



# Criteria for meaning discrimination and the identification of synonymy

Dirk Geeraerts



University of Leuven

Quantitative Lexicology and Variational Linguistics

## What are we talking about?

on the one hand, lexical synonymy is a paramount case of semantic equivalence, and semantic equivalence is relevant

- in a grammatical theory, as the basis of constructional alternation
- in sociolinguistics, as the basis of the ‘sociolinguistic variable’
- in typology, as the basis of crosslinguistic comparison
- in applied linguistics, as the basis of translational equivalence

## What are we talking about?

on the other hand, the traditional way of thinking about synonymy in lexical semantic theory is part of a specific structuralist tradition that is not unproblematic

we can think of lexical semantics as a succession of theoretical frameworks, from prestructuralist over structuralist and formalist to cognitive-functional (cp. Geeraerts 2010, *Theories of Lexical Semantics*, OUP)

## What are we talking about?

so, given that synonymy is a typically structuralist notion, what does the transition to cognitive-functional approaches mean for the study of synonymy?

## What kind of talk is this?

the simple purpose of this talk is **conceptual analysis and clarification**, not descriptive illustration, empirical falsification, or methodological development

(but I will make use of specific case studies pursued within our QLVL research team)

## What are the steps to take?

1. the lexical relations model is problematic
2. synonymy is the onomasiological counterpart of polysemy
3. the referential level is important for detecting synonymy
4. synonymy criteria may diverge
5. synonymy criteria are context-sensitive

## Step 1

the lexical relations model is problematic

## Why go beyond the lexical relations model?

Lyons 1963:59

“the meaning of a given linguistic unit is defined to be the set of (paradigmatic) relations that the unit in question contracts with other units of the language ..., without any attempt being made to set up ‘contents’ for these units”

(cp. Cruse 1986, WordNet)



## Why go beyond the lexical relations model?

assumptions of a lexical relations model:

1 sense relations constitute a natural set that does not include any typically referential, encyclopaedic relations, i.e. the broader type of content description that Lyons refers to

## Why go beyond the lexical relations model?

assumptions of a lexical relations model:

2 sense relations are methodologically independent; if sense relations really belong to the level of linguistic structure and the broader content description is situated on the encyclopaedic or pragmatic level, then we should be able to establish sense relations without having recourse to that other level

## Why go beyond the lexical relations model?

however, concerning 1:

meronymy is readily recognized by proponents of a lexical relations approach as a sense relation

but part-whole relations like those between hand and finger are definitely of a referential and encyclopaedic nature

→ how impermeable is the distinction between the two levels?

# Why go beyond the lexical relations model?

however, concerning 2:

identifying sense relations as a relationship between senses

practically assumes a form of content description on the semantic level

→ is a lexical relations model really methodologically independent?

## Why go beyond the lexical relations model?

e.g. burial vs funeral

some burials are not funerals (animals)

and some funerals are not burials (cremations)

is this a case of near-synonymy, or partial synonymy?

that depends on an analysis of the possible polysemy of the items in the area of overlap --- i.e. the polysemy analysis decides on the synonymy, and not the other way round

(cp. Oversteegen, this conference)

## Why go beyond the lexical relations model?

an alternative approach, as present in cognitive-functional approaches to meaning, does not assume the irrelevance of the world level, and does not equate meaning with a network of structural relations

but what expectations about synonymy could we derive from such a model?

a bridging hypothesis: synonymy is the onomasiological counterpart of polysemy

## Step 2

synonymy is the onomasiological counterpart of polysemy

# What do semasiology and onomasiology imply?

thing

thing

thing

concept

concept

concept

concept

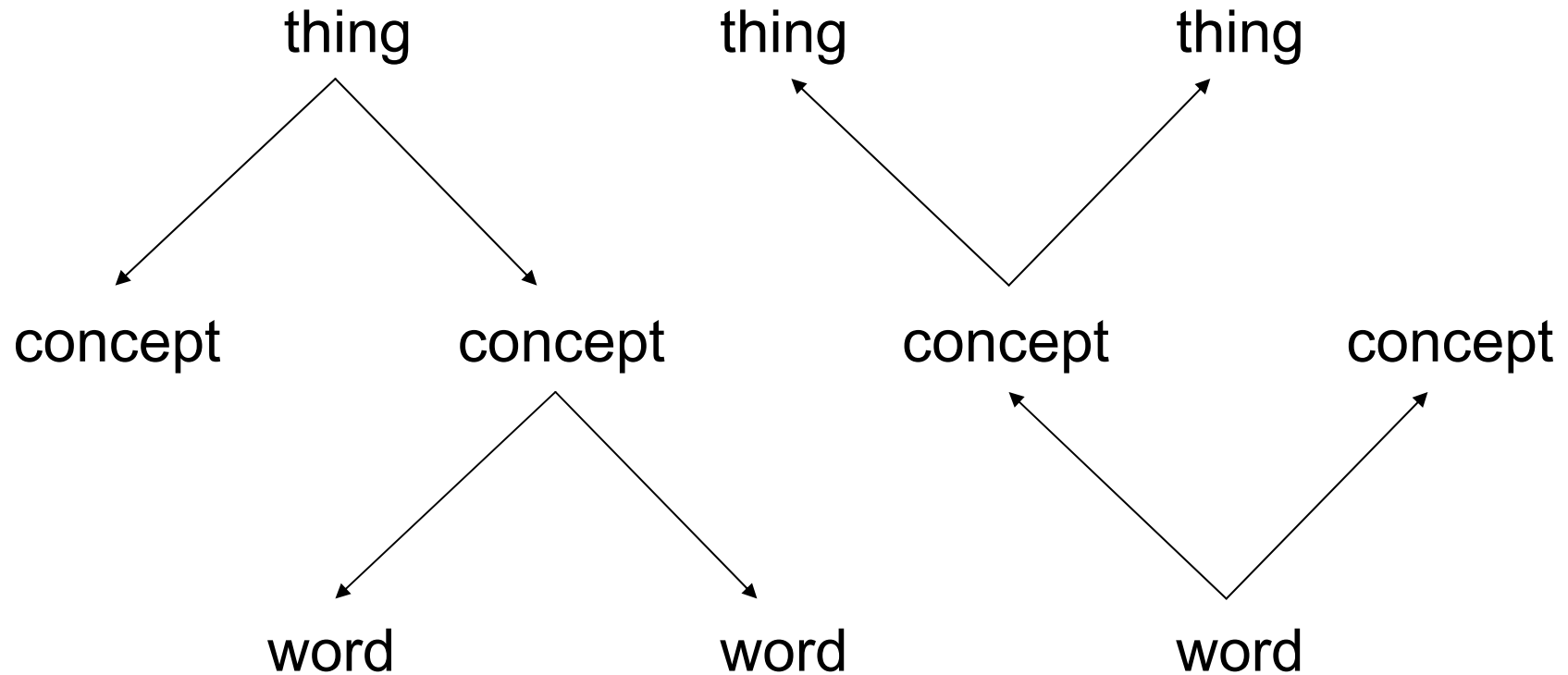
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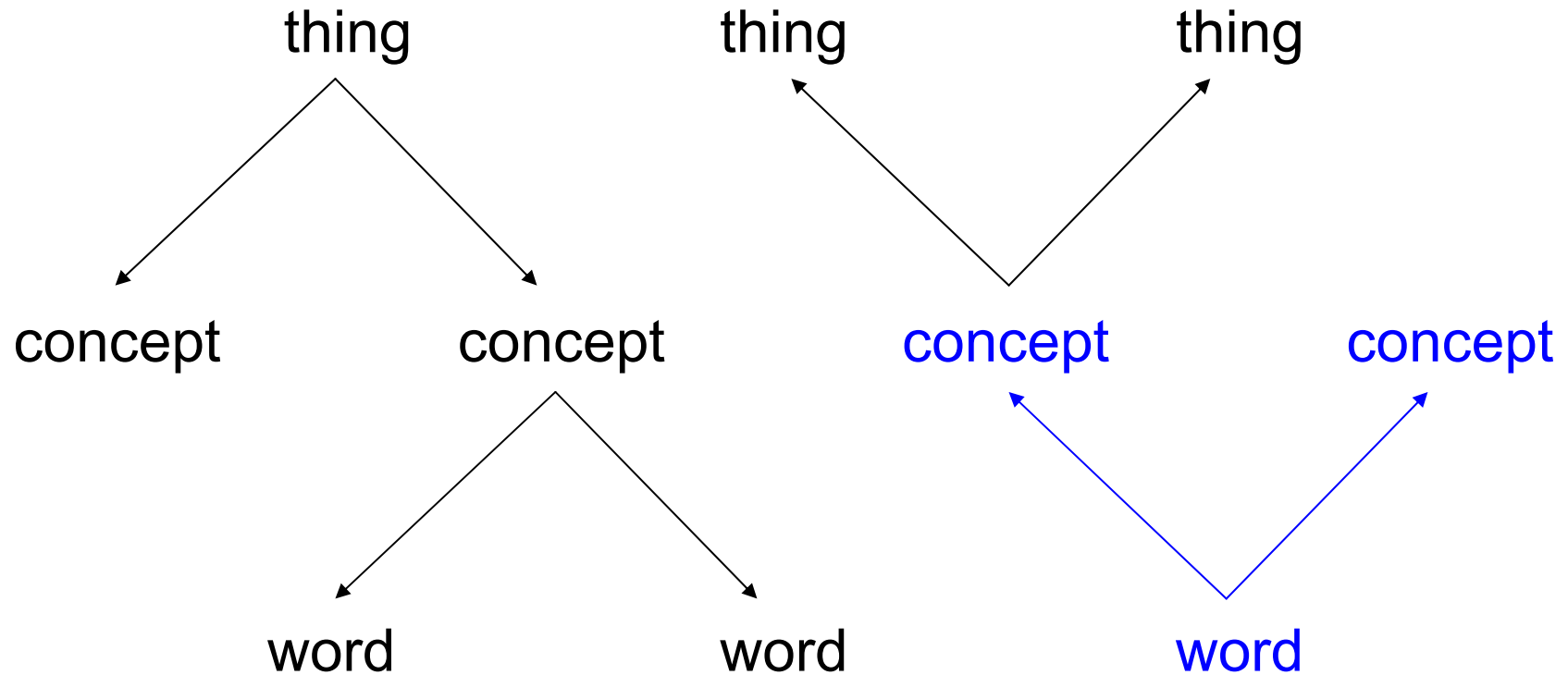
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# What do semasiology and onomasiology imply?



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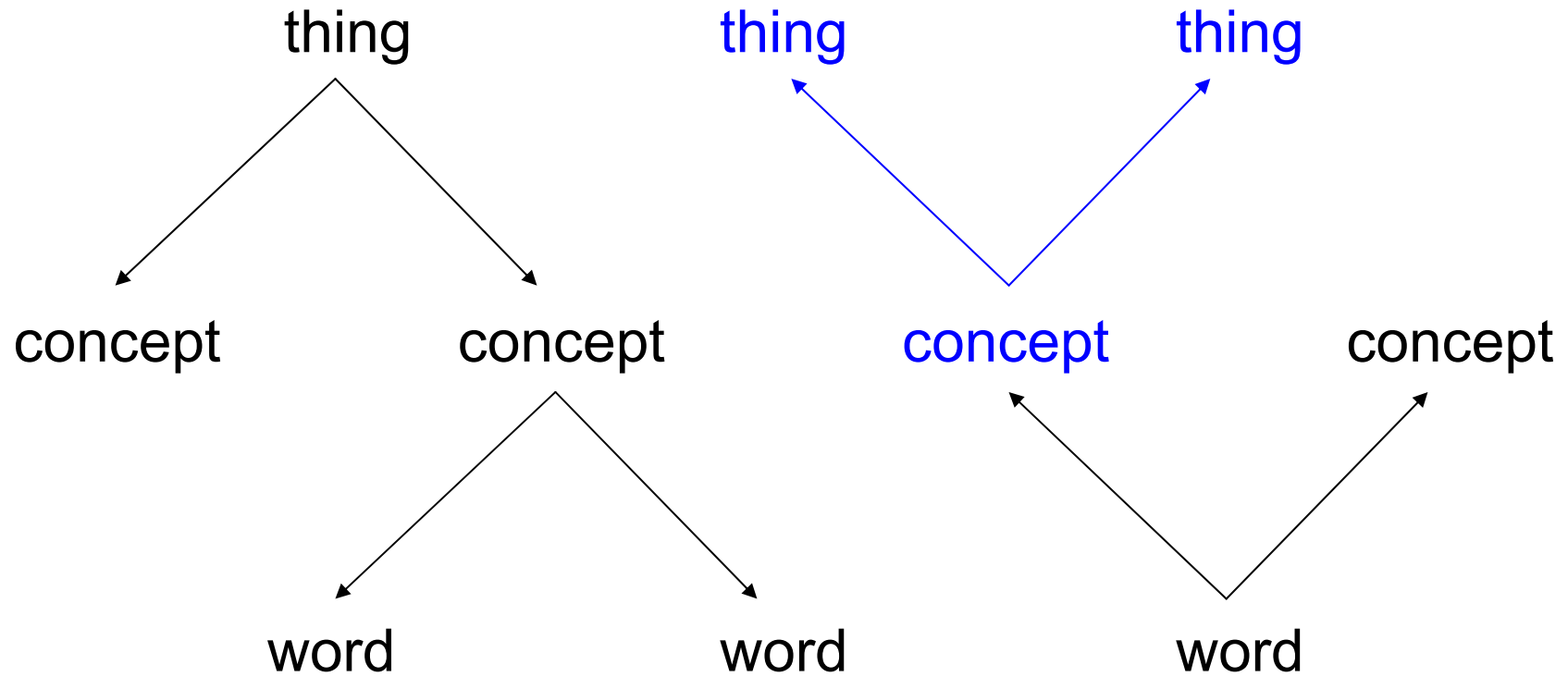
# What do semasiology and onomasiology imply?

semasiological salience involving polysemy

i.e. some meanings are more central (in terms of frequency, or in terms of semantic coherence) to a word than others

→ a traditional recognition, rediscovered by cognitive linguistics in the form of radial sets and network models of meaning

# What do semasiology and onomasiology imply?



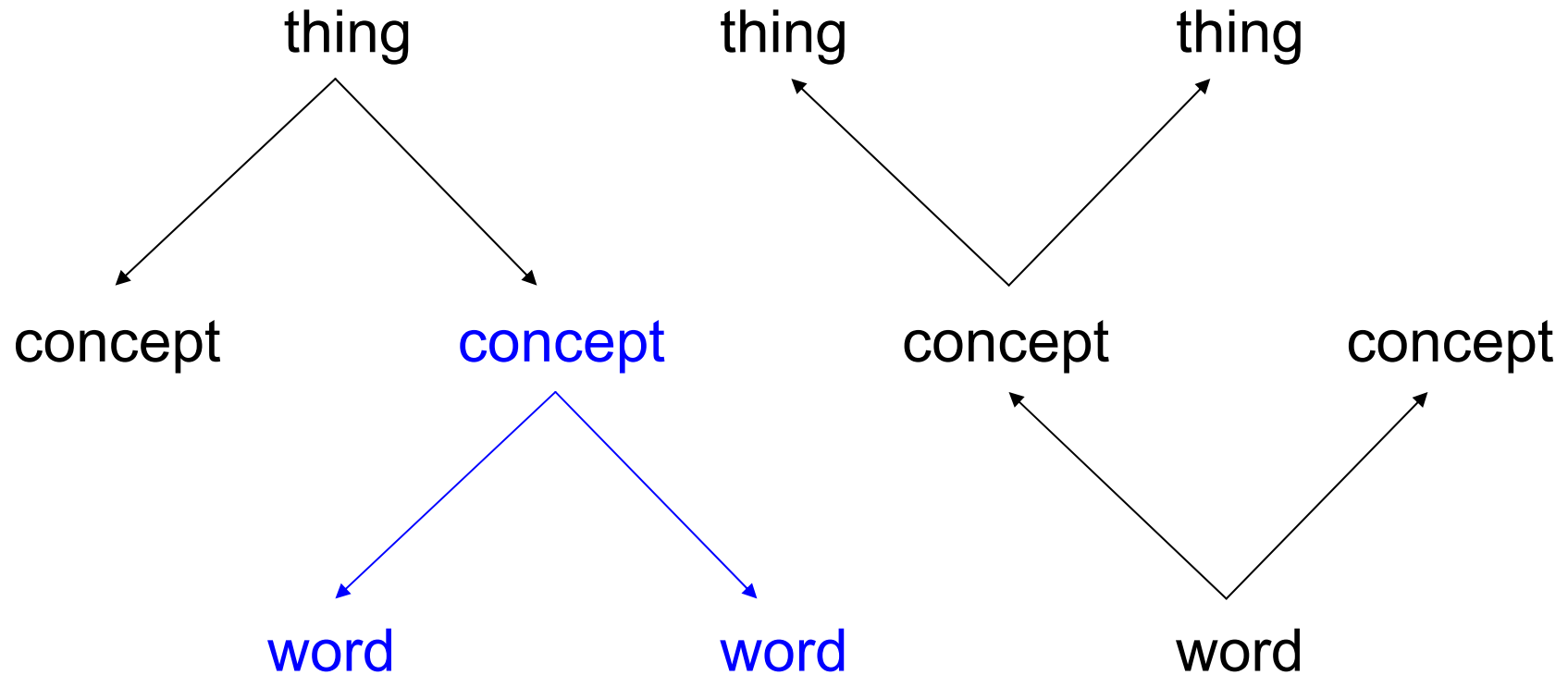
## What do semasiology and onomasiology imply?

semasiological salience involving (referential) prototypicality

i.e. some members of a category are more central (in terms of frequency, or in terms of intracategorical coherence) than others

→ the original psycholinguistic discovery of Rosch et al., further developed (but largely independently) in psycholinguistic categorization research and cognitive linguistics

# What do semasiology and onomasiology imply?



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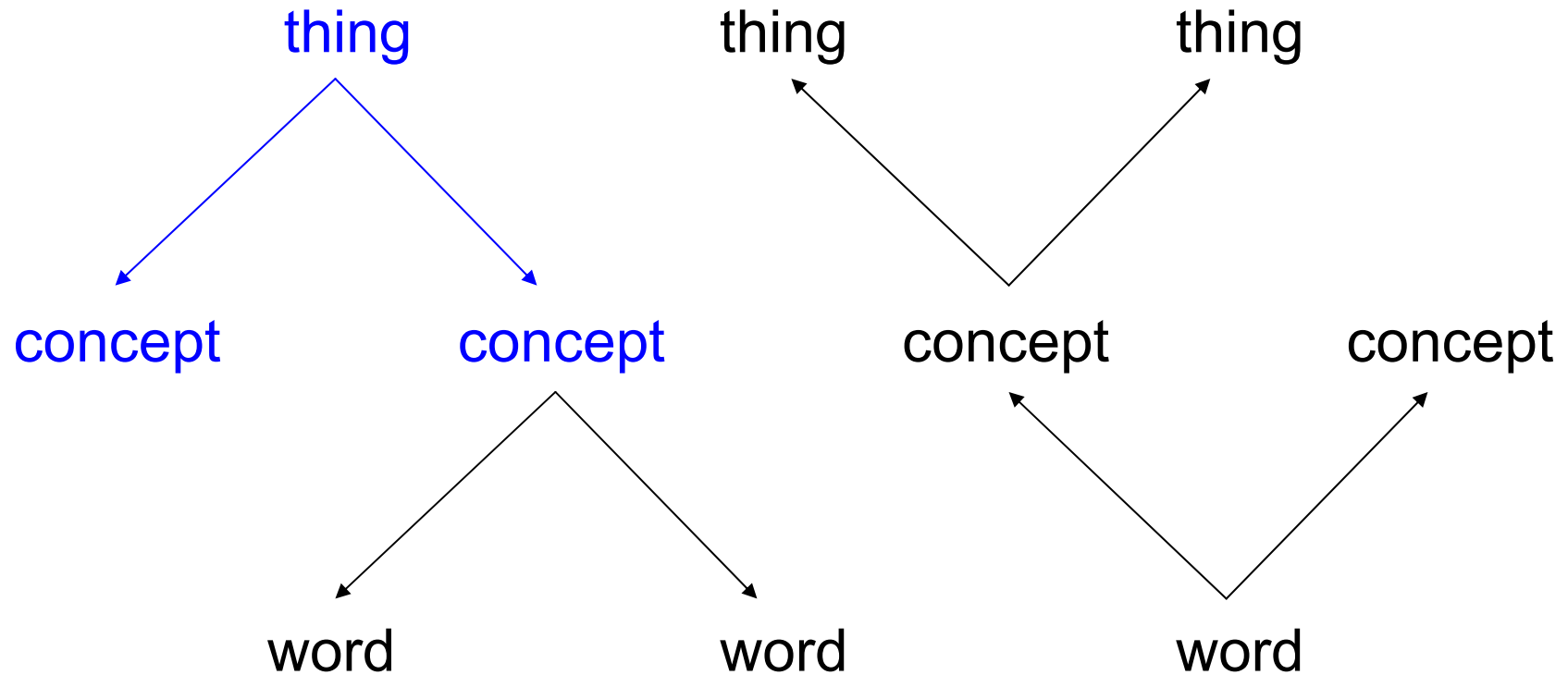
formal onomasiological salience involving synonyms

i.e. some lexicalizations of a given concept are relatively more frequent, in a given context, than others

→ the basis for a lexical sociolectometry that measures lexical distances among lects on the basis of the relative frequencies of competing synonyms (a 'profile-based approach')

cp. this conference: Eline Zenner, Augusto Silva

# What do semasiology and onomasiology imply?





# What do semasiology and onomasiology imply?

conceptual onomasiological salience involving near-synonyms

i.e. some conceptual construals of a given reality are relatively more frequent, in a given context, than others

→ a generalization of the notion of basic level concept: generalized onomasiological salience involves preferred ways of categorizing given chunks of reality

## What can we derive from this overview?

the overview of the scope of lexical semantics shows that  
synonymy is the perspectival opposite of polysemy

this means that some of the phenomena that are prominent in the  
cognitive-functional approach to semantics, may be extrapolated to  
the study of synonymy

## So what can we expect?

1 as in the study of polysemy, the referential level has to be included in the analysis

background: prototype theory; the internal referential structure (typicality of membership, exemplar-based models etc.) is important for an insight into how words mean

## So what can we expect?

2 as in the study of polysemy, criteria for synonymy

2.a need not converge, and 2.b need not be stable

background: Geeraerts, Dirk (1993). 'Vagueness's puzzles, polysemy's vagaries' *Cognitive Linguistics* 4: 223-272 (a.o.)

→ different criteria for polysemy lead to distinct results (2.a), and each criterion applied separately may have contextually different results (2.b)

## Step 3

the referential level is important for detecting synonymy

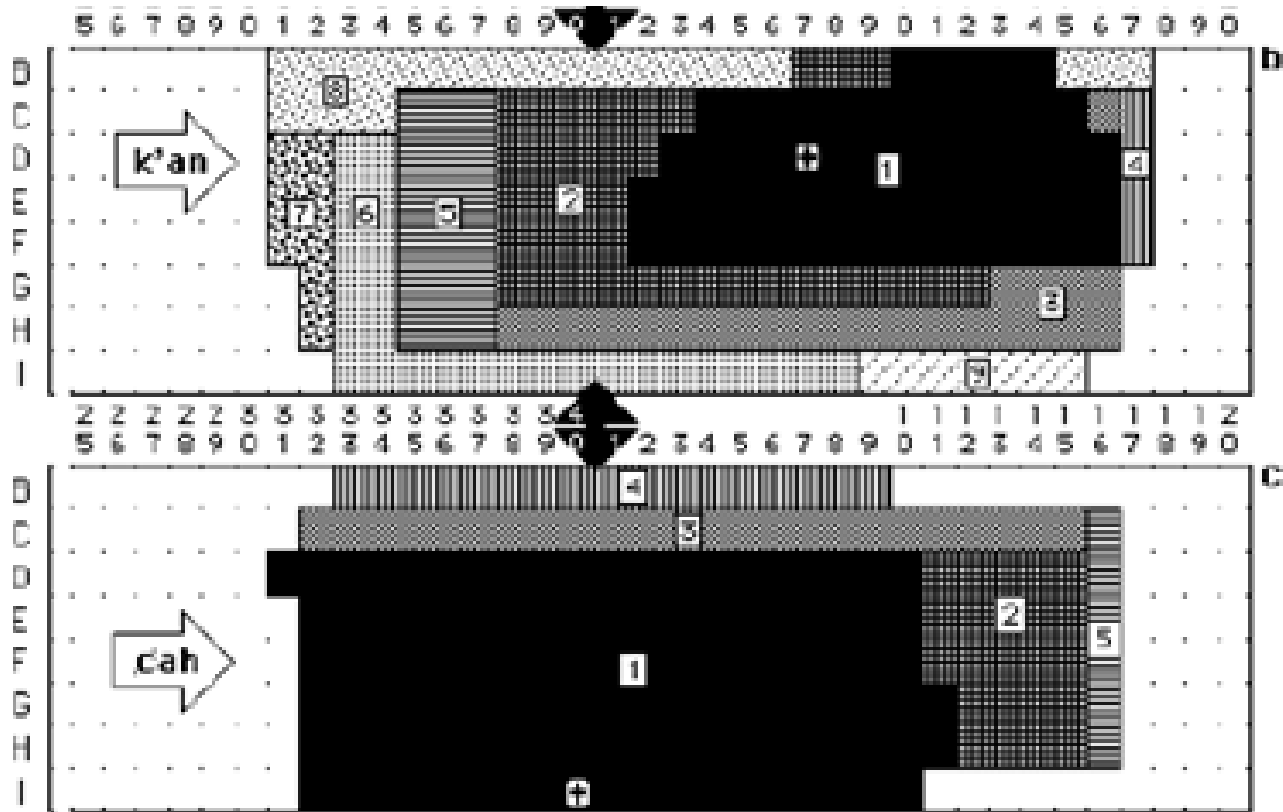
## Why does the referential level count?

items that are co-extensive may construe their referential range of application differently

this is well known when we compare a literal expression and one embodying a metaphor or an image (hump, hunchback vs scoliosis, kyphosis), or when there are differences of syntactic construal (cp. Beth Levin, this conference: leaves / foliage) --- but it may also take the form of prototype effects

# Why does the referential level count?

e.g. MacLaury 1997 (and cp. Anishchanka, this conference)



## Why does the referential level count?

e.g. Geeraerts 1988 on vernielen / vernietigen “to destroy”:

same range of subjects and direct objects, but different prototypical centers

cp. Augusto Silva, this conference: deixar / abandonar / permitir



## Step 4

synonymy criteria may diverge

## What criteria could we use?

### polysemy criteria

- intuitive recognition of (truth-conditional) non-equivalence (the ‘p and not p’ test)
- description and definitional analysis of referential ranges
- syntagmatic distribution (viz. zeugma)
- neuro-imaging

# What criteria could we use?

## synonymy criteria

- intuitive recognition of equivalence  
(plus experimental research involving similarity judgements)
- description and definitional analysis of referential ranges
- syntagmatic distribution (specifically also in the form of manually coded or word space-based corpus studies)
- neuro-imaging

# What criteria could we use?

## synonymy criteria

- intuitive/experimental recognition of equivalence

**this conference:** Raukko, Oversteegen, Liu

- description and definitional analysis of referential ranges

**this conference:** Anishchanka

- syntagmatic distribution

**this conference:** Glynn, Cappelle, the Computational workshop

- neuro-imaging

## Do the criteria converge?

not necessarily: there is sufficient anecdotal evidence that what we think about words is not necessarily how we actually use them;  
we may also establish this more empirically

intuition vs referential range: Geeraerts 1988

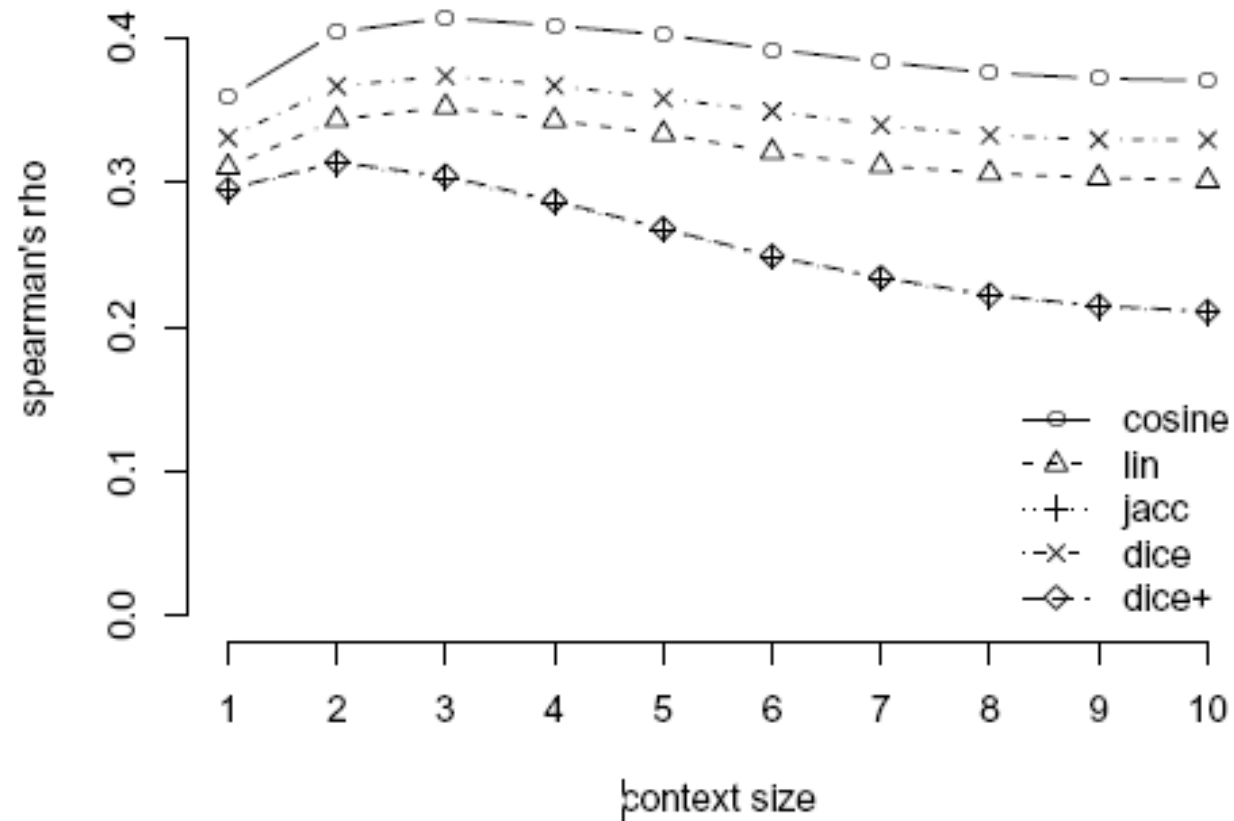
distribution vs referential range: Sutrop, this conference

distribution vs intuition: Liu, Backus & Mos,  
this conference

## Do the criteria convergence?

a further example from Yves Peirsman 2010, Crossing Corpora (PhD Leuven): a comparison of experimental similarity judgements for 2197 Dutch word pairs, compared against vector spaces for the same pairs, based on a 250 million word corpus

# Do the criteria convergence?



## Step 5

synonymy criteria are context-sensitive



## What does the context-sensitivity of the criteria mean?

distinctions that (according to any of the criteria) are relevant in one context need not be so in another context

→ meaning takes the form of a ‘schematic network’, in which meanings may be construed more vaguely at a higher level of the network, or more specifically at a lower level

(cp. Tuggy 1993)

## What does the context-sensitivity of the criteria mean?

an informal example from Karl-Otto Erdmann (1910):

der Deutsche – ethnic (descent), linguistic (mother tongue),  
political (citizenship)

Bismarck: “Wir Deutsche fürchten Gott und sonst nichts in der Welt”, ‘we Germans fear God and nothing else in the world’

## What does the context-sensitivity of the criteria mean?

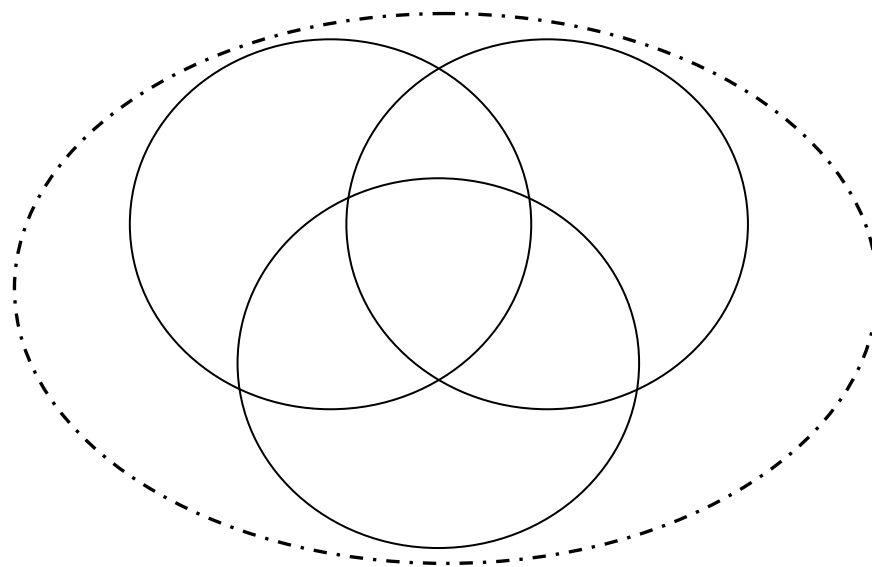
an informal example from Karl-Otto Erdmann (1910):

der Deutsche – ethnic (descent), linguistic (mother tongue),  
political (citizenship)

Erdmann: If we were to ask Bismarck whether his statement also applies to the German-speaking Swiss or to speakers of Polish living within the boundaries of the German state, the answer would probably be that he simply did not have all those distinctions in mind, and that they are of no significance for his utterance

## What does the context-sensitivity of the criteria mean?

three overlapping meanings, and a few more, through contextual  
neutralization of the differences  
each with their own synonyms



## What does the context-sensitivity of the criteria mean?

so, if the identification of synonymy requires an identification of polysemy, and

if polysemy may operate at different levels of schematicity, then synonymy too should be investigated at different levels of contextual granularity

## What does the context-sensitivity of the criteria mean?

a less informal illustration: current PhD work by Natalia Levshina  
on the causative auxiliaries doen / laten in Dutch  
(cp. Arppe, this conference)

6855 observations with causative constructions

8 mln word newspaper corpus

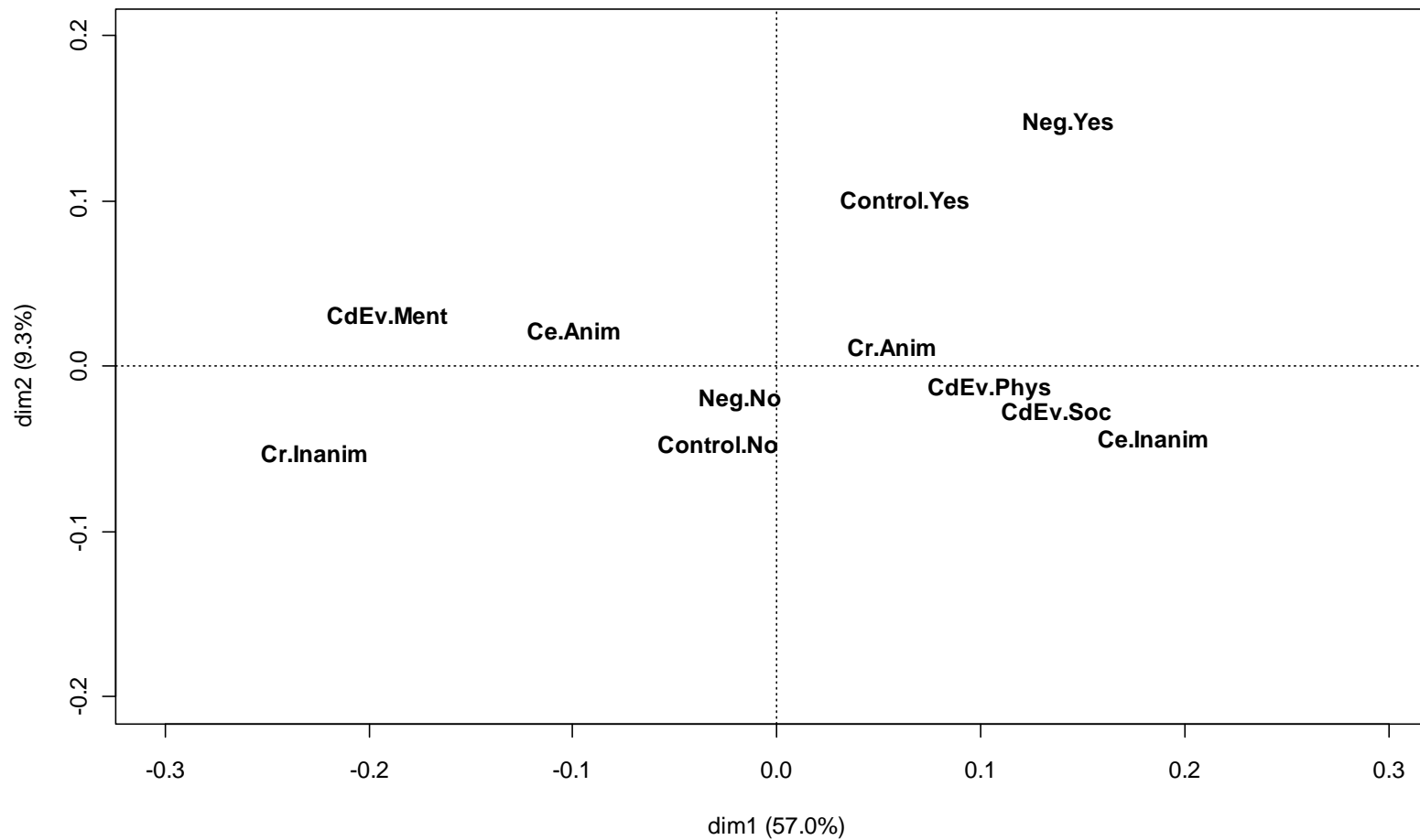
manually coded for 5 semantic features: semantic class of Causer,  
Causee, Caused Event; coreferentiality and possession relations  
between Causer and other participants; negation

## What does the context-sensitivity of the criteria mean?

- build a semantic space through a correspondence analysis on the coded observations
- map the verbs with different levels of detail: verbs alone vs verbs + syntactic type of Causee

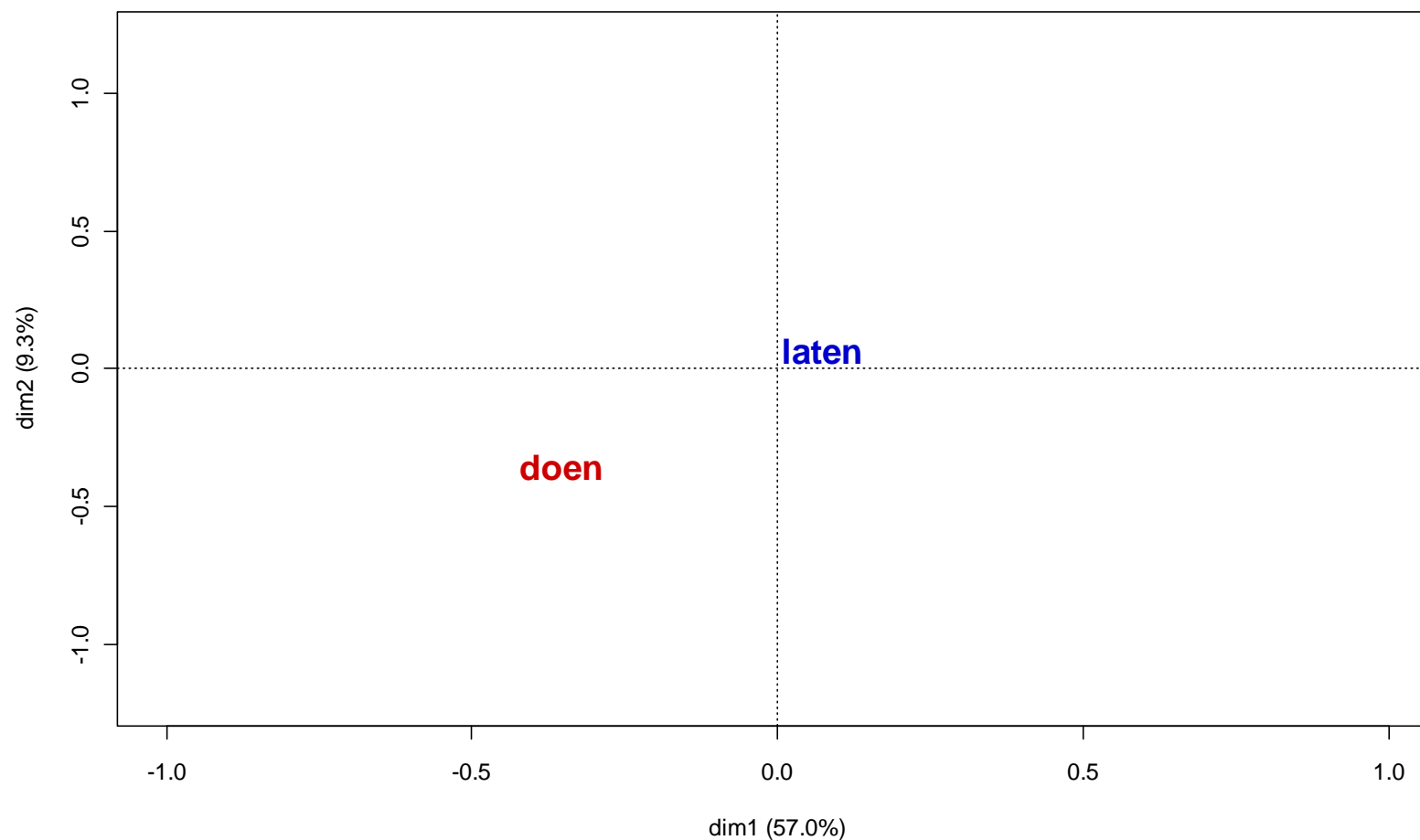
if the position of the siblings (more specific entities – and especially, the relative position of doen and laten) differs significantly from the position of the parents (more schematic entities), we find granularity effects

# What does the context-sensitivity of the criteria mean?

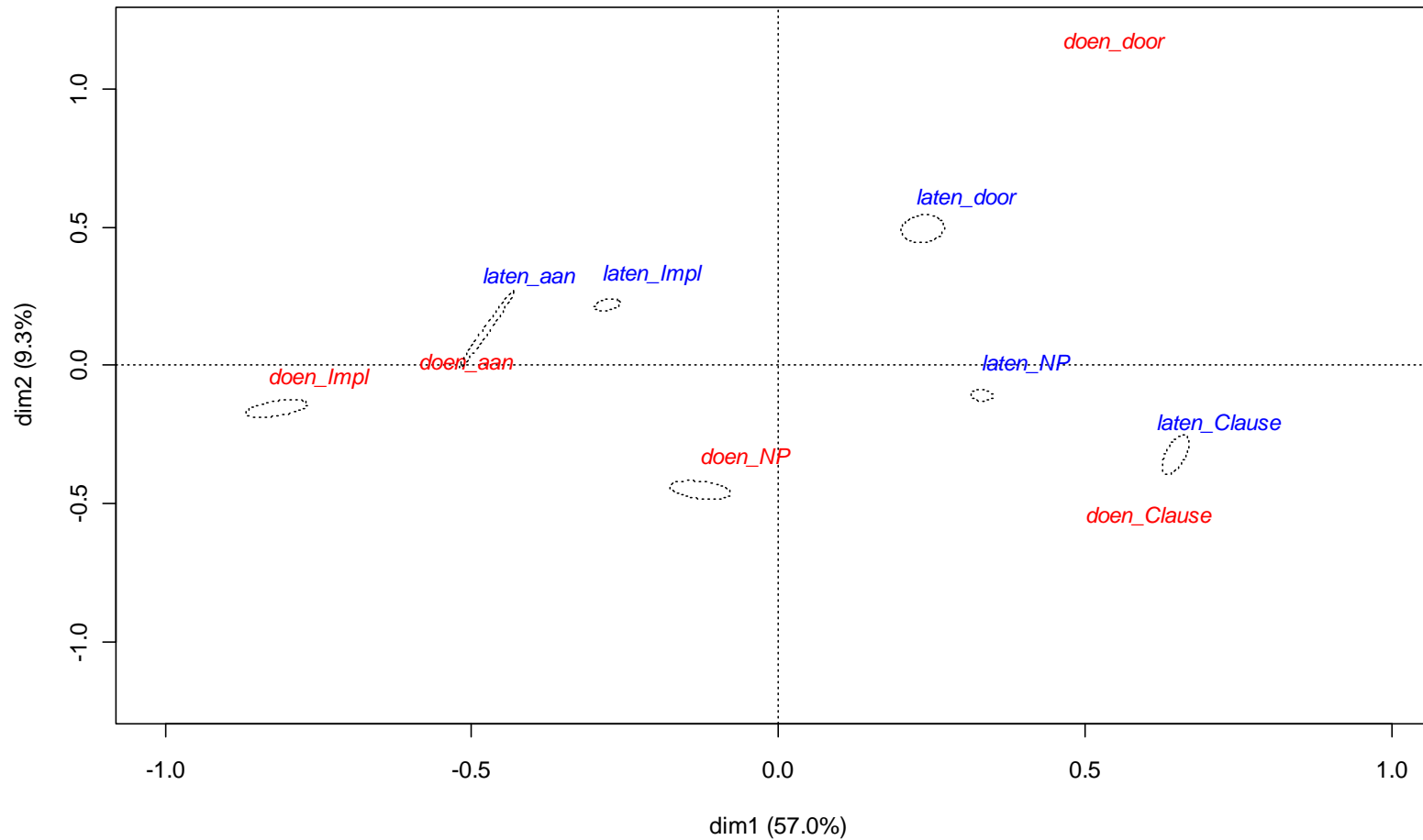




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## What can we conclude?

we find that the expectations we derived from extrapolating the cognitive-functional study of polysemy to the study of synonymy are indeed borne out:

- the referential level matters
- different criteria are not necessarily convergent
- it is relevant to think in terms of schematic networks

can we turn these observations into a more general conclusion?

## What can we conclude?

1 if we abandon the lexical relations model and its assumptions of a stable system-internal structure of sense relations, the notion of synonymy becomes as fluid as the notion of meaning in Cognitive Semantics and usage-based models in general:

in Quine-like fashion, **synonymy is observed equivalence in a set of contexts**

## What can we conclude?

untrivially, this means

- that the method of observation matters
- that the level of contextual granularity matters:

the distinction between synonymy (formal onomasiological variation) and near-synonymy (conceptual onomasiological variation) depends

- on the type of equivalence we are looking at
- on the detail with which we construe our schematic network

## What can we conclude?

2 in an un-Quinean way, the **research programme** following from this recognition is one in which the main task is not finding a gold standard for the identification of synonymy (there is none), but one which systematically investigates

- the effect of context and contextual granularity
- the correlation between various methods of observation

so, to answer Conference Question nr 1 “Does synonymy exist?”:

there are many synonymies  
all of them waiting to be re-thought

thank you !

for further information:

<http://wwwling.arts.kuleuven.be/qlvl>

[dirk.geeraerts@arts.kuleuven.be](mailto:dirk.geeraerts@arts.kuleuven.be)

