



OCP effects in Germanic possession: dialectal and diachronic evidence

Alexandra Rehn & Hannah Booth

UGent G4 Group
March 2022

Adnominal Possession

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

Adnominal Possession

- An asymmetric relation between two nominals
- One denotes the possessor, the other denotes the possessum

(1) The man's house

(2) The wheel of the car

(3) The taste of the wine

Adnominal Possession

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

Possession comprises different semantic relations:

- | | | |
|-----|-----------------------|-------------------|
| (1) | The man's house | <i>ownership</i> |
| (2) | The wheel of the car | <i>part-whole</i> |
| (3) | The taste of the wine | <i>property</i> |

- Possession expresses some sort of affiliation between the two nominals involved
- Across Germanic, various constructions to express such a relation exist

Adnominal Possession in Germanic

Introduction	construction	example	distribution
OCP effects	POSSESSIVE PRONOUN ^a	<i>hus-et mitt</i> house-DEF my	Norw., Ice., Northern Swe.
		<i>mitt hus</i> my house	all Gmc. languages (North Scand., emphatic)
Linkers	ADNOMINAL GENITIVE	<i>das Haus des Mannes</i> the house the.GEN man.GEN	Standard Ger., Ice.
Present-day Ger.		<i>mannen-s hus</i> man-GEN house	Eng., Standard Dan., (WJut., Dutch/Ger. dialects)
Middle Low Ger.		<i>s-POSSESSIVE^b</i> <i>Mutter-s Haus</i> mother-POSS house	Ice. proper names, Ger./Far. also kinship terms
Analysis	PLC	<i>dem Mann sein Haus</i> the.DAT man his house	Norw. dialects, Dan. (WJut.), Dutch/Ger. dialects
		<i>hus-et hans Per</i> house-DEF his Per	North Swe., Norw., Ice. (proper names/kinship terms)
	PREPOSITIONAL POSSESSIVE	<i>hus-et till Per</i> house-DEF to Per	all Gmc. languages except Dan., Swe., Ice.

The Possessor Linking Construction (PLC)

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- (1) a. Alemannic (SynAlm)²
des isch [dem Vater sin Platz]
this is the.MASC.SG.DAT father his seat
'this is father's seat'
- b. Middle Low German (CHLG: Lauremberg)³
men wat in [disses Mans syn Hovet] is begrepen
but what in this.GEN man.GEN his head is understood
'but whatever in this man's head is understood'

Other names:

- *possessor doubling*
- *possessive dative*
- *garpe-genitiv*

→ Possessor Linking Construction (PLC)

Terminology:

Dem Mann sein Haus

↓ ↓ ↓

Possessor DP, Possessive element, Possessum DP

Ordering restrictions in the PLC

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

In the PLC the possessor must precede the possessum:

PLC

(2) German

a. dem Mann sein Haus
the.DAT Mann his house
'the man's house'

b. *sein Haus dem Mann
his house the.DAT Mann
Intended: 'the man's house'

ADNOMINAL GENITIVE

(3) German

a. das Haus des Mannes
the house the.GEN man.GEN
'the man's house'

b. des Mannes Haus
the.GEN man.GEN house
'the man's house' (archaic)

(5) German

a. das Haus der Frau
the house the.GEN woman
'the woman's house'

b. *der Frau Haus
the.GEN woman house
Intended: 'the woman's house'

PREPOSITIONAL POSSESSIVE

(4) German

a. das Haus von dem Mann
the house of the.DAT man
'the man's house'

b. von dem Mann das Haus
of the.DAT man the house
'the man's house'

This paper

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

- Account for the ordering restrictions in Germanic possessive constructions via the **OCP (Obligatory Contour Principle)**
- Motivate possessive markers as linking elements in relation to the OCP
→ **multifunctionality**
- **Synchronic** data: present-day German varieties, including Alemannic and Low German
→ judgement/translation tasks
- **Diachronic** data: Middle Low German
→ corpus data



OCP effects in morphosyntax

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

OCP – Obligatory Contour Principle

- Originally a **phonological** constraint (Leben 1973; Goldsmith 1976)
 - Two adjacent tonemes must be distinct
 - (1) a. *HHL
b. HL
- Now: general principle of linguistic organisation which operates across different linguistic dimensions (Mohanan 1994; Plag 1998; Yip 1998; Nevins 2012)
 - ‘**identity avoidance**’
 - ‘**distinctness violation**’
- Extended to various **morphosyntactic** phenomena

OCP effects in morphosyntax

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

Strategy 1: deletion ('haplology', Nevins 2012; Neeleman & van de Koot 2017)

(11) English (Menn & MacWhinney 1984: 523)

- a. girl/z/
girl.GEN.SG
- b. girl/z/
girl.PL
- c. girl/z/ (*girl/zəz/)
girl.GEN.PL

OCP effects in morphosyntax

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

Strategy 2: suppletion

(12) Italian (Bonet 1995: 609)

- a. * Si si lava
one self washes
'One washes oneself'
- b. Ci si lava
we self washes
'One washes oneself'

OCP effects in morphosyntax

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

Strategy 3: (lack of) movement/word order

(15) Serbo-Croatian (Nevins 2012: 89)

- a. **Ko koga** vidi?
who whom sees
'Who sees whom?'
- b. **Šta uslovljava šta?**
what conditions what
'What conditions what?'

OCP effects in morphosyntax

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

Strategy 4: insertion

- (13) English (Richards 2010)
- a. * [the destruction [a city]]
 - b. [the destruction [of a city]]

Types of identity

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- **Traditional OCP: identity in form**

(19) Western/literary Pashto (Nevins 2012: 104)

- a. motar mo/*am rAwostə
car PART.PL bought
'We/y'all brought the car'
- b. motar *mo/am mo rAwostə
car PART.PL PART.PL bought
'We/y'all brought our/y'alls car'

- But **other types of linguistic identity** can be relevant, in particular in relation to morphosyntax

(18) English (Nevins 2012: 92)

- a. *John is **more more** intelligent than Bill than you are.
- b. *John is **more taller** than Bill than you are.

Relevant domains

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

- **Traditional OCP: linear adjacency**

(21) Hindi (Mohanan 1994: 186–187)

- a. ?? ramm-ko baccō-ko samhaalnaa paḍaa.
Ram-DAT children-ACC take.care.of.NF fall.PERF
‘Ram had to take care of the children.’
- b. ramm-ko apnii bahin-ke baccō-ko samhaalnaa paḍaa.
Ram-DAT self’s sister-GEN children-ACC take.care.of.NF fall.PERF
‘Ram had to take care of his sister’s children.’
- c. ramm-ko [pause] baccō-ko samhaalnaa paḍaa.
Ram-DAT children-ACC take.care.of.NF fall.PERF
‘Ram had to take care of the children.’

- But **syntactic proximity** rather than linear order can also be relevant

(22) Hindi (Mohanan 1994: 200)

- ilaa aramm-ko baccō-ko bulaane b^hejegii.
Ila-NOM Ram-DAT children-ACC call.NF send.FUT
‘Ila will send Ram to call the child.’

Linkers

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- **OCP strategy: insertion**

→ **linkers** (e.g. Ghomeshi 1997; Richards 2010)

(13) English (Richards 2010)

- a. * [the destruction [a city]]
- b. [the destruction [of a city]]

- **“Linker”** is a rather nebulous term

→ functional element between head and dependent (Samvelian 2007)

→ typically **multifunctional**

Linkers

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- **Persian** **ezafe**; does not indicate precise semantic or syntactic nature of relation

(24) Persian (**Windfuhr & Perry 2013**: 473)

- a. āsmān-e ābi
blue-EZ sky
‘blue sky’
- b. ketāb-e Hasan
book-EZ Hasan
‘Hasan’s book’
- c. rāh-e Tehrān
road-EZ Tehran
‘the road to/of Tehran’

Linkers

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- Greek **determiner spreading**

(25) Greek (Larson & Yamakido 2008: 15)

- a. to spiti to meghalo to petrino
the house the big the of-stone
'the big stone house'
- b. *to spiti meghalo petrino
the house big of-stone
'the big stone house'

Linkers

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- Zazaki (Indo-Iranian) **reverse ezafe**

→ multifunctionality

(27) Zazaki (Toosarvandani & Van Urk 2014: ex. (3))

- a. kutık-o girs
dog-EZ.MASC.SG.NOM big
'the big dog'
- b. ju bız-a girs-e
one goat-EZ.FEM.SG big-FEM.SG
'a big goat'

OCP in present-day German possession

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

Recall the ordering restrictions:

PLC

(2) German

a. dem Mann sein Haus
the.DAT Mann his house
'the man's house'

b. *sein Haus dem Mann
his house the.DAT Mann
Intended: 'the man's house'

ADNOMINAL GENITIVE

(3) German

a. das Haus des Mannes
the house the.GEN man.GEN
'the man's house'

b. des Mannes Haus
the.GEN man.GEN house
'the man's house' (archaic)

(5) German

a. das Haus der Frau
the house the.GEN woman
'the woman's house'

b. *der Frau Haus
the.GEN woman house
Intended: 'the woman's house'

PREPOSITIONAL POSSESSIVE

(4) German

a. das Haus von dem Mann
the house of the.DAT man
'the man's house'

b. von dem Mann das Haus
of the.DAT man the house
'the man's house'

PLC

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

(2) German

a. dem Mann sein Haus
the.DAT Mann his house
'the man's house'



Possessor_{DP} **sein** Possessum_{DP}

b. *sein Haus dem Mann
his house the.DAT Mann
Intended: 'the man's house'



*sein Possessum_{DP} **DAT** Possessor_{DP}

- Striking, given the fact that DAT can mark possession in external possessive constructions

- (33) a. standard German
der Peter wäscht **dem** Opa die Haare
the Peter washes the.DAT grandfather the hair
'Peter washes his grandfather's hair'
- b. Alemannic
des isch **dem** Leo
this is the.DAT Leo
'this belongs to Leo'

Adnominal genitive

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

(29) a. des Mann-es Haus
the.MASC.GEN man-MASC.GEN house
'the man's house'

b. des Mädchen-s Haus
the.NT.GEN girl-NT.GEN house
'the girl's house'

c. *der Frau-Ø Haus
the.FEM.GEN woman house
Intended: 'the woman's house'



Possessor_{DP} GEN Possessum_{DP}



*Possessor_{DP} Ø Possessum_{DP}

(30) a. das Haus des Manne-s
the house the.MASC.GEN man-MASC.GEN
'the man's house'

b. das Haus des Mädchen-s
the house the.NT.GEN girl-NT.GEN
'the girl's house'

c. das Haus der Frau-Ø
the house the.FEM.GEN woman
'the woman's house'



Possessum_{DP} GEN Possessor_{DP}

s-possessive

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

- Grammaticalised possessive marker –s derived from masc/neut.gen
- Occurs on feminine and complex prenominal possessors which otherwise lack possessor-final genitive morphology

(36) Low German (Strunk 2004: 109)

a. Hinnerk un Anna-s Huus
Hinnerk and Anna-poss house
'Hinnerk and Anna's house'



Possessor_{DP} s Possessum_{DP}

b. *Hinnerk-s un Anna Huus
Hinnerk-poss and Anna house
Intended: 'Hinnerk and Anna's house'



*Possessor_{DP} Ø Possessum_{DP}

Prepositional possessive

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

(38) German

- a. das Haus **von** dem Mann
the house of the.DAT man
'the man's house'
- b. von dem Mann das Haus ~~von dem Mann~~
of the.DAT man the house
'the man's house'



Possessum_{DP} **VON** Possessor_{DP}

- Roehrs (2019): prenominal variant involves **movement** to a higher functional projection (LLP) (with focus)
- Underlyingly, *von* originates **between possessum and possessor**

Summary

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- *Possessor_{DP} Possessum_{DP}
- Possessor_{DP} **sein** Possessum_{DP}
- Possessor_{DP} **GEN** Possessum_{DP}
- Possessum_{DP} **GEN** Possessor_{DP}
- Possessum_{DP} **von** Possessor_{DP}

- **sein, GEN and von** can all prevent an OCP violation
- The OCP requirement explains the **ordering restrictions** across the various constructions

Evidence from stacking

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

- Two stacked possessive constructions are ruled out when the linkers are of the same form:

(43) Swabian (Alemannic)

- a. ??/* ds Buach vom Onkl vom Nochbr
the book of-the uncle of-the neighbour
Intended: 'the book of my uncle's neighbour'
- b. ??/* em Nochbr seim Onkl sei Buach
the.DAT neighbour his.DAT uncle his book
Intended: 'the book of the neighbour's uncle'
- c. ??/* dr Nochbre ihra Dande ihr Buach
the neighbour.FEM her.DAT aunt her book
'the book of the neighbours's aunt'

- But this is grammatical when the linkers are of different forms:

(44) Swabian (Alemannic) (as based on [Zifonun 2003](#): 100)

- a. dr Doris ihram Mo sei Partei
the.DAT Doris her.DAT husband his party
'Doris' husband's party'
- b. in meim Nochbr seiner Schweschr ihram Garda
in my.DAT neighbour his.DAT sister her.DAT garden
'in my neighbour's sister's garden'

Middle Low German

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

MLG case system: erosion gradually underway

- Genitive morphology remains present on majority of masc/neut nouns and **on many fem nouns** (although optional already)

	MASC.SG	NEUT.SG	FEM.SG
NOM	dach	wort	wîse
ACC	dach	wort	wîse
DAT	dage	worde	wîse(n)
GEN	dag-es	word-es	wîs-e(n)

Table 2: MLG case system (Härd 2000)

(5) German

a. das Haus der Frau
the house the.GEN woman
'the woman's house'

b. *der Frau Haus
the.GEN woman house
Intended: 'the woman's house'

- Prediction:** prenominal fem genitives in MLG should be fine, given that genitive case morphology is present to prevent an OCP violation

Middle Low German

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

Prediction: ✓

(47) Middle Low German

a. (CHLG: Arznei)

dar aff eyn plaster geleet vppe der vrowe-n hemelike stad
thereof a plaster placed on the.GEN woman-GEN secret place
'thereof a plaster placed on the woman's secret place'

b. (CHLG: Bremen)

des ersten Sondaghes na vser vrowe-n daghe
the.GEN first.GEN Sunday.GEN after our.GEN lady-GEN day.DAT
'the first Sunday after our lady's day'

c. (CHLG: Engelhus)

de was eyner arme-n ghevange-n vrowe-n sone
he was a.GEN poor-GEN captive-GEN woman-GEN son
'he was the son of a poor captive woman'

d. (CHLG: Flos)

dorch clarisse-n willen mochte se des nicht laten
through Clarisse.GEN will wanted she so NEG leave
'on account of Clarisse's will she didn't want to leave so'

More diachronic evidence

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- Genitive marking on the possessor later becomes confined to **the rightmost edge**

→ grammaticalisation, s-possessive

- (49) a. Older Low German (Strunk 2004: 106)

myn-s Grotvader-s older Möme sprack
my-GEN grandfather-GEN old.GEN grandmother language
'the language of my grandfather's old grandmother'

- b. Modern Low German (Strunk 2004: 107)

mien-Ø Grotvader-s olle Möme-s spraak
my grandfather-POSS old grandmother-POSS language
'the language of my grandfather's old grandmother'

- (50) a. Older Low German (Strunk 2004: 107)

de-s Künige-s Tochter
the-GEN king-GEN daughter
'the king's daughter'

- b. Modern Low German (Strunk 2004: 107)

de(n) König-s Tochter
the.NOM.(ACC) king-POSS daughter
'the king's daughter'

PLC

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- Range of cases marked on the possessor (in line with case erosion)

(51) Middle Low German

- a. (ReN: Chr._Wass._Duisberg)
Ende was hartoch Jan van cleue syn suster
and was duke.NOM/ACC Jan van Cleve his sister
'And (she) was Duke Jan van Cleve's sister'
- b. (ReN: Hildesh._StR_1300)
Sterft emme manne sin wif
dies a.DAT man.DAT his wife
'If a man's wife dies'
- c. (ReN: Lauremberg_1652)
Wen idt wehre de-s Her-n sin Wille
if it were the.GEN sir.GEN his will
'if it were the sir's will'



Possessum_{DP} GEN **sin** Possessor_{DP}

transitional stage (redundancy)

- (52) (CHLG: Braunschweig)
uneses alde-n herre-n tiden
our old sir's time
'our old sir's time'



Possessum_{DP} GEN Possessor_{DP}

Summary

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- Diachronic data from MLG further supports the **OCP account of Germanic possession**
- Connection: loss of genitive and rise of PLC
- OCP is standardly invoked in **synchronic** contexts
- But it can also provide useful insights in the context of **diachrony**

OCP and the possessive relation

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- The empirical data motivate **an OCP effect** in possessive constructions
- The data also motivate the analysis of the different possessive markers as **linking elements** preventing an OCP violation
 - The OCP effect can account for the observed ordering restrictions
 - The OCP **does not explain** the specific semantic relation the two DPs involved enter into
- **Open question:** besides the OCP effect, how can the semantic relation between the possessor and possessum be accounted for?

OCP and the possessive relation

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

All three possessive constructions span a range of semantic relations

Adnominal genitive (subtle) animacy restriction

- a. Peters Katze (OWNERSHIP)
- b. Peters Onkel (KINSHIP)
- c. Peters gute Singstimme (PROPERTY)
- d. Peters Nase (BODY PART)
- e. des Meeres Wellen (PART-WHOLE) archaic
- f. Peters Operation (AGENT/THEME)

Prepositional possessive

- a. die Katze vom Nachbarn (OWNERSHIP)
- b. der Onkel vom Nachbarn (KINSHIP)
- c. die Höhe von dem Baum (PROPERTY)
- d. das glänzende Fell von dem Hund (BODY PART)
- e. die Zweige von dem Baumes (PART-WHOLE)
- f. die Operation von dem Mann (THEME)
- g. die Operation von dem Arzt (AGENT)

PLC animacy restriction

- a. dem Peter seine Katze (OWNERSHIP)
- b. dem Peter sein Onkel (KINSHIP)
- c. dem Peter seine gute Singstimme (PROPERTY)
- d. dem Peter seine Nase (BODY PART)
- e. ??dem Meer seine Wellen (PART-WHOLE)
- f. dem Peter seine Operation (AGENT/THEME)

The multifunctionality of linkers

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

Elements traditionally analysed as linking elements are mostly not **exclusively** linkers

- *Of* in English → preposition
- *Ezafe* → agreement
- (reverse ezafe ≈ adjectival inflection)
- Determiner spreading in Greek → polydefiniteness

(25) Greek (Larson & Yamakido 2008: 15)

- a. to spiti to meghalo to petrino
the house the big the of-stone
'the big stone house'
- b. * to spiti meghalo petrino
the house big of-stone
'the big stone house'

(27) Zazaki (Toosarvandani & Van Urk 2014: ex. (3))

- a. kutık-o girs
dog-EZ.MASC.SG.NOM big
'the big dog'
- b. ju bız-a girs-e
one goat-EZ.FEM.SG big-FEM.SG
'a big goat'

Possessive markers → establish the POSS-relation between head noun and possessor

Previous approaches to possession

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

Previous approaches to adnominal possession in Germanic

- Focus on ban of possessor extraction (Olsen 1996; Gavrusseva 2000; Haegeman 2004)
- Focus on parallel make-up of CP and DP (see discussion in Alexiadou et al. 2007)
- Aim for **unified structure** from which all poss constructions can be derived (Weiß 2008; Roehrs 2019)
 - Possessor in complement position (→ specific thematic relation)
 - Possessor in some Spec of an IP/nP/PossP above NP with subject-like properties

Problem 1: Ordering restriction

- PLC possessor is never grammatical in postnominal (complement) position

Problem 2: Prenominal genitive and the PLC show an animacy restriction

- How can movement of only the 'animate subset' of possessors be accounted for if they all originate in e.g. a PossP in complement position?

A universal spine approach to complex DPs?

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

Possible solution:

Rather than trying to motivate possessors as complements or subjects, a more general approach to complex DPs based on Wiltschko (2014) might be able to bring **the OCP** and the **semantic relation of possessor and possessum** together

Wiltschko (2014)

- Observation: tense and thus TP has traditionally been regarded as a universal category
- However, there are languages that do not make the past-non-past distinction
 - Tense is not universal!
- Proposal: there is a universal category but it is more abstract → **anchoring**
- Crosslinguistic variation is expected as the Unit of Language (UoL) associated with it can vary

A universal spine approach to complex DPs?

Introduction

OCP effects

Linkers

Present-day Ger.

Middle Low Ger.

Analysis

- Overall, anchoring is some sort of **coincidence**
- **Clause-level**: anchoring concerns event time and utterance time (e.g. via tense)
- Wiltschko (2014) does assume anchoring in the nominal domain, but **does not apply it to complex DPs**
 - \pm identity of speaker and addressee
- Complex DPs (e.g. possession): coincidence of **possessor and possessum**

A universal spine approach to complex DPs?

Introduction
OCP effects
Linkers
Present-day Ger.
Middle Low Ger.
Analysis

- But [\pm coincidence] alone is not sufficient to provide the fine-grained semantic patterns we find in possession (ownership vs. other relations)
- Proposal: **coincidence_{abs}** vs. **coincidence_{concr}**
plus **control** (to have at one's disposal, cf. Stolz et al. 2008; Kasper 2014)
- Ownership = **coincidence_{abs}** plus **control**
→ the possessum coincides with possessor in an abstract sense, who has it at their disposal

PLC

- dem Peter seine Katze (OWNERSHIP)
- dem Peter sein Onkel (KINSHIP)
- dem Peter seine gute Singstimme (PROPERTY)
- dem Peter seine Nase (BODY PART)
- ??dem Meer seine Wellen (PART-WHOLE)
- ~~dem Peter seine Operation (AGENT/THEME)~~

+ control	+ coincidence _{abs}	-coincidence _{concr}
- control	+ coincidence _{abs}	-coincidence _{concr}
- control	- coincidence _{abs}	+coincidence _{concr}
- control	- coincidence _{abs}	+coincidence _{concr}
- control	-coincidence _{abs}	+coincidence _{concr}

Acknowledgements

Many thanks to:

- The YSF of the University of Konstanz for funding of the PossAlm project based on the SynAlm data.
- The ReN team, for their collaboration in the CHLG
- For generous funding for the CHLG, the Hercules foundation (2014-2015, grant number AUGÉ 13/02) and the Flemish research foundation FWO (2015-2020, grant number G0F2614N).

