

*Nominal distribution of
prepositions and adnumeral operators
in Polish*

Adam Przepiórkowski^{1,2,3}, Julia Pater¹, Maciej Pastwa¹

¹University of Warsaw

²Polish Academy of Sciences

³University of Oxford

Slavic Linguistics Society (SLS15)

4 September 2020

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- do not inflect...
- combine (directly) with (semantic) numerals
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*
 saw(ACC).1SG.M **about** dozen.ACC people.GEN
 'I saw about a dozen people.' (AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*
 prepared.IMPS **about** 50.ACC applications.GEN to court
 'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy (około) dwustu paczek.*
 prepared(ACC).1PL.M **about** 200.GEN parcels.GEN
 'We prepared about two hundred parcels.' (NKJP) (P)

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- do not inflect...
- combine (directly) with (semantic) numerals
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*
 saw(ACC).1SG.M **about** dozen.ACC people.GEN
 'I saw about a dozen people.' (AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*
 prepared.IMPS **about** 50.ACC applications.GEN to court
 'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy (około) dwustu paczek.*
 prepared(ACC).1PL.M **about** 200.GEN parcels.GEN
 'We prepared about two hundred parcels.' (NKJP) (P)

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- **do not inflect...**
- combine (directly) with (semantic) numerals
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*
 saw(ACC).1SG.M **about** dozen.ACC people.GEN
 'I saw about a dozen people.' (AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*
 prepared.IMPS **about** 50.ACC applications.GEN to court
 'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy (około) dwustu paczek.*
 prepared(ACC).1PL.M **about** 200.GEN parcels.GEN
 'We prepared about two hundred parcels.' (NKJP) (P)

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- **do not inflect...**
- **combine (directly) with (semantic) numerals**
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*

saw(ACC).1SG.M **about** dozen.ACC people.GEN

'I saw about a dozen people.'

(AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*

prepared.IMPS **about** 50.ACC applications.GEN to court

'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy (około) dwustu paczek.*

prepared(ACC).1PL.M **about** 200.GEN parcels.GEN

'We prepared about two hundred parcels.' (NKJP)

(P)

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- do not inflect...
- combine (directly) with (semantic) numerals
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*

saw(ACC).1SG.M about dozen.ACC people.GEN

'I saw about a dozen people.'

(AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*

prepared.IMPS about 50.ACC applications.GEN to court

'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy (około) dwustu paczek.*

prepared(ACC).1PL.M about 200.GEN parcels.GEN

'We prepared about two hundred parcels.' (NKJP)

(P)

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- do not inflect...
- combine (directly) with (semantic) numerals
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*
 saw(ACC).1SG.M **about** dozen.ACC people.GEN
 'I saw about a dozen people.'

(AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*
 prepared.IMPS **about** 50.ACC applications.GEN to court
 'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy (około) dwustu paczek.*
 prepared(ACC).1PL.M **about** 200.GEN parcels.GEN
 'We prepared about two hundred parcels.' (NKJP) (P)

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- do not inflect...
- combine (directly) with (semantic) numerals
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*

saw(ACC).1SG.M **about** dozen.ACC people.GEN

'I saw about a dozen people.'

(AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*

prepared.IMPS **about** 50.ACC applications.GEN to court

'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy (około) dwustu paczek.*

prepared(ACC).1PL.M **about** 200.GEN parcels.GEN

'We prepared about two hundred parcels.' (NKJP)

(P)

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- do not inflect...
- combine (directly) with (semantic) numerals
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*
 saw(ACC).1SG.M **about** dozen.ACC people.GEN
 'I saw about a dozen people.' (AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*
 prepared.IMPS **about** 50.ACC applications.GEN to court
 'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy około dwustu paczek.*
 prepared(ACC).1PL.M **about** 200.GEN parcels.GEN
 'We prepared about two hundred parcels.' (NKJP) (P)

Prepositions (P) and adnumeral operators (AO)

Adnumeral operators (Grochowski 1997: 27–31):

- do not inflect...
- combine (directly) with (semantic) numerals
- transparent to case assignment

(1) *Widziałem (z) tuzin osób.*
 saw(ACC).1SG.M **about** dozen.ACC people.GEN
 'I saw about a dozen people.' (AO)

May have the same meaning as corresponding prepositions:

(2) *Przygotowano(ACC) (około) pięćdziesiąt wniosków do sądu...*
 prepared.IMPS **about** 50.ACC applications.GEN to court
 'About 50 applications to the court were prepared...' (NKJP) (AO)

(3) *Przygotowaliśmy (około) dwustu paczek.*
 prepared(ACC).1PL.M **about** 200.GEN parcels.GEN
 'We prepared about two hundred parcels.' (NKJP) (P)

Distribution in nominal positions

Empirical problems

- controversies about the **nominal distribution of Ps**:
 - **około** ‘about’ not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
‘I support(ACC) about five.GEN societies.GEN’
 - **pomagam około pięciu towarzystw*
‘I help(DAT) about five.GEN societies.GEN’
 - is **po** ‘each’ acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
‘on each table was lying po one.LOC apple.LOC’
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997: 73–74) about **około** ‘about’: not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
‘prepared.IMPS about 50.ACC applications’ (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** ‘each’: rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
‘on benches were lying po three.NOM sheets.NOM paper.GEN’
(Łojasiewicz 1979: 154)

Distribution in nominal positions

Empirical problems:

- controversies about the **nominal distribution of Ps**:
 - **około** ‘about’ not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
‘I support(ACC) about five.GEN societies.GEN’
 - **pomagam około pięciu towarzystw*
‘I help(DAT) about five.GEN societies.GEN’
 - is **po** ‘each’ acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
‘on each table was lying po one.LOC apple.LOC’
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997: 73–74) about **około** ‘about’: not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
‘prepared.IMPS about 50.ACC applications’ (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** ‘each’: rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
‘on benches were lying po three.NOM sheets.NOM paper.GEN’
(Łojasiewicz 1979: 154)

Distribution in nominal positions

Empirical problems:

- controversies about the **nominal distribution of Ps**:
 - **około** 'about' not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
'I support(ACC) about five.GEN societies.GEN'
 - **pomagam około pięciu towarzystw*
'I help(DAT) about five.GEN societies.GEN'
 - is **po** 'each' acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
'on each table was lying po one.LOC apple.LOC'
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997: 73–74) about **około** 'about': not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
'prepared.IMPS about 50.ACC applications' (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** 'each': rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
'on benches were lying po three.NOM sheets.NOM paper.GEN'

Distribution in nominal positions

Empirical problems:

- controversies about the **nominal distribution of Ps**:
 - **około** ‘about’ not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
‘I support(ACC) about five.GEN societies.GEN’
 - **pomagam około pięciu towarzystw*
‘I help(DAT) about five.GEN societies.GEN’
 - is **po** ‘each’ acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
‘on each table was lying po one.LOC apple.LOC’
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997: 73–74) about **około** ‘about’: not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
‘prepared.IMPS about 50.ACC applications’ (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** ‘each’: rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
‘on benches were lying po three.NOM sheets.NOM paper.GEN’

Distribution in nominal positions

Empirical problems:

- controversies about the **nominal distribution of Ps**:
 - **około** ‘about’ not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
‘I support(ACC) about five.GEN societies.GEN’
 - **pomagam około pięciu towarzystw*
‘I help(DAT) about five.GEN societies.GEN’
 - is **po** ‘each’ acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
‘on each table was lying PO one.LOC apple.LOC’
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997: 73–74) about **około** ‘about’: not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
‘prepared.IMPS about 50.ACC applications’ (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** ‘each’: rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
‘on benches were lying PO three.NOM sheets.NOM paper.GEN’

Distribution in nominal positions

Empirical problems:

- controversies about the **nominal distribution of Ps**:
 - **około** ‘about’ not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
‘I support(ACC) about five.GEN societies.GEN’
 - **pomagam około pięciu towarzystw*
‘I help(DAT) about five.GEN societies.GEN’
 - is **po** ‘each’ acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
‘on each table was lying po one.LOC apple.LOC’
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997:73–74) about **około** ‘about’: not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
‘prepared.IMPS about 50.ACC applications’ (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** ‘each’: rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
‘on benches were lying po three.NOM sheets.NOM paper.GEN’

Distribution in nominal positions

Empirical problems:

- controversies about the **nominal distribution of Ps**:
 - **około** ‘about’ not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
‘I support(ACC) about five.GEN societies.GEN’
 - **pomagam około pięciu towarzystw*
‘I help(DAT) about five.GEN societies.GEN’
 - is **po** ‘each’ acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
‘on each table was lying PO one.LOC apple.LOC’
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997:73–74) about **około** ‘about’: not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
‘prepared.IMPS about 50.Acc applications’ (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** ‘each’: rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
‘on benches were lying PO three.NOM sheets.NOM paper.GEN’

Distribution in nominal positions

Empirical problems:

- controversies about the **nominal distribution of Ps**:
 - **około** 'about' not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
'I support(ACC) about five.GEN societies.GEN'
 - **pomagam około pięciu towarzystw*
'I help(DAT) about five.GEN societies.GEN'
 - is **po** 'each' acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
'on each table was lying PO one.LOC apple.LOC'
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997:73–74) about **około** 'about': not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
'prepared.IMPS about 50.ACC applications' (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** 'each': rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
'on benches were lying PO three.NOM sheets.NOM paper.GEN'

Distribution in nominal positions

Empirical problems:

- controversies about the **nominal distribution of Ps**:
 - **około** 'about' not investigated, even though there are clear constraints:
 - *wspieram około pięciu towarzystw*
'I support(ACC) about five.GEN societies.GEN'
 - **pomagam około pięciu towarzystw*
'I help(DAT) about five.GEN societies.GEN'
 - is **po** 'each' acceptable in nominative positions?
 - [?]*na każdym stole leżało po jednym jabłku*
'on each table was lying PO one.LOC apple.LOC'
- controversies about the **nominal distribution of OAs**:
 - Grochowski (1997:73–74) about **około** 'about': not in ad-verbal nominative and accusative positions
 - *przygotowano około pięćdziesiąt wniosków*
'prepared.IMPS about 50.ACC applications' (NKJP; (2) above)
 - Franks 1995: 162 and Derwojedowa 2011: 144–145 about **po** 'each': rather unacceptable in nominative positions
 - *na ławkach leżały po trzy arkusze papieru*
'on benches were lying PO three.NOM sheets.NOM paper.GEN'

Theoretical importance

Broader theoretical importance:

- for theories of case assignment (why are some Ps fine in some cased – purely nominal – positions?)
- perhaps for the theories of **structural vs. lexical/inherent case** distinction (Ps seem to be fine in structural case positions)

Theoretical importance

Broader theoretical importance:

- for theories of **case assignment** (why are some Ps fine in some cased – purely nominal – positions?)
- perhaps for the theories of **structural vs. lexical/inherent case** distinction (Ps seem to be fine in structural case positions)

Theoretical importance

Broader theoretical importance:

- for theories of **case assignment** (why are some Ps fine in some cased – purely nominal – positions?)
- perhaps for the theories of **structural vs. lexical/inherent case** distinction (Ps seem to be fine in structural case positions)

Aim

Investigate 3 items (also MIĘDZY ‘between’ – ignored here):

item	meaning	case assigned as P
OKOŁO	‘about’	GEN
OD... DO...	‘from... to...’	GEN
PO	‘each’	ACC/LOC

... as **Ps** (assigning specific case) or **AOs** (transparent to case)...

... in **6 case positions** (NOM, ACC, GEN, DAT, INS, LOC; no vocative)...

... separately **ad-verbal** and **ad-prepositional** where it makes sense (only ad-verbal NOM, only ad-prepositional LOC).

Aim

Investigate 3 items (also MIĘDZY ‘between’ – ignored here):

item	meaning	case assigned as P
OKOŁO	‘about’	GEN
OD... DO...	‘from... to...’	GEN
PO	‘each’	ACC/LOC

...as **Ps** (assigning specific case) or **AOs** (transparent to case)...

...in **6 case positions** (NOM, ACC, GEN, DAT, INS, LOC; no vocative)...

...separately **ad-verbal** and **ad-prepositional** where it makes sense
(only ad-verbal NOM, only ad-prepositional LOC).

Aim

Investigate 3 items (also MIĘDZY ‘between’ – ignored here):

item	meaning	case assigned as P
OKOŁO	‘about’	GEN
OD... DO...	‘from... to...’	GEN
PO	‘each’	ACC/LOC

...as **Ps** (assigning specific case) or **AOs** (transparent to case)...

...in **6 case positions** (NOM, ACC, GEN, DAT, INS, LOC; no vocative)...

...separately **ad-verbal** and **ad-prepositional** where it makes sense
(only ad-verbal NOM, only ad-prepositional LOC).

Aim

Investigate 3 items (also MIĘDZY ‘between’ – ignored here):

item	meaning	case assigned as P
OKOŁO	‘about’	GEN
OD... DO...	‘from... to...’	GEN
PO	‘each’	ACC/LOC

...as **Ps** (assigning specific case) or **AOs** (transparent to case)...

...in **6 case positions** (NOM, ACC, GEN, DAT, INS, LOC; no vocative)...

...separately **ad-verbal** and **ad-prepositional** where it makes sense (only ad-verbal NOM, only ad-prepositional LOC).

Aim – first approximation

	OKOŁO 'about'		OD... DO... 'from... to...'		PO 'each'	
	P	AO	P	AO	P	AO
V+NOM	?	?	?	?	?	?
V+ACC	?	?	?	?	?	?
P+ACC	?	?	?	?	?	?
V+GEN	?	?	?	?	?	?
P+GEN	?	?	?	?	?	?
V+DAT	?	?	?	?	?	?
P+DAT	?	?	?	?	?	?
V+INS	?	?	?	?	?	?
P+INS	?	?	?	?	?	?
P+LOC	?	?	?	?	?	?

Complication – distributive PO

PO 'each' as (a) **preposition(s)** combines with:

- **ACC numeral phrases** (NumPs):

dałem im po dwa jabłka

'I gave them PO two.ACC apples.ACC'

- **LOC nominal phrases** (NPs):

dałem im po jabłku

'I gave them PO apple.LOC'

So, also as adnumeral operator PO investigated separately with:

- numeral phrases:

? *na ławkach leżały po trzy arkusze*

'on benches were lying PO three.NOM sheets.NOM'

- nominal phrases:

* *na ławkach leżał po jeden arkusz*

'on benches was lying PO one.NOM sheet.NOM'

Complication – distributive PO

PO 'each' as (a) **preposition(s)** combines with:

- **ACC numeral phrases** (NumPs):

dałem im po dwa jabłka

'I gave them PO two.ACC apples.ACC'

- **LOC nominal phrases** (NPs):

dałem im po jabłku

'I gave them PO apple.LOC'

So, also as **adnumeral operator** PO investigated separately with:

- **numeral phrases:**

? *na ławkach leżały po trzy arkusze*

'on benches were lying PO three.NOM sheets.NOM'

- **nominal phrases:**

* *na ławkach leżał po jeden arkusz*

'on benches was lying PO one.NOM sheet.NOM'

Survey

Survey design:

- **6 sentences** for each pair $\langle \text{CASE}, \text{ITEM} \rangle$
- (when CASE split into V+CASE and P+CASE – **3 sentences** for each)

Because of its large size, survey split into **6 questionnaires**.

Each filled by **different groups** of at least 15 respondents.

Sentences were judged on the **scale from 1 (totally unnatural/unacceptable) to 8 (perfectly natural/acceptable)**.

Survey

Survey design:

- **6 sentences** for each pair $\langle \text{CASE}, \text{ITEM} \rangle$
- (when CASE split into V+CASE and P+CASE – **3 sentences** for each)

Because of its large size, survey split into **6 questionnaires**.

Each filled by **different groups** of at least 15 respondents.

Sentences were judged on the **scale from 1 (totally unnatural/unacceptable) to 8 (perfectly natural/acceptable)**.

Survey

Survey design:

- **6 sentences** for each pair $\langle \text{CASE}, \text{ITEM} \rangle$
- (when CASE split into V+CASE and P+CASE – **3 sentences** for each)

Because of its large size, survey split into **6 questionnaires**.

Each filled by **different groups of at least 15 respondents**.

Sentences were judged on the scale from 1 (totally unnatural/unacceptable) to 8 (perfectly natural/acceptable).

Survey

Survey design:

- **6 sentences** for each pair ⟨CASE, ITEM⟩
- (when CASE split into V+CASE and P+CASE – **3 sentences** for each)

Because of its large size, survey split into **6 questionnaires**.

Each filled by **different groups of at least 15 respondents**.

Sentences were judged on the **scale from 1 (totally unnatural/unacceptable) to 8 (perfectly natural/acceptable)**.

Complication – P/AO indeterminacy

In some CASE positions, the interpretation of the ITEM is **indeterminate**:

- is it a P assigning this CASE,
- or an AO transparent to this CASE?

For **example**: in V+GEN, is OKOŁO a P_{GEN} or an AO?

- (4) *Te dzieci domagają się około dwudziestu czterech prezentów...*
 these children demand(GEN) about twenty.GEN four.GEN gifts.GEN
 'These children demand about twenty four gifts...'

In such cases:

- low acceptability → neither P nor AO is acceptable
- high acceptability → at least one of P / AO is acceptable

Complication – P/AO indeterminacy

In some CASE positions, the interpretation of the ITEM is **indeterminate**:

- is it a P assigning this CASE,
- or an AO transparent to this CASE?

For **example**: in $V+GEN$, is OKOŁO a P_{GEN} or an AO?

- (4) *Te dzieci domagają się około dwudziestu czterech prezentów...*
these children demand(GEN) about twenty.GEN four.GEN gifts.GEN
'These children demand about twenty four gifts...'

In such cases:

- low acceptability → neither P nor AO is acceptable
- high acceptability → at least one of P / AO is acceptable

Complication – P/AO indeterminacy

In some CASE positions, the interpretation of the ITEM is **indeterminate**:

- is it a P assigning this CASE,
- or an AO transparent to this CASE?

For **example**: in $V+GEN$, is *około* a P_{GEN} or an AO?

- (4) *Te dzieci domagają się około dwudziestu czterech prezentów...*
 these children demand(GEN) about twenty.GEN four.GEN gifts.GEN
 ‘These children demand about twenty four gifts...’

In such cases:

- **low acceptability** → neither P nor AO is **acceptable**
- **high acceptability** → at least one of P / AO is **acceptable**

Complication – P/AO indeterminacy

In some CASE positions, the interpretation of the ITEM is **indeterminate**:

- is it a P assigning this CASE,
- or an AO transparent to this CASE?

For **example**: in $V+GEN$, is OKOŁO a P_{GEN} or an AO?

- (4) *Te dzieci domagają się około dwudziestu czterech prezentów...*
 these children demand(GEN) about twenty.GEN four.GEN gifts.GEN
 ‘These children demand about twenty four gifts...’

In such cases:

- **low acceptability** → neither P nor AO is **acceptable**
- **high acceptability** → **at least one** of P / AO is **acceptable**

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP PO + NP 'each'			
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NP 'each'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP PO + NP 'each'			
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NP 'each' – unacceptable everywhere as AO:

- • **na ławkach leżał po jeden arkusz*
'on benches was lying PO one.NOM sheet.NOM'
- **dałem im po jedno jabłko*
'I gave them PO one.ACC apple.ACC' 'I gave them one apple after...'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NP 'each' – acceptable as P_{LOC}:

- certainly in V+ACC

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NP 'each' – acceptable as P_{LOC}:

- certainly in V+ACC
 - *dałem im po jabłku*
'I gave them PO apple.LOC'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP PO + NP 'each'			
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NP 'each' – acceptable as P_{LOC}:

- certainly in V+ACC
- less so in V+NOM/GEN
 - ? *na każdym stole leżało po jednym jabłku*
'on each table was lying PO one.LOC apple.LOC'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NumP 'each'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP 'each'		PO + NP	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NumP 'each':

- AO acceptable in V+NOM
- *na ławkach leżały po trzy arkusze papieru*

'on benches were lying PO three.NOM sheets.NOM paper.GEN'

(Łojasiewicz 1979: 154)

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
	V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NumP 'each':

- AO acceptable in V+NOM
- P_{ACC} acceptable only in V+ACC, if at all
 - *datem im po dwa jabłka*
'I gave them PO two.ACC apples.ACC'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
	V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89 [▲]		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NumP 'each':

- AO acceptable in V+NOM
- P_{ACC} acceptable only in V+ACC, if at all
 - *datem im po dwa jabłka*
'I gave them PO two.ACC apples.ACC'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
	V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	6.89 [▲]		7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NumP 'each':

- AO acceptable in V+NOM
- P_{ACC} acceptable only in V+ACC, if at all
- more coherent interpretation: there is no distributive P_{ACC}, only AO

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
	V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]	▼	1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

PO + NumP 'each':

- AO acceptable in V+NOM
- P_{ACC} acceptable only in V+ACC, if at all
- more coherent interpretation: there is no distributive P_{ACC}, only AO

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OD... DO... 'from... to...':

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		5.37		1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OD... DO... 'from... to...':

- AO systematically marginal everywhere

- ?? *dałem im od dwa do cztery jabłka*

'I gave them from two.ACC to four.ACC apples.ACC'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]	▼	1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22			5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OD... DO... 'from... to...':

- AO systematically marginal everywhere

- ?? *dałem im od dwa do cztery jabłka*

'I gave them from two.ACC to four.ACC apples.ACC'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]	▼	1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16		3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22			5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OD... DO... 'from... to...':

- AO systematically marginal everywhere
- SO, P_{GEN} acceptable in V+NOM/ACC/GEN
 - *dałem im od dwóch do czterech jabłek*
'I gave them from two.GEN to four.GEN apples.GEN'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22			5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OD... DO... 'from... to...':

- AO systematically marginal everywhere
- SO, P_{GEN} acceptable in V+NOM/ACC/GEN
 - *dałem im od dwóch do czterech jabłek*
'I gave them from two.GEN to four.GEN apples.GEN'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		◆	5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OD... DO... 'from... to...':

- AO systematically marginal everywhere
- SO, P_{GEN} acceptable in V+NOM/ACC/GEN
 - *dałem im od dwóch do czterech jabłek*
'I gave them from two.GEN to four.GEN apples.GEN'

Results

	około 'about'		od... do... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		◆	5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

około 'about'

Results

	około 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]	▼	1.49 [▼]	2.38 [▼]
V+GEN	6.43		7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	6.22		◆	5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

około 'about':

- AO acceptable everywhere
 - *przygotowano około pięćdziesiąt wniosków*
'prepared(ACC).IMPS about 50.ACC applications.GEN'
 - *pomagam około pięciu towarzystwom*
'I help(DAT) about five.DAT societies.DAT'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]	▼	1.49 [▼]	2.38 [▼]
V+GEN		6.43 [▲]	7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN		6.22 [▲]	◆	5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

około 'about':

- AO acceptable everywhere
 - *przygotowano około pięćdziesiąt wniosków*
'prepared(ACC).IMPS about 50.ACC applications.GEN'
 - *pomagam około pięciu towarzystwom*
'I help(DAT) about five.DAT societies.DAT'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]	▼	1.49 [▼]	2.38 [▼]
V+GEN		6.43 [▲]	7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN		6.22 [▲]	◆	5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

około 'about':

- what about PP_{GEN}?
 - *przygotowaliśmy około dwustu paczek*
'we prepared(ACC) about 200.GEN parcels.GEN'
 - **pomagam około pięciu towarzystw*
'I help(DAT) about five.GEN societies.GEN'

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN		6.43 [▲]	7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN		6.22 [▲]	◆	5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OKOŁO 'about':

- what about PP_{GEN}?
- perhaps similar to other Ps
- i.e., acceptable in V+NOM/ACC/GEN?

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP 'each'		PO + NP	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN		6.43 [▲]	7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN		6.22 [▲]	◆	5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OKOŁO 'about':

- what about PP_{GEN}?
- perhaps similar to other Ps
- i.e., acceptable in V+NOM/ACC/GEN?

Results

	OKOŁO 'about'		OD... DO... 'from... to...'		PO + NumP		PO + NP 'each'	
	P _{GEN}	AO	P _{GEN}	AO	P _{ACC}	AO	P _{LOC}	AO
V+NOM	5.62 [▲]	6.69 [▲]	7.24 [▲]	3.97 [▼]	2.63 [▼]	6.03 [▲]	5.17 [▲]	2.73 [▼]
V+ACC	5.58 [▲]	6.58 [▲]	7.73 [▲]	4.04 [◆]	▼	6.89 [▲]	7.58 [▲]	4.29 [◆]
P+ACC	2.20 [▼]	6.75 [▲]	4.58 [◆]	4.19 [◆]	3.12 [▼]		1.49 [▼]	2.38 [▼]
V+GEN	▲	6.43 [▲]	7.16 [▲]	◆	3.27 [▼]	3.22 [▼]	5.51 [▲]	2.47 [▼]
P+GEN	▼	6.22 [▲]	◆	5.37 [◆]	1.20 [▼]	2.18 [▼]	1.13 [▼]	2.44 [▼]
V+DAT	1.89 [▼]	7.06 [▲]	2.40 [▼]	5.63 [▲]	1.13 [▼]	3.87 [▼]	1.64 [▼]	3.56 [▼]
P+DAT	2.53 [▼]	6.13 [▲]	2.84 [▼]	4.56 [◆]	1.20 [▼]	2.82 [▼]	1.20 [▼]	2.18 [▼]
V+INS	2.09 [▼]	6.85 [▲]	2.11 [▼]	5.06 [▲]	1.31 [▼]	3.24 [▼]	2.33 [▼]	3.31 [▼]
P+INS	1.64 [▼]	6.94 [▲]	2.89 [▼]	4.02 [◆]	1.22 [▼]	2.71 [▼]	1.31 [▼]	2.53 [▼]
P+LOC	2.79 [▼]	6.86 [▲]	3.83 [▼]	5.85 [▲]	1.19 [▼]	3.11 [▼]	2.46 [▼]	

OKOŁO 'about':

- what about PP_{GEN}?
- perhaps similar to other Ps
- i.e., acceptable in V+NOM/ACC/GEN?

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- **V+NOM, V+ACC**: adnumeral operator **PO + NumP**
- **V+NOM, V+ACC, V+GEN**: prepositions **OKOLO, OD... DO...**, **PO + NP**
- **V+NOM, V+ACC, V+GEN, P+ACC** (marginally), **P+GEN** (marginally): preposition **OD... DO...**
- **all NOM, ACC(, GEN)**: the agreement/government syntax of numerals
- **all NOM, ACC(, GEN), INS**: the agreement/government syntax of collective numerals...

Topic for a different talk...

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- V+NOM, V+ACC: adnumeral operator PO + NumP
- V+NOM, V+ACC, V+GEN: prepositions OKOLO, OD... DO..., PO + NP
- V+NOM, V+ACC, V+GEN, P+ACC (marginally), P+GEN (marginally): preposition OD... DO...
- all NOM, ACC(, GEN): the agreement/government syntax of numerals
- all NOM, ACC(, GEN), INS: the agreement/government syntax of collective numerals...

Topic for a different talk...

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- **V+NOM, V+ACC**: adnumeral operator $PO + NumP$
- **V+NOM, V+ACC, V+GEN**: prepositions $OKO\lambda O, OD... DO..., PO + NP$
- **V+NOM, V+ACC, V+GEN, P+ACC** (marginally), **P+GEN** (marginally): preposition $OD... DO...$
- **all NOM, ACC(, GEN)**: the agreement/government syntax of numerals
- **all NOM, ACC(, GEN), INS**: the agreement/government syntax of collective numerals...

Topic for a different talk...

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- **V+NOM, V+ACC**: adnumeral operator PO + NumP
- **V+NOM, V+ACC, V+GEN**: prepositions OKOŁO, OD... DO..., PO + NP
- **V+NOM, V+ACC, V+GEN, P+ACC** (marginally), **P+GEN** (marginally): preposition OD... DO...
- **all NOM, ACC(, GEN)**: the agreement/government syntax of numerals
- **all NOM, ACC(, GEN), INS**: the agreement/government syntax of collective numerals...

Topic for a different talk...

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- **V+NOM, V+ACC**: adnumeral operator $PO + NumP$
- **V+NOM, V+ACC, V+GEN**: prepositions $OKO\lambda O, OD\dots DO\dots, PO + NP$
- **V+NOM, V+ACC, V+GEN, P+ACC** (marginally), **P+GEN** (marginally): preposition $OD\dots DO\dots$
- all **NOM, ACC(, GEN)**: the agreement/government syntax of numerals
- all **NOM, ACC(, GEN), INS**: the agreement/government syntax of collective numerals...

Topic for a different talk...

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- **V+NOM, V+ACC**: adnumeral operator PO + NumP
- **V+NOM, V+ACC, V+GEN**: prepositions OKOŁO, OD... DO..., PO + NP
- **V+NOM, V+ACC, V+GEN, P+ACC** (marginally), **P+GEN** (marginally): preposition OD... DO...
- **all NOM, ACC(, GEN)**: the agreement/government syntax of numerals
- **all NOM, ACC(, GEN), INS**: the agreement/government syntax of collective numerals...

Topic for a different talk...

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- **V+NOM, V+ACC**: adnumeral operator $PO + NumP$
- **V+NOM, V+ACC, V+GEN**: prepositions $OKO\lambda O, OD... DO..., PO + NP$
- **V+NOM, V+ACC, V+GEN, P+ACC** (marginally), **P+GEN** (marginally): preposition $OD... DO...$
- **all NOM, ACC(, GEN)**: the agreement/government syntax of numerals
- **all NOM, ACC(, GEN), INS**: the agreement/government syntax of collective numerals...

Topic for a different talk...

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- **V+NOM, V+ACC**: adnumeral operator $PO + NumP$
- **V+NOM, V+ACC, V+GEN**: prepositions $OKO\lambda O, OD... DO..., PO + NP$
- **V+NOM, V+ACC, V+GEN, P+ACC** (marginally), **P+GEN** (marginally): preposition $OD... DO...$
- **all NOM, ACC(, GEN)**: the agreement/government syntax of numerals
- **all NOM, ACC(, GEN), INS**: the agreement/government syntax of collective numerals...

Topic for a different talk...

Instead of conclusion

Case dichotomies and hierarchies are postulated in various schools of linguistic thought.

This experiment suggests that **the part-of-speech of the governor should also be taken into account** in such hierarchies:

- **V+NOM, V+ACC**: adnumeral operator $PO + NumP$
- **V+NOM, V+ACC, V+GEN**: prepositions $OKO\lambda O, OD\dots DO\dots, PO + NP$
- **V+NOM, V+ACC, V+GEN, P+ACC** (marginally), **P+GEN** (marginally): preposition $OD\dots DO\dots$
- **all NOM, ACC(, GEN)**: the agreement/government syntax of numerals
- **all NOM, ACC(, GEN), INS**: the agreement/government syntax of collective numerals...

Topic for a different talk...

Thank you for your attention!

- Derwojedowa, M. (2011). *Grupy liczebnikowe we współczesnym języku polskim. Zarys opisu zależnościowego*. Uniwersytet Warszawski, Wydział Polonistyki, Warsaw.
- Franks, S. (1995). *Parameters of Slavic Morphosyntax*. Oxford University Press, New York.
- Grochowski, M. (1997). *Wyrażenia funkcyjne. Studium leksykograficzne*. Wydawnictwo Instytutu Języka Polskiego PAN, Cracow.
- Łojasiewicz, A. (1979). O budowie wyrażen z przyimkiem *po* dystrybutywnym. *Polonica*, V, 153–160.
- Przepiórkowski, A., Bańko, M., Górski, R. L., Lewandowska-Tomaszczyk, B., Łaziński, M., and Pęzik, P. (2011). National Corpus of Polish. In Z. Vetulani, ed., *Proceedings of the 5th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics*, pp. 259–263, Poznań, Poland.
- Przepiórkowski, A., Bańko, M., Górski, R. L., and Lewandowska-Tomaszczyk, B., eds. (2012). *Narodowy Korpus Języka Polskiego*. Wydawnictwo Naukowe PWN, Warsaw.