

Decomposing Polish proportional partitives

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Introduction. Though a lot of research has focused on quantifiers, certain aspects of proportional quantifiers (PQs) have not achieved enough attention so far (exception: Hackl 2009). In this paper, I investigate the syntactic and semantic properties of different classes of PQs in Polish. Though some quirks in their behavior have been recognized (Przepiórkowski 2006, Dziubała-Szrejbrowska 2016, Wągiel 2019), they remain surprisingly understudied. The aim of this paper is to give firmer empirical footing for the study of the expressions in question.

Corpus study. To determine the distribution of Polish PQs, I have conducted a corpus study based on the National Corpus of Polish (NCP). I have examined syntactic environments and collocations of: *część*, *częstka* (both ‘part’), *ćwierć*, *ćwiartka* (both ‘quarter’), *pół*, *połowa*, *połówka* (all ‘half’) and *większość* (‘most’). The results are summarized in Table 1. First of all, only *ćwierć* and *pół* can and often do co-occur with measure terms and numeral phrases, see (1). Second, morphologically complex PQs derived with the suffix *-k-* *częstka*, *ćwiartka* and *połówka* as well as *część* are incompatible with degree modifiers such as *niemal* (‘almost’), see (2). Finally, while *część*, *połowa* and *większość* can combine with cumulative predicates (plurals and mass nouns), *częstka*, *ćwierć*, *ćwiartka*, *pół* and *połówka* cannot, see (3).

Physical and informational objects. Recently, it has been reported that classifiers which are optional in Hungarian give rise to a non-trivial interpretative effect when combining with nominals which are ambiguous between a physical-object sense and an informational-object sense such as *book* (Pustejovsky 1995, Gotham 2017). Classifiers disambiguate otherwise polysemous nouns and force a physical-object sense (Schvarcz and Wohlmuth 2020). Interestingly, a similar effect is observed with Polish PQs derived with the suffix *-k-*. While (4-a) is felicitous, (4-b) is weird since it forces an incompatible physical-object interpretation.

Analysis. Following Grimm 2012, I assume that referents of concrete nouns are properly modeled in terms of mereotopological notions such as connectedness and integrity. In other words, they are treated as spatial entities that come in one piece. I propose that the typology of proportional quantifiers in Polish results from an interaction between mereotopology and degree semantics. In particular, certain quantifiers introduce special restrictions on the interpretation of the NP. Finally, I assume that phrases with PQs such as *ćwiartka* primarily refer to physical objects and only under special circumstances can be shifted to measures via a special operation (Rett 2014). On the other hand, phrases with PQs such as *ćwierć* simply refer to measures. The combination of these factors explains the properties in Table 1.

- (1) a. ...wiedzą, co znaczy **ćwierć tony** trotylu w rękach amatora.
they-know what means quarter₁ ton.GEN TNT.GEN in hands amateur.GEN
'... they know what a quarter ton of TNT in the hands of an amateur means.'NCP
- b. #Wiedzą, co znaczy **ćwiartka tony** trotylu w rękach amatora.
they-know what means quarter₂ ton.GEN TNT.GEN in hands amateur.GEN

Table 1: Distributional properties of Polish proportional quantifiers

	<i>ćwierć</i> 'quarter'	<i>pół</i> 'half'	<i>połowa</i> 'half'	<i>większość</i> 'most'	<i>część</i> 'part'	<i>częstka</i> 'part'	<i>połówka</i> 'half'	<i>ćwiartka</i> 'quarter'
measure terms	✓	✓	*	*	*	*	*	*
degree modifiers	✓	✓	✓	✓	*	*	*	*
cumulative pred.	*	*	✓	✓	✓	*	*	*

- (2) a. ...obie miały okulary automobilowe zakrywające **niemal pół** twarzy...
 both had eyeglasses automobile.ADJ covering nearly half₁ face.GEN
 '...they both had car goggles covering nearly half of a face...' NCP
- b. #Obie miały okulary automobilowe zakrywające **niemal połówkę** twarzy.
 both had eyeglasses automobile.ADJ covering nearly half₃ face.GEN
- (3) a. ...wywinał tylko ciupagą i **połowa napastników** padła na ziemię.
 he-brandished only axe and half₂ agressors.GEN fell on ground
 '...he only brandished an axe and half of the agressors hit the ground.' NCP
- b. #Wywinał tylko ciupagą i **pół napastników** padło na ziemię.
 he-brandished only axe and half₁ agressors.GEN fell on ground
- (4) a. Jadzia przeczytała **pół książki**.
 Jadzia read half book.GEN
 'Jadzia read half a book.'
- b. #Jadzia przeczytała **połówkę książki**.
 Jadzia read half book.GEN

Keywords: proportional quantifiers; partitives; syntax; semantics; Polish

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