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On the synchrony and diachrony of causal *jako-że*-clauses in Polish

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Abstract: In this article, I examine causal clauses in Polish introduced by the complementizer *jako że/iż* ‘because’ (lit. ‘as that’). Synchronically, I argue that *jako-że/iż*-clauses can express distinct reason relations operating on different semantic levels. By focusing on their content interpretation, I provide evidence showing that *jako-że/iż*-clauses are syntactically integrated adverbial clauses. The main arguments for this claim come from information-structural movement to the left periphery of the matrix clause and quantificational binding. Diachronically, I show that *jako* could already be used as a causal C-head in Old Polish (up to 1543), and that the declarative complementizer *że/iż* ‘that’ was incorporated into the causal clause structure in the transition from Old to Middle Polish.

Keywords: adverbial clause; comparative clause; causal clause; diachrony; Polish

1 Introduction

In Present-Day Polish, causal relations can be expressed by subordinate clauses introduced by different clause-linking elements, for example by *ponieważ*, *bo*, *jako że*, *gdyż*, or *albowiem*, all roughly corresponding to the English complementizer *because*; see (1), where the speaker takes the rain to be the reason for why the matrix subject decides to stay at home.¹

- (1) *Zostaniemy w dom-u, ponieważ / bo / jako że / gdyż / albowiem pada deszcz.*
 remain.1PL in house-LOC because fall.3SG rain
 ‘We’re going to stay at home because it’s raining.’

Not much is known about differences between these subordinate clauses, nor do we know in great detail how they came into being.² Skibicki (2007: 27) mentions *jako-że*-clauses in passing, but she does not offer any analysis. Likewise, Grochowski et al. (1984: 295) note the existence of *jako że* in a conjunction index, but do not discuss its use. Blümel and Pitsch (2019: 5) observe that the meaning of *jako że* is opaque, that is, it cannot be calculated from the meaning of its component parts in a compositional way. Markowski (2008: 358) paraphrases it as *ponieważ* ‘because’. These remarks strongly suggest that a detailed analysis of *jako-że*-clauses is called for.

The main aim of this article is to examine the synchrony and diachrony of *jako-że*-clauses. As (2a) and (2b), two examples from crime novels of Remigiusz Mróz, show, these clauses are often used in modern Polish:

¹ Examples follow the Leipzig Glossing Rules. Abbreviations used: 1/2/3 first/second/third person; ACC accusative; AUX auxiliary; COMP complementizer; DAT dative; F feminine; FOC/PTCL focus particle; FUT future tense; GEN genitive; IMPER imperative mood; INFV infinitive; INST instrumental; L:PTCP *l*-participle (inflected for number and gender); LOC locative; M masculine; N neuter; NEG negation; NOM nominative; NVIR non-virile; PL plural; REFL reflexive; SG singular; VIR virile.

² Łoś (1928: 358–359) and Pisarkowa (1984: 243) observe that the complementizer *ponieważ* was borrowed from Czech and that it is supposed to go back to *poněvadž*, consisting of the preposition *po* ‘after’, a demonstrative pronoun, and two focus particles **va* and **že*; see Boryś (2005) for more details.

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- (2) a. *Co jest całkiem zrozumiałe, jako że dziennikarka miała w usta-ch monet-ę.*
 what be.3SG totally understandable as that journalist.F have.l:PTCP.SG.F in
 lips-LOC coin-ACC
 ‘Which is totally understandable because the journalist had a coin in her mouth.’
 (Przew, p. 11)
- b. *Zdawał sobie spraw-ę, że Edling jest odporny praktycznie na wszystkie metody manipulacyjne, jako że sam je stosuje lub na pewnym etap-ie życi-a stosował.*
 seem.l:PTCP.SG.M REFL.DAT issue-ACC that Edling be.3SG resistant practically on
 all methods manipulative as that REFL them.ACC use.3SG or on certain
 period-LOC life-GEN use.l:PTCP.SG.M
 ‘[He] realized that Edling is resistant to practically all manipulative methods because he uses them himself or he used them at certain point of his life.’
 (Kab, p. 80)

Synchronically, to my knowledge, no analysis has been proposed so far. This is not surprising because *jako że* is non-existent as a causal conjunction in other Slavic languages; compare, for example, (3a) for Czech (West Slavic), (3b) for Bulgarian (South Slavic), and (3c) for Russian (East Slavic).

- (3) a. *Zůstaneme doma, protože / jelikož / ponděvadž / neboť / *jako že prší.*
 remain.1PL home because rain.3SG
 ‘We’re going to stay at home because it’s raining.’
 (Radek Šimík, pers. comm.)
- b. *Shte ostanem vkushti poneže / zašhtoto / tŭj kato / *kato che vali (dŭžd).*
 FUT stay.1PL at:home because rain.3SG rain
 ‘We will stay at home because it’s raining.’
 (Vesela Simeonova, pers. comm.)
- c. *My ostanemsja doma, potomu čto / potomu kak / tak kak / *kak čto idet dožd’.*
 we stay.1PL home because go.3SG rain
 ‘We’re going to stay at home because it’s raining.’
 (Katja Jasinskaja, pers. comm.)

Remarkably, neither *jako že* in Czech nor *kato che* in Bulgarian nor *kak čto* in Russian can be used to introduce a causal dependency relationship. Instead other conjunctions have to be used.³ Diachronically, *jako-že*-clauses constitute an interesting case as well, because *jako že* literally consists of the relativizer *jako* ‘as’ and the complementizer *že* ‘that’ introducing usually complement clauses.⁴ In this connection, it is interesting to figure out how the causal meaning comes about, and how *jako-že*-clauses came into being.

³ Keep in mind, however, that *kato* itself in Bulgarian, for example, can be used as a conjunction introducing temporal clauses. A detailed comparison of *kato* across Slavic languages would definitely reveal a clear picture of its distribution and development.

⁴ As Radek Šimík (pers. comm.) pointed out to me, *jako že* in Czech can introduce complement clauses after clause-embedding predicates like *vypadat* ‘look’, *zdát se* ‘seem’, *znít* ‘sound’, *tvářit se* ‘make one’s face seem like’, as example (ia) shows:

- (i) a. *Vypadala, jako že se každou chvíli rozpláče.*
 looked.l:PTCP.3SG.F as that REFL every moment.ACC start:crying.3SG
 ‘She looked as though she would start crying any moment.’
 (Radek Šimík, pers. comm.)
- b. *Wyglądała, *jako że / jakby miała się rozplakać.*
 look.l:PTCP.3SG.F as that / as:though have.l:PTCP.3SG.F REFL start:crying.INFV
 ‘She looked as though she would start crying (any moment).’

Due to its causal meaning, *jako že* cannot introduce complement clauses in Polish, as shown in (ib); instead *jakby* ‘as though’ must be used.

This article is structured as follows. In Section 2, I examine the semantics and syntax of *jako-że*-clauses in Present-Day Polish. The main focus is on their content interpretation. Section 3 is concerned with the diachrony of *jako-że*-clauses, whereas Section 4 offers an outline of the diachronic development. Finally, Section 5 summarizes the most important findings.

2 *Jako-że*-clauses in Present-Day Polish

In this section, I briefly examine the use of *jako-że*-clauses in Present-Day Polish. In Section 2.1, I give an overview over their possible interpretations and show that they can be interpreted as content, epistemic, or speech act causal clauses. Section 2.2 is concerned with the external syntax of *jako-że*-clauses, with the main focus on their content interpretation.

Before I examine *jako-że*-clauses at the syntax-semantics interface, it first needs to be proven that *jako że* is a frozen complementizer expressing a causal relation. In principle, one could intuitively argue that *jako*⁵ is used as a relativizer (‘as’), whereas *że* ‘that’ introduces a subordinate clause. This would mean that the causal relation between the matrix clause and the subordinate clause is attributed to a presupposition or an implicature. However, such an analysis cannot be upheld. Consider (4), a corpus example:⁶

- (4) *Ma ponadto doskonale dobrany kolor włosów, jako że nie widać zbyt dużej różnic-y między odrost-ami a włos-ami farbowanymi.*
 have.3SG furthermore excellently chosen color hairs-GEN as that NEG see.INFV too big difference-GEN between roots-INST and hairs-INST dyed
 ‘Furthermore, she has an excellent hair color because one cannot see a too big difference between her roots and dyed hairs.’
 (NKJP, *Dziennik Zachodni*, 10 April 2001)

If *jako* and *że* were two independent elements, we should be able to dispense with one of them. This is impossible, though, when a causal relation is expressed:

- (5) a. **Ma ponadto doskonale dobrany kolor włosów, jako nie widać zbyt dużej różnicy między odrostami a włosami farbowanymi.*
 b. **Ma ponadto doskonale dobrany kolor włosów, że nie widać zbyt dużej różnicy między odrostami a włosami farbowanymi.*⁷

⁵ *Jako* should not be confused with the *wh*-word *jak* (lit. ‘how’), as they fulfill distinct functions. Due to space restrictions, I mention here only three selected differences: while *jak* can introduce indirect questions, as in (i), modal *wh*-constructions, as in (ii), and conditional clauses, as in (iii), *jako* cannot:

- (i) *Jak / *jako jechałaś?* (independent question)
 how / as drive.1.PTCP.SG.F
 ‘How did you drive?’
- (ii) *Nie mam jak / *jako pracować.* (modal existential *wh*-construction)
 NEG have.1SG how / as work.INFV
 ‘I have no appropriate conditions to work.’
- (iii) *Nie zaprzeczę, jak / *jako zgadniesz.* (conditional)
 NEG deny.1SG how / as guess.2SG
 ‘I won’t deny, if you guess correctly.’

I thank one of the anonymous reviewers for raising this issue.

⁶ I use “corpus examples” to mean those examples that have been taken from a corpus. When I cite a corpus example, I also provide its exact source and date. A list of synchronic and diachronic corpora is given in Appendix A. If no source is provided, it indicates that I made up the example for the purposes of argumentation.

⁷ This example is correct when *że* is used as an elaboration marker, but in this case it is not a declarative complementizer. Rather, it is used as a discourse marker; for more details, see Guz and Jędrzejowski (2023).

It straightforwardly follows from (5a) and (5b) that *jako* and *że* have to co-occur to express a causal relation between the matrix clause and the subordinate clause. However, it should be kept in mind that Polish also has another declarative complementizer, *iż* ‘that’, occurring mainly in higher register texts.⁸ Compare (6a), a slightly modified version of (4), and (6b), a corpus example:

- (6) a. *Ma ponadto doskonale dobrany kolor włosów, jako iż nie widać zbyt dużej różnicy między odrostami a włosami farbowanymi.*
 b. *Polacy nadal uważają, że trzęsienia ziemi im nie zagrażają, jako iż*
 Poles still claim.3PL that earthquakes them.DAT NEG threaten.3PL as that
kraj nasz leży w strefie asejsmicznej.
 country our lie.3SG in zone-LOC non-seismic
 ‘Polish people still claim that earthquakes do not threaten them because our country is in a non-seismic zone.’
 (NKJP, *Dziennik Polski*, 5 March 2005)

In either case *jako* and *iż* also introduce a causal relation between the matrix and the subordinate clause (see also Dunaj 1998: 336). This clearly indicates that a declarative complementizer establishing a causal relation along with *jako* is not restricted to any particular form. While discussing the synchronic data, I restrict myself to *że* due to the lack of space, but all synchronic observations made below can be carried over to *iż* as well.

2.1 Semantics

It is well known that causal relations can be expressed on three cognitive levels. They can operate on the content level, on the epistemic level, or on the speech act level (van Dijk 1977: 68–76; Frey 2016, 2023; Schiffrin 1987: 202; Sweetser 1990: 77; to provide but a few references). As the following examples show, *jako-że*-clauses can also operate on these three levels.

- (7) a. *Zostaniemy w dom-u, jako że pada deszcz.*
 remain.1PL in house-LOC as that fall.3SG rain
 ‘We’re going to stay at home because it’s raining.’
 b. *Musi być teraz w dom-u, jako że jego auto stoi przed garaż-em.*
 must.3SG be.INFV now in house-LOC as that his car stay.3SG in:front:of garage-INST
 ‘He must be at home now as his car is in front of the garage.’
 c. *Jako że ciągle o to pytasz, nie spotykam się już z twoją córk-ą.*
 as that still about this ask.2SG NEG meet.1SG REFL no:longer with your
 daughter-INST
 ‘Since you still keep asking, I don’t date your daughter any longer.’

⁸ In older stages of Polish, in particular in Old Polish, *że* was used to add emphasis. To introduce embedded clauses one usually employed *ize* ‘that’ which was originally a relative clause marker, as convincingly shown in Meyer (2017), and which in some contexts lost the initial vowel *i* becoming homophonous with the focus particle. Traces of this development can still be observed in Present-Day Polish cases in which both elements co-occur:

- (i) *Powiedział, że że-ście tam poszli.*
 say.1PTCP.SG.M COMP FOC:PTCL-2PL there go.1PTCP.PL.VIR
 ‘He said you had gone there.’
 (Bański 2000: 99, ex. 77c)

In (i), the first *że* is a declarative complementizer introducing a subordinate clause; the second *że*, in turn, is a focus particle merging with the mobile inflection auxiliary marked for the second person plural. For more details, the interested reader is referred to Decaux (1955), Bański (2000, 2001), Migdalski (2016: 156–157 and 160, fn. 33), among many others.

In the content domain, causal clauses usually encode a reason relation between two events – for example, in (7a), the rain is the reason for staying at home. The core property of these clauses is that the information conveyed in the matrix clause is presupposed, whereas the proposition in the subordination clause is asserted (see Larson 2004: 31–34 for more details and Arsenijević 2021: 13–15 for a similar account):

- (8) a. *We stayed at home because we were playing Scrabble.*
 b. presupposition: we stayed at home
 c. assertion: our staying at home was due to playing Scrabble
 d. $\exists e[\text{staying at home}(x, e) \ \& \ \exists e'[\text{Cause}(e', e) \ \& \ \text{playing Scrabble}(x, e')]]$

In (7b), in turn, the speaker provides the reason for why she or he thinks the matrix clause is true. Correspondingly, the speaker takes the car being in front of the garage to be a reasonable argument to assume that the matrix subject is at home. And in (7c), in the speech act domain, the speaker reveals the motivation for why she or he is performing a speech act.

Causal complementizers have been additionally divided into two groups, depending whether or not they convey a non-at-issue meaning. Causal clauses headed by English *since*, French *puisque*, and German *denn* have been claimed to be non-at-issue (e.g., Charnavel 2017, 2020; Scheffler 2013: 50–93), as their content cannot be directly dissented with, nor is their content relevant to the question under discussion (for more details about [non]-at-issueness, see Tonhauser 2012). On the other hand, causal clauses headed by *because* in English, *parce que* in French, and *weil* in German are taken to be at-issue. *Jako-że*-clauses are clearly at-issue, as their content can be directly dissented with:

- (9) A: *Zostaniemy w dom-u, jako że pada deszcz.*
 remain.1PL in house-LOC as that fall.3SG rain
 ‘We’re going to stay at home because it’s raining.’
 B: *Ale to nieprawda, nie pada.*
 but this untruth NEG fall.3SG
 ‘But this is not truth, it is not raining.’

In (9), speaker B denies the content of the *jako-że*-clause by using the demonstrative *to* ‘this’ with reference to the content of the subordinate clause and by negating it with the noun *nieprawda* ‘untruth’.

In what follows, I focus on *jako-że*-clauses operating on the content level, and do not elaborate on the other possible interpretations, as they express different reason relations and constitute distinct clause types; for more details, the interested reader is referred to Frey (2016), Larson (2004), Larson and Sawada (2012), and Morreall (1979).

2.2 Syntax

Although adverbial clauses can be introduced by a large number of adverbial complementizers, they can be divided into three main groups depending on the extent to which they are syntactically integrated into the matrix clause: central (= TP adjuncts), peripheral (= CP adjuncts), and disintegrated adverbial clauses (adjuncts attaching outside the clause structure). Different syntactic criteria help us to keep them apart. If an adverbial clause cannot appear on the right edge of the matrix clause and be part of it, then it must be analyzed as a disintegrated adverbial clause having its own illocutionary force. If, on the other hand, an adverbial clause is part of the matrix clause and can appear in the left periphery of it, then it is reasonable to examine to what extent it is sensitive to material occurring in the matrix clause to determine its integration status. Following Reinhart (1983: 122), I argue that quantificational binding is subject to a surface c-command condition, and adhere to the well-established view that the nominative case is checked in Spec,TP. Consequently, if an adverbial clause allows variable binding, then it is expected to be in the c-command domain of the quantificational phrase: a quantifier can bind an agreeing pronoun occurring in the subordinate clause iff the quantifier c-commands the pronoun (for more details, see Buring 2005: 83–93; Chomsky 1981: 183–230; Enç 1989: 62–64). Now, if an adverbial clause passes this test, then it

Table 2: Historical stages of Polish.

Language period	Abbreviation	Time period
Old Polish	OP	Up to 1543
Middle Polish	MP	1543–1765
New Polish	NP	1765–1939
Present-Day Polish	PDP	Since 1939

3.1 Etymology

The causal subordinate clause introduced by *jako że* can be decomposed into two elements that are still available in PDP: the relativizer *jako* ‘as’, that assigns a case value to its complement, seen in (12), and the declarative complementizer *że* ‘that’, which introduces canonical complement clauses, as in (13):

- (12) *Simon ciągle pracuje jako szpion.*
 Simon still work.3SG as spy.NOM
 ‘Simon still works as a spy.’
- (13) *Agnes przypuszcza, że Simon jest szpion-em.*
 Agnes suspect.3SG that Simon be.3SG spy-INST
 ‘Agnes suspects that Simon is a spy.’

Not much is known about the history of *jako że/jako iż*. Brückner (1927) does not mention them at all; he only notes that *jako* was phonologically reduced to *jak* (lit. ‘how’). Decyk-Zięba et al. (2008: 54–55) trace *jako* back to the Proto-Slavic form **jakъ* that is still attested in Czech (*jako*), in Lower Sorbian (*ako*), in Ukrainian (*jáko*), and in Old Church Slavonic (*jako*). They also confirm Brückner’s observation that *jako* has been reduced to *jak* in MP, due to an accent shift, giving rise to a similar effect in other lexemes (e.g., *tamo* → *tam* ‘there’, *tako* → *tak* ‘so’, etc.; for more details on such processes in the history of Slavic languages, see Carlton 1991; Kapović 2005). Furthermore, Decyk-Zięba et al. (2008) point out that *jako* is mainly used as comparative preposition/relativizer that can relate different phrases, for example DPs or CPs, but they are silent about its use in connection with *iż(e)/że* as an adverbial causal complementizer.⁹

3.2 Old Polish: up to 1543

Jako is an exceedingly frequent element in the oldest stage of Polish. To get a clear picture of how it was used in OP, I extracted and analyzed over 550 examples in which *jako* occurs. For an overview, the interested reader is referred to Table 3 in Appendix B.

As a comparative relativizer it can relate two XPs, for examples DPs as in (14a) or TPs as in (14b), comparing them as to some manner or degree of some property:

- (14) a. *a przeztoć ja dzisiaj [DP tobie] chwał-ę jako [DP Bog-u] daję*
 and through:this I today you.DAT glory-ACC as God-DAT give.1SG
 ‘and based on this I praise you as God’
 (KTS, *Kazania Gnieźnieńskie*, 1420, *Kazanie II: Na Boże Narodzenie*, 4v)

⁹ Of course, as one of the anonymous reviewers pointed out to me, the etymology of *jako* is more complex. However, for the purpose of the present article it suffices to note that (Old and Modern) Polish *jako* – just like *jak* and *jaki* – relates to the Proto-Slavic stem **jak-*, which has undoubtedly the primary meaning ‘how’. Accordingly, the use of *jako* as a comparative relativizer was original and has paved the way for the causal use of *jako*.

- b. *i* [TP *nie dał jest on był sobie więcę chwał-y*
 and NEG give.l:PTCP.SG.M be.3SG he be.l:PTCP.SG.M REFL.DAT more glory-GEN
jako [TP *bog-u czynić był*
 as God-DAT do.INFV be.l:PTCP.SG.M
 ‘and he didn’t want to be praised anymore, as he used to do with God’
 (KTS, *Kazania Gnieźnieńskie*, 1420, *Kazanie II: Na Boże Narodzenie*, 5r)

As a *wh*-word, *jako* can occur as a manner *wh*-word introducing finite clauses embedded, for example, under verbs of perceptions, as in (15a). But it can also occur in independent contexts, such as in (15b):

- (15) a. *chtore słyszeli i widzieli, [CP [Spec,CP jako] rzeczone jest do*
 who hear.l:PTCP.PL.VIR and see.l:PTCP.PL.VIR as said be.3SG to
nich]
 them.GEN
 ‘who have heard and seen how they told it them’
 (KTS, *Ewangelia Zamoyskich*, 2nd half of the 15th century, 3v: 20)
- b. [CP [Spec,CP *Jako*] *może człowiek narodzić się, gdy jest stary?*
 how can.3SG human:being bear.INFV REFL if be.3SG old
 ‘How can a human being be borne if he is old?’
 (KTS, *Ewangelia Zamoyskich*, 2nd half of the 15th century, 7r: 4)

These functions are still available in PDP, but mainly with the phonologically reduced form *jak*, and not with *jako*. This also holds for the use of *jako* as a temporal complementizer, seen in (16a), or as a declarative complementizer, as in (16b):

- (16) a. *A [CP [C⁰ jako] przyszli do Salomonowa kościoła], tamo było*
 and as come.l:PTCP.VIR to Salomon church-GEN there be.l:PTCP.SG.N
piętnaście stopień ku drzwi-am, tako dzieciątko Maryja wyrwawszy się ku drzwi-om
 fifteen step to door-DAT so baby Mary came:out REFL to doors-REFL
z ręk-u swojej matk-i [...] sama weszła naprzod przed
 with hand-GEN her mother-GEN [...] alone come.in.l:PTCP.SG.F to:the:fore ahead:of
swoim ojce-m i przed swoją matk-ą.
 her father-INST and ahead:of her mother-INST
 ‘And when they arrived at Salomon’s church, they saw fifteen steps to the door; the baby Mary went adrift from her mother’s hands and went alone ahead in front of her father and mother.’
 (KTS, *Rozmyślanie przemyskie*, p. 13, lines 12–18)
- b. *Tedy my Idzik-owi skazalismy przysiac, [CP [C⁰ jako] nie wie, kto*
 then we Idzik-DAT command.l:PTCP.1PL swear.INFV how NEG know.3SG who
ji uraził].
 him.ACC insult.l:PTCP.SG.M
 ‘Then, we commanded Idzik to swear that he doesn’t know who insulted him.’
 (KTS, *Kodeks Działyńskich*, 1425–1488, p. 35, lines 30–31)

In (16a), the dependent event expressed in the temporal *jako*-clause is a factual event immediately preceding the main event expressed in the matrix clause. Remarkably, the use of *jako* as a temporal complementizer is not very frequent in OP. In (16b), in turn, *jako* is employed as a declarative complementizer instead of *że/iż* ‘that’ (for more cross-linguistic details, see Legate 2010; Umbach et al. 2022).

Interestingly enough, in OP *jako* could be also used as a causal complementizer without being accompanied by a declarative complementizer:

- (17) *Matko Boża, ciebie proszę, [CP [C⁰ jako] wiesz lepiej]*
 Mother of God you.ACC ask.1SG as know.2SG better
 ‘Mother of God, I’m asking you, as you know better’
 (KTS, *Książeczka Nawojki*, 29: 6–8)

This option is not available in PDP, neither with *jako* nor with *jak*:

- (18) *Matko Boża, ciebie proszę, *(jako) / *(jak) / ^{OK}(jako że/iż) wiesz lepiej.*

I was not able to find any examples illustrating the use of *jako* in combination with *iż(e)/że*, in which the latter follows the former. However, the reverse word order can be attested:

- (19) *Iżę jako to wy sami dobrze wiecie i te-że wy o tem to często*
 FOC:PTCL as this you alone well know and also-FOC:PTCL you about this this often
słyszacie, gdyżci się ktoremu krol-ewi albo książę-ciu syn narodzi
 hear.2PL that REFL some king-DAT or prince-DAT son be:born.3SG
 ‘As you know all about this and as you also often hear about this, a son was born to a king or to a prince’
 (KTS, *Kazania Gnieźnieńskie*, 1420, *Kazanie I: Na Boże Narodzenie*, 1r)

The combination of *Iżę* and *jako* in (19) does not give rise to a causal interpretation, though. Instead, *Iżę* is to be analyzed as a focus particle, and *jako* as a comparative relativizer (see also footnote 8; for more details, see Meyer 2017).

3.3 Middle Polish: 1543–1765

The causal pattern attested in PDP is also present in the MP period. The combination of *jako* and of the declarative complementizer *że* or *iż* gives rise to a causal interpretation:

- (20) *Inne przy tym wielkiego walor-u sztuki są bez cen-y, tak dla dawność-i,*
 other at the big value-GEN pieces are.3PL without price-GEN so for antiquity-GEN
jako że onym podobnych żaden dom dom-owi austriackiemu waleczność-ią onych
 as that those-DAT similar no house house-DAT Austrian bravery-INST their
nabyci-a nie zrównia.
 obtaining-GEN NEG equate.3SG
 ‘Comparatively, other pieces of big value are without a price, just for antiquity, because there are no other Austrian houses that would be equal with this one by being able to obtain them.’
 (KorBa, 1612, *Diariusze*, p. 163)
- (21) *I. Apostat-ę młodzieńc-a ś. Andrzej ś. Grzegorz srodze*
 first Apostate-ACC youngling-ACC holy Andrew holy Gregory ferociously
biczowali tak dla odstępstw-a jako iż dług wdow-ie nie rychło
 flagellate.3PL.NVIR so for deviation-GEN as that debt widow-DAT NEG quickly
zapłacił aż też że się z ubogich żebrak-ów naśmiewał
 pay.SG.I:PTCP.M FOC:PTCL also that REFL from poor men-GEN deride.SG.I:PTCP.M
 ‘Holy Andrew I and holy Gregory flagellated the youngling Julian the Apostate because he didn’t pay the widow quickly and because he derided poor men.’
 (KorBa, Hieronim Radziwiłł, 1747–1756, *Wielkie zwierciadło przykładów*, p. 52)

If only the complementizer *jako* is used, a comparison is expressed:

- (22) *jako dobrze namienił wielki Kanclerz Bacon, każda Monarchia nie mająca*
 as well mention.SG.I:PTCP.M big Chancellor Bacon, every monarchy not having

Szlacht-y jest szczerę Tyrantstwo
nobility-GEN be.3SG truly bully

‘as the great Chancellor Bacon clearly mentioned, every monarchy which does not have a nobility class is a true bully’

(KorBa, Hieronim Kłokocki, 1678, *Monarchia turecka*, p. 87)

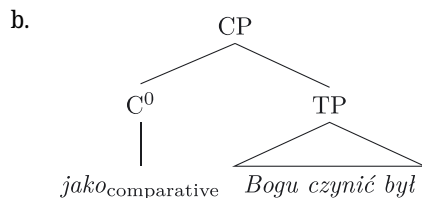
I was not able to find any examples from MP in which *jako* would express only a causal meaning without *że*.

4 Development

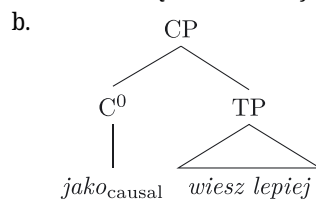
4.1 Step 1

Jako fulfills different functions in the OP period. Importantly, it can be used as an adverbial complementizer, introducing comparative clauses, as in (23a), and causal clauses, such as in (24a):

- (23) a. *i nie dał jest on był sobie więcej chwał-y jako*
and NEG give.l:PTCP.SG.M be.3SG he be.l:PTCP.SG.M REFL more glory-GEN as
bog-u czynić był
God-DAT do.INFV be.l:PTCP.SG.M
‘and he didn’t want to be praised anymore, as he used to do with God’
(KTS, *Kazania Gnieźnieńskie*, 1420, *Kazanie II: Na Boże Narodzenie*, 5r)



- (24) a. *Matko Boża, ciebie proszę, jako wiesz lepiej*
Mother of God, you.ACC ask.1SG as know.2SG better
‘Mother of God, I’m asking you, as you know better’
(KTS, *Książeczka Nawojki*, 29: 6–8)



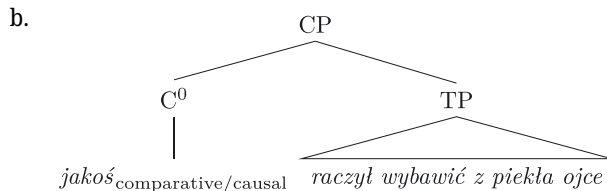
I take the use of *jako* as a comparative relativizer to be original and to have paved the way for the causal use of *jako*. Sanfelici and Rodeghiero (2024) observe a related grammaticalization path with respect to *siccome* ‘because’ in the history of Italian. In my view, *jako-że*-clauses developed in a similar way. Structurally, no radical changes are involved, as *jako* is a C-head throughout taking a TP-complement,¹⁰ regardless of what kind of adverbial relation it introduces.¹¹ What changes is its semantics. Several properties that both comparative and causal

¹⁰ One of the anonymous reviewers suggested the development of *jako* from Spec,CP (comparative) to C⁰ (causal). In my view, this scenario should be ruled out based on the data discussed in the present paper. We have seen that *jako* is already used as a C-head in OP.

¹¹ Interestingly enough, in Old Church Slavonic – as observed by Vondrák (1928: 509), Sadnik-Altzetz Müller and Altzetz Müller (1955: 7), Bielfeldt (1961: 180), Trunte (2005: 167), and Sonnenhauser (2015: 44–46) – *jako* shows quite a range of uses that seem only in part to be relatable to *jako* with the meaning *how, which*. This range includes, among others, ‘how’, ‘as though’, ‘since’, ‘because’, ‘so that’, ‘in order to’, ‘that’ (introducing object clauses), and ‘approximately’ (with numerals). This may indicate that *jako* used as a causal

clauses have in common underpin their diachronic affinity. Firstly, they express two interrelated events: the event expressed in the subordinate clause can either provide the manner in which the matrix event takes place or entail the reason why the matrix event takes place. Secondly, in both cases the dependent event needs to be factual and temporally contiguous to the main event. Finally, as Sanfelici and Rodeghiero (2024) persuasively show, the change towards a causal reading is additionally favored when the dependent event shares its participants with the main event.

- (25) a. *Jako-ś raczył wybawić z piekła ojce,*
 as-2SG.AUX deign.l:PTCP.SG.M disembarrass.INFV from hell-GEN fathers.ACC
racz też wybawić z grzech-ów dusze nasze.
 deign.IMPER.SG also disembarrass.INFV from sins-GEN souls.ACC our
 ‘As/Since you deigned to deliver our fathers from hell, deign to deliver our souls from sin too.’
 (KTS, *Modlitwy Wacława*, 104r, 13–14; 104v, 1–2)



Due to these properties, ambiguous (comparative vs. causal) cases are unavoidable. In (25a), the event expressed in the subordinate clause can be interpreted either as the manner in which God deigned to deliver the fathers from hell or as the reason why he should deign to deliver our souls from sin. In both scenarios, the event expressed in the subordinate clause is factual and temporally it precedes the event expressed in the matrix clause. Finally, both the matrix clause and the subordinate clause share the same participant: it is an implicit argument *God*, which is associated with the event of redemption. Sanfelici and Rodeghiero (2024) provide an elegant formal account of the semantic shift from a comparative to a causal interpretation. For the purposes of this article, it suffices to know that this process was completed in the OP period. As (24a) illustrates, pure causal *jako*-clauses without any other interpretation possibilities exist already in OP.

4.2 Step 2

Jako is an ambiguous adverbial C-head. It can introduce comparative, temporal or causal clauses. To disambiguate the adverbial relation expressed by *jako*, the declarative complementizer *że/iż* is recruited into the left periphery of the causal clause.¹² The combination *jako + że/iż* is restricted to a causal meaning, that is, the causal presupposition becomes syntactically encoded:

- (26) a. *Inne przy tym wielkiego walar-u sztuki są bez cen-y, tak dla*
 other at the big value-GEN pieces are.3PL without price-GEN so for

complementizer in OP was inherited or borrowed from other older Slavic languages. If this hypothesis could be proven true, we would observe typical hallmarks of a linguistic cycle in the sense claimed by van Gelderen (2011), according to which *jako* as a causal C-head disappeared from use, only to appear again in a different language period and under a slightly different shape. Of course, another option could be that the change in Old Church Slavonic took place independently from Polish, with, however, the same underlying development path. I thank one of the anonymous reviewers for drawing my attention to this data and references.

¹² Apart from causal *jako*-clauses, *bo*-clauses occur in OP too:

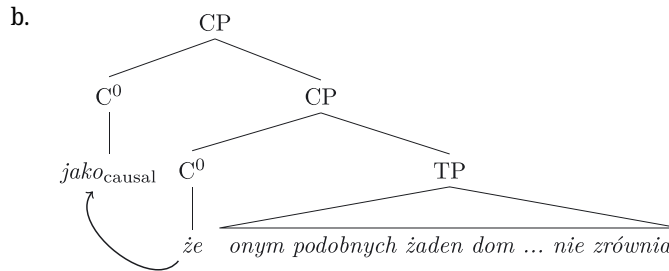
- (i) *bo wszystko me jest*
 because all mine be.3SG
 ‘because everything is mine’
 (KTS, *Biblia królowej Zofi*, 1453–1455, 13: 14–15)

The presence of different causal conjunctions in the oldest stages of Polish calls for a detailed diachronic investigation.

dawność-i, jako że onym podobnych żaden dom dom-owi austriackiemu
 antiquity-GEN as that those similar no house house-DAT Austrian
waleczność-ią onych nabyci-a nie zrównia.
 bravery-INST their obtaining-GEN NEG equate.3SG

‘Comparatively, other pieces of big value are without a price, just for antiquity, because there are no other Austrian houses that would be equal with this one by being able to obtain them.’

(KorBa, 1612, *Diariusze*, p. 163)

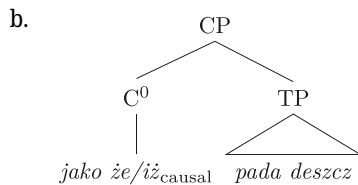


When a *jako*-clause is used as a causal clause, a dependency relationship between the matrix clause and the subordinate clause emerges. Concretely, the event expressed in the subordinate clause causes the event expressed in the matrix clause to take place. To syntactically mark this subordinate dependency the declarative complementizer, which usually introduces complement clauses, *że/iż* is added. Sanfelici and Rodeghiero (2024) make a similar observation about *siccome* ‘because’ followed by *che* ‘that’ in various Venetian dialects. No such dependency relationship is involved when *jako* is employed as a comparative relativizer relating two propositions. In this case, both propositions are interrelated with regard to some property giving rise to an equivalence relation, and *jako* itself is deemed to encode this relation (for similar cases of comparative clauses and more details, see Bücking 2017).

4.3 Step 3

Having syntacticized the pragmatic causal inference, *jako-że/iż* is a single C-head expressing a causal relation:

- (27) a. *Zostaniemy w dom-u, jako że/iż pada deszcz.*
 remain.1PL in house-LOC because fall.3SG rain
 ‘We’re going to stay at home because it’s raining.’



Jako-że/iż is frozen in the sense that none of its elements can be dropped (see (5a) and (5b)). This is mainly due to the fact that *jako* itself lost its causal meaning altogether. This process must have happened before the accent shift and the drop of final vowels, as *jak* ‘how’ can introduce comparative and temporal clauses in PDP, but not causal clauses. Presumably, this led Blümel and Pitsch (2019: 5) to the assumption that the meaning of *jako że* is opaque.

5 Conclusions

The main objective of this article was to examine the synchrony and diachrony of causal *jako-że/iż*-clauses in Polish. Synchronically, I discussed evidence showing that *jako-że*-clauses can express different causal relations,

and that they should be analyzed as central adverbial clauses if they operate on the content level. Diachronically, I briefly outlined a grammaticalization path, according to which comparative clauses develop into causal clauses, and which additionally involves head adjunction of two complementizers to syntactically signal a causal dependency relationship. One of the main issues that needs to be addressed in a broader context is the extent to which *jako-że/iż*-clauses differ from causal clauses headed by *ponieważ*, *bo*, *gdyż*, and *albowiem* (see (1)), and how they were interrelated in older stages of Polish. I leave these questions open for future research.

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Appendix A: Primary sources

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

Bies Andrzej Potocki, 2021, *Księga legend i opowieści bieszczadzkich* [The storybook of Bieszczady legends and stories], Rzeszów: Carpathia.

Kab Remigiusz Mróz, 2023, *Kabalista* [The cabalist], Poznań: Filia.

KorBa Elektroniczny korpus tekstów polskich z XVII i XVIII w. (do 1772 r.) [Electronic corpus of 17th and 18th century Polish texts (up to 1772)/The Baroque corpus of Polish]: https://korba.edu.pl/query_corpus/.

KTS Korpus tekstów staropolskich do roku 1500 [Corpus of Old Polish texts up to 1500]: <https://ijp.pan.pl/publikacje-i-materialy/zasoby/korpus-tekstow-staropolskich/>.

NKJP Narodowy Korpus Języka Polskiego [National Corpus of Polish]: <http://www.nkjp.pl/>.

Przew Remigiusz Mróz, 2023, *Przewieszenie* [Overhang], 3rd edn., Poznań: Filia.

Below I list all sources that I analyzed for OP. They are available in the KTS corpus for free. The abbreviations are taken from the corpus website. For each source, a PDF file is available, downloadable, and searchable.

Blaz Żywot świętego Błażeja.

Dzial Kodeks Działyńskich.

EwZam Ewangelia zamojskich.

Fl Psalterz floriański.

Gn Kazania gnieźnieńskie.

Ksw Kazania świętokrzyskie.

ListTat List chana perekopskiego z r. 1500 do króla Jana Olbrachta.

MW Modlitwy Wacława.

Naw Książeczka do nabożeństwa Jadwigi księżniczki polskiej, tzw. Książeczka Nawojki.

R XXII 230–318 Kazanie na dzień Wszech Świętych.

Sul Kodeks Świętosławówi.

Appendix B: *jako* (że) in Old Polish

Here, I provide an overview of how *jako* (że) was used in Old Polish. The data presented in Table 3 have been extracted from over ten texts from the *Korpus tekstów staropolskich do roku 1500* (KTS; ‘Corpus of Old Polish texts up to 1500’). The abbreviations used in the table headers are: *jako*_{comparative} for the complementizer introducing comparative clauses; *jako*_{causal} for the complementizer introducing causal clauses; *jako że/iż(e)* for the complementizer introducing causal clauses; and *jako*_{other} for the relativizer relating two XPs (but not two propositions), the complementizer introducing complement clauses, and so on. I analyzed all attested cases manually by identifying them in the text and interpreting them in particular contexts.

Table 3: The occurrence of *jako* (że/iż(e)) in the KTS corpus.

Source	<i>jako</i> _{comparative}	<i>jako</i> _{causal}	<i>jako że/iż(e)</i>	<i>jako</i> _{other}	Total
Blaz	0	0	0	0	0
Dzial	13	0	0	24	37
EwZam	9	0	0	6	15
Fl	36	1	0	171	208
Gn	19	0	0	7	26
Ksw	3	0	0	1	4
ListTat	1	0	0	1	2
MW	21	1	0	34	56
Naw	12	2	0	12	26
R XXII 230-318	30	0	0	20	50
Sul	93	3	0	57	153
Total	237	7	0	333	577

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