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# On epistemic causal *że*-clauses in spoken Polish

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**Abstract:** In this article, we examine subordinate causal clauses headed by the declarative complementizer *że* ‘that’ in Polish. By comparing them with canonical causal clauses headed by *ponieważ* ‘because’, we argue that causal *że*-clauses function as speech act modifiers. The main evidence for this claim comes from: (i) movement to the left periphery of the matrix clause, (ii) variable binding, and (iii) sensitivity to material associated with the TP domain, CP domain, and the illocutionary force of the matrix clause. Additionally, we argue that they possess distinct discursive and semantic properties, i.e., they are non-at-issue and express epistemic causality. Diachronically, we provide evidence showing that *że* ‘that’, as a complementizer, has undergone semantic narrowing, leading to its restricted behavior at the syntax–semantics interface in Present-Day Polish, in contrast to inherent causal complementizers.

**Keywords:** causal *że*-clause; epistemic modality; ActP modifier; diachrony; Polish

## 1 Introduction

In Present-Day Polish, causal clauses are typically introduced by the complementizer *ponieważ* ‘because’:<sup>1</sup>

- (1) *Jan chciał nas odwiedzić, ponieważ dawno nas nie widział.*  
Jan want.l:PTCP.SG.M US.ACC visit.INFV because long US.ACC NEG see.l:PTCP.SG.M  
‘Jan wanted to visit us because he hadn’t seen us in a long time.’

In (1), *ponieważ* establishes a dependency relationship between the matrix clause and the subordinate clause. Specifically, the proposition embedded in the subordinate clause (i.e., not seeing someone for a long time) is taken to be the reason for the event expressed in the matrix clause (i.e., wanting to visit someone) to occur (cf. Cristofaro 2003: 161). Interestingly, in colloquial spoken Polish, a similar causal relation can be expressed with the declarative complementizer *że* (lit. ‘that’), as the following corpus examples from Spokes illustrate:<sup>2</sup>

<sup>1</sup> Of course, there are several other causal complementizers in Present-Day Polish – *bo*, *jako że*, *albowiem*, and *gdyż* – all of which introduce a reason dependency relationship between the matrix clause and the subordinate clause. Due to space constraints, we limit our comparison to causal *że*-clauses and *ponieważ*-clauses, and do not discuss causal clauses introduced by the other complementizers. Examples follow the Leipzig Glossing Rules. Abbreviations used: 1/2/3 first/second/third person; ACC accusative; ADV adverb; ANA anaphoric pronoun; AUX auxiliary; COND conditional; DAT dative; F feminine; FUT future; GEN genitive; HON honorific; IMP imperative; IMP.PASS impersonal passive; INFV infinitive; INST instrumental; l:PTCP l-participle (inflected for number and gender); LOC locative; M masculine; N neuter; NEG negation; NOM nominative; PRTL particle; REFL reflexive; SG singular; VIR virile.

<sup>2</sup> Spokes is a corpus of conversational spoken Polish consisting of over 2.6 million words. It is freely available online at <https://spokes.clarin-pl.eu/>; see Pęzik (2015) for further details.

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- (2) *a może pomyśli* [<sub>CP1</sub> *że jestem głupi-q wredn-q suk-q*] [<sub>CP2</sub> *że nie*  
and maybe think.3SG.FUT that be.1SG stupid-INST mean-INST bitch-INST that NEG  
*odpisałam*]  
write:back.l:PTCP.F.1SG  
'and maybe (s)he will think that I am a stupid mean bitch because I didn't write back' (Spokes)
- (3) *No powiem, ci że dostał szans-ę kurwa w loteri-i, że go*  
PRTL tell.1SG.FUT you.DAT that get.l:PTCP.SG.M chance-ACC fuck in lottery-LOC that him.ACC  
*wybrała, nie?*  
pick.l:PTCP.SG.F right  
'I'll tell you what, he totally hit the fucking jackpot in the lottery – because she picked him, right?' (Spokes)
- (4) *i teraz mam taką rozkmin-ę, nie? czy to może ja jestem*  
and now have.1SG such.ACC deep:thought-ACC NEG whether this maybe I be.1SG  
*perdolnięta że mi się zaraz wyobrażają wszystkie najgorsze rzeczy?*  
fucked.up that me.DAT REFL in:a:moment imagine.3PL all worst things  
'And now I'm trying to figure out, is it me who is fucked up because I instantly imagine the worst possible things?' (Spokes)

In (2), two *że*-clauses occur. The first one (CP1) is a complement clause to the clause-embedding predicate *pomyśleć* 'think'. The second one (CP2) is an adverbial causal clause, providing an explanation for why someone may be considered a stupid mean bitch. The claim that *że* 'that' in CP2 encodes a causal relation follows from the observation that *że* can, at least at first glance, be replaced by *ponieważ* 'because' without affecting the meaning of the whole clause, as seen in (5). Likewise, as the English paraphrases of (3) and (4) indicate, *że* should be interpreted as a causal connective.

- (5) *a może pomyśli* [<sub>CP1</sub> *że jestem głupi-q wredn-q suk-q*] [<sub>CP2</sub> *ponieważ nie*  
and maybe think.3SG.FUT that be.1SG stupid-INST mean-INST bitch-INST because NEG  
*odpisałam*]  
write:back.l:PTCP.F.1SG  
'and maybe (s)he will think that I am a stupid mean bitch because I didn't write back'

Based on the semantic similarity between (2) and (5), we aim to examine causal *że*-clauses. To our knowledge, no such studies currently exist. The article is structured as follows. In Section 2, we compare selected syntactic properties of *ponieważ*-clauses with those of causal *że*-clauses and show that they differ in syntactic status. In Section 3, we focus on how structural differences are further paired with semantic and discursive contrasts. Section 4 presents the historical development that led to *że*'s restricted behavior in syntax, semantics, and discourse. Section 5 concludes the paper.

## 2 *Ponieważ*-clauses versus *że*-clauses in Present-Day Polish: syntactic properties

In this section, we briefly compare *ponieważ*-clauses with causal *że*-clauses and focus on selected syntactic properties: (i) movement to the left periphery of the matrix clause, (ii) variable binding, and (iii) sensitivity to negation, subjective speaker-oriented adverbs, and the illocutionary force of the matrix clause.

Prosodically, the causal *że*-clause – as exemplified in (3) – is usually separated from the preceding host clause material by an intonational break. The *ponieważ*-clause, on the other hand, may – but need not – be separated by such a break. This prosodic difference already suggests that causal *że*-clauses form their own intonational unit and that, prosodically, they are nonintegrated subordinate clauses. Comparable prosodic behavior has been observed for causal *because*-clauses in English, which pattern with *ponieważ*-clauses in allowing, but not requiring, an intonational break (cf. Selkirk 2005: 22–28). The syntactic tests discussed below support this view.

## 2.1 Movement to the left periphery

The first difference concerns the possibility of information-structural movement to the left periphery of the matrix clause. Whereas *że*-clauses cannot be attracted and moved to the left periphery of the matrix clause, *ponieważ*-clauses exhibit no such restrictions; compare (6a) with the focalization in (6b):

- (6) a. *Jestem kiepsk-ą przyjaciółk-ą, ponieważ / że nie oddzwoniłam.*  
 be.1SG bad-INST friend-INST because / that NEG call:back.l:PTCP.F.1SG  
 ‘I am a bad friend because I didn’t call back.’
- b. Focalization of the subordinate clause:  
 A: *Co myślisz?*  
 what think.2SG  
 ‘What do you think?’  
 B: [<sub>FORCEP</sub> [<sub>FOCP</sub> [<sub>CP</sub> *Ponieważ / \*Że nie oddzwoniłam*]<sub>i</sub>], *jestem kiepsk-ą przyjaciółk-ą* t<sub>i</sub>].  
 because / that NEG call:back.l:PTCP.F.1SG be.1SG bad-INST friend-INST  
 ‘Because I didn’t call back, I am a bad friend.’

The contrast illustrated in (6b) suggests that causal *że*-clauses are syntactically less integrated than their *ponieważ*-counterparts. A technical implementation of this distinction is presented in Section 2.6.

## 2.2 Variable binding

The received wisdom holds that a quantifier can bind an agreeing pronoun occurring in the subordinate clause if the quantifier c-commands the pronoun (for more details, see Büring 2005: 83–93; Chomsky 1981: 183–230; Eng 1989: 62–64). In (7), we observe that variable binding is not possible into the *że*-clause, but it is possible with the *ponieważ*-clause.

- (7) *Prawie [każda dziewczyna]<sub>i</sub> z klas-y wyciągnęła szczęśliwy los, ponieważ / \*że*  
 almost every girl from class-GEN pick.l:PTCP.SG.F lucky ticket because / that  
*zaproszono [ją]<sub>i</sub> na bal.*  
 invite.IMP.PASS her.ACC on ball  
 ‘Almost every girl in the class got lucky because she was invited to the ball.’

The causal *że*-clause becomes grammatical when the personal pronoun *ją* ‘her’ occurring in the subordinate clause refers to a particular individual previously defined in the discourse, or when the plural pronoun *je* ‘them’ is used. In either case, no variable binding is involved.

As evidenced, binding theory helps determine the attachment height of the causal *że*-clause. A similar observation can be made regarding sensitivity to negation.

## 2.3 Sensitivity to negation

Haiman and Thompson (1984: 517) observe that certain types of subordinate clauses can – but need not – be in the scope of a matrix negation; compare the minimal pair in (8):

- (8) a. *They don’t call us back because they love us.* (¬ > because)  
 b. *They don’t call us back, because they love us.* (¬ < because)  
 (Haiman and Thompson 1984: 517, (13a)–(13b); slightly modified by the authors, ŁJ & WG)

Whereas in (8a) the subordinate clause is negated – meaning that calling back takes place not because *they love us* – in (8b) no calling back is involved, and only the matrix clause falls within the scope of the negation operator. Interestingly, *ponieważ*-clauses in Polish pattern with *because*-clauses in English. In (9), the negation *nie* occurring



- (13) *musiała być związana ze swoj-ą mam-ą, że tak bardzo*  
 must.l:PTCP.SG.F be.INFV close with her-INST mother-INST that so much  
*przechodziła to*  
 go:through.l:PTCP.SG.F this  
 ‘she must have been close with her mom because she took it so hard’ (Spokes)
- (14) a. *Chyba musiała być związana ze swoj-ą mam-ą, ponieważ tak*  
 presumably must.l:PTCP.SG.F be.INFV close with her-INST mother-INST because so  
*bardzo to przechodziła.*  
 much this go:through.l:PTCP.SG.F  
 ‘Presumably, she must have been close with her mom because she took it so hard.’  
 ⇓ She took it so hard (chyba > ponieważ)
- b. *Ponoć musiała być związana ze swoj-ą mam-ą, ponieważ tak*  
 supposedly must.l:PTCP.SG.F be.INFV close with her-INST mother-INST because so  
*bardzo to przechodziła.*  
 much this go:through.l:PTCP.SG.F  
 ‘Supposedly, she must have been close with her mom because she took it so hard.’  
 ⇓ She took it so hard (ponoć > ponieważ)
- c. *Chyba musiała być związana ze swoj-ą mam-ą, że tak bardzo to*  
 presumably must.l:PTCP.SG.F be.INFV close with her-INST mother-INST that so much this  
*przechodziła.*  
 go:through.l:PTCP.SG.F  
 ‘Presumably, she must have been close with her mom because she took it so hard.’  
 ⇒ She took it so hard (\*chyba > causal że)
- d. *Ponoć musiała być związana ze swoj-ą mam-ą, że tak bardzo to*  
 supposedly must.l:PTCP.SG.F be.INFV close with her-INST mother-INST that so much this  
*przechodziła.*  
 go:through.l:PTCP.SG.F  
 ‘Supposedly, she must have been close with her mom because she took it so hard.’  
 ⇒ She took it so hard (\*ponoć > causal że)

Whereas *ponieważ*-clauses fall under the scope of both adverbs, this is not the case for causal *że*-clauses, as the entailment that someone took it so hard is not canceled, as seen in (14c) and (14d). Since neither adverb affects the causal *że*-clause, it must adjoin higher than  $\text{Mod}_{\text{epistemic}}$  and  $\text{Mood}_{\text{evidential}}$ .

In the next section, we show that causal *że*-clauses interact with the illocutionary force of the matrix clause.

## 2.5 Sensitivity to the illocutionary force

What we have seen so far is that *ponieważ*-clauses are sensitive to material from the TP and CP domains of the matrix clause, whereas causal *że*-clauses are not. Now, the question arises whether they fall under the scope of the illocutionary force of the matrix clause. In all our examples discussed in the present paper, a causal *że*-clause elaborates an assertion by providing a specific reason for the proposition made in the matrix clause. In (4), for instance, imagining the worst possible things was the reason why the speaker believed herself to be possibly fucked up. As (15) demonstrates, causal *że*-clauses can still fall within the scope of a question even when they are separated from the host clause by an intonational break (marked as “||”), with (15) otherwise corresponding to (4).

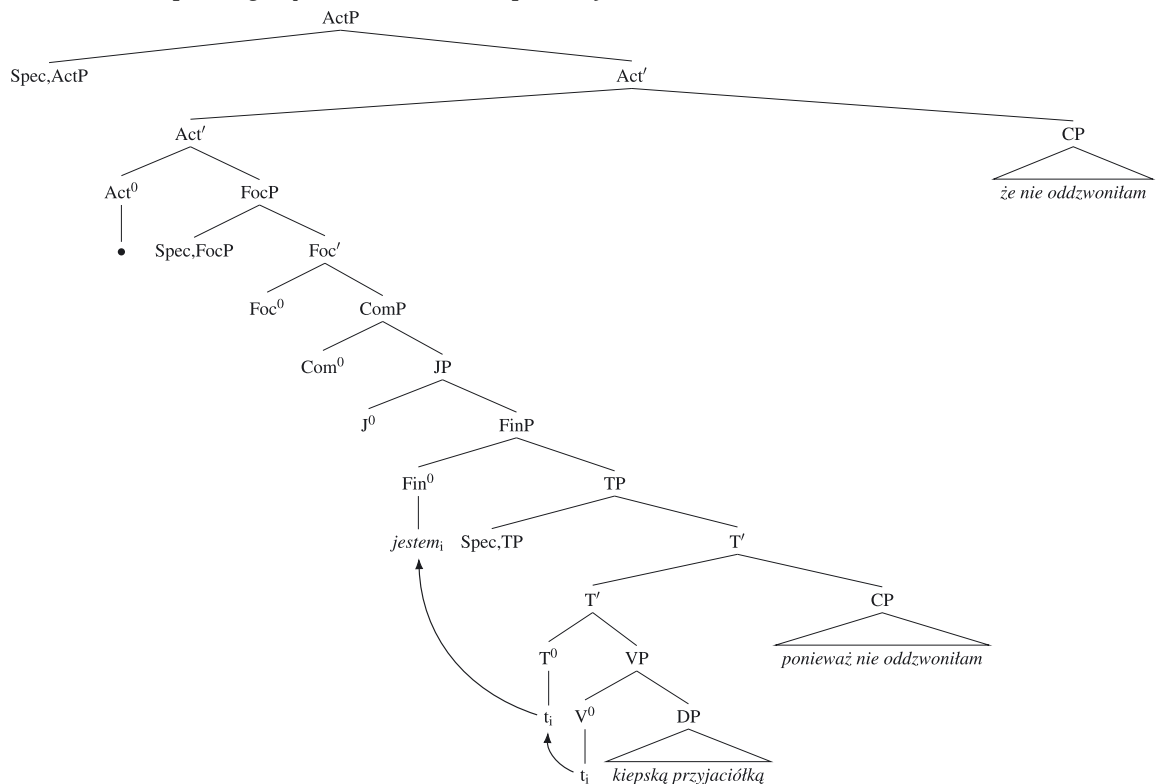
- (15) *Czy to może ja jestem pierdolnięta || że mi się zaraz wyobrażają wszystkie najgorsze rzeczy?*  
 whether this maybe I be.SG fucked:up that me.DAT REFL in:a:moment imagine.3PL all  
 worst things  
 ‘Is it me who is fucked up because I instantly imagine the worst possible things?’ (Q > causal *że*)

By analyzing (15), we can conclude that causal *że*-clauses depend on the illocutionary force of the matrix clause.

## 2.6 Interim conclusion

Putting together everything we have shown in Sections 2.1–2.5, we arrive at the conclusion that causal *że*-clauses modify a speech act and therefore adjoin as speech act modifiers. In Cinque’s (1999) terminology, causal *że*-clauses would attach as adjuncts to Mood<sub>speech act</sub>. However, in the present paper, we follow Krifka’s (2023) approach and abbreviate the speech act layer as ActP. A partial derivation of example (6a), reproduced below as (16a) for ease of reference, is provided in (16b).

- (16) a. *Jestem kiepską przyjaciółką, ponieważ / że nie oddzwoniłam.*  
 be.1SG bad-INST friend-INST because / that NEG call:back.l:PTCP.F.1SG  
 ‘I am a bad friend because I didn’t call back.’  
 b. Two alternative attachment sites for *ponieważ* and *że*:  
 (The tree below illustrates two alternative attachment options for the causal clause in (16a), corresponding to *ponieważ* and *że*, respectively.)



- c. ForceP > (TopP\*) > FocP > (TopP\*) > FinP > IP/TP

The restrictions on epistemic causal *że*-clauses described above follow from their high adjunction position. Since the *że*-clause is adjoined to ActP and therefore lies outside the c-command domain of lower material, variable binding into it is impossible, as seen in (7), and neither matrix negation, as in (10), nor speaker-oriented adverbs, as in (14c)–(14d), can affect its interpretation. However, because causal *że*-clauses are c-commanded by Act<sup>0</sup>,

assuming c-command as defined in Chomsky (1995), they are expected to be sensitive to the illocutionary force of the matrix clause. Within Krifka's (2023) framework, “•” represents an assertion operator, as illustrated in (16b), whereas in (15) “?” would correspond to an information-seeking question operator.

Following Rizzi's (1997) articulated left periphery of the clause and the syntacticization of information-structural notions such as focalization, exemplified in (16c), we assume that the finite verb in (16a) undergoes cyclic movement from  $V^0$  to  $Fin^0$ , as demonstrated in (16b). This movement is triggered by formal features that attract the verb in order to realize finiteness. In line with this approach, we also assume FocP as a landing site for focused constituents, positioned directly below ActP. Adopting Rizzi's (2006) proposal, we take FocP to be a criterial position whose head,  $Foc^0$ , carries a [FOC] feature and probes its c-command domain. When a constituent bears a matching [FOC] feature, it can be attracted to Spec,FocP. Once the criterion is satisfied, criterial freezing applies and no further movement is possible. Since *ponieważ*-clauses fall within the c-command domain of  $Foc^0$  and can bear a [FOC] feature,  $Foc^0$  can successfully probe them, thereby accounting for the possibility of fronting these clauses. Causal *że*-clauses, by contrast, are high ActP modifiers and therefore lie outside the probe domain of  $Foc^0$ , rendering them incompatible with criterial satisfaction in FocP. Moreover, deriving movement of a causal *że*-clause to FocP would require downward movement, a type of operation that is incompatible with standard probe-goal configurations and thus generally excluded.

A final note is in order concerning cases such as those in (3). In these cases, the clause-embedding predicate *powiedzieć* ‘tell’ selects a finite CP clause as its complement, which is further elaborated by a following causal *że*-clause. Crucially, the causal *że*-clause has narrow scope, that is, it scopes over the embedded finite CP clause rather than over the matrix clause containing the clause-embedding verb of saying. In such cases, we argue that the complement *że*-clause projects up to ActP and behaves like an independent, root-like clause. The causal *że*-clause is then adjoined to this structure as a clausal modifier. This analysis implies that ActP is not restricted to main clauses and may also project in certain types of subordinate clauses. Krifka (2023: 159–163), for example, provides evidence that verbs of saying indeed embed ActPs as their complements. Further cases illustrating the embeddability of ActP are discussed in Woods (2016). By contrast, Green (2000) and Frey (2023) argue against the embeddability of ActP in general. These opposing views suggest that the internal syntax of subordinate clauses is not uniform. This conclusion is unsurprising, given that, as Schönenberger and Haegeman (2023: 160–162) point out, even nonintegrated adverbial clauses may display divergent syntactic behavior despite belonging to the same broader class.

### 3 *Ponieważ*-clauses versus *że*-clauses in Present-Day Polish: discourse and semantic properties

As shown in Section 2, *ponieważ*- and *że*-clauses differ syntactically. In this section, we focus on how these structural differences are further paired with discursive and semantic contrasts.

#### 3.1 Discourse properties

In this section we argue that causal *że*, unlike *ponieważ*, requires certain local discourse properties that license its occurrence. Consider again example (13), reproduced below as (17) with the added option of *ponieważ*:

- (17) *musiała być zwiqzana ze swoj-q mam-q, że / poniewaę tak bardzo to*  
 must.l:PTCP.SG.F be.INFV close with her-INST mother-INST that / because so much this  
*przechodziła*  
 go:through.l:PTCP.SG.F  
 ‘she must have been close with her mom because she took it so hard’

While *ponieważ* and *że* may be interchangeable in some cases, causal *że* is more restricted in that certain discursive conditions must be met for it to be used. Specifically, *że*-clauses are geared towards encoding reasons that are backgrounded and either discourse-given or known to the listener. They cannot, at least in Present-Day Polish, express causality when (i) the *że*-clause marks information that is discourse-new, and/or (ii) emphasis is on providing the reason.

Thus, for *że* to replace *ponieważ* in example (17), the discourse conditions, unexpressed in the example as it stands, must be such that communicative emphasis is on *musiała być związana ze swoją mamą* ‘she must have been close with her mom’ and the information *że tak bardzo to przechodziła* ‘because she took it so hard’ is presupposed as already given in preceding discourse or known to the listener from shared prior knowledge. As a result, the reason clause is also backgrounded, and focus is on the matrix clause.

All these effects are illustrated in three different settings in (18), where the original example (17) is situated in broader context to clarify the specific discourse conditions (discourse-newness/givenness) or the extent of shared-knowledge. Acceptable uses of causal *że* are given in (18a) (discourse-given information) and (18b) (shared prior knowledge); an ill-formed result is produced in (18c) due to the fact that *że* cannot introduce a reason that is discourse-new and emphasized.<sup>3</sup>

(18) a. reason is discourse-given:

A: *I ona po tym wypadk-u długo nie mogła się  
and she after this-LOC accident-LOC long NEG can.l:PTCP.SG.F REFL  
pozierać.*  
pull:oneself:together.INFV

‘And after this accident she couldn’t get a grip on herself for a long time.’

B: *Musiała być związana ze swoją mam-ą, ponieważ / że tak bardzo to  
must.l:PTCP.SG.F be.INFV close with her-INST mother-INST because / that so much this  
przechodziła.*  
go:through.l:PTCP.SG.F

‘She must have been close with her mom because she took it so hard.’

b. no preceding discourse, reason is known via shared prior knowledge:

*Wszyscy wiemy, jak cierpiała. Musiała być związana ze swoją  
all know.1PL how suffer.l:PTCP.SG.F must.l:PTCP.SG.F be.INFV close with her-INST  
mam-ą, ponieważ / że tak bardzo to przechodziła.*  
mother-INST because / that so much this go:through.l:PTCP.SG.F

‘We all know how she suffered. She must have been close with her mom because she took it so hard.’

c. reason is emphasized and new to listener:

A: *Dlaczego uważasz, że musiała być związana ze swoją mam-ą?  
why think.2SG that must.l:PTCP.SG.F be.INFV close with her-INST mother-INST  
‘Why do you think that she was close with her mom?’*

B: *Ponieważ / \*Że tak bardzo to przechodziła.  
because / that so much this go:through.l:PTCP.SG.F  
‘Because she took it so hard.’*

Following from (18c) is that *why* questions asking for reasons cannot be answered with *że*-clauses as they do not offer the required focus weight. *Że*-clauses are only causal inasmuch as they provide the backgrounded and presupposed cause of the matrix proposition, which, in turn, is brought to the foreground, that is, in (18a), *Musiała być związana ze swoją mamą* ‘She must have been close with her mom’ receives focus, and *że tak bardzo to przechodziła* ‘because she took it so hard’ is discourse-old. As causal *że*-clauses cannot serve as answers to *why*

<sup>3</sup> One of the anonymous reviewers raises the question of whether we are dealing with a causal function of *że* or, rather, with a causal reading triggered by a specific context. We assume that causal *że* has its own lexical entry. It is stored as a non-at-issue conjunction, and various syntactic and semantic restrictions follow from its non-at-issue status, as discussed in Sections 2 and 3. Context helps determine these restrictions. We thank the reviewer for bringing this issue to our attention.

questions, we assume them to be non-at-issue, similar to *since*-clauses in English (Charnavel 2017), *puisque*-clauses in French (Charnavel 2020), and *denn*-clauses in German (Scheffler 2013: 50–93).

Of course, given the lack of restrictions on the use of *ponieważ*, *że* and *ponieważ* may be used interchangeably in some cases and under appropriate conditions, as in examples (2)–(4) in Section 1. However, even then, nuanced interpretational differences still hold. Consider example (17) again, where interchangeability is possible. If *że* is used, the reason conveyed by the *że*-clause ‘because she took it so hard’ may be expected to be known to both participants from shared knowledge, even though it is not explicitly present in the prior discourse. In comparison, the *ponieważ*-clause in (17) places emphasis on the reason provided and is likely to present it as discourse-new.

### 3.2 Semantic properties

Let us move on to the semantic contrasts. In this respect, *że* once again proves to be more restricted than *ponieważ*. The argument here is based on van Dijk’s (1977), Morreall’s (1979), and Sweetser’s (1990) distinction between content and epistemic interpretations of causal relations. The former are cause-and-effect relations pertaining to the physical world, as in (19), while the latter are premise–conclusion relations based on the speaker’s reasoning and interpreted with reference to the mental domain of the speaker, as in (20).

(19) *The streets are wet because we’ve had some rain.* ‘*p* because *q*’

(20) *Since we’ve had some rain, the streets must be wet.* ‘I conclude *p* on the basis of *q*’

In the literature, the distinction between content and epistemic causal relations has been widely reported as relevant crosslinguistically in the speakers’ selection of appropriate causal markers (e.g., Sanders and Stukken 2012). This is also the case for *że* in that the construal of *że*-reasons hinges on epistemic readings: the type of causality coded by *że* is only felicitous when interpreted as based on the speaker’s reasoning. This is why *że* is fine in (21) (epistemic), but ungrammatical in (22) (content).

(21) A: *Popatrz, sąsiedzi wyjechali na wakacje, ale światło się świeci.*  
look-IMP neighbors leave.l:PTCP.PL.VIR on holidays but light REFL shine.3SG  
‘Look, the neighbors have gone on holiday, but the lights are on.’

B: *Muszą być bardzo rozrzutni, że / ponieważ światło zostawili włączone w cały-m dom-u.*  
must.3PL be.INFV very wasteful that / because light leave.l:PTCP.PL.VIR turned:on in  
whole-LOC house-LOC  
‘They must be very wasteful because they left the lights on all over the house.’

(22) A: *Sąsiedzi wrócili z wakacji i okazało się, że przez cały czas w dom-u świeciło się światło.*  
neighbors return.l:PTCP.PL.VIR from holiday-GEN and turn:out.l:PTCP.3SG.N REFL that through  
whole time in house-LOC shine.l:PTCP.3SG.N REFL light  
‘The neighbors returned from holiday and it turned out that the lights in the house had been on the whole time.’

B: *Zapłacili wysoki rachunek za prąd, \*że / ponieważ zostawili światło włączone w cały-m dom-u.*  
pay.l:PTCP.PL.VIR high bill for electricity that / because leave.l:PTCP.PL.VIR light  
turned:on in whole-LOC house-LOC  
‘They paid a hefty electricity bill because they’d left the lights on all over the house.’

Note that in both (21) and (22) the required discourse conditions, as discussed above, are present: the *że*-reasons are purposely made discourse-old/shared knowledge through preceding context; they are also backgrounded. From this it follows that the epistemicity constraint operates independently of the discourse constraints. Even

though the discourse conditions are such that they would otherwise allow for a *że*-clause, as is the case in both (21) and (22), violation of the epistemicity constraint in example (22) rules out the sentence.

By the same token, compliance to the epistemicity constraint must be accompanied by appropriate discourse conditions for a sentence to be grammatical. Both constraint types – discursive and semantic – must be satisfied simultaneously, as shown by the ungrammaticality of (23) versus the grammaticality of (21). Example (23) is ungrammatical because it pairs epistemic causality with discourse-newness of the reason provided (and emphasis placed on it).

- (23) A: *Dlaczego uważasz, że są rozrzutni?*  
 why think.2SG that be.3PL wasteful  
 ‘Why do you think that they are wasteful?’  
 B: *Muszą być rozrzutni, \*że / ponieważ zostawili światło włączone w*  
 must.3PL be.INFV wasteful that / because leave.I:PTCP.PL.VIR light turned:on in  
*cały-m dom-u.*  
 whole-LOC house-LOC  
 ‘They must be wasteful because they left the lights on all over the house.’

The characteristics of causal *że*-clauses are thus as follows. First, they encode backgrounded reasons that are either discourse-old or known to the participants via shared prior knowledge (the proposition in the main clause is thus brought to the foreground). Second, the causal relation encoded by *że*-clauses is one of epistemic rather than content (or real-world) causality. The presence of epistemic expressions marking subjective inferences in the matrix clause (e.g., *muszą* ‘they must’ in (21)), further facilitates the use of *że*-reasons. We have also seen that the preferred discursive and semantic conditions must apply in tandem for causal *że* to occur. In all these respects, *że*-clauses have a more restricted distribution than *ponieważ*-clauses.

In the next section, we examine causal *że*-clauses from a diachronic point of view.

## 4 *Że*-clauses in the history of Polish

We have now shown that synchronically causal *ponieważ*- and *że*-clauses differ in syntactic status as well as semantic and discourse-related properties, with *że*-clauses being more restricted and specialized in their use and distribution. In this section we present the historical background for these contrasts focusing only on the developmental path of *że*. As will be argued, *że* has shifted significantly in its syntax, discourse, and semantics, and has transformed from a highly versatile causal linker to a causal ActP modifier of the type described in Sections 2 and 3.

It is our objective in this section to prove the claim that causal *że* has become more confined in its range of uses. Note that our aim is not to plot in detail the development of the process in question – a task that in itself merits a separate inquiry; instead, we discuss key examples that illustrate the crucial contrasts between what used to be possible with *że* historically, on the one hand, and the more restricted use patterns we observe contemporarily, on the other. Based on the contrasts, we spell out the use changes that have occurred over the course of time.

Also note that in order to stay in line with our discussion of synchronic facts outlined in Sections 2 and 3, we focus on an analogous range of issues: syntactic behavior (movement to left periphery), discourse properties (newness/givenness, foregrounding/backgrounding), and semantic properties (epistemic vs. content causality).<sup>4</sup>

As far as sources of data go, we take advantage of the fact that causal *że* is richly illustrated in the literature, for various historical periods. The examples used in this section come from a number of reference works on the history of Polish, where they are explicitly listed under “causal *że*” (*że przyczynowe* in Polish). These works are as

<sup>4</sup> We are limited here to whatever facts can be observed in historical texts (constructed examples being out of the question). For syntactic properties, movement to left periphery is the only aspect of syntactic behavior we were able to find illustration for. We were not able to find relevant examples for variable binding, sensitivity to negation, or sensitivity to appropriate adverbials and modifiers.

follows: *Słownik staropolski* (Dictionary of Old Polish), *Słownik polszczyzny XVI wieku* (Dictionary of 16th-century Polish; Mayenowa et al. 1966–), *Słownik pojęciowy języka staropolskiego* (Conceptual dictionary of Old Polish), *Słownik języka Jana Chryzostoma Paska* (Dictionary of the language of Jan Chryzostom Pasek; Koneczna and Doroszewski 1965–1973), as well as the *Zapomniane konstrukcje* (Forgotten constructions) series – an anthology of archaic syntactic constructions in the history of Polish: *Zapomniane konstrukcje składni staropolskiej/średnio-polskiej/nowopolskiej* (Forgotten constructions of Old/Middle/New Polish syntax; Kałkowska et al. 1973; Kałkowska et al. 1974; Kałkowska et al. 1972). Of course, we also reference the original source texts: each example is marked with an appropriate abbreviation code (given in the Appendix, along with further details of the sources).

## 4.1 Etymology and background

Polish *że* follows the typologically familiar pattern in which pronominal forms give rise to declarative ‘that’-type complementizers. It shares this path of development with complementizers deriving from relative pronouns (cf. Axel-Tober [2017] for German *dass* and English *that*; Meyer [2017] for Slavic in general; and Fagard and Degand [2010] for Latin *quod* and its Romance descendants, to name but a few).

Polish *że* goes back to the Proto-Slavic inflected relative pronoun *\*jъže* (NOM.SG.M), *\*jaže* (NOM.SG.F), *\*ježe* (NOM.SG.N), which in turn consisted of the Proto-Slavic relative pronoun *\*jъ*, *\*ja*, *\*je* (< PIE *\*(h)yo-*) strengthened by the Proto-Slavic emphatic particle *\*že* (< PIE *\*g<sup>h</sup>e*). More specifically, it is the neuter form *\*ježe* that is put forth by some as the source of *że* (e.g., Kopečný et al. 1980: 289, 759; Mańczak 2017: 235); others point to the masculine form *\*jъže* (e.g., Boryś 2005: 753; Decyk-Zięba and Dubisz 2008: 268). Subsequently *jъ*- in *\*ježe* / *\*jъže* was weakened in a regular reduction of the yer<sup>5</sup> in word-initial position, ultimately to zero via *\*iže* – an intermediate form that is well represented in historical records as *iže* – and *że* was the outcome. *Iż*, the modern bookish equivalent of *że*, evolved in a parallel development of the yer: *\*jъže* → *iže* → *iż*. The reduction took place in word-final position.

All three forms – *iže*, *że*, and *iż* – coexisted in Old Polish and later, with *iže* gradually giving way to *że* and *iż*. It must be emphasized that all three were highly multifunctional and the complementizer function was one of many; for illustration, let us focus on *że*. *Słownik Staropolski* (Dictionary of Old Polish) cites eight clause linkage types signaled by *że*, including four adverbial clause types: reason, result, degree, and manner (cf. Urbańczyk 1953–2002). This is a much broader range of clause linkage types than is observed today in standard Polish, suggesting that a process of functional specialization has occurred: *że* has dropped some of its historical uses, at least in the standard variety. Further, and more importantly for this paper, with specific reference to adverbial clauses of reason (i.e., causal clauses), *że* is more restricted today than it used to be.

## 4.2 Sentential position

With respect to position in the sentence, *że*-clauses were more flexible, as shown in the seventeenth- and nineteenth-century examples in (24) and (25), where the reason clauses appear sentence-initially. As shown above in example (6b), the same is not possible in Present-Day Polish; as a result, examples (24) and (25) sound markedly archaic.<sup>6</sup>

5 A yer is a reduced, schwa-like vowel.

6 Sentence-initial causal clauses today are possible with additional lexical material accompanying *że* such as *a że ... to ...* (lit. ‘and that ..., then ...’); *więc że ..., to ...* (lit. ‘so that ..., then ...’), as seen in.

(i) *A że miałem czas, to poszedłem do dom-u pieszo.*  
and that have.I:PTCP.SG.M.1SG time then go.I:PTCP.SG.M.1SG to house-LOC on:foot  
‘And since I had time, I went home on foot’.

We take these semi-formulaic constructions built around complex conjunctions to be related to the causal *że* in that they inherit its causal semantics. Nevertheless, they should be distinguished from historical and present-day causal clauses in which *że* functions on its own.

- (24) *Żem w pogod-ę wyszedł, nie wzięli mi opończ-y.*  
 that.AUX.1SG in fair:weather-ACC go:out.l:PTCP.M NEG take.l:PTCP.PL me.DAT cape-GEN  
 ‘Because I went out in fair weather, they did not bring me a cape.’ (1690–1695, PasPam 262v)
- (25) [...] upraszam Pan-a, ażeby było w Wiln-ie wydrukowane in 8vo, na  
 [...] ask.1SG HON-ACC so:that be.l:PTCP.3SG.N in Vilnius-LOC printed in 8vo on  
 dobry-m papierz-e. Że jestem coraz słabsz-ego zdrowi-a, niech się drukarz  
 good-LOC paper-LOC that be.1SG increasingly poorer-GEN health-GEN PRTL REFL printer  
 kwapi dla bliski-ej śmierc-i mojej.  
 get:ready.3SG for imminent-GEN death-GEN my-GEN  
 ‘[...] I ask you (for it) to be printed in Vilnius in the octavo format, on good paper. Because I am of  
 increasingly poorer health, let the printer get ready for my imminent death.’ (1820, KKarp 227)

Additionally, example (26) (from the sixteenth century) shows that both of the positions relative to the matrix clause were readily available to causal *że*-clauses, as well as that *że* alternated with  *iż*  in this function.

- (26) *Iż we mnie nadzieję miał, wybawię go, obronię go, że*  
 that in me.LOC hope-ACC have.l:PTCP.SG.M save.FUT.1SG him.ACC protect.FUT.1SG him.ACC that  
*poznał imię moje.*  
 learn.l:PTCP.SG.M name.ACC my  
 ‘Because he had hope in me, I will save him; I will protect him because he learned my name.’  
 (1593, WujNT Psalm 91:14)

### 4.3 Discourse

In historical texts we find causal *że*-clauses used freely and indiscriminately as far as the local discourse setting is concerned. Included are discourse configurations that match the present-day pattern: the subordinate *że*-clause provides the backgrounded event that is discourse-old (or known) and that serves as a reason for the main clause proposition. This is the case in (27), featuring the  *iże*  variant of the conjunction. In this part of the biblical story of Noah’s dove, the fact that the dove did not find dry land is first explicitly stated, only to be repeated again later in the backgrounded causal  *iże* -clause.

- (27) *Potem po niem wypuścił gołęb-ia, aby wzwiędział, jużli wody*  
 then after him.LOC release.l:PTCP.SG.M dove-ACC so:that find:out.l:PTCP.SG.M if waters  
*przystały na ziemi. Jenże nie znalazł, gdzie by odpoczynęła*  
 recede.l:PTCP.PL.NVIR on earth.LOC ANA NEG find.l:PTCP.SG.M where COND rest.l:PTCP.SG.F  
*noga jego, i wroczył się zasię k niemu w korab, iże jeszcze*  
 leg his and return.l:PTCP.SG.M REFL again towards him.DAT in ship that still  
*były wody po wsz-ej ziemi.*  
 be.l:PTCP.PL.NVIR waters over entire-LOC earth.LOC  
 ‘Then he sent out a dove to find out if the waters had receded from the earth. And the dove found  
 nowhere to rest his legs on and returned again to him, to the ship, because the waters still covered all the  
 earth.’

(fifteenth century, BZ, 1Moj 8,9)

However, in the very same text from the fifteenth century, we also find the opposite configuration, that is, reasons that are communicatively prominent and discourse-new are framed in  *że* -clauses. In (28), the information ‘because you have not traveled by it before’ is vital and discourse-new, yet framed in a  *że* -clause. As argued in Section 3, this would not be possible in Present-Day Polish.

- (28) *Z daleka nie moglibyście widzieć ani poznać, ktor-ą drog-ą weszli, że-ście drzewiej nie chodzili po niej.*  
 from far NEG can.COND.2PL see.INFV NOR recognize.INFV which-INST road-INST  
 enter.l:PTCP.PL.VIR that-AUX.2PL earlier NEG walk.l:PTCP.PL.VIR on her.LOC  
 ‘From far away you would not be able to see or recognize by which road you entered because you had not traveled by it before.’ (fifteenth century, BZ, Joz 3, 4)

Likewise, in other texts, and in various time periods, the discourse setting that is required today is only one of many: Reasons that are communicatively prominent and discourse-new may freely be introduced by *że*. In example (29) (from the seventeenth century), the information that the old man stutters is cited as the discourse-new reason for the fact that the man cannot be understood.

- (29) *Co inszego wiele powiada ten starzec, tylko że mu rozumieć nie może, że się bardzo zająka.*  
 what other much say.3SG this old:man only that him.DAT understand.INFV NEG can.3SG that  
 REFL very stutter.3SG  
 ‘Much more the old man says, but one cannot understand him because he stutters a lot.’  
 (seventeenth century, SatMieszcz 297)

In (30), the information structure is such that it is clear that the reason given in the *że*-clause receives strong focus as key and discourse-new information: this can be seen in the emphasis effect produced in ‘Everyone is silent, and they are silent because <focus>’. Historical *że* was thus capable of marking at-issue propositions, for example, in replies to *why* questions. By contrast, in Present-Day Polish, examples (29) and (30) would necessarily have to be phrased with a dedicated causal linker, for example, *ponieważ* or *bo*.

- (30) *Zdaje się, że wszyscy dla interes-u milczą, a oni milczą, że wiedzą, że sejm będzie zerwany i że nic temu poradzić nie mogą.*  
 seem.3SG REFL that everyone for interest-GEN be:silent.3PL and they be:silent.3PL that know.3PL  
 that Sejm be.3SG.FUT broken:up and that nothing it.DAT help.INFV NEG can.3PL  
 ‘It seems that everyone is silent for own gain, and they are silent because they know that the Sejm (session) will be broken up and that they cannot help it.’ (1760–1763, KonOsk 213)

The above fifteenth-, seventeenth-, and eighteenth-century examples may be complemented by yet another use type, one in which the reason provided is discourse-new yet secondary with respect to information status. Consider (31), where the *że*-clause is merely a side comment inserted in the middle of a conditional construction. The matrix clause of the conditional construction receives primary focus.

- (31) [...] *a obwinion-ego, dla wszelkie-go bezpieczeństw-a, z sobą do kolegijum brali, albo też jeżeli się tak nie dało, że była jakakolwiek wina ze stron-y porwan-ego, tedy [...] zatarg-ę onę do zgod-y prowadzili*  
 [...] and guilty-ACC for all-GEN safety-GEN with REFL.INST to collegiums  
 take.l:PTCP.PL.VIR OR TOO IF REFL SO NEG be:possible.l:PTCP.3SG.N that be.l:PTCP.3SG.F  
 any guilt from side-GEN captive-GEN then [...] dispute-ACC this.ACC to settlement-GEN  
 lead.l:PTCP.PL.VIR  
 ‘[...] and the accused, for the sake of safety, would be escorted to the collegium, and if that was not feasible, because there was some guilt on the part of the captive, then they would lead the dispute to settlement’

(end of the eighteenth century; KitO 99)

In historical perspective, then, causal *że* used to be markedly more flexible than it is today with respect to discourse conditions in which it appeared in.

#### 4.4 Content versus epistemic causality

Just as *że* was historically liberally used in a variety of discourse settings, it was also freely used, unlike in Present-Day Polish, in both of the causal relation types of interest to us here: content and epistemic. For instance, example (32) features content causality in that two states of affairs are shown to be related in the physical world: some animals do not eat certain foods because they are unfit for consumption.

- (32) *Każde ma osobny sposób życi-a [...] Jedne żyją tylko pewny-m pokarm-em, który też im pożyteczny jest, jegoż nie tykają drugie, że im albo nie pożyteczny, albo wcale trucizn-ą jest.*  
 each have.3SG separate way life-GEN [...] some live.3PL only certain-INST food-INST which too them.DAT useful be.3SG ANA NEG touch.3PL others that them.DAT either NEG useful or quite poison-INST be.3SG  
 ‘Each one has its own way of life. Some live only on a certain type of food that is useful to them; other (animals) do not touch it because to them it is either useless or even harmful.’ (1795; KIZ 130)

Along the same lines, other examples may be analyzed as representing content relations. For example, in (29) above, we see a cause-and-effect relation between two events: the old man stutters and that is the reason that he is difficult to understand. Note additionally that in both (29) and (32), *że*-reasons provide vital, discourse-new information. The epistemicity constraint and the discourse constraints that hold in Present-Day Polish (see Section 3) are thus both violated in these examples. For these two reasons, they sound archaic and infelicitous today.

On the other hand, epistemic causal relations are also coded with *że* in historical texts. One such relation holds between the two clauses in (33): the information ‘because she believed such a fairy tale (i.e., such a ludicrous story)’ serves as a basis for the speaker’s inference ‘someone must have done some persuading’. On the discourse side of things, the *że*-reason expresses information that is shared knowledge between the speaker and addressee, that is, the ‘fairy tale’ refers to gossip that was widely circulated at the time when the letter was written: the addressee of the letter was certainly familiar with the gossip. This configuration of semantic and discourse properties is precisely the pattern that we also see in Present-Day Polish.

- (33) [...] *wierzę, że w głow-ę zaszła albo ktoś mocny musiał*  
 [...] believe.1SG that in head-ACC go.l:PTCP.3SG.F or someone mighty must.l:PTCP.3SG.M  
*perswadować, że tak-iej uwierzyła bajc-e.*  
 persuade.INFV that such-DAT believe.l:PTCP.3SG.F fairy:tale-DAT  
 ‘[...] I believe that she has either gone crazy or someone influential must have done some persuading because she believed such a fairy tale.’ (1665; SobJListy, 29)

Example (28) above may also be seen as representing epistemic causality: the causal relation is based on an inference made by the speaker ‘you would not be able to recognize [...] because you have not been there before’; the relation is therefore mental rather than event-based. On the other hand, example (28) departs from the present-day pattern in that the discourse setting is such that the *że*-reason provided is high in terms of information status.

On the basis of the foregoing discussion, we conclude that diachronically causal *że* has become more restricted in its range of uses. It started out in Old Polish as a highly versatile reason clause marker used indiscriminately in a variety of syntactic, discursive, and semantic environments and later gradually specialized in introducing epistemic causality, as well as in backgrounded, discourse-given (or known) reasons.

The evolution of *że* is also marked by a broader trend. It started out as a highly multifunctional expression, including – beside the ‘that’-type complementizer function – a range of adverbial relations (as indicated by historical dictionaries of Polish). By itself, *że* no longer serves these adverbial functions. Instead, it combines with other lexical material to mark relations such as exceptionality (*chyba że* ‘unless’; see Jędrzejowski 2022), result or consecutiveness (*tak że* ‘so that’), degree (*tak że* ‘to such a degree that’), manner (*tak że* ‘in such a way that’), causality (*jako że*, *dlatego że* ‘because’; see Jędrzejowski 2025). Free-standing *że* has become marginal in the

adverbial domain, at least in standard Polish. Nowadays, the trend is for *że* to be used as a ‘that’-type complementizer. Similar processes have been also observed in other languages, inter alia in West Germanic languages; see de Rooy (1965) for Dutch *dat*, Behaghel (1928: 138–140) for German *dass*, Fischer (1992: 346) for English *that*, and Gregersen (in press) for Wangerooze Frisian *dat*.

This is also supported by more general remarks made in the literature on the diachrony of Polish regarding conjunctions in clause linkage. Scholars agree that, generally, in the oldest periods of the language, conjunctions were liberally used in a variety of functions, even to the point of blurring the distinction between paratactic and hypotactic relations. Subsequently, the boundary between the two domains became clearer as conjunctions evolved to specialize in either coordination or subordination. Further still, a clause linker that previously was flexible enough to encode more than one subordination relation would later typically specialize more narrowly to encode fewer or only one of them. It is hypothesized that this process in no small part was due to the codification and normativization accompanying the emergence of the national standard variety (see, among others, Długosz-Kurczabowa and Dubisz 2006: Chap. 7; Klemensiewicz et al. 1965; Pisarkowa 1984).

Likewise, the boundary between spoken and written codes – previously unclear – also became more apparent along with the codification process. This also affected conjunction use, including the use of *że*. As stated above, today *że* tends to be used as a ‘that’-complementizer, and it is mostly in colloquial speech that we observe some of its relic functions: causal *że* is a case in point (see also Guz [2023] for relative *że*; Guz and Jędrzejowski [2023] for *że* as a marker of elaboration). Our claim that causal *że* – besides the syntactic, discursive, and semantic restrictions – is also mainly characteristic of casual spoken language is further, although indirectly, supported by Pisarkowa’s observation that some historical syntactic means of expression in Polish have survived to this day in colloquial speech (stated in 1972), although they have disappeared from the standard variety (see Pisarkowa in her foreword to Kałkowska et al. 1972: 6; Pisarkowa 1975: 148–149).

## 5 Conclusions

In this paper, we have shown that causal clauses headed by the complementizer *że* (lit. ‘that’) are more restricted in their use than those introduced by the inherent causal complementizer *ponieważ* ‘because’. These differences are attributed to their respective non-at-issue versus at-issue status as well as *że*’s specialization to express epistemic causality, and are primarily the result of the diachronic development of *że* and its semantic narrowing within the domain of adverbial dependency relations. Crosslinguistic studies will be necessary to determine the extent to which *że*, as a causal head, differs from other non-at-issue causal complementizers.

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## Appendix: Primary sources

The following are the sources used for the primary data in this study, together with codes used to refer to them in examples:

**BZ** *Biblia Królowej Zofii* [Bible of Queen Sophia], fifteenth century

**KitO** Jędrzej Kitowicz, *Opis obyczajów za panowania Augusta III* [Description of customs during the reign of August III], written at the end of the eighteenth century, published in 1841

**KIZ** Krzysztof Kluk, *Zwierząt domowych i dzikich, osobliwie kraioowych, historii naturalney początki i gospodarstwo*, vol. 1, *O zwierzętach ssących, z figurami* [Domestic and wild animals, particularly in Poland, vol. 1, Natural history and livestock farming], 1795

**KKarp** Franciszek Karpiński, *Korespondencja z lat 1763–1825* [Correspondence from the years 1763–1825]

**KonOsk** Stanisław Konarski, *O skutecznym rad sposobie* [On the means of effective counsels], 1760–1763

**PasPam** Jan Chryzostom Pasek, *Pamiętniki* [Memoirs], 1690–1695

**SatMieszcz** *Polska satyra mieszczańska, nowiny sowizdrzalskie* [Polish bourgeois satire], collection of seventeenth-century texts, edited by Karol Badecki

**SubJListy** Jan III Sobieski, *Listy do królowej Marysienki* [Letters to Queen Marysienka], 1665–1683

**Spokes** *Korpus i wyszukiwarka danych konwersacyjnych Spokes* [Spokes: A search and exploration service for conversational corpus data], <http://spokes.clarin-pl.eu/>

**WujNT** Jakub Wujek, *Nowy Testament* [New Testament], 1593

## References

- Axel-Tober, Katrin. 2017. The development of the declarative complementizer in German. *Language* 93(2). e29–e65.
- Behaghel, Otto. 1928. *Deutsche Syntax: Eine geschichtliche Darstellung*, vol. 3: *Die Satzgebilde*. Heidelberg: Carl Winter's Universitätsbuchhandlung.
- Boryś, Wiesław. 2005. *Słownik etymologiczny języka polskiego* [Etymological dictionary of Polish]. Kraków: Wydawnictwo Literackie.
- Büring, Daniel. 2005. *Binding Theory*. Cambridge: Cambridge University Press.
- Charnavel, Isabelle. 2017. Non-at-issueness of *since*-clauses. *Proceedings of SALT 27*. 43–58.
- Charnavel, Isabelle. 2020. French causal *puisque*-clauses in the light of (not)-at-issueness. In Irene Vogel (ed.), *Romance languages and linguistic theory 15: Selected papers from the 47th linguistic symposium on Romance languages (LSRL47), Newark, Delaware* (Romance Languages and Linguistic Theory 16), 50–64. Amsterdam: John Benjamins.
- Chomsky, Noam. 1981. *Lectures on government and binding: The Pisa lectures* (Studies in Generative Grammar 9). Dordrecht: Foris.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective* (Oxford Studies in Comparative Syntax). Oxford: Oxford University Press.
- Cristofaro, Sonia. 2003. *Subordination*. Oxford: Oxford University Press.
- de Rooy, Jaap. 1965. *Als – of – dat: Een semantisch-onomasiologische studie over enkele subordinerende conjuncties in het ABN, de Nederlandse dialecten en het Fries, vergelijkend-synchronisch beschouwd*. Nijmegen: Katholieke Universiteit te Nijmegen dissertation.
- Decyk-Zięba, Wanda & Stanisław Dubisz. 2008. *Glosariusz staropolski: Dydaktyczny słownik etymologiczny* [Old Polish glossary: Didactic etymological dictionary]. Warszawa: Wydawnictwo Uniwersytetu Warszawskiego.
- Długosz-Kurczabowa, Krystyna & Stanisław Dubisz. 2006. *Gramatyka historyczna języka polskiego [Historical grammar of Polish]*. Warszawa: Wydawnictwo Uniwersytetu Warszawskiego.
- Enç, Mürvet. 1989. Pronouns, licensing, and binding. *Natural Language and Linguistic Theory* 7(1). 51–92.
- Fagard, Benjamin & Liesbeth Degand. 2010. Cause and subjectivity, a comparative study of French and Italian. *Lingvisticae Investigationes* 33(2). 179–193.
- Fischer, Olga. 1992. Syntax. In Norman Blake (ed.), *The Cambridge history of the English languages*, vol. 2, 207–408. Cambridge: Cambridge University Press.
- Frey, Werner. 2023. On the categorial status of different dependent clauses. In Jutta M. Hartmann & Angelika Wöllstein (eds.), *Propositionale Argumente im Sprachvergleich: Theorie und Empirie / Propositional arguments in cross-linguistic research: Theoretical and empirical issues* (Studien zur deutschen Sprache 84), 363–408. Tübingen: Narr.
- Green, Mitchell S. 2000. Illocutionary force and semantic content. *Linguistics and Philosophy* 23(5). 435–473.
- Gregersen, Sune. in press. Complementizers as causal subordinators in West Germanic languages. In Łukasz Jędrzejowski (ed.), *On the diachrony of adverbial clauses* (Brill's Studies in Historical Linguistics). Leiden: Brill.
- Guz, Wojciech. 2023. Presentational relative clauses introduced by *że* in Polish. *Zeitschrift für Slawistik* 68(2). 304–334.
- Guz, Wojciech & Łukasz Jędrzejowski. 2023. Polish *że* as an elaboration marker: Language-internal and cross-linguistic perspectives. In Alessandra Barotto & Simone Mattioli (eds.), *Discourse phenomena in typological perspective* (Studies in Language Companion Series 227), 167–199. Amsterdam: John Benjamins.
- Haiman, John & Sandra A. Thompson. 1984. "Subordination" in universal grammar. In Claudia Brugman & Monica Macaulay (eds.), *Proceedings of the tenth annual meeting of the Berkeley linguistics society*, 510–523. Berkeley, CA: Berkeley Linguistics Society.
- Jędrzejowski, Łukasz. 2022. On the synchrony, variation and diachrony of adverbial exceptive clauses in Polish. *Glossa: A Journal of General Linguistics* 6. 1–41.

- Jędrzejowski, Łukasz. 2025. On the synchrony and diachrony of causal *jako-że*-clauses in Polish. *Linguistics Vanguard* 1–16. <https://doi.org/10.1515/lingvan-2021-0126>.
- Kałkowska, Anna, Krystyna Pisarkowa, Magdalena Szybistowa & Jadwiga Twardzikowa (eds.), 1973. *Zapomniane konstrukcje składni średniopolskiej (1700–1780): Wybór przykładów* [Forgotten constructions of Middle Polish syntax (1700–1780): Selected examples]. Wrocław: Ossolineum.
- Kałkowska, Anna, Krystyna Pisarkowa, Magdalena Szybistowa & Jadwiga Twardzikowa (eds.), 1974–1977. *Zapomniane konstrukcje składni nowopolskiej (1780–1918): Wybór przykładów* [Forgotten constructions of New Polish syntax (1780–1918): Selected examples]. Wrocław: Ossolineum.
- Kałkowska, Anna, Krystyna Pisarkowa & Jadwiga Twardzikowa (eds.), 1972. *Zapomniane konstrukcje składni średniopolskiej (XVII wiek): Wybór przykładów* [Forgotten constructions of Middle Polish syntax (17th century): Selected examples]. Wrocław: Ossolineum.
- Klemensiewicz, Zenon, Tadeusz Lehr-Spławiński & Stanisław Urbańczyk. 1965. *Gramatyka historyczna języka polskiego* [Historical grammar of Polish]. Warszawa: Państwowe Wydawnictwo Naukowe.
- Koneczna, Halina & Witold Doroszewski. 1965–1973. *Słownik języka Jana Chryzostoma Paska* [Dictionary of the language of Jan Chryzostom Pasek]. Wrocław: Ossolineum.
- Kopečný, František, Vladimír Šaur & Václav Polák. 1980. *Etymologický slovník slovanských jazyků: Slova gramatická a zájmena, vol. 2, Spojky, částice, zájmena a zájmenná adverbia* [Etymological dictionary of Slavic languages: Function words and pronouns, vol. 2, Conjunctions, particles, pronouns, and adverbials]. Prague: Československá Akademie Věd.
- Krifka, Manfred. 2023. Layers of assertive clauses: Propositions, judgements, commitments, acts. In Jutta Hartmann & Angelika Wöllstein (eds.), *Propositionale Argumente im Sprachvergleich: Theorie und Empirie / Propositional arguments in cross-linguistic research: Theoretical and empirical issues* (Studien zur deutschen Sprache 84), 115–182. Tübingen: Narr.
- Lund, Gunnar & Isabelle Charnavel. 2020. The syntax of concessive clauses: Evidence from exempt anaphora. *University of Pennsylvania Working Papers in Linguistics* 26(1). 159–168.
- Mańczak, Witold. 2017. *Polski słownik etymologiczny* [Etymological dictionary of Polish]. Kraków: Polska Akademia Umiejętności.
- Mayenowa, Maria Renata, Stanisław Bąk, Krzysztof Mrowcewicz & Franciszek Peplowski (eds.), 1966–. *Słownik polszczyzny XVI wieku* [Dictionary of 16th-century Polish]. Wrocław: Zakład Narodowy im. Ossolińskich.
- Meyer, Roland. 2017. The C system of relatives and complement clauses in the history of Slavic languages. *Language* 93(2). e97–e113.
- Morreall, John. 1979. The evidential use of *because*. *Papers in Linguistics* 12(1–2). 231–238.
- Pęzik, Piotr. 2015. Spokes – A search and exploration service for conversational corpus data. In Jan Odijk (ed.), *Selected papers from the CLARIN 2014 conference*, 99–109. Linköping: University Electronic Press.
- Pisarkowa, Krystyna. 1975. *Składnia rozmowy telefonicznej* [The syntax of a telephone conversation]. Wrocław: Ossolineum.
- Pisarkowa, Krystyna. 1984. *Historia składni języka polskiego* [Historical syntax of Polish]. Wrocław: Ossolineum.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed.), *Elements of grammar: Handbook in generative syntax* (Kluwer International Handbooks of Linguistics 1), 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2006. On the form of chains: Criterial positions and ECP effects. In Lisa Cheng & Norbert Corver (eds.), *Wh-movement: Moving on* (Current Studies in Linguistics 42), 97–133. Cambridge, MA: MIT Press.
- Sanders, Ted & Ninke Stukken. 2012. Causal connectives in discourse: A cross-linguistic perspective. *Journal of Pragmatics* 44(2). 131–137.
- Scheffler, Tatjana. 2013. *Two-dimensional semantics: Clausal adjuncts and complements* (Linguistische Arbeiten 549). Berlin: Mouton de Gruyter.
- Schönenberger, Manuela & Liliane Haegeman. 2023. English rationale *since* and a reassessment of the typology of adverbial clauses. In Łukasz Jędrzejowski & Constanze Fleczyreck (eds.), *Micro- and macro-variation of causal clauses: Synchronic and diachronic insights* (Studies in Language Companion Series 231), 129–166. Amsterdam: John Benjamins.
- Selkirk, Elisabeth. 2005. Comments on intonational phrasing in English. In Sónia Frota, Marina Vigário & Maria João Freitas (eds.), *Prosodies: With special reference to Iberian languages* (Phonology and Phonetics 9), 11–58. Berlin: Mouton de Gruyter.
- Sweetser, Eve. 1990. *From etymology to pragmatics: Metaphorical and cultural aspects of semantic structure* (Cambridge Studies in Linguistics 54). Cambridge: Cambridge University Press.
- Urbańczyk, Stanisław (ed.), 1953–2002. *Słownik staropolski* [Dictionary of Old Polish]. Kraków: IJP PAN.
- van Dijk, Teun. 1977. *Text and context: Explorations in the semantics and pragmatics of discourse* (Longman Linguistics Library 21). London: Longman.
- Woods, Rebecca Louise. 2016. *Investigating the syntax of speech acts: Embedding illocutionary force*. York: University of York dissertation.