperfective contexts, Czech licenses a minimal usage of general factual imperfective contexts and Polish is an intermediate zone. What it not clear is what it means that Polish is an intermediate zone. It may mean that there is regional variation where Polish speakers from the eastern part of Poland show a preference for imperfective aspect and Polish speakers from the western part of Poland show a preference for perfective aspect. Furthermore, it would be interesting to see whether the patterns of variation in the use of aspect in general factual contexts in Polish are the same in existential and presuppositional factual contexts. This study reports the results of an online questionnaire where speakers from the eastern and western part of Poland were asked to fill in the missing verbs in existential and presuppositional general factual imperfective contexts in Polish.

The paper is organized as follows: Section 2 introduces relevant background on Polish aspect and explains why general factual imperfective contexts constitute a problem for most theories of aspect in Slavic. Section 3 presents an overview of rhetorical relations and their role in constraining the temporal ordering of events in discourse. Section 4 overviews different approaches to factual imperfective contexts in Slavic. Section 5 presents our study on aspect choices in presuppositional and existential factual contexts in eastern and western Poland. Section 6 accounts for the observed patterns of microvariation in aspect choices in Polish in the framework of Ramchand's (2004, 2008a, 2008b) first phase syntax. Section 7 presents our conclusions.

## 2. Grammatical aspect in Polish

Almost all verbs in Polish (including infinitives) are either perfective or imperfective and they have both aspectual variants, as illustrated in (1) and (2).

(1) Jan czytał<sup>I</sup> książkę.  
Jan read book  
'John was reading a book.'

(2) Jan przeczytał<sup>P</sup> książkę.  
Jan read book  
'Jan read a book.'

Perfectivity is usually morphologically marked by means of a prefix or a suffix, as presented in (3a, b):

(3) a. pisać<sup>I</sup> – napisać<sup>P</sup> 'to write'  
b. błyskać<sup>I</sup> – błysnąć<sup>P</sup> 'to flash'

Imperfective verbs form two classes: primary imperfectives (see (4a), (5a)) and secondary imperfectives signaled by means of an *-ywa* suffix or by stem alternation (see (4b), (5b)).

(4) a. pisać<sup>I</sup> 'to write'  
b. podpisywać<sup>I</sup> 'to sign (imperfective)'

(5) a. bić<sup>I</sup> 'to hit'  
b. wbijać<sup>I</sup> 'to hammer'

Most perfective forms can be used as complements of phasal verbs: *zacząć* 'to begin', *kontynuować* 'continue', *skończyć* 'to finish', or as complements of the auxiliary *będzie* in periphrastic future constructions, as shown in (6) (cf. Wróbel 2001; Willim 2006; Zinova 2016; Filip 2017).

(6) zacząć / kontynuować / skończyć / będzie:  
begin / continue / finish / will:  
a. czytać<sup>I</sup>/\*przeczytać<sup>P</sup> artykuł 'read / finish reading an article'  
b. kwiczeć<sup>I</sup>/\*zakwiczeć<sup>P</sup> 'squeak repeatedly / start squeaking'  
c. śpiewać<sup>I</sup>/\*pośpiewać<sup>P</sup> 'sing / sing for a while'  
d. stukać<sup>I</sup>/\*stuknąć<sup>P</sup> 'knock repeatedly / knock once'

Most perfective verbs cannot be used as present participles *\*przeczytając* 'while reading', *\*stukając* 'while knocking', *\*poczytając* 'while reading'. Moreover, when used in the present tense form perfective verbs refer to future events as in *przeczyta* 'will read.3SG', *postuka* 'will knock.3SG for a while' *pośpiewa* 'will sing.3SG for a while' (see Zinova 2016; Filip 2017: 173).

Perfective verbs have a very specific meaning and they usually refer to single, well-delimited events happening on a specific occasion (see Willim 2006: 202). By contrast, imperfective verbs in Polish refer to unbounded events.

A relevant fact about imperfective aspect is that it is cross-linguistically multiply ambiguous. Languages differ in the range of possible readings of imperfective but the two most canonical ones are single ongoing (*Anna czytała gazetę, kiedy ktoś wszedł do domu* 'Anna read.IMPFV (lit. was reading) a newspaper when someone entered the house') and plural event readings (*Mary prasowała.IMPFV swoje sukienki wieczorami* 'Mary ironed.IMPFV her dresses in the evenings'). There is an additional reading of imperfective verbs under which they describe events as completed and this reading arises only when imperfective verbs are used in the so called general factual contexts as in *Kto otwierał okno w moim pokoju?* 'Who opened<sup>1</sup> the window in my room?'. This reading is only attested in Slavic languages and not in Spanish, French or Italian (cf. Cipria and Roberts 2000; Hacquard 2006; Deo 2009). Grønn (2004), in his discussion of factual imperfective contexts in Russian, distinguishes between two kinds of factual imperfective contexts: (i) existential and (ii) presuppositional exemplified in (7) and (8) respectively.

(7) Ja vaši očerki o Sibiri čital<sup>1</sup>, mne oni očēn' nraǰatsja<sup>1</sup>. (Uppsala Corpus)  
I have read your essays on Siberia, I like them a lot.

(8) A deti kričali: papa, papa! [...] Za čto on umer<sup>P?</sup>? Tovarišči, no počemu že ko mne? Pri čem tut ja? Ja, čto li, ubival<sup>1</sup>? (Uppsala Corpus)  
And the children cried out: Dad, dad [...] Why did he die? Well, my friends, why do you ask me? I've got nothing to do with it. Did I kill him?

Grønn (2004: 25)

In contexts of the type shown in (7), the existence of the event denoted by the verbal predicate is asserted (focused). In presuppositional factual contexts of the type presented in (8), the existence of the event denoted by a verb is presupposed (backgrounded).<sup>1</sup>

In both kinds of factual contexts imperfective verbs describe events which are understood as completed. This observation is challenging for all the theories of imperfective aspect whose goal is (i) to formulate its invariant semantics covering all of its possible meanings and (ii) to make it distinct from the semantics of perfective aspect.

General factual imperfective contexts are not the only ones, in which imperfective is used to express event completion in Polish. Also under the plural event reading, imperfective aspect can be used to refer to a series of completed

<sup>1</sup> Pragmatic presupposition is understood as in Karttunen (1973), Stalnaker (1973), Von Stechow (2008). See also Zinova and Filip (2014) and Frąckowiak (2015) for a related discussion on the pragmatics of aspect in Slavic.

events and it can be modified by both durative adverbials (*for X-time*) and time span adverbials (*in X-time*), as shown in (9) and (10) respectively:

- (9) Maria gotowała<sup>1</sup> obiad przez godzinę.  
 Mary cooked dinner through hour  
 ‘Mary was cooking dinner for an hour (on a single occasion).’  
 ‘Mary cooked dinner for an hour (on several occasions).’
- (10) Maria gotowała<sup>1</sup> obiad w godzinę.  
 Mary cooked dinner in hour  
 ‘#Mary was cooking dinner in an hour (on a single occasion).’  
 ‘Mary cooked dinner in an hour (on several occasions).’

The eventuality in (9) is preferably interpreted as single ongoing but with contextual support it could be interpreted as a series of ongoing events. In (10) the preferred single ongoing reading creates a mismatch with the time-span adverbial. However, under the plural event reading in (10), the time span adverbial modifies each of the completed events in the plural set. A strong preference for imperfective aspect over perfective aspect is also observed in Polish in contexts with quantifying adverbs (QA) in complex sentences with *when*-temporal adjunct clauses which also express the plurality of events. In such contexts, the relation of precedence or coincidence with the eventuality in the main clause is evaluated with respect to the *when*-clause eventuality. The sequential interpretation where the *when*-clause eventuality is understood as completed can be either expressed by means of perfective or imperfective aspect, as shown in (11).

- (11) Zawsze kiedy mężczyźni wracali<sup>1</sup> / wrócili<sup>P</sup> z łowów, cała wioska  
 Always when men returned from hunts, whole village  
 zbierała się przy ognisku.  
 gathered by fire  
 ‘Whenever the men returned from hunting, the whole village gathered by the fire.’

Klimek-Jankowska (2012) points out that a preference for imperfective aspect (expressing event plurality) is licensed in those contexts which unambiguously expressed the rhetorical relation of Narration which by itself was sufficient to create a relation of precedence between the eventualities in the *when*-clause and in the main clause (see Lascarides and Asher 1993, 2003), as shown in (12).

- (12) Za każdym razem gdy upadał, podnosił<sup>1</sup> się.  
 Every time when fell, stood up  
 ‘Whenever he fell, he stood up.’

In (12), the coincidence of the eventualities of falling and standing up is pragmatically implausible. The only pragmatically plausible interpretation is that of precedence between falling and standing up. These observations clearly show

that temporal relations between eventualities in discourse result from the interaction of aspect and rhetorical structure and imperfective can be used to express the plurality of events only because the completion of the *when*-clause eventuality follows from the rhetorical relation of Narration guaranteeing the precedence relation between the *when*-clause and main clause eventuality.

### 3. Rhetorical relations and temporal discourse

Most of the time the order in which events are presented in discourse matches their temporal order, as in (13) but there are some exceptions to this rule, where the order of events mismatches the temporal order, as shown in (14):

(13) John stood up. Max greeted him.

(14) John fell down. Max pushed him.

Kamp and Rohrer (1983) in their Discourse Representation Theory account for temporal relations in narrative texts of the type presented in (13) by postulating that the reference time is anaphoric and events encode forward movement of reference time while states and processes do not. Lascarides and Asher (1993) observed that this theory is not able to account for the backward movement in (14). They claim that temporal relations are calculated not only compositionally but also on the basis of defeasible rhetorical relations modeled after Hobbs (1985). They define the following rhetorical relations:

**Explanation (1, 2):** the event described in 2 explains why 1's event happened (perhaps by causing it), as exemplified in (15).

(15) John broke his leg. He fell down.

**Elaboration (1, 2):** 2's event is part of 1's event (perhaps by being in the preparatory phase or consequent state). 2's event is a subevent of 1's event, as shown in (16).

(16) The council built the bridge. The architect drew up the plans.

**Narration/Occasion (1, 2):** the event described in 2 is a consequence of (but not strictly speaking caused by) the event described in 1, as demonstrated in (17).

(17) Max stood up. John greeted him.

**Background (1, 2):** the state described in 2 is the backdrop or circumstances under which the event in 1 occurred (no causal connections but the event and state temporally overlap), as illustrated in (18).

(18) Max opened the door. The room was pitch dark.

**Result (1, 2):** the event described in 1 caused the event or state described in 2, as shown in (19).

(19) Max switched off the light. The room was pitch dark.

Explanation is in a sense the dual to Result, they both invoke causation but the latter matches the contextual and temporal order of the events whereas the former does not. Both Result and Narration encode that textual order matches temporal order, but only the former relation induces a causal link between the events.

These observations will be relevant in our account of the observed patterns of variation in aspect choices in factual imperfective contexts in Polish proposed in Section 6. One of the crucial questions which need to be addressed is which semantic and pragmatic factors motivate the use of imperfective aspect in factual imperfective contexts in which event completion could be more directly expressed by means of perfective aspect. In order to answer this question, it is crucial to discuss different approaches to factual imperfective contexts offered in the literature with the objective of creating a list of their most important characteristics.

#### 4. Factual imperfective contexts: An overview of different approaches

Śmiech (1971) noted that in Polish it is possible to express a completed event with an imperfective verb. He suggested that imperfective aspect can be used in place of perfective aspect when the result of an action is known or when it is possible to infer from that the result of the action was achieved (see Śmiech 1971: 44). Smith (1991) suggested that it is the Maxim of Quality (Grice 1989) which underlies the choice of imperfective in referring to complete events. More precisely, perfective encodes [+ temporal anchoring] or [+ sequencing] and imperfective is chosen when these features are not relevant in a given context. Borik (2002, 2006) accounts for the aspectual opposition as privative, where imperfective is treated as non-perfective. She provides a formal account capturing the single ongoing and factual uses of imperfective aspect. Yet another approach to factual imperfective contexts was proposed by Grønn (2004). Grønn (2004: 81) enumerates a number of characteristics of factual imperfective contexts. He states that factual imperfective contexts are marked with past tense and imperfective morphology, they entail the existence of only one past event in the past and they contain telic predicates. Grønn's (2004) proposes a semantico-pragmatic account of factual imperfective contexts in which he resorts to aspectual competition. He suggests that imperfective is

used in factual contexts when perfective is for some reason infelicitous. According to Grønn's (2004), what governs aspectual competition is different in existential and presuppositional factual imperfective contexts. In existential factual imperfective contexts, perfective is more likely to win the competition when the assertion time is narrow and specific whereas imperfective is preferred in the absence of a temporal adverbial narrowly restricting the assertion time. For example in existential factual imperfective contexts, imperfective occurs with a big and indefinite assertion time where the focus is on the existence of an event and target state validity of telic predicates is irrelevant. Existential factual imperfectives typically combine with vague adverbs such as *earlier, once, already, never* which do not locate the event at a specific time. To account for factual imperfective contexts, Grønn's (2004: 273–274) 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.

This is compatible with the proposal made Altshuler (2010, 2012). In his account of why both aspectual forms (perfective and imperfective) can be used in factual contexts, he 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. Recently, Borik and Gehrke (2018) also observed a correlation between the use of imperfective in factual contexts in Russian and rhetorical relations. More precisely, they conducted a corpus study in which they collected past passive participles in Russian. Past passive participles are preferably expressed by means of perfective aspect because they are resultative. However, they found some instances of imperfective past passive participles and they observed that these rare instances always involve presuppositional factual meanings. They observed that imperfective past participle contexts are anaphoric to (i) a previously introduced perfective event, (ii) a deverbal noun or (iii) a created object (where created objects presuppose the event that created them), as shown in (20), (21) and (22) respectively.

(20) Eto – ne ja sdelal<sup>P</sup>, eto – vedeno<sup>I</sup> bylo moeju rukoj!  
 This not I did this led was my.INSTR hand.INSTR  
 'Not I did this, this was orchestrated by my hands!'

(21) Čto kasaetjsa platy deneg, to plačeny<sup>I</sup> byli nalanymi šest  
 What concerns payment.GEN money.GEN so paid were in-cash six  
 tysjač rublej [...] thousand Rubles  
 'What concerns the payment: 6000 Rubles were paid in cash.'

- (22) *Pisma ego pisany byli černo i kruglo [...]*  
 Letters his written were black and round  
 ‘His letters were written in black and round letters.’

Gehrke (2019) and Borik and Gehrke (2019) account for the observed data by emphasizing the role of discourse relations and anaphoricity to an antecedent event introduced in earlier discourse (sometimes via presupposition). More precisely, they suggest that the presuppositional imperfective turns out to be true if it elaborates on a part of a previously introduced event. In other words, the presuppositional IPF involves an Elaboration discourse relation.

We would like to suggest that all the contexts in (20), (21) and (22) contain information about the result holder of the past event and this result holder is under discussion at the moment of speaking. This creates a logical inference that the past event had a result subevent (was completed). Otherwise the result holder would not be available at the moment of speaking. For example in (20), the word *eto* ‘this’ refers to some event which happened in the past but is relevant at the moment of speaking. In (21), the phrase *Čto kasaetjsa...* ‘What concerns...’ makes the nominal *platy* ‘payment’ relevant at the moment of speaking but there is a presupposition that the payment was made in the past. Similarly in (22), *pisma ego* ‘his letters’, the noun phrase is also relevant at the moment of speaking. It seems to be the case that the past events in these contexts are in an Elaboration relation with the situation under discussion and the result holder is available at the moment of speaking, which signals that the result subevent of the past event persists till the moment of speaking or is causally related with the moment of speaking. But crucially, this leads to an important inference that the past event has a result subevent (was completed). With this conclusion in mind, we conducted a study as part of which we constructed scenarios involving Elaboration relations to test aspect choices in factual contexts in eastern and western part Poland.

## 5. The study

In order to elicit aspect choices in the tested factual contexts with an Elaboration relation between the moment of speaking and a past event, an online questionnaire was conducted where respondents were asked to fill in the missing verbs in Polish.

### 5.1. Participants

116 respondents from western Poland and 125 respondents from eastern Poland filled in the questionnaire.

## 5.2. Procedures

The experiment was uploaded to the survey platform <https://www.google.pl/intl/pl/forms/about/> and it was sent to colleagues in Poland from eastern and western universities with the request to distribute them among their students and friends and further colleagues. Additionally, in order to reach a high number of participants, the links were made available on Facebook in various groups from the eastern and western parts of Poland. Participants were asked to fill in the missing verbs using contextual information and English infinitival verb forms given in the brackets as cues.

## 5.3. Material and results

The questionnaire consisted of 34 scenarios, 10 of which were experimental and contained 5 presuppositional factual contexts and 5 existential factual contexts. All the experimental scenarios started from a sentence outlining a topic situation holding at the moment of speaking and then the past event in the following sentence was of relevance to it. This created an Elaboration relation between the past event and the discourse topic holding at the moment of speaking understood as in Büring (1999).<sup>2</sup>

Most of the distractors (24 scenarios) contained time-span adverbials, durative adverbials or phase verbs *zacząć* ‘begin’ or *skończyć* ‘finish’ which restrict aspect choices to either perfective or imperfective. The distractors were to mislead the respondents as to the purpose of the experiment and to make aspect choices in factual contexts as unconscious as possible. English infinitival verb forms were used as cues in the brackets. Polish infinitives could not be used as cues since they would be themselves marked for either perfective or imperfective aspect which could prompt aspect choices in the tested scenarios. The tested contexts and the distractors were pseudorandomized. The questionnaire was anonymous. At the end of the questionnaire, information about the age group and the region of origin was elicited from the respondents. Below, the tested scenarios are presented together with the results, which include the percentage of respondents from the tested groups who chose perfective and imperfective forms in the tested presuppositional and existential factual contexts.

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<sup>2</sup> Büring (1999: 1) defines a discourse topic as “a set of sentences/propositions with which the conversation might be continued”.

## Presuppositional factual contexts

## Scenario 1

- (23) Żona: Ojej, szybka w moim telefonie jest stłuczona. Dzieci się nim bawiły. Dlaczego ich nie pilnowałeś?  
Mąż: Czy to ja im dawałem<sup>I</sup> / dałem<sup>P</sup> ten telefon do zabawy?  
Wife: Gee, the screen in my mobile phone is broken. The kids were playing with it. Why didn't you watch them?  
Husband: Did I **give** them the phone?

## Scenario 2

- (24) Jan: Miło, że Cię widzę, Mario. Co cię tu sprowadza?  
Maria: Chcę ci zadać kilka pytań o twój esej o Syberii.  
Jan: Nie ma sprawy. Kiedy go czytałeś<sup>I</sup> / przeczytałeś<sup>P</sup>?  
John: It's nice to see you, Mary. What brings you here?  
Mary: I want to ask you a few questions about your essay on Siberia.  
John: No problem. When have you **read** it?

## Scenario 3

- (25) Ola je obiad i mówi: Jakie smaczne ziemniaki. Kto je gotował<sup>I</sup> / ugotował<sup>P</sup>?  
Ola is eating dinner and saying: What tasty potatoes. Who has **cooked** them?

## Scenario 4

- (26) Podczas zwiedzania Barcelony jeden z turystów pyta przewodnika:  
Turysta: Jaka spektakularna budowla. Kto ją budował<sup>I</sup> / zbudował<sup>P</sup>?  
While visiting Barcelona, one of the tourists asks the guide:  
Tourist: What a spectacular building. Who **built** it?

## Scenario 5

- (27) Scenka: Janek słyszy, jak Ola biegle śpiewa piosenkę po hiszpańsku i pyta:  
Olu, kto uczył<sup>I</sup>/nauczył<sup>P</sup> cię tej piosenki?  
John hears Julia fluently singing a song in Spanish and asks:  
Julia, who **taught** you this song?

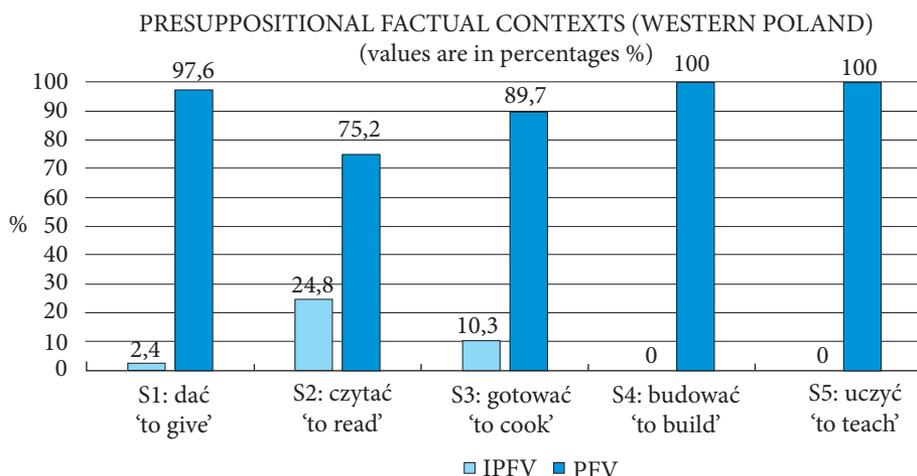


Figure 1. The percentage of respondents (in the sample of 116 respondents) who chose perfective and imperfective verb forms in western Poland in five scenarios with presuppositional factual contexts involving an Elaboration relation<sup>3</sup>

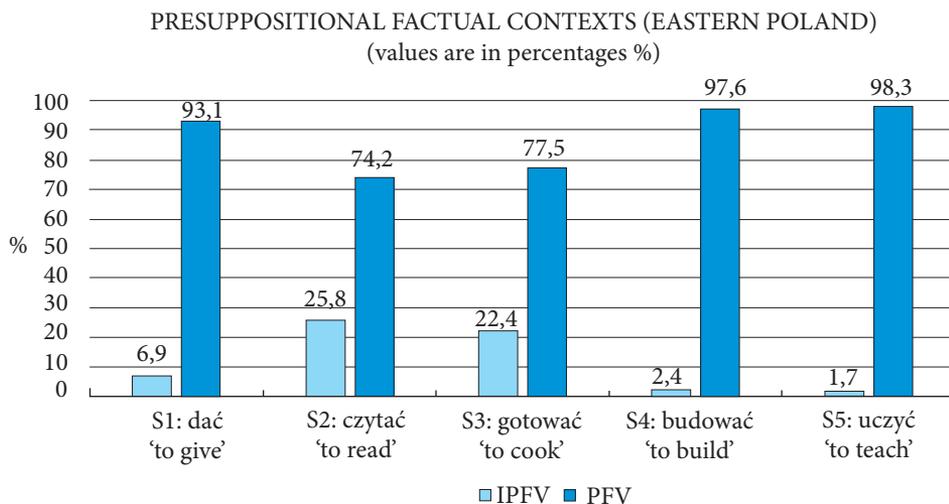


Figure 2. The percentage of respondents (in the sample of 125 respondents) who chose perfective and imperfective verb forms in eastern Poland in five scenarios with presuppositional factual contexts involving an Elaboration relation

<sup>3</sup> All figures in the text are the author's own work.

## Existential factual contexts

## Scenario 1

(28) Jan: Czy masz ochotę na zupę, którą dzisiaj ugotowałem? Zosia: Nie, dziękuję. Już jadłam<sup>I</sup> / zjadłam<sup>P</sup> obiad.

John: Do you want the soup that I have cooked today?

Sophie: No thank you. I have already **eaten** dinner.

## Scenario 2

(29) Marek: Czy chcesz pojechać ze mną na obóz letni, w ramach którego zaplanowane są skoki ze spadochronem? Jan: Nie dziękuję, ja już kiedyś skakałem<sup>I</sup> / skoczyłem<sup>P</sup> ze spadochronem i niezbyt dobrze się to skończyło. Do dziś mam problemy z kręgosłupem.

Mark: Do you want to go with me to the summer camp, in which skydiving is planned?

John: No thanks, I have already **jumped** with a parachute once and it did not end well. I still have back problems.

## Scenario 3

(30) Maria: Coś dziwnie zachowują się zwierzęta w zagrodzie. Czy karmiłaś<sup>I</sup> / nakarmiłaś<sup>P</sup> je dzisiaj?

Mary: The animals in the yard behave strangely. Have you **fed** them today?

## Scenario 4

(31) Ola: Jaki ładny zapach w kuchni? Marek: Czy piekłaś<sup>I</sup> / upiekłaś<sup>P</sup> jakieś ciasteczka?

Julia: What a nice smell in the kitchen. Have you **baked** any cookies?

## Scenario 5

(32) Marek sprawdza swoje dokumenty w segregatorze i widzi, że jedna strona jest wyciągnięta. Pyta sekretarki:

Czy wyciągałaś<sup>I</sup> / wyciągnęłaś<sup>P</sup> coś z mojego segregatora?

Marek checks his documents in a folder and sees that one page is taken out. He asks the secretary:

Have you **taken** something **out of** my folder?

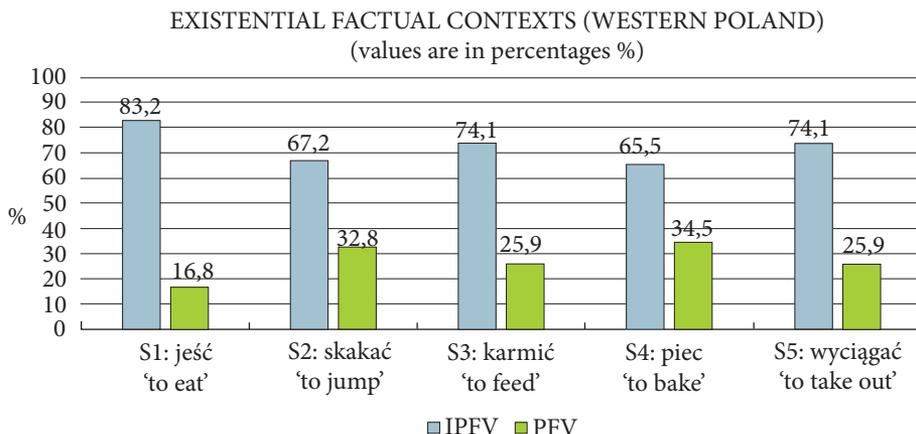


Figure 3. The percentage of respondents (in the sample of 116 respondents) who chose perfective and imperfective verb forms in western Poland in five scenarios with existential factual contexts involving an Elaboration relation

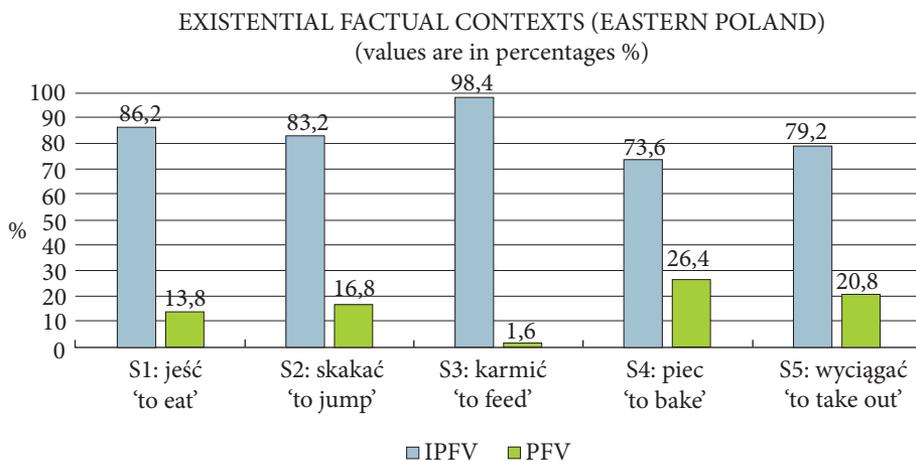


Figure 4. The percentage of respondents (in the sample of 125 respondents) who chose perfective and imperfective verb forms in eastern Poland in five scenarios with existential factual contexts involving an Elaboration relation

## 5.4. Discussion

The results of the questionnaire show that in all the tested contexts both forms (perfective and imperfective) can be chosen (with the exception of S4 and 5 in western Poland). To confirm this we interviewed 10 native speakers of Polish

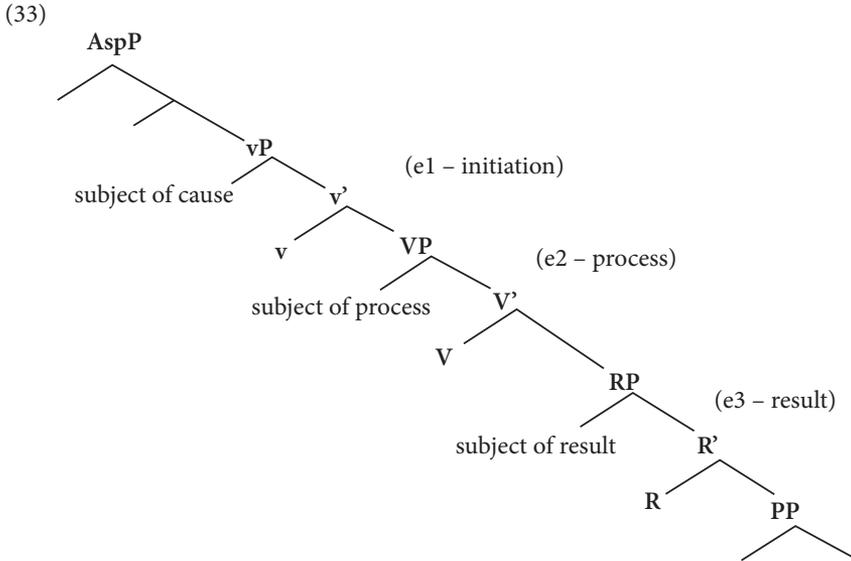
and they all agreed that both forms can be used in all the tested contexts to refer to a complete past event. Additionally, the results of our questionnaire show that there is a clear preference for perfective forms in presuppositional factual contexts and for imperfective forms in existential factual contexts in all the tested groups. This means that in generalizing about microvariation patterns in factual imperfective contexts one should distinguish between the presuppositional and existential ones. What is worth pointing out is that in Scenarios 2 and 3 in presuppositional contexts there were considerably more choices of imperfective than in the remaining scenarios. It may be related to the fact that in Scenario 2 the focus is on the process subevent. Concerning Scenarios 3, 4 and 5, they all ask about the initiator of the event but only in Scenario 3 the focus is really on the initiator. In Scenario 4, the tourist presumably wants to classify the building so the focus is more on the result than on the initiator and in Scenario 5 John presumably wants to express that Julia sings the song unbelievably well so the focus is also more on the result.<sup>4</sup> The question about the initiator is rhetorical. These observations may suggest that the choice of imperfective aspect in factual contexts is more likely when the initiator and the process are in focus and not when the result is in focus. This will be discussed further in Section 6. As to the regional variation, both in presuppositional and existential factual contexts perfective forms were clearly more often used by the respondents from western Poland consistently throughout the tested scenarios.

## 6. Account

In order to account for aspect choices in our study, we rely on Ramchand's (2004, 2008a, 2008b) formal analysis of aspect and temporality. She adopts the central idea of the Distributed Morphology (DM) (see Halle and Marantz 1993). She postulates the existence of the event building phase of the derivation called the first-phase syntax where information classically considered to be part of lexical items including event structure and argument structure information is decomposed. Her event structure syntax contains three subevental components: a causing (initiation) subevent, a process subevent and a subevent corresponding to a result state. Each of these subevents is represented as its own projection, ordered hierarchically and each of them has an event participant projected in the specifier position, as demonstrated in (33).

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<sup>4</sup> We would like to thank an anonymous reviewer for pointing this out.



The initiation subevent corresponds to the outer causal projection which licenses the external argument ( $\nu P$  in the recent literature). The external argument is referred to as 'subject' of cause or INITIATOR. The initiation subevent e1 leads to the process subevent e2. This subevent is present in every dynamic verb and it corresponds to the VP projection which licenses the subject of process (UNDERGOER). The process subevent may optionally lead to the lowest projection i.e., Result Phrase corresponding to the result state of the event. This phrase licenses the 'subject' of result = RESULTEE (the holder of a 'result'). In this chain of events e1 causally implicates e2 and e2 causally implicates e3.

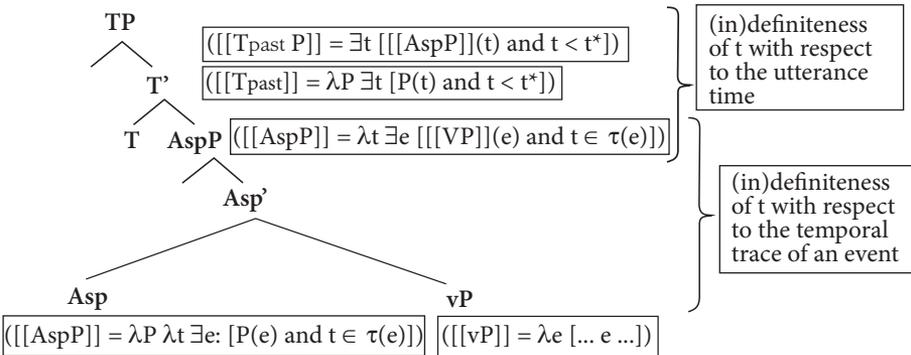
Additionally, Ramchand (2004, 2008a, 2008b) argues that the first phase syntax is embedded under the second phase where temporal variables are introduced. She uses time variables and event variables and she assumes two temporal relations: (i) between the event and the reference time and (ii) between the reference time and the speech time. The first phase introduces an event variable and it makes no reference to times. The actual time variable is introduced at the level of AspP. The event variable and the temporal variable are related formally by a temporal trace function  $\tau(e)$  which maps an event to the 'time line' that it occupies. Ramchand (2008a) proposes that  $\nu P$  introduces an event variable which is bound by AspP which in turn introduces a time variable (reference time) and specifies its relation with respect to the temporal trace of an event variable, as represented in (34).

$$(34) \text{[[Asp]]} = \lambda P \lambda t \exists e [P(e) \ \& \ \tau(e)]$$

Next, the tense head of TP combines with AspP to bind the time variable and relate it with respect to the speech time. An innovation in Ramchand’s (2008a) proposal is that 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 subevent is present in the first phase syntax, the time variable *t* must be part of the process subevent and part of the result subevent, which boils down to the placement of the time variable at the single unique transition point between the two subevents. This definite time point within the temporal trace of an event is then located with respect to the utterance time. Ramchand (2008a) emphasizes that this transition point must precede the utterance time under past tense. Consequently, it is not the event as a whole that is asserted to be before the utterance only the transition to the result subevent and in the case of immediate past events the inference is made that the result subevent still holds at the moment of speaking. Regarding imperfective aspect in Ramchand’s (2008a) system, the time variable is situated at an arbitrary point within the run time of the process part of the event. She points out that imperfective Asp head can in principle choose any point within the run time of the event as the argument of the tense predicate.

To sum up, in Ramchand’s (2008a) system, there are in principle two kinds of (in)definiteness of the temporal variable: (i) (in)definiteness with respect to the temporal trace of an event and (ii) (in)definiteness of *t* with respect to the utterance time, as shown in (35) (see Ramchand 2008a: 1701).

(35)



Importantly, we assume 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.

How can this formalism help us account for the puzzling aspect choices in factual contexts in Polish. The results of our study show that both aspectual forms are possible in both presuppositional and existential factual contexts but the preferences are for perfective aspect in presuppositional contexts and for imperfective aspect in existential factual contexts. Additionally, in both types of contexts perfective is more often chosen in western Poland than in eastern part of Poland. How to account for it? First of all, in all the tested contexts the events are complex and they consist of all the three subevents in the first phase syntax. Second of all, in presuppositional factual contexts, the Elaboration relation makes it clear that the transition between the process subevent and the result state took place before the moment of speaking and the result holder (subject of the result subevent) is available at the moment of speaking and is under discussion. According to Ramchand (2008a) perfective is chosen when the time variable is placed at the transition point between the process and result subevents. However, as stated in Section 5.4, in presuppositional factual contexts the choice of imperfective aspect seems to depend on whether the focus is on the initiator, on the process or on the result subevent. In order to confirm this intuition, we carried out an online survey in which we created scenarios with an Elaboration relation in presuppositional factual contexts. The scenarios focused on the initiation, process or result subevent, as shown in (36), (37), (38) respectively.

(36) Scenario 1: Focus on the initiation subevent

Jan szuka dobrego architekta, ponieważ kończy budowę domu i chce zlecić projekt wnętrza specjaliście. Odwiedza przyjaciela i bardzo podoba mu się wnętrze jego domu. Pyta: Stary, świetne masz wnętrze. Pamiętasz, kto to projektował<sup>I</sup> / zaprojektował<sup>P</sup>? Dasz mi namiar?

John is looking for a good architect because his house is almost ready and he needs a specialist who could design the interiors. He is visiting his friend and he likes the way the interiors are arranged. He is saying: It is a nice interior. Do you remember who **designed** it? Will you give me contact information to this person?

(37) Scenario 2: Focus on the process subevent

Szef ekipy budowlanej dostaje telefon z reklamacją. Klient skarży się, że schodzi ze ścian farba. Szef idzie do swoich pracowników i pyta: Chłopaki, który z was pamięta, kiedy malowaliśmy<sup>I</sup> / pomalowaliśmy<sup>P</sup> domek na ulicy Bombelkowej?

The boss of a construction crew got a phone call with a complaint. The client complained that the paint is peeling off the walls. The boss is asking his crew: Guys, do you remember when we **painted** the house in Bombelkowa street?

(38) Scenario 3: Focus on the result subevent<sup>5</sup>

Marysia odwiedza kolegę, który sam wykonał sobie komodę. Oto jej komentarz: Heniek, świetnie Ci to wyszło. Czy pamiętasz, z jakiego drewna ją wykonywałeś<sup>I</sup> / wykonałeś<sup>P</sup>?

Mary is visiting her friend who created his chest of drawers. She is asking: Heniek, you did a great job. Do you remember which wood you **made** it of?

We obtained 27 responses from Polish native speakers. The questionnaire contained more fillers than tested items to distract the participants from the main purpose of the study. It turned out that the percentage of choices of imperfective aspect was higher in (36) and (37), where the focus was on the initiation and process subevents and nobody opted for imperfective in (38), where focus was on the result subevent the effect is great, as summarized in Figure 5.

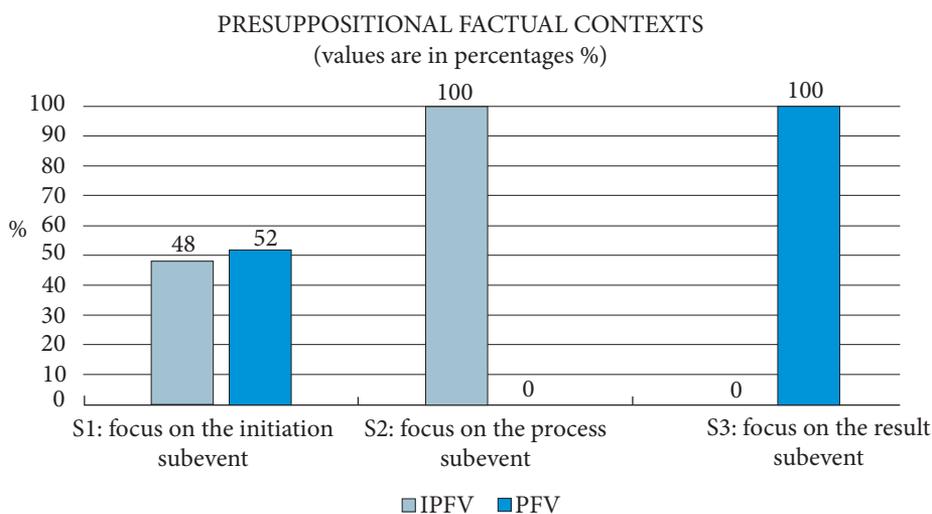


Figure 5. The percentage of respondents (in the sample of 27 respondents) who chose perfective and imperfective verb forms in presuppositional factual contexts involving an Elaboration relation, when the focus was placed more on the initiation, process or result subevent

It seems that even though all the contexts in (36), (37), (38) are presuppositional and they involve an Elaboration relation, 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 subevent. When the focus is on the result subevents it is more likely to lead to the placement of the temporal variable at the transition point between the process and result subevent (leading to definiteness with respect to the temporal trace of an event) but

<sup>5</sup> In (38) Mary thinks that the result is great thanks to the kind of wood used to make the chest of drawers. Therefore, she asks about the kind of wood used by Heniek.

when the focus is more on the initiation or process subevents it is more likely to lead to the placement of the temporal variable at an arbitrary point within these two subevents (leading to indefiniteness with respect to the temporal trace of an event). In the latter case, even though imperfective is used, the result subevent is understood to be a necessary consequence of the initiation and process subevents. This is how event completion reading is obtained in these special Elaboration presuppositional contexts in which it additionally follows from the context that the result holder (the subject of the result subevent) is available at the moment of speaking and is under discussion.

What is still unclear is why imperfective is used more often in existential factual contexts than in presuppositional factual contexts. We would like to suggest that existential factual contexts contain explicit markers of indefiniteness of the temporal variable with respect to the moment of speech such as *once*, *already*, *whenever*. The 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 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. How can event completion be inferred in existential factual contexts when imperfective is used? Unlike in presuppositional contexts, in existential factual contexts the completion reading of events arises as a pragmatic implicature or some kind of pragmatic strengthening (see Durst-Andersen 1992; Altshuler 2013, 2014; Frąckowiak 2015). It is usually so that these contexts imply that the whole complex event happened in the past because the result holder is available at the moment of speaking and is under discussion but the construction itself is not presuppositional. It appears that in existential factual contexts, the issue of the past event reaching the result subevent 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. We would like to suggest that in existential factual contexts, there is a competition between the choice of perfective and imperfective aspect depending 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. This is consistent with Grønn (2004) but we propose a different formal explanation of this competition. Since Ramchand's (2008a) formalism is an extension of the Distributed Morphology view on the architecture of language, the spellout domain is either  $\nu$ P or CP (see Chomsky 2001, 2004, 2005a, 2005b). Since both types of (in)definiteness are made before CP (at the level of AspP and TP), the phonological realizations associated with them in 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. It seems to be the case that in existential contexts the indefiniteness of the temporal variable with respect to the moment of speaking is more important than the definiteness of this variable with respect to the temporal trace of the event. Additionally, 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 round. 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. In order to reliably account for the regional variation in aspect choices in existential and presuppositional factual contexts, it is necessary to extend the present study and use a similar method to trace the preference patterns in the use of perfective and imperfective aspect in factual contexts in other Slavic languages.

## 7. Conclusion

The goal of this study was to reach a better understanding of the preferences in aspect choices in existential and presuppositional factual contexts in eastern and western Poland. We 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 of the result subevent is available at the moment of speaking and is under discussion). It turned out that perfective aspect is preferred in presuppositional factual contexts and imperfective is preferred in existential factual contexts in both regions 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 subevent. We would like to suggest that the placement of focus on one of the subevents of a decomposed complex event in first phase syntax determines the placement of the temporal variable with respect to the temporal trace of this event. When the focus is on the result subevents it is more likely to lead to the placement of the temporal variable (introduced at the level of AspP) at the transition point between the process and result subevent in first phase syntax (leading to definiteness with respect to the temporal trace of an event) but when the focus is more on the initiation or process subevents it is more likely to lead to the placement of the temporal variable at an arbitrary point within these two subevents (leading to indefiniteness with respect to the temporal trace of an event). In the former case, language

users use perfective aspect and in the latter case they opt for imperfective aspect. On the comprehension side, when imperfective is used in presuppositional factual contexts involving an Elaboration relation, the result subevent is understood to be a necessary consequence of the initiation and process subevents because Ramchand's (2008a) system of temporal interpretation requires that in a complex event the initiation subevent leads to the process subevent which leads to the result subevent. The event completion reading of imperfective is also facilitated by the Elaboration relation in which the result holder is available at the moment of speaking and is under discussion, which signals the existence of the result subevent.

Regarding existential factual contexts which typically contain explicit markers of indefiniteness of the temporal variable with respect to the moment of speech, we would like to suggest that the indefiniteness of the temporal variable with respect to the utterance time facilitates its placement at an arbitrary point within the temporal trace of an event leading to the choice of imperfective aspect. In comprehension, event completion is implied in existential factual contexts because either the result holder is available at the moment of speaking and is under discussion or the issue of whether the event was completed or not remains unresolved as it is of no relevance.

Finally, regarding more frequent choices of perfective aspect in both kinds of factual contexts in western Poland than in eastern Poland, we propose that when the event in first phase syntax is complex, 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.

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