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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

## 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) &<sub>CAUSE</sub> BECOME(OUTDONE(NP2))

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

## Today's problem: denominals

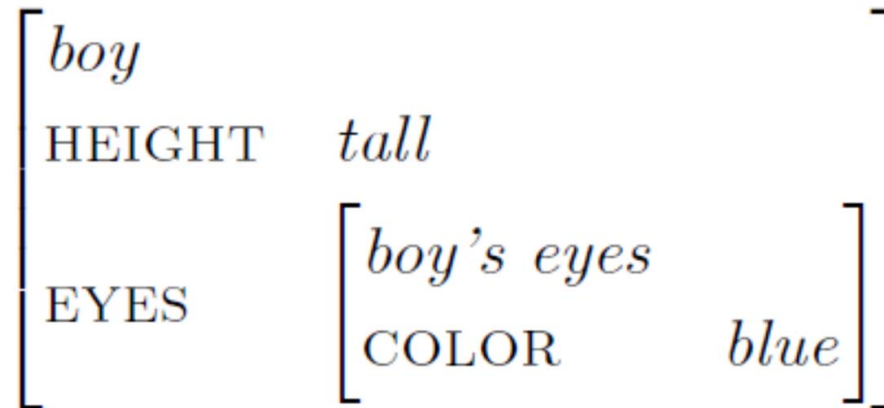
- *out-* is category-changing (despite claims to the contrary)
- Twofold problem: inferring both an event and an appropriate scale

- (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)

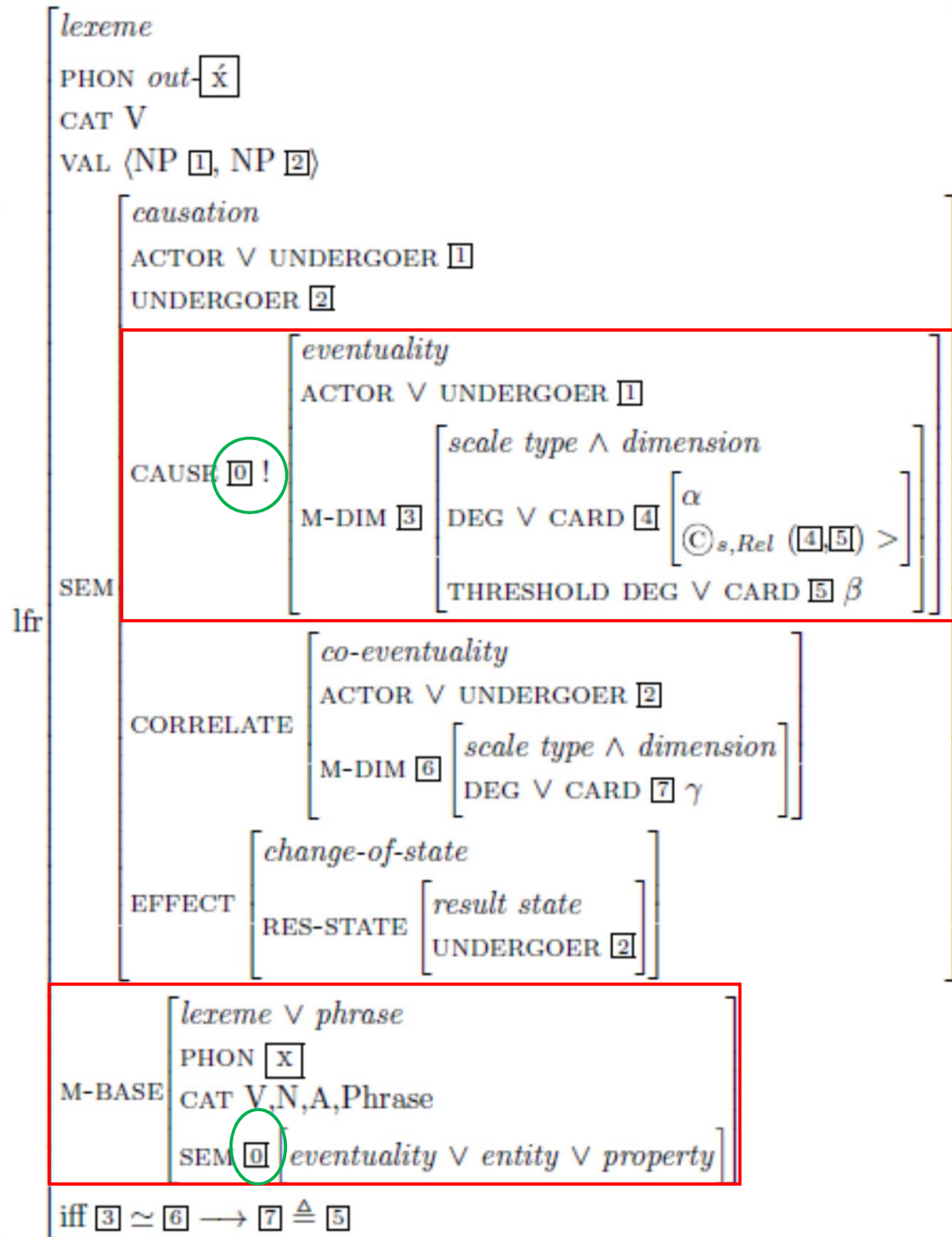
e.g. Bauer et al. 2013: ch.16; Kotowski 2020; McIntyre 2015

## 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



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

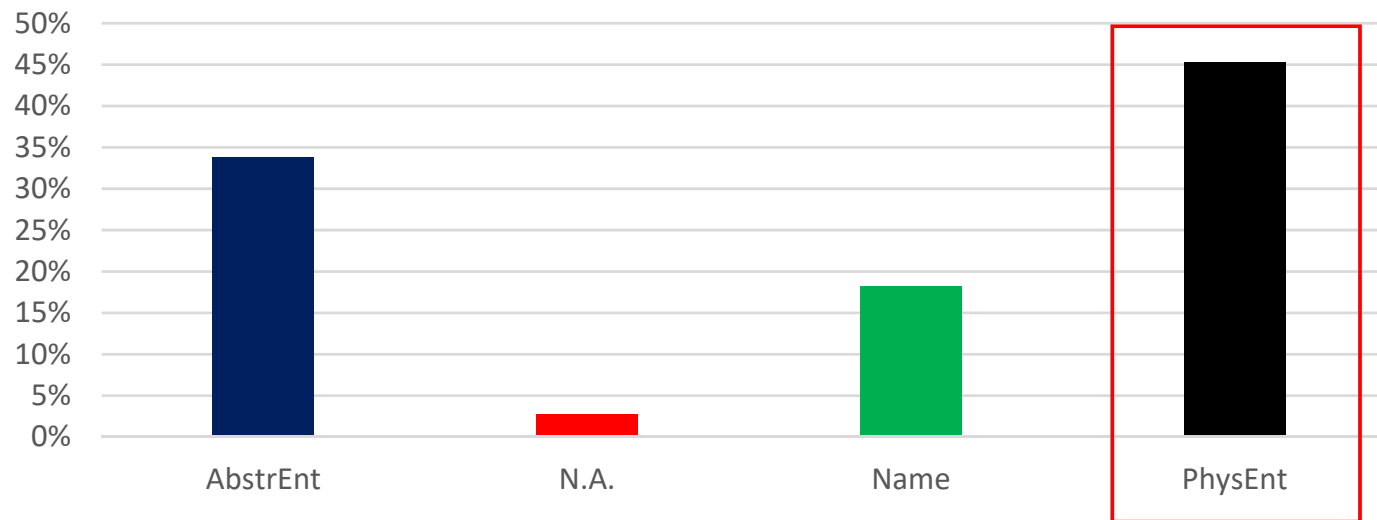
# Semantic types and generalizations

## 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

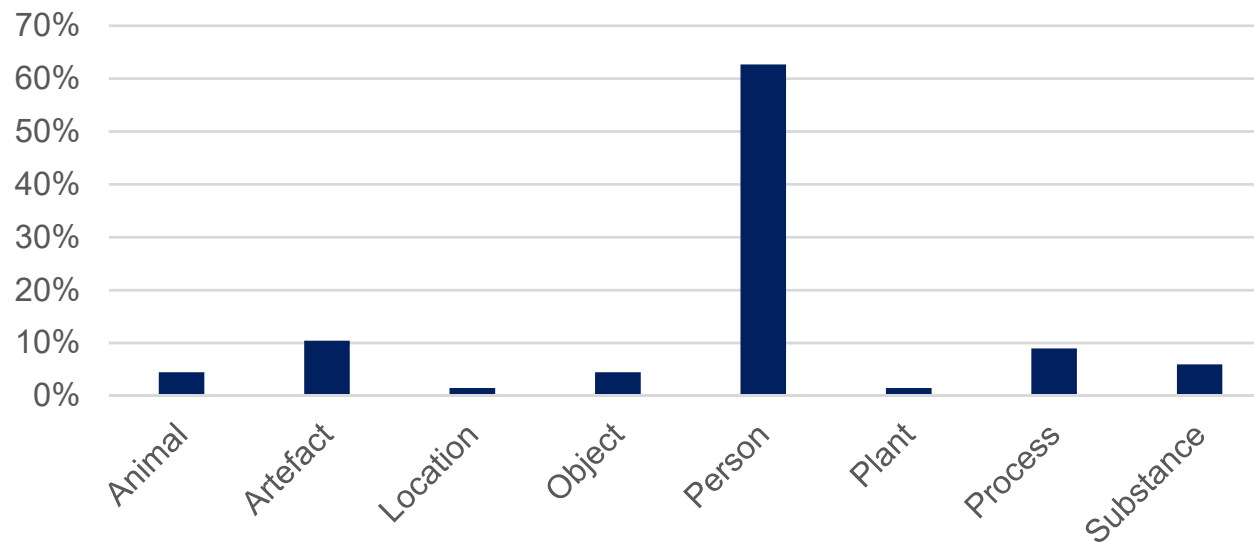
Abstract	Physical
Events ( <i>capture</i> )	Person ( <i>cynic</i> )
States ( <i>balance</i> )	Animal ( <i>fox</i> )
Relations ( <i>speed</i> )	Artefact ( <i>megaphone</i> )
Measure ( <i>capacity</i> )	Substance ( <i>acid</i> )

*out-* (N = 148)



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

Subtypes of phys\_ent (N = 67) in COCA



## ■ Mostly PERSON nouns but also

- ARTEFACT: *outrope*
- ANIMAL: *outfox*
- OBJECT: *outsun*
- SUBSTANCE: *outdrug*

## 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

## 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-garbage**d 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

## 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...

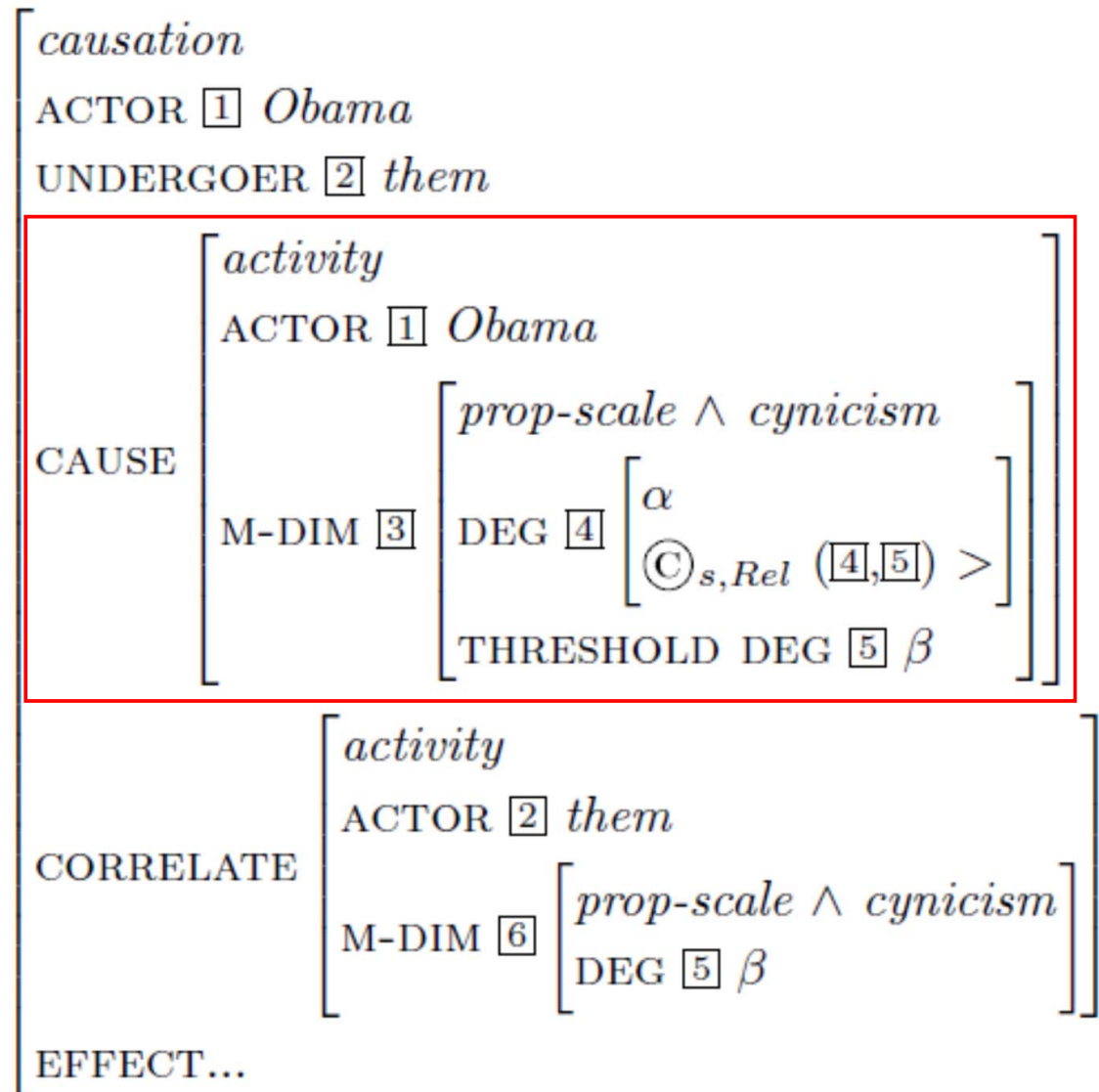
## Attitudinal nouns

- 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}

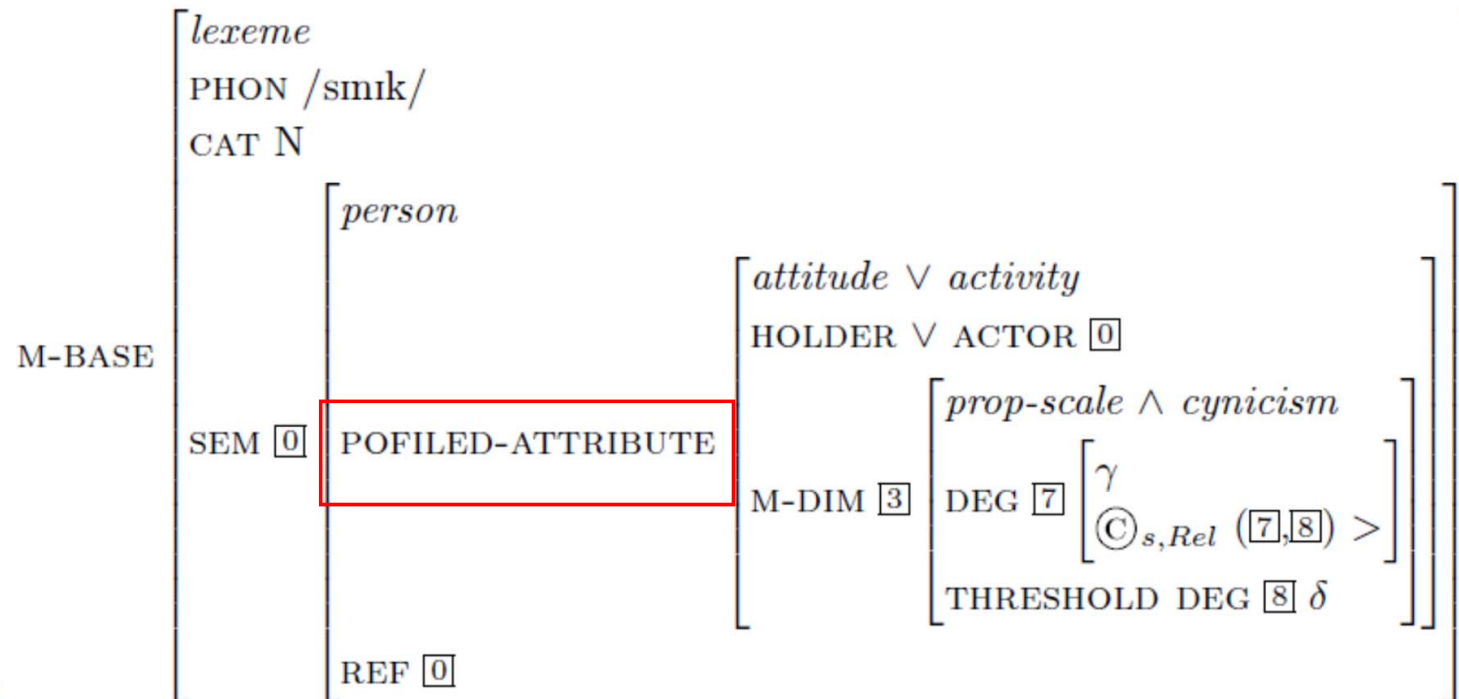
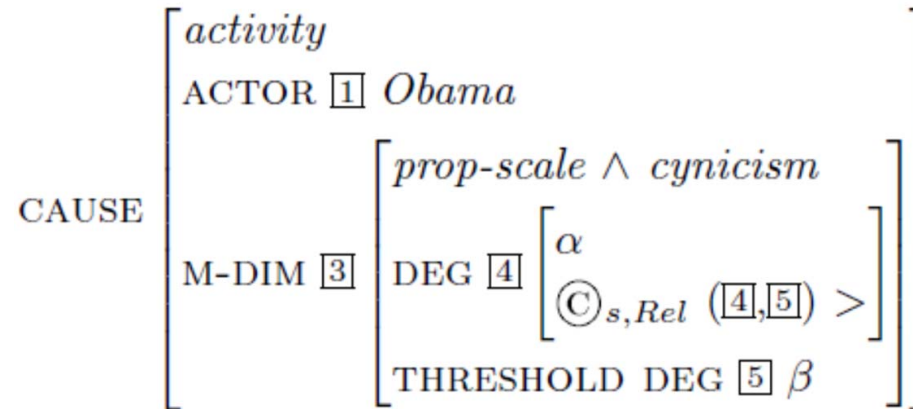
see Morzycki 2009; Paradis 2008; Schmid 1999

# Modeling

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



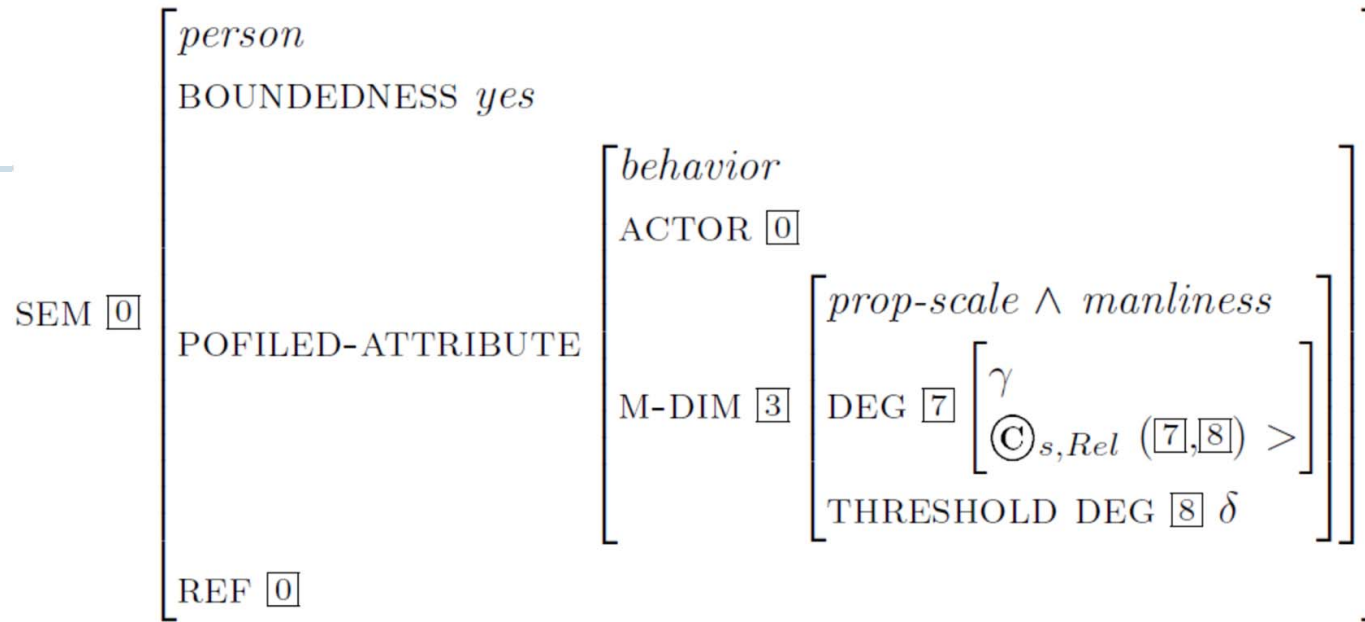
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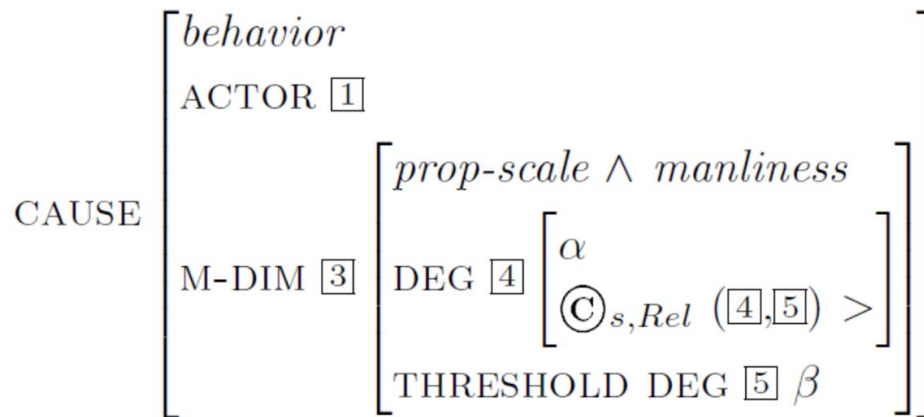


## Attitudinal nouns and cardinality scales

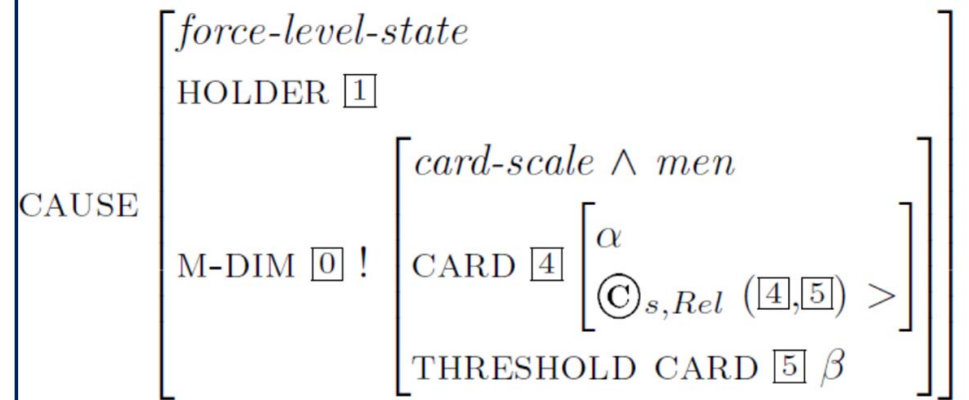
- (1) Sandberg writes, for example, about how women need to be women; [...] to not pretend to **outman** men. (iWeb)
  - (2) The prosecution, on the other hand, has these 43 lawyers, hundreds of investigators. We are **out-manned**, out-womaned, out-moneyed at every turn in this case. (COCA)
- In (1), use of base *man* as attitudinal noun
  - In (2), systematic possibility: bounded entities can induce cardinality readings



ATTITUDINAL use inherited:



General property of bounded entity:



# Summary

- *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

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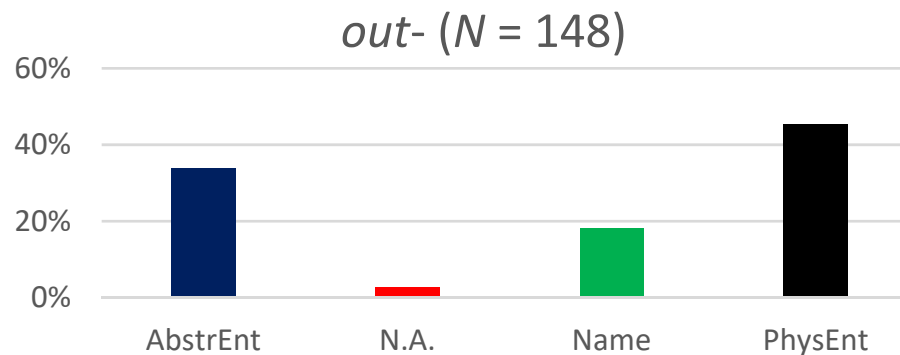
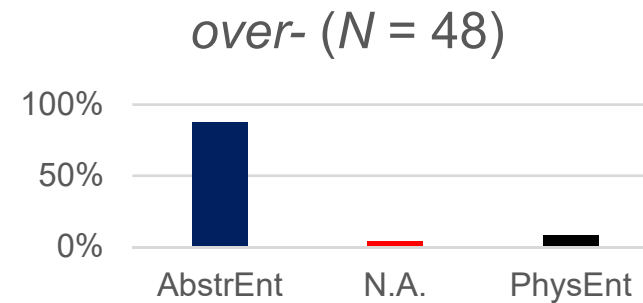
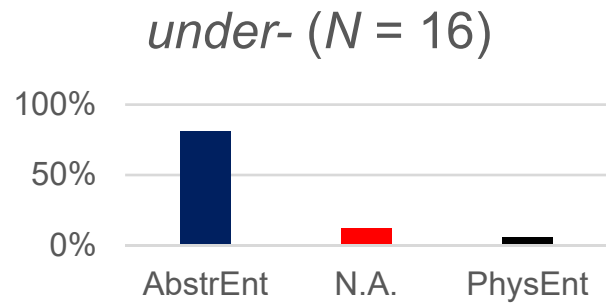
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## Why *over-* and *under-* are not that interesting (for this talk)

- 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