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English locative prefixes and scalar information encoded in nouns

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The problem: nouns and scalarity

- Typically, scalarity/gradability feature of adjectival domain
- Gradation of prototypical nouns indirect – bound to individual gradable properties

(1) ??A very/total house.

(2) A very large house.

Some exceptions, e.g.:

(3) An utter disaster

see; Morzycki 2009; Paradis 2008

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Scale-based, causative interpretations of *out-*

(1) Peter **outran** John by 0.2 seconds. [property – SPEED]
(2) The Jets **outnumbered** the Sharks. [cardinality]

- Exceeding some threshold
  - Property scales with dimensions and degrees
  - Cardinality scales
- Always derives transitive verbs
- Causative interpretations
  - DO(NP1, PRED1) $\&_{CAUSE}$ BECOME(OUTDONE(NP2))

see e.g. Bauer et al. 2013: ch.16; Kotowski 2020; Solt 2015; Talmy 2000

Today's problem: denominals

- *out-* is category-changing (despite claims to the contrary)
- Twofold problem: inferring both an event and an appropriate scale

(1) There was an old boy with 'a lifetime of badges' on his hat. […] Step forward Lil Kemp who could **outbadge** him any day. (pinkun.com)

(2) I went downtown to check out the crime scene, but that douche from the FBI **out-badged** me! (urbandictionary.com)

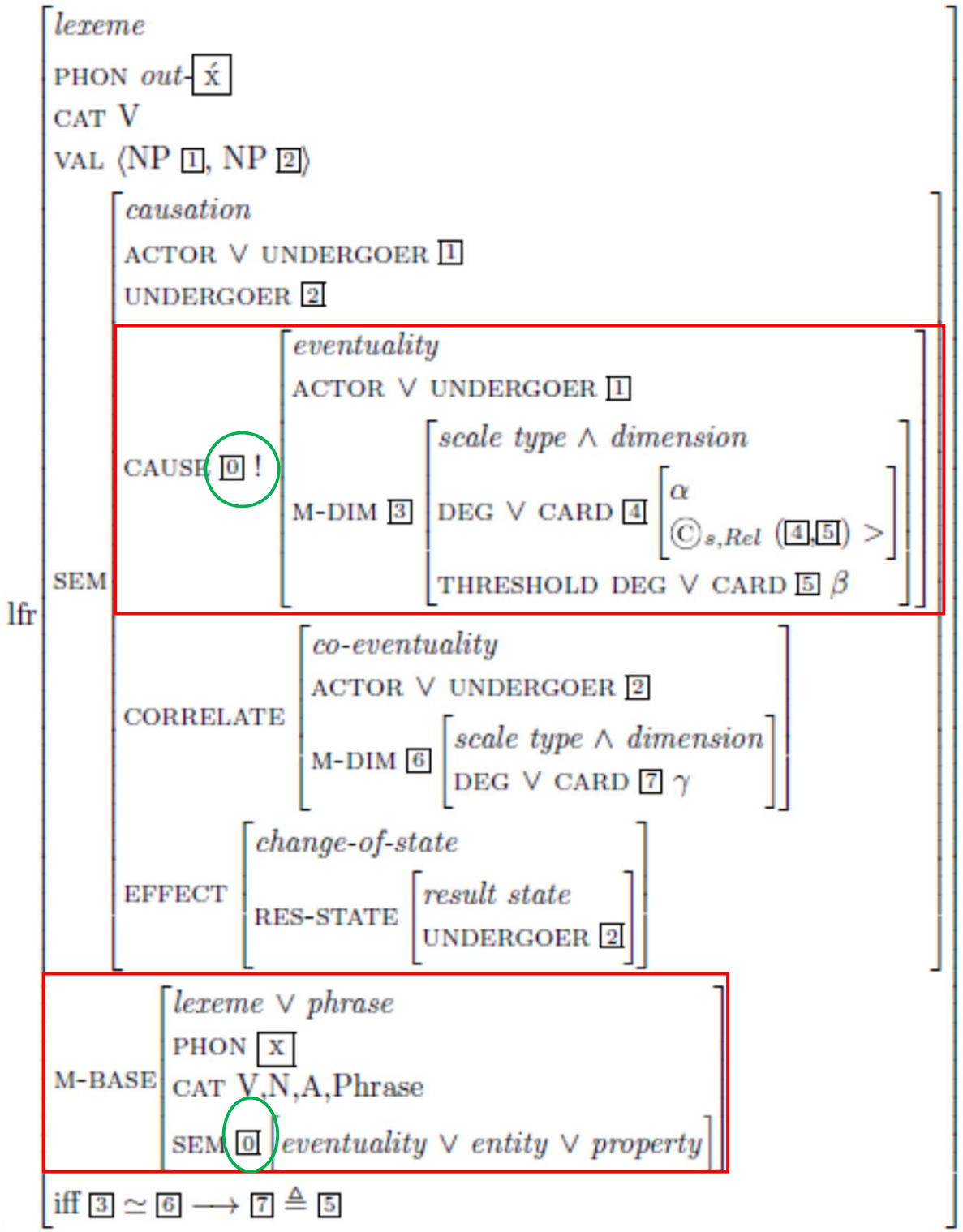
e.g. Bauer et al. 2013: ch.16; Kotowski 2020; McIntyre 2015

Barsalou frames

- Frames are recursive attribute–value structures
- Attributes are unique to the attribute holder and take a single value at one point in time

$$\begin{bmatrix} boy & \\ \text{HEIGHT} & tall \\ \text{EYES} & \begin{bmatrix} boy's\ eyes & \\ \text{COLOR} & blue \end{bmatrix} \end{bmatrix}$$

see Barsalou 1992; Löbner 2014; Petersen 2007



see Kotowski 2020; in prep.

Focus

- Focus on PHYSICAL ENTITIES (such as *badge*)
- ABSTRACT ENTITIES: MEASURE/QUALITY (e.g. *temperature*; *capacity*) and STATE/EVENT nouns (e.g. *stress*)
  - Already either scalar or eventive

(1) …they were **out-tempoed** by Villanova in the first round.

(2) And he did it in such impressive fashion, **out-acing** the big-serving Roddick 17-7…

Outline

- The extent of the problem
  - COCA search
  - Classification of semantic types
- Closer look at (some) input classes to *out-*
- Frame semantic modeling
  - Attitudinal nouns
  - Both cardinality and property scales

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Semantic types and generalizations

Extent of the phenomenon

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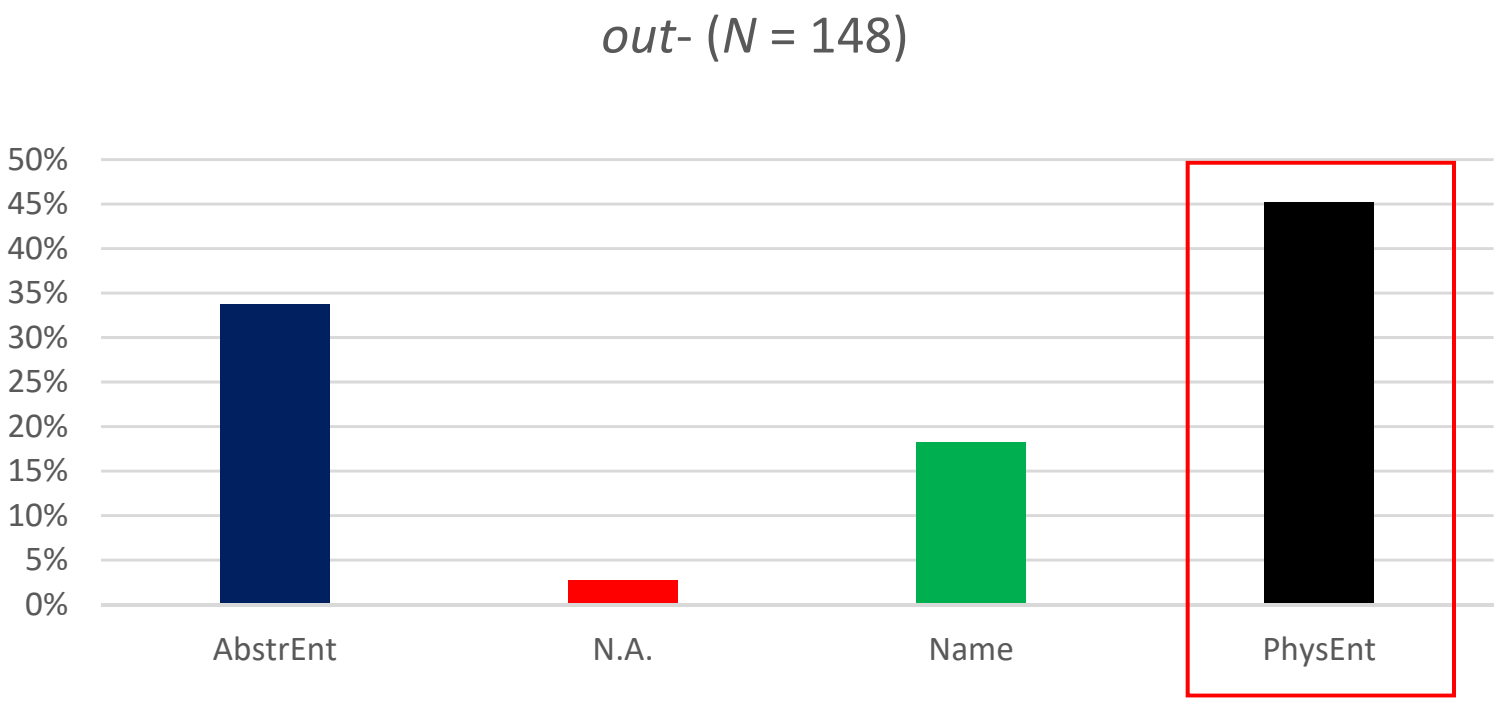
COCA (Davies 2008) & WordNet (Fellbaum 1998)

- COCA web interface
- Only simplex/nominal bases (e.g. not *out-industrialization*) – *N* = 148

- WordNet: coarse distinction wrt common hypernyms ABSTRACT and PHYSICAL ENTITIES

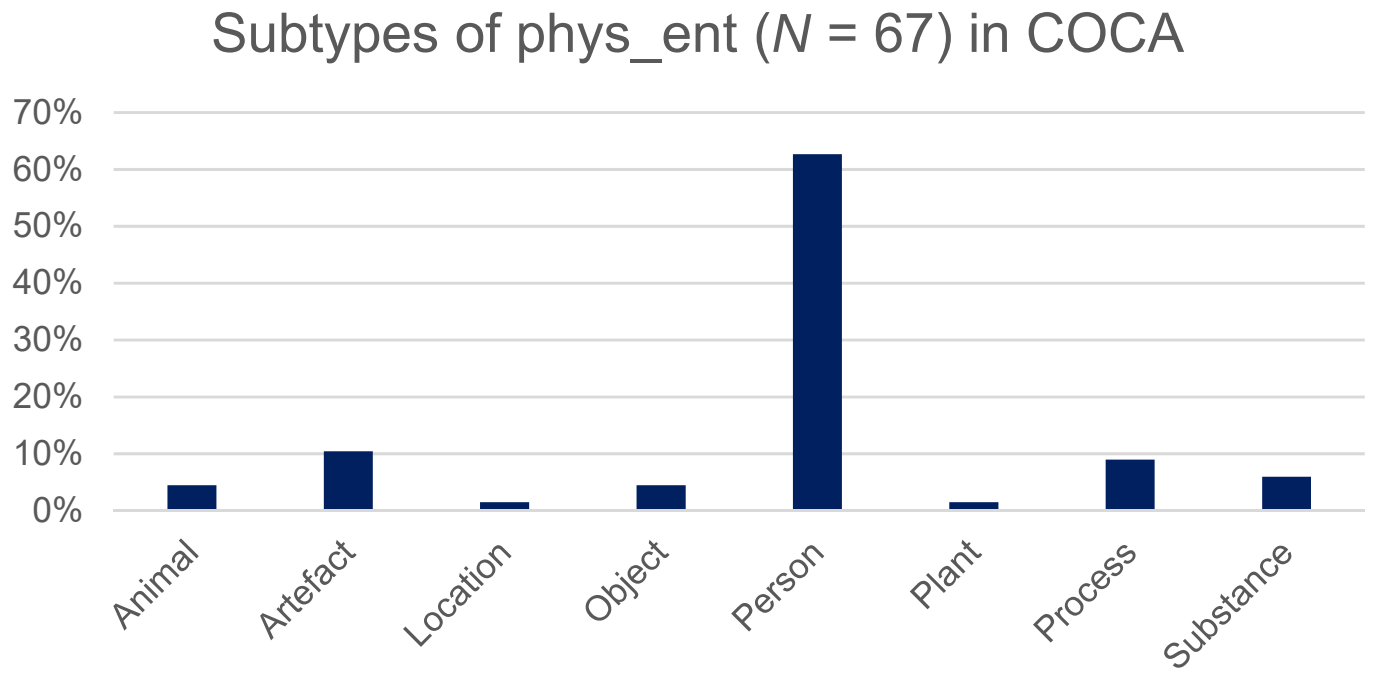
Abstract	Physical
Events (*capture*)	Person (*cynic*)
States (*balance*)	Animal (*fox*)
Relations (*speed*)	Artefact (*megaphone*)
Measure (*capacity*)	Substance (*acid*)

Extent of the phenomenon



- Nominal input to *out*- neither primarily eventuality- nor dimension-based

Semantic types



- Mostly PERSON nouns but also
  - ARTEFACT: *outrope*
  - ANIMAL: *outfox*
  - OBJECT: *outsun*
  - SUBSTANCE: *outdrug*

Semantic types

ARTEFACT nouns

(1) Over on the west side of the canal, overshadowed and often **out-megaphoned** ("MARTIN PARTY, YOUR TABLE IS READY") by the big surf-and-turf wharf bars, is the small but smart and retro-hilarious Gilligan's… (COCA)

(2) They think buying all those guns can **outgun** the military. (COCA)

- Allow for AFFORDANCE-related event-inference – scalar dimension mostly QUALITY (OF USE)
- Cardinality always available for bounded PHYSICAL ENTITIES

see e.g. Löbner 2013

Semantic types

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SUBSTANCE nouns

(1) In the Sixties and Seventies, he managed to **out-drug** Stills, Nash and Young combined. (COCA)

(2) Cuyahoga County litter bugs […] **out-garbaged** every other county along Ohio's highways last year… (COCA)

- Cardinality not available for unbounded PHYSICAL ENTITIES
- SUBSTANCES always allow for EXTENT/AMOUNT-related measuring
- Event highly context-/noun-dependent

Semantic types

PERSON nouns

- ROLE (*lawyer*), ORIGIN (*Roman*), GENERAL PERSON TERMS (daughter)
- However, ~60% attitudinal nouns

(1) They are not going to allow Obama to **out-cynic** them, which he did in December.

(2) That's one of the reasons I went to Paris. I felt I could never **out-wunderkind** him…

Attitudinal nouns

- Functional expressions (in the mathematical sense)
  - Denote (mostly) people (also objects; cf. *crap*)
  - Lexical semantics: **profile single** (highly restricted sets of) properties, behaviors, or character traits

- Profiled elements tend to be gradable
- Often encoded in linguistic form: *idiot* --> IDIOCY

(1) utter/total {bastard, idiot, genius}

(2) real/true {bastard, demagogue, snob}

see Morzycki 2009; Paradis 2008; Schmid 1999

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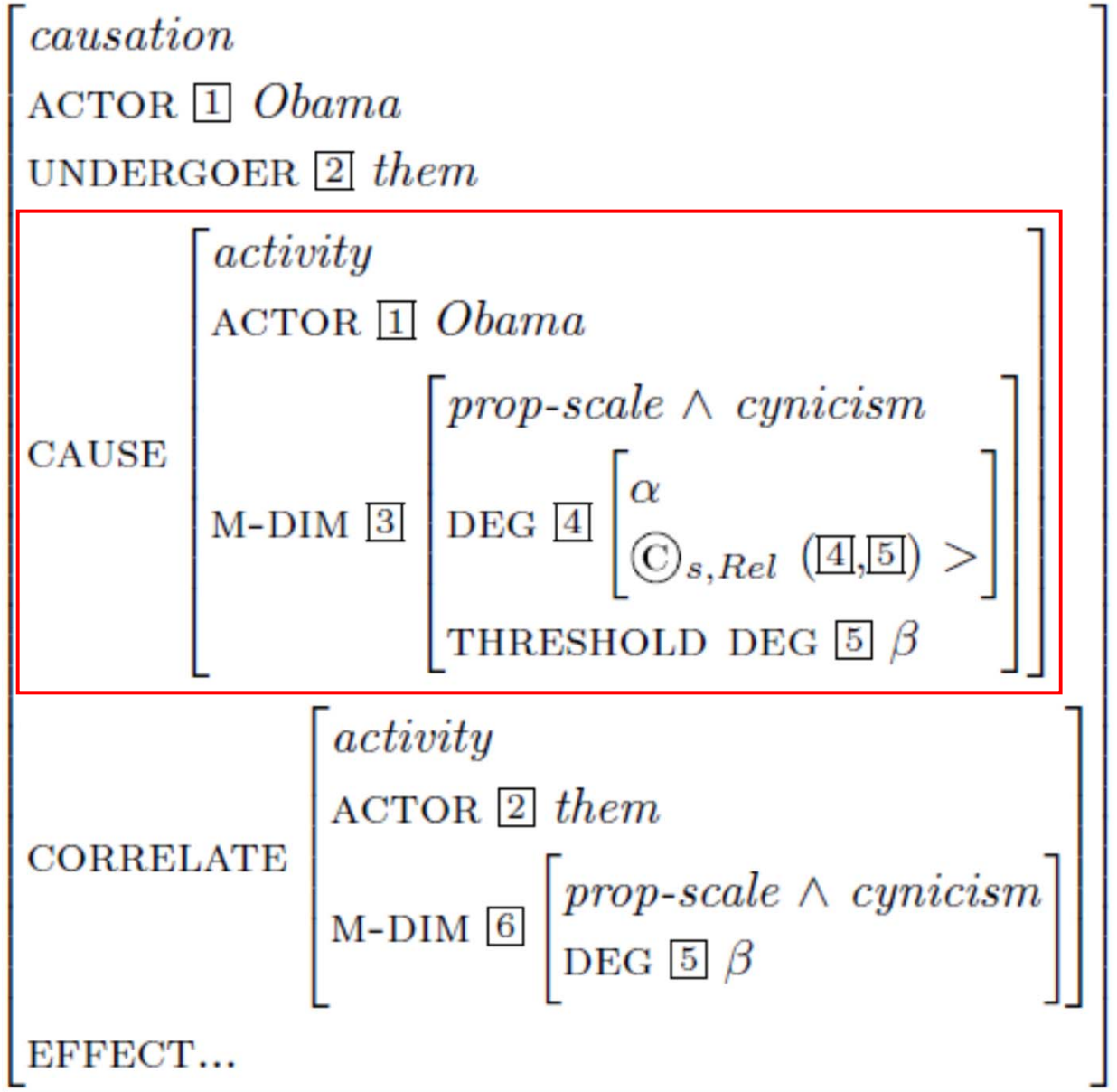
Modeling

(1) They are not going to allow Obama to **out-cynic** them, which he did in December.



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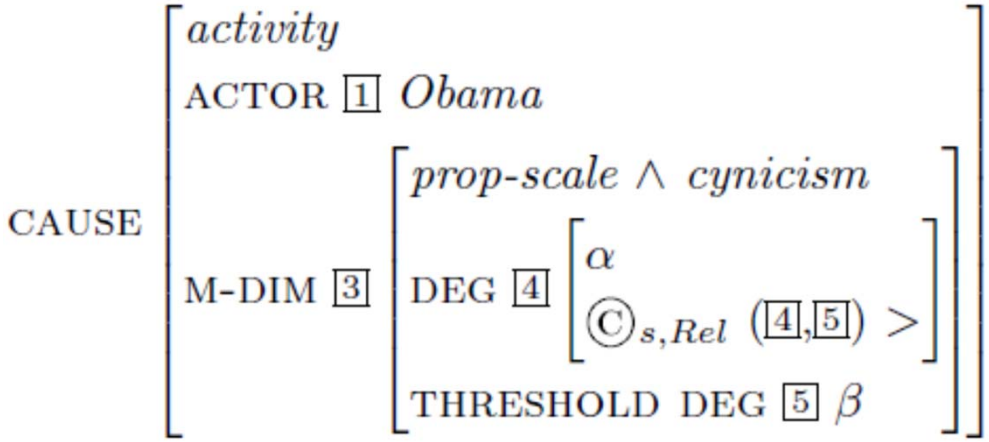
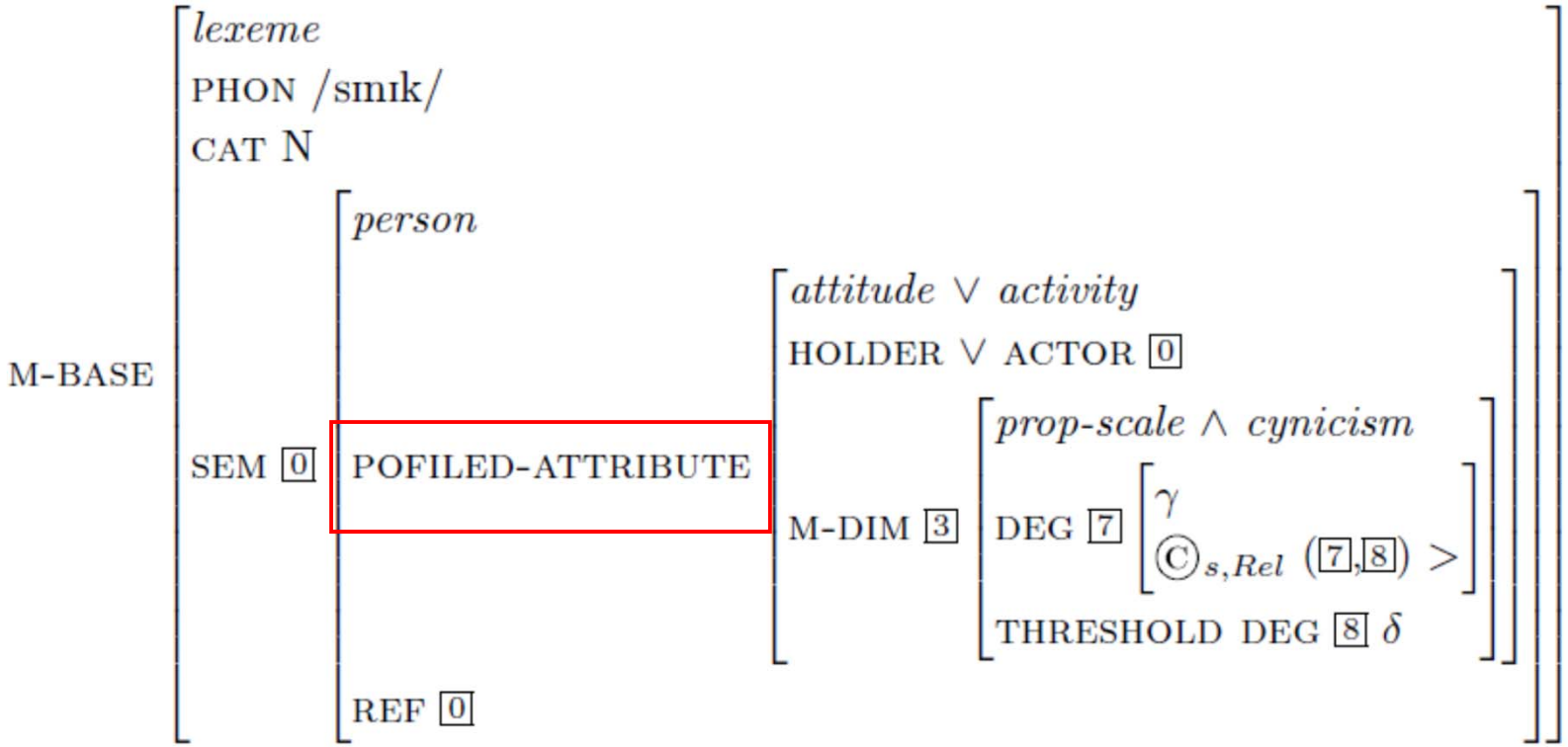


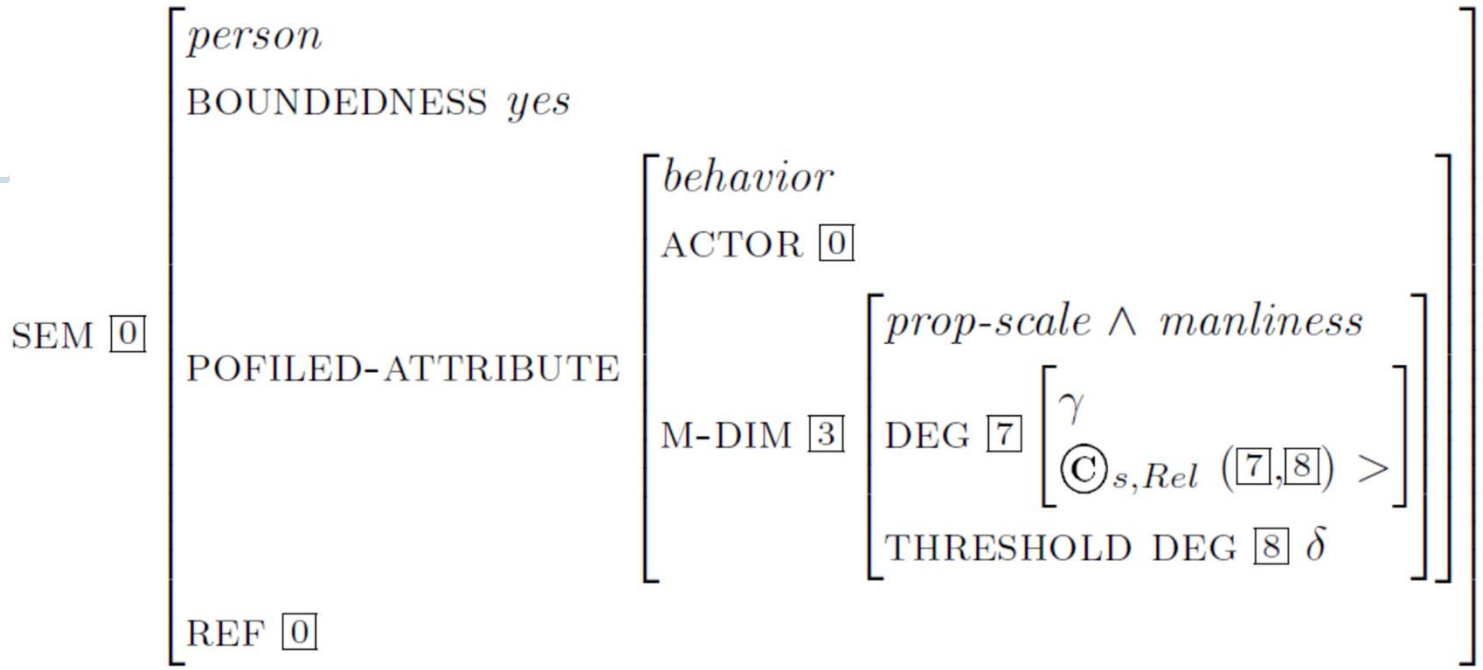


Attitudinal nouns and cardinality scales

(1) Sandberg writes, for example, about how women need to be women; […] to not pretend to **outman** men. (iWeb)

(2) The prosecution, on the other hand, has these 43 lawyers, hundreds of investigators. We are **out-manned**, out-womaned, out-moneyed at every turn in this case. (COCA)

- In (1), use of base *man* as attitudinal noun
- In (2), systematic possibility: bounded entities can induce cardinality readings



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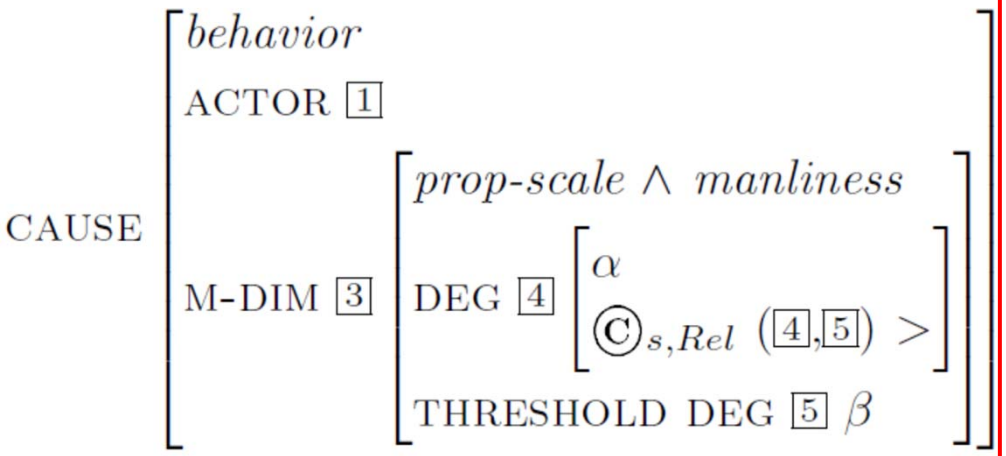
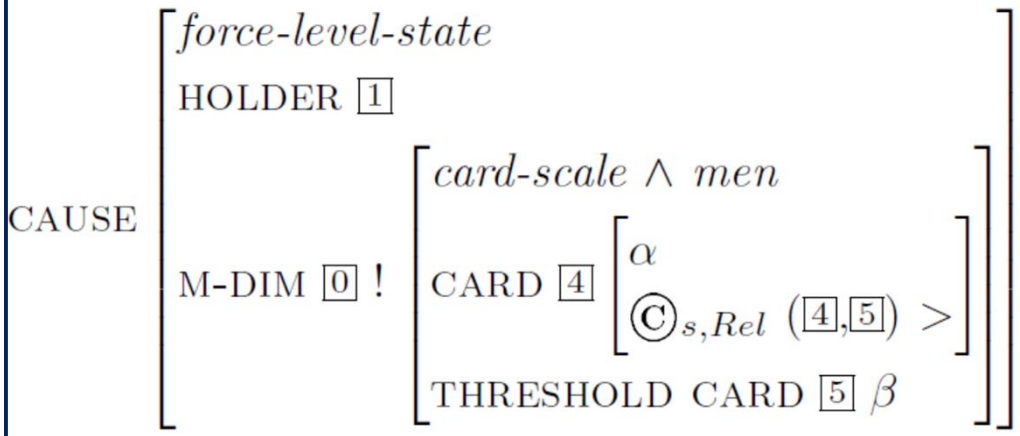
ATTITUDINAL use inherited:



General property of bounded entity:



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Summary

Summary

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- *out-*: majority of nominal bases not eventive
- Eventive structure mostly coerced via constructional semantics of WF-process

- PHYSICAL ENTITIES as base systematically allow cardinalities if bounded
- More fine-grained types come with generalizations

- Attitudinal nouns allow for scale & event inheritance
- Frames can capture embedded information – decomposition to any depth level

THANK YOU!

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Why *over-* and *under-* are not that interesting (for this talk)

- Abstract_Entities (85% of all over-/under-bases):
  - MEASURE/QUALITY nouns: e.g. *temperature*; *capacity; power; influence*
  - STATE and EVENT nouns: e.g. *stress*; *ambition*; *work*; *exercise*

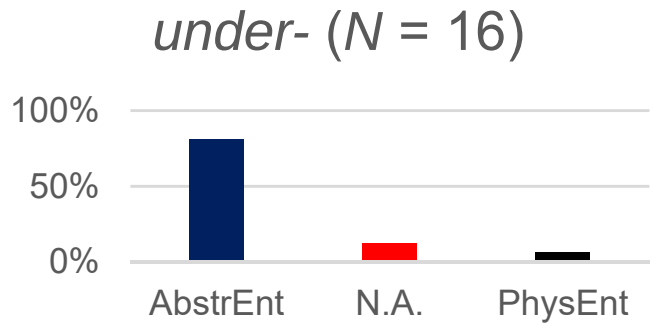
- Also Physical_Entities mostly event-related

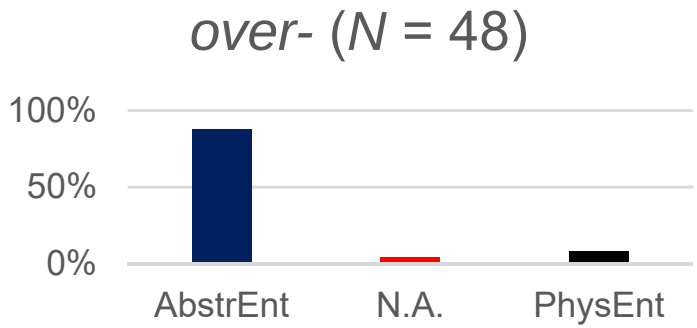
(1) … greater tendency to present physiological **overresponse**…

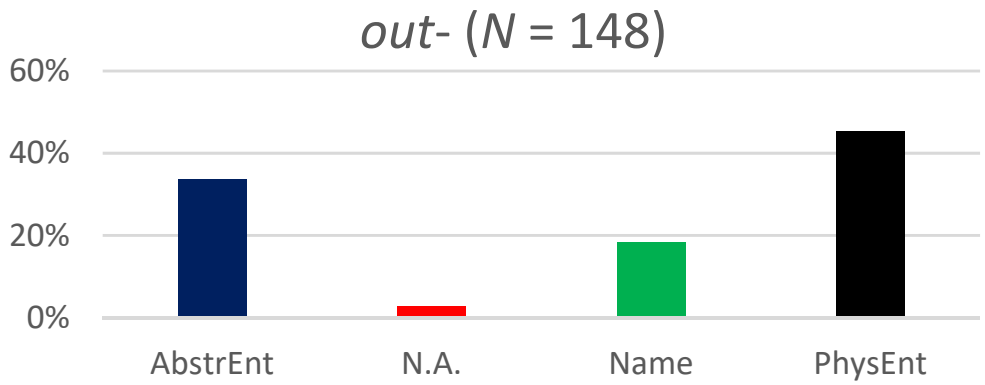
(2) In the event of **undervoltage**…

- Thus, bases in question provide either events or scales directly

Extent of the phenomenon







- *out-* v *under-*/*over-*: Chi-squared values 17.8338 and 42.3508, respectively; $p < .01$
- *under-* v *over-*: not significant