



# Constructional spaces in contrast: Periphrastic causatives in English and Dutch

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# Introduction

- Constructions are form-meaning pairings
- Meaning is a concept

	Continuum of abstractness	
	Exemplars	Prototypes
Within-construction perspective (polysemy), e.g. Goldberg 2002; Coleman 2010	?	?
Cross-constructural perspective (synonymy), e.g. Gries 2003; Levshina et al. In press	?	?

# Quantitative Corpus-Based Methods

	Polysemy	Synonymy	Exemplars	Prototypes
Regressing on near-synonyms	?	+	?	+
Collostructional Analysis	+	+	+(?)	?
Behavioral Profiles	predef. senses	+	?	+
<b>This approach</b>	+	+	+	+

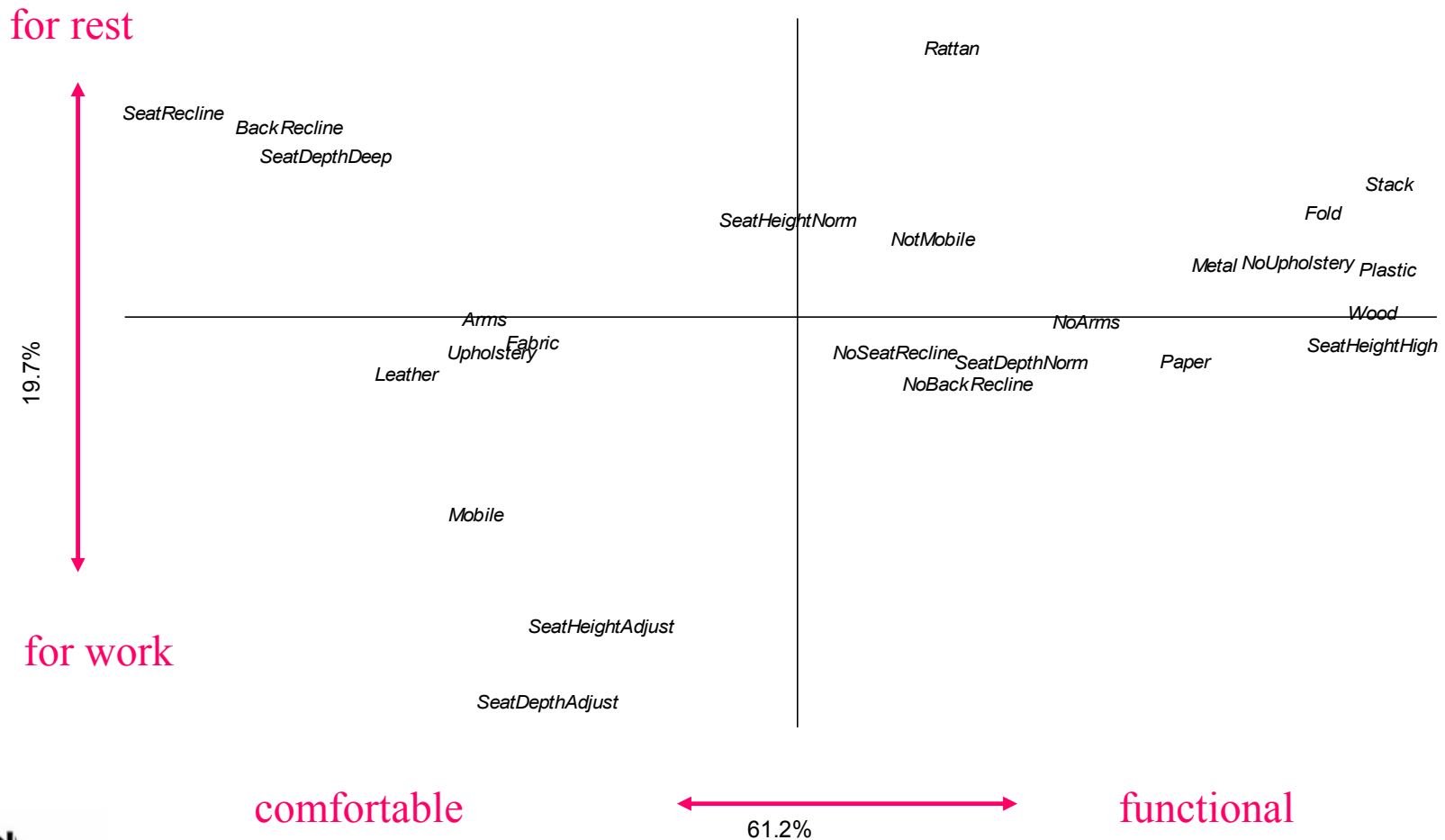
# Method

- set of observations (exemplars) coded for several variables
- Multiple Correspondence Analysis with supplementary points, `ca` package in R
- semantic space as a low-dimensional map

# Operationalization of Cxl Semantics

	Exemplars	Prototypes
Within-constuction perspective	distribution of exemplars on the map	average position of all Cxl exemplars
Cross-constructional perspective	overlapping and unique areas of contrasting Cxs	difference between the positions of the prototypes of contrasting Cxs

# e.g. Semantic Map of *Stuhl* and *Sessel*



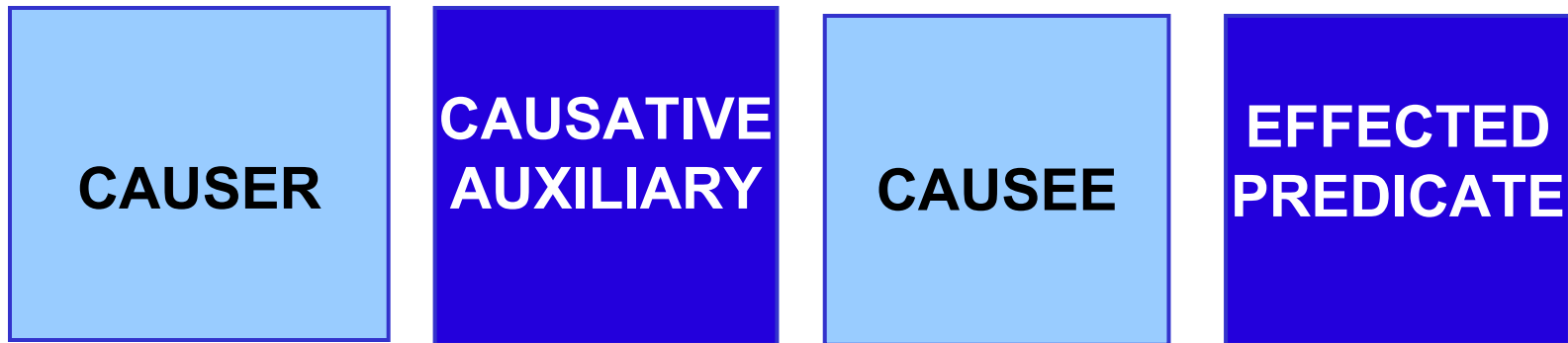
# Stuhl and Sessel: Exemplars and Prototypes



# Contrastive study of English and Dutch causative constructions



# Periphrastic Causative Constructions



The joke

made

the girl

laugh

# English Causative Constructions

**CAUSER**

**CAUSATIVE  
AUXILIARY**

**CAUSEE**

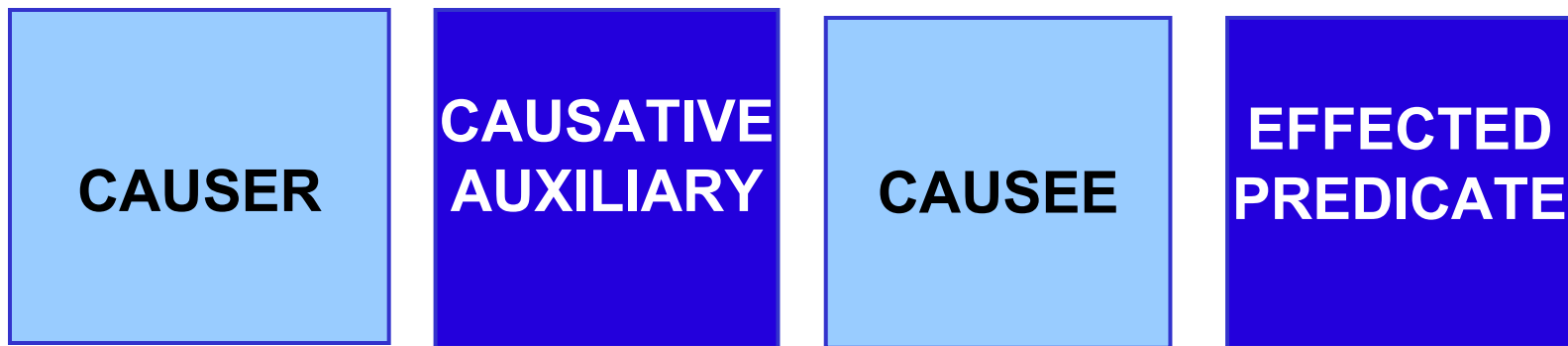
**EFFECTED  
PREDICATE**

make  
have  
get  
cause

NP/to NP  
NP/by NP/O  
NP/by NP/O  
NP

Vinf/Ved  
Vinf/Ved/Ving  
to-Vinf/Ved/Ving  
to-Vinf

# Dutch Causative Constructions



doen  
laten

NP/0  
NP/aan NP/door NP/0

Vinf  
Vinf

# Objectives of the contrastive analysis

- What is the common conceptual space of the causatives like?
- Are there differences in the way the conceptual space is cut in the two languages?
- Are there cross-linguistic equivalents (i.e. overlapping semantic areas and close generalizations)?

# Data and variables

# Data

- English: 1925 exemplars from the newspaper component of the BNC:
  - make (be made): 1026 obs.
  - have: 411 obs.
  - get: 356 obs.
  - cause: 132 obs.
- Dutch: equal sample from corpora of Belgian and Netherlandic newspapers
  - laten: 1571 obs.
  - doen: 354 obs.

# Variables

- Semantic class of the Causer: animate, material, abstract
- Semantic class of the Causee: animate, material, abstract
- 15 middle-grained semantic classes of the second verb: aspect, bodily processes, change of possession, change of state, creation and transformation, motion, etc.

Common conceptual space

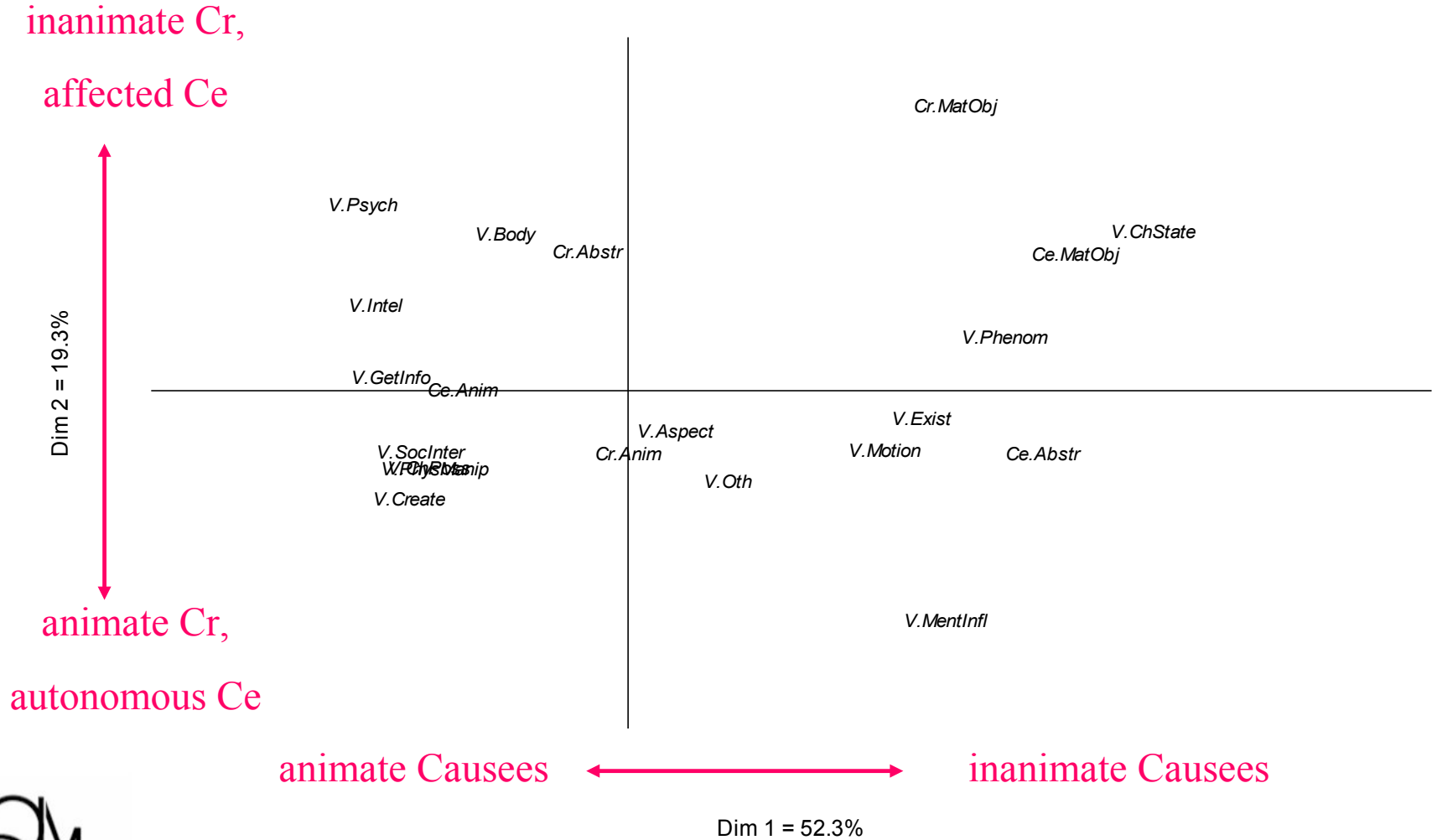




# Dimensions 1 and 2



# Dimensions 1 and 2



# Dimensions 1 and 2

inanimate Cr,

affected Ce

Dim 2 = 19.3%

animate

autonomous Ce

The joke made me laugh.

The crisis caused the prices to soar.

I had the house painted.

I got the car going.

*Cr.MatObj*

*V.Phenom*

*V.GetInfo*  
*Ce.Anim*

*V.Exist*

*V.Aspect*

*V.Motion*

*Abstr*

*Cr.Anim*

*V.Oth*

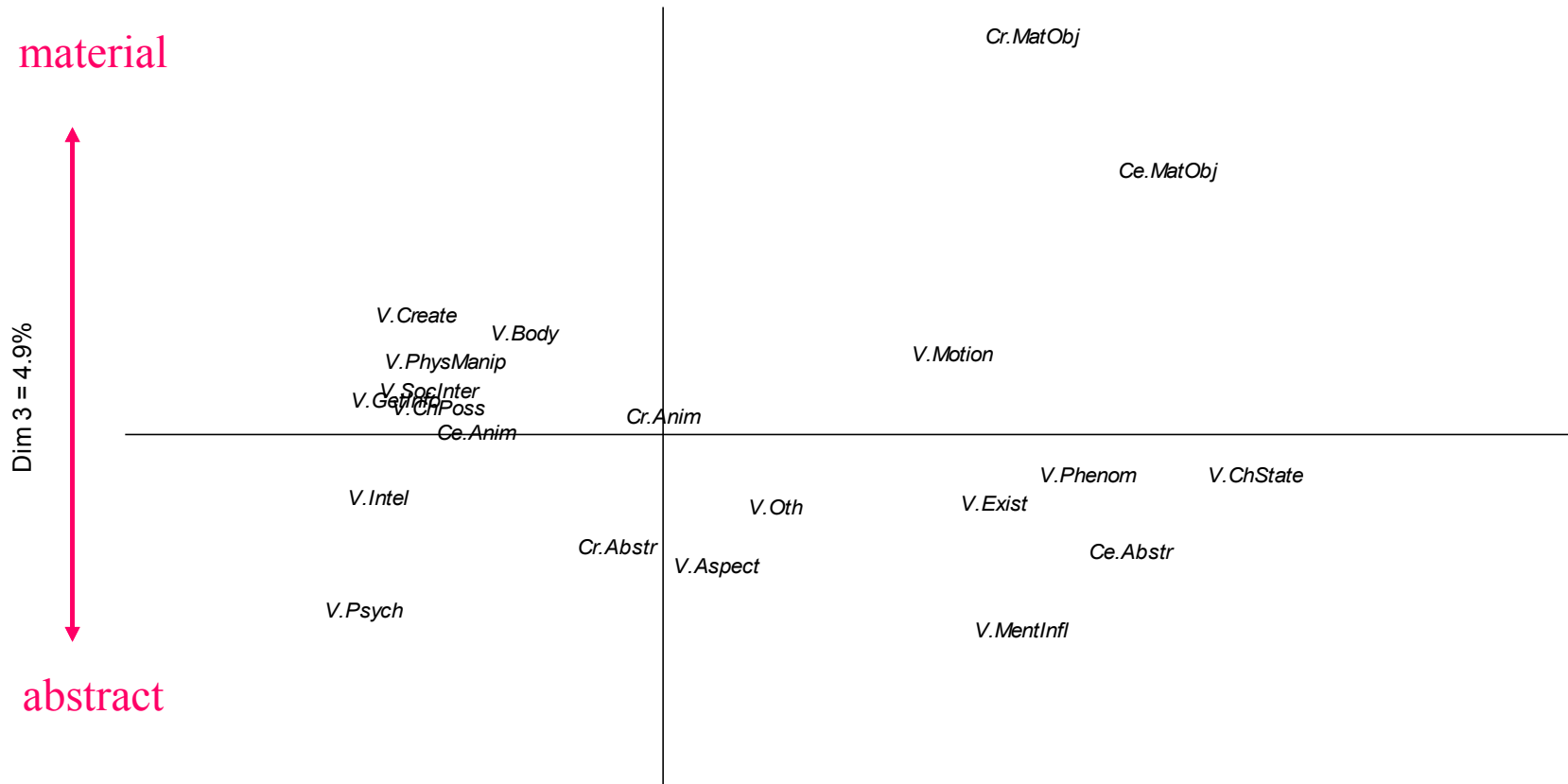
animate Causees

inanimate Causees

Dim 1 = 52.3%



# Dimensions 1 and 3



Dim 1 = 52.3%

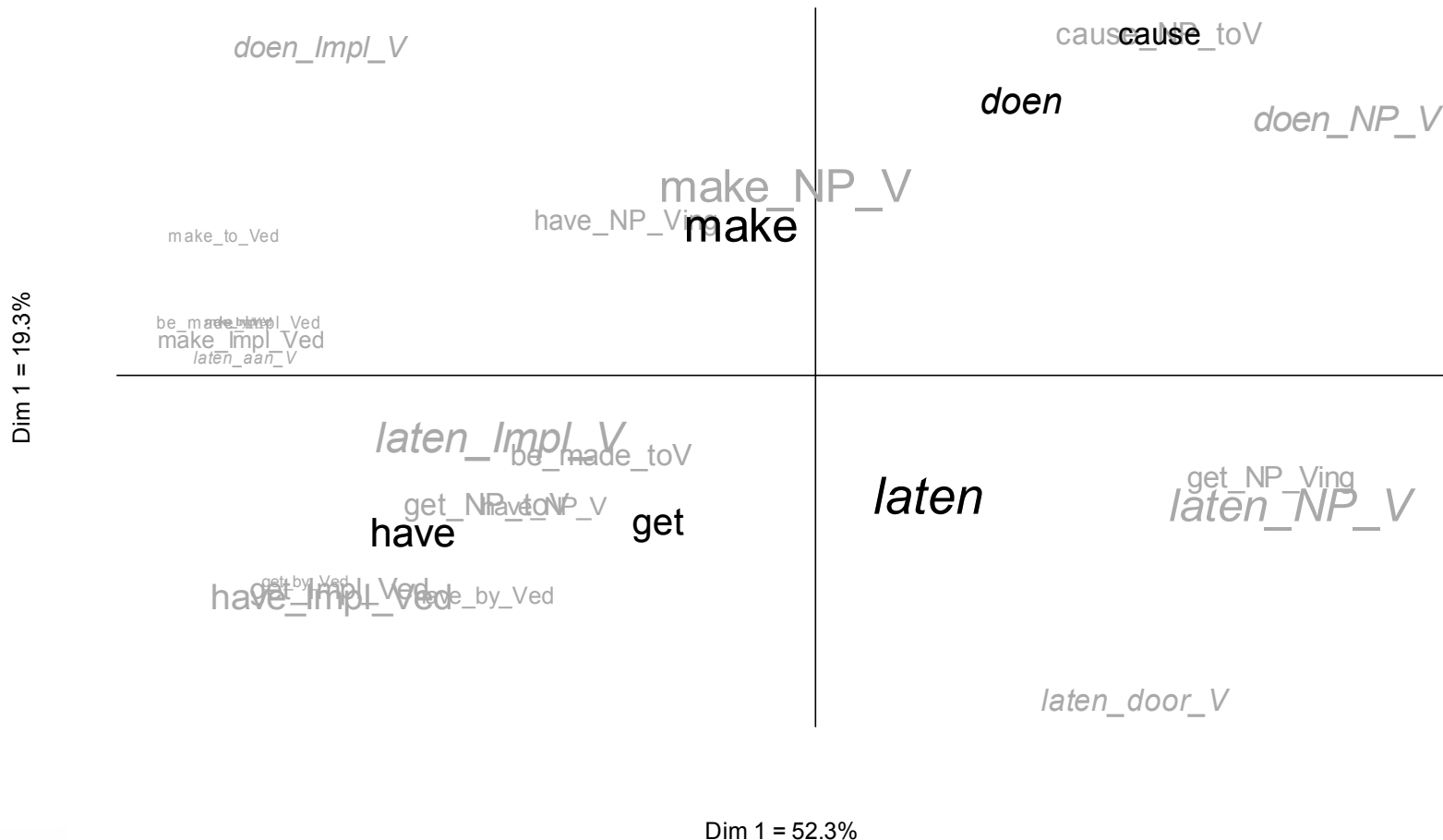


# Status of common space

- Are language-specific spaces of the English and Dutch constructions different from the common space?
- Correlations between the coordinates of the features on three dimensions in the common and language-specific spaces  $r > 0.5$

form-meaning mapping:  
prototypes

# Prototypes: Dimensions 1&2



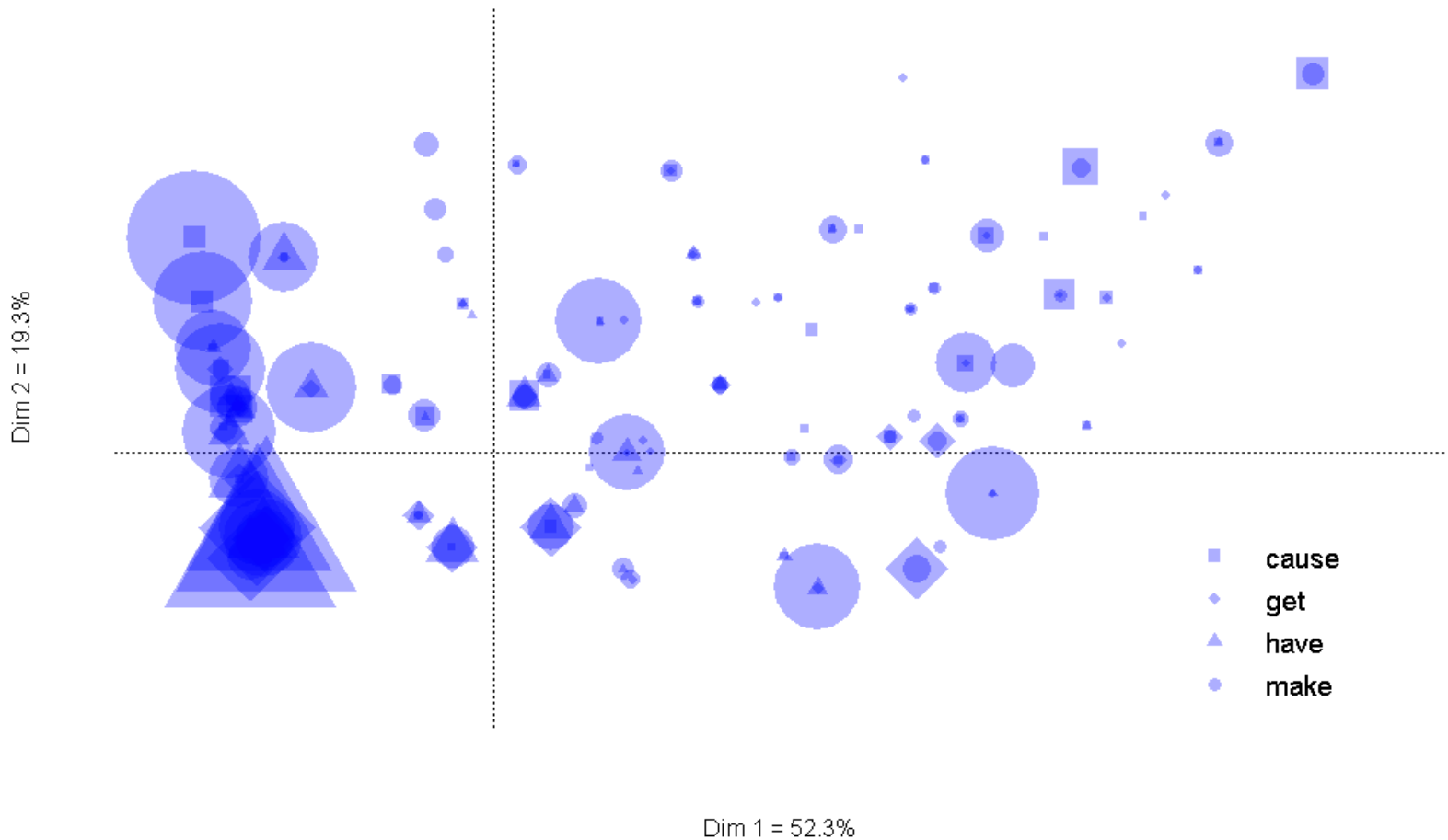
# Prototypes: Interim summary

- Commonalities:
  - animate Causees have more chances to be implicit
  - more agentive Causees have more chances to be marked prepositionally
- Differences:
  - the Dutch formal patterns are distributed more regularly wrt. the semantic dimensions based on the properties of the slot fillers

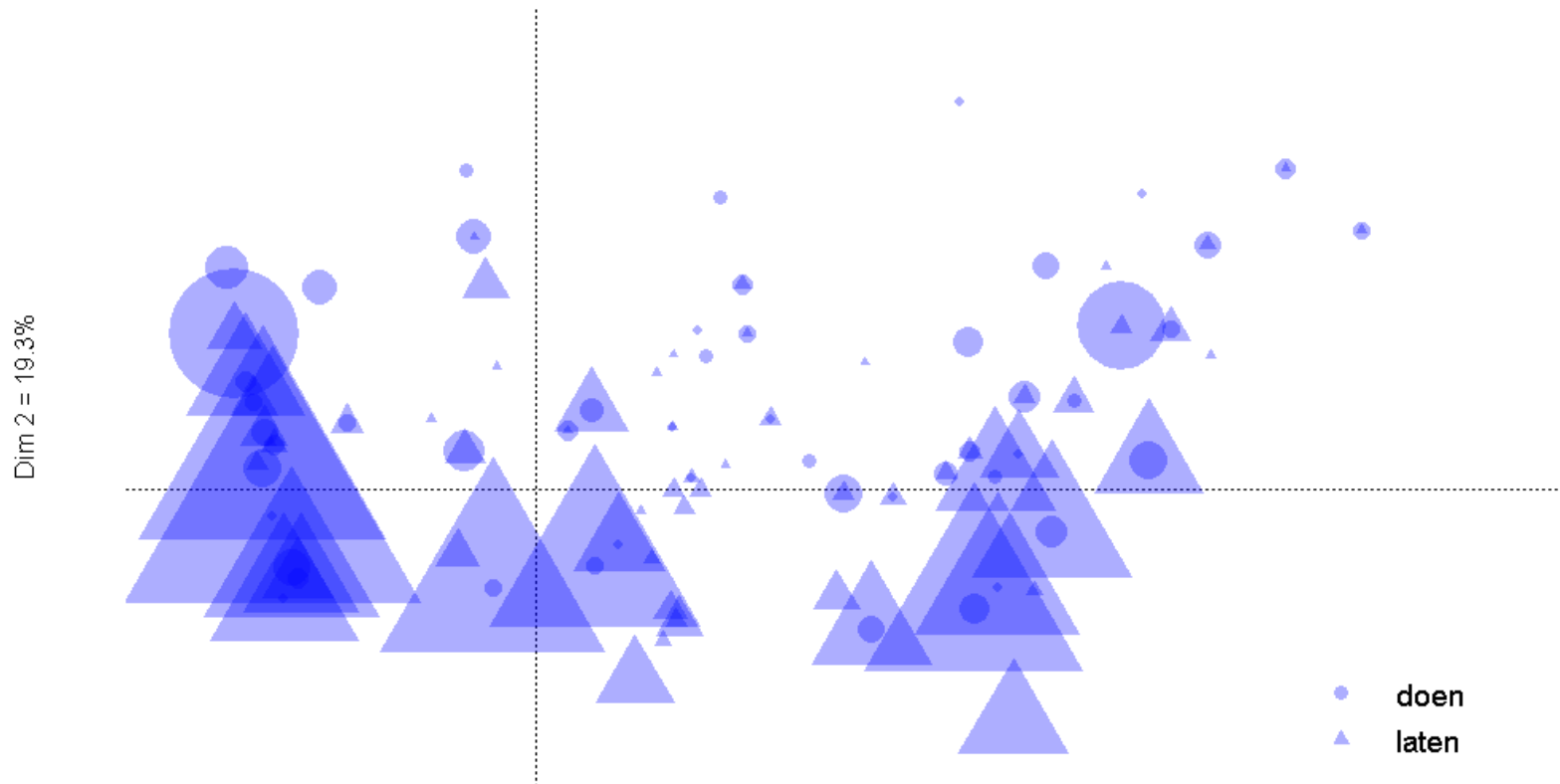


form-meaning mapping:  
exemplars and semantic areas

# English exemplars: Dimensions 1&2



# Dutch exemplars: Dimensions 1&2



# Exemplars: Interim summary

- The English and Dutch constructions cut the space in unique ways
- English: *make* has the broadest meaning, *have* and *get* are associated normally with human agentive Causees and animate Causers, *cause* is mostly physical
- Dutch: the main *doen* vs. *laten* distinction is along the vertical dimension (agentivity of the Causee), which supports previous research (e.g. Verhagen & Kemmer 1994)

# Discussion

# Discussion: conceptual space

- the dimensions of causation are very similar in both languages: universal conceptual space (Croft 2001)
- probably, the 'classical' 4 causation types (Talmy – Croft) associated with the (in)animateness of the Causer and the Causee are not sufficient
- more agentive Causees are associated with human Causers: more control is needed to influence a strong participant (cf. Talmy 1976)

# Discussion: form-meaning mapping

- the languages cut the conceptual space in unique ways, so there are no strict cross-linguistic equivalents
- yet, some constructions overlap substantially (*doen* and *cause*, *laten\_Impl\_V* and *have\_Ved* or *get\_Ved*)

# Discussion: form-meaning mapping

- prepositional marking of Causees corroborates the universal hierarchy of affectedness of the Causee (Kemmer and Verhagen 1994):  
zero-NP > aan/to > by/door
- human Causees are more frequently implicit because of their higher salience and accessibility





Thank you!

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