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Locative prefixes and nominal scalarity

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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) &_{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)

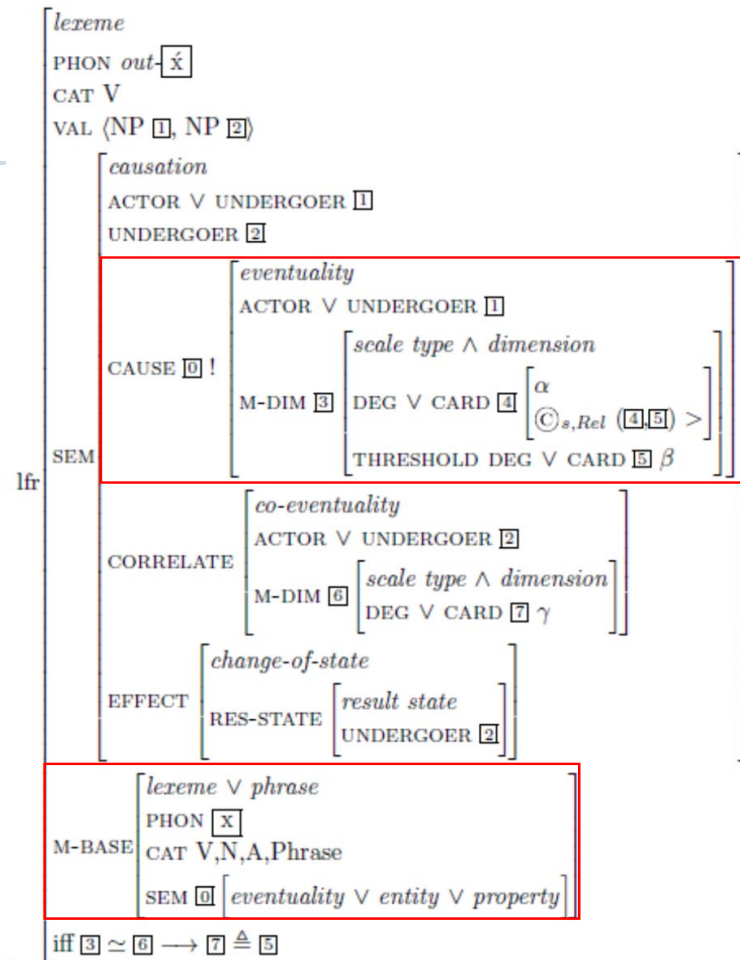
e.g. Bauer et al. 2013: ch.16; Kotowski 2020; McIntyre 2015

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

$$\left[\begin{array}{l} \textit{boy} \\ \text{HEIGHT} \quad \textit{tall} \\ \text{EYES} \quad \left[\begin{array}{l} \textit{boy's eyes} \\ \text{COLOR} \quad \textit{blue} \end{array} \right] \end{array} \right]$$

see Barsalou 1992; Löbner 2014; Petersen 2007



see Kotowski 2020; in prep.

Focus

- Focus on PHYSICAL ENTITIES
 - 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

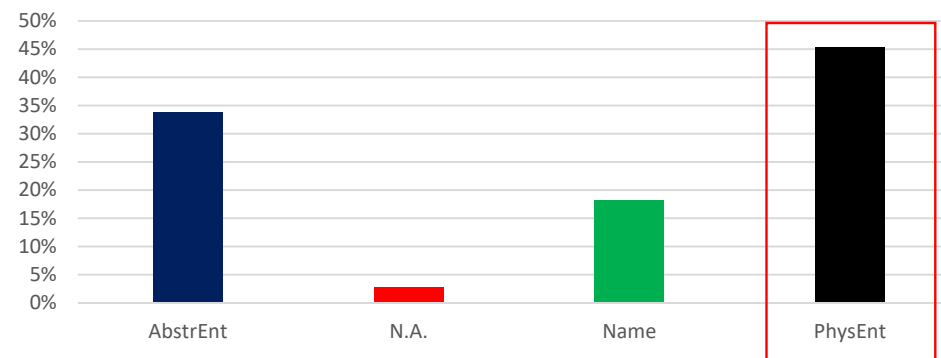
Extent of the phenomenon

COCA (Davies 2008) & WordNet (Fellbaum 1998)

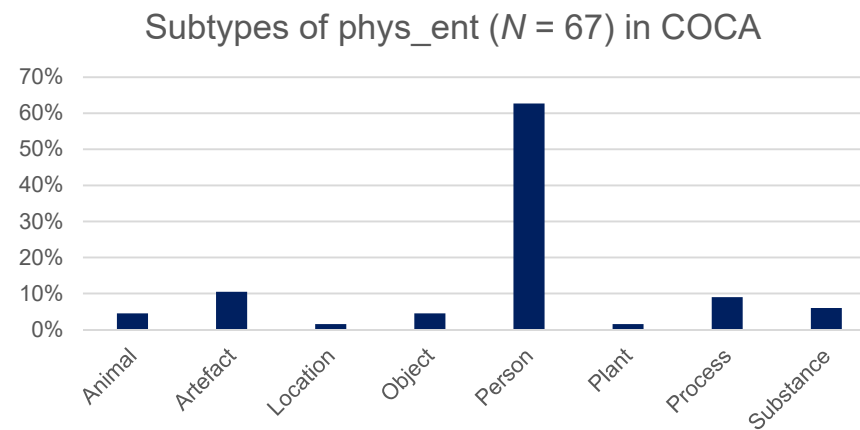
- COCA web interface
- Only simplex/nominal bases (e.g. not *out-industrialization*) – $N = 148$
- WordNet: coarse distinction wrt common hypernyms ABSTRACT and PHYSICAL ENTITIES

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



■ 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)

- Cardinality always available for bounded PHYSICAL ENTITIES
- ARTEFACTS always allow for AFFORDANCE-related event-inference

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-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

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

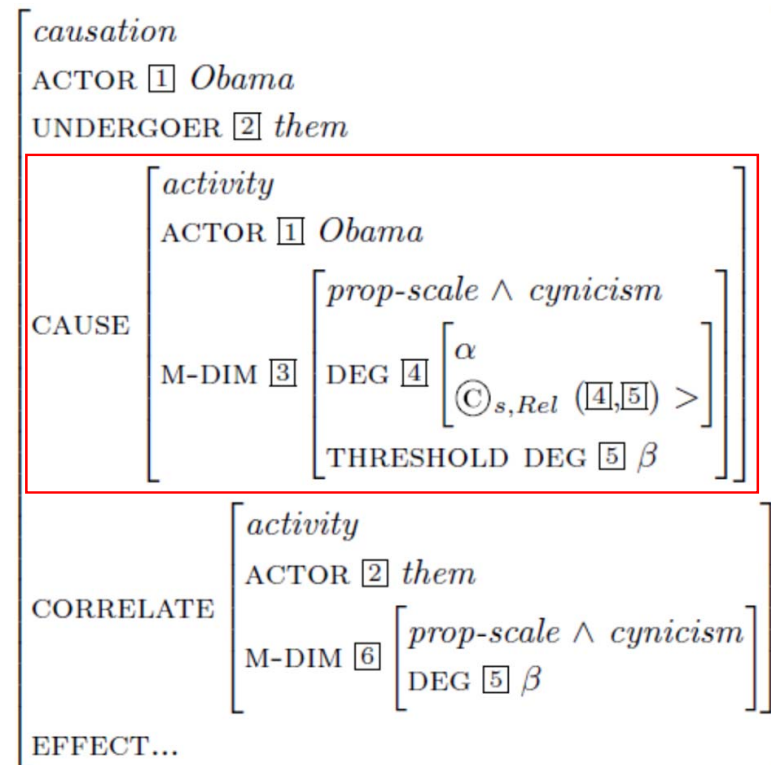
- Functional expressions (in the mathematical sense)
 - Denote (mostly) people (also objects; cf. *crap*)
 - Lexical semantics: **profile single** (highly restricted sets of) properties, behaviors, or character traits

- These embedded elements tend to be gradable
- Often encoded in linguistic form: *idiot* --> IDIOCY
- (1) utter/total {bastard, idiot, genius}
- (2) real/true {bastard, demagogue, snob}

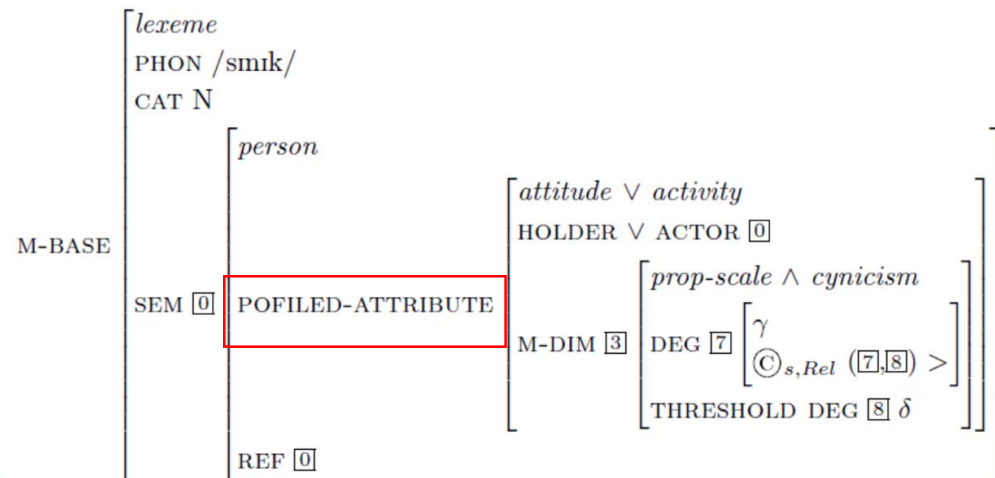
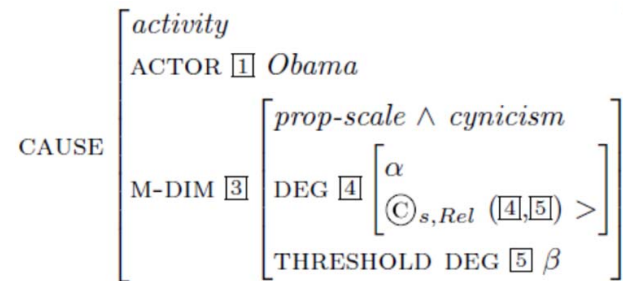
see Morzycki 2009; Paradis 2008; Schmid 1999

Modeling

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



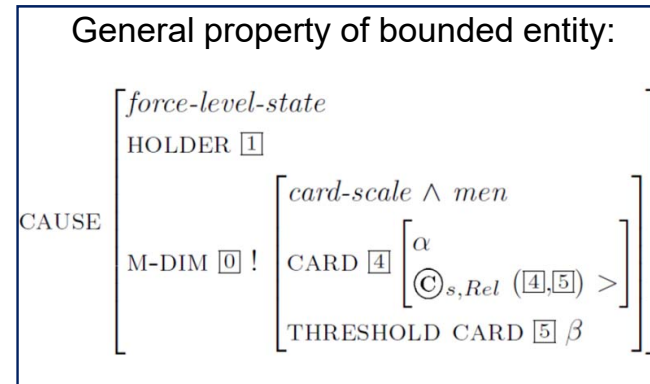
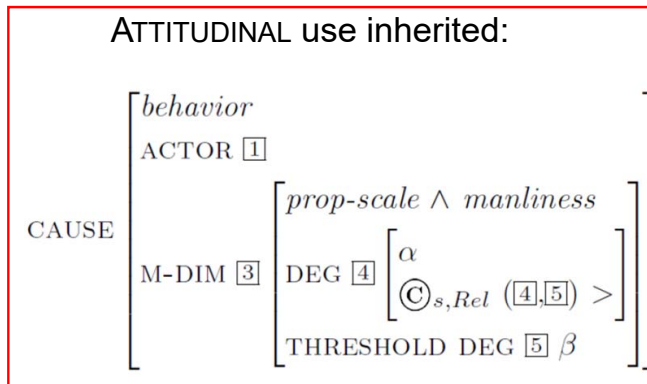
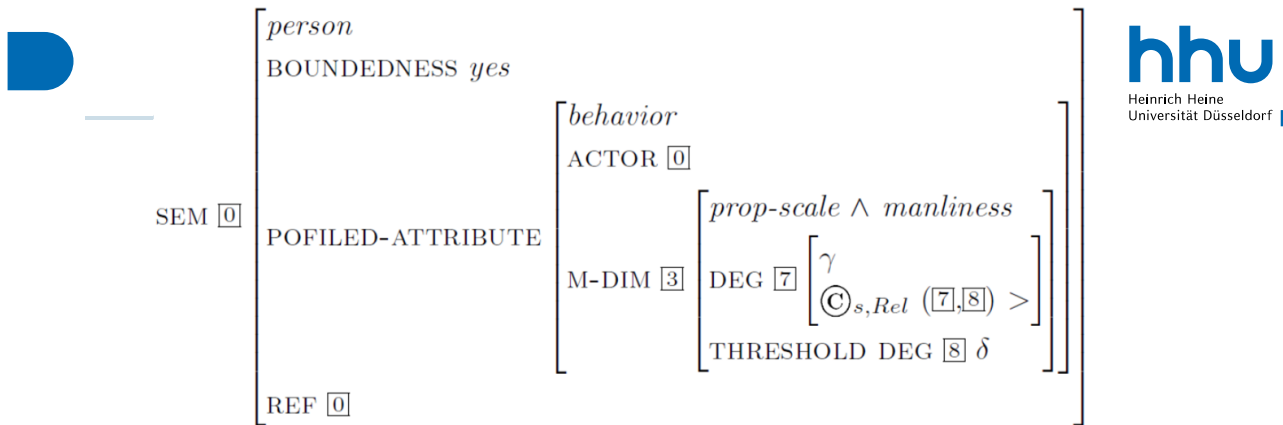
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Attitudinal nouns and cardinality scales

- (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



Conclusion

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 tend to come with generalizations
- E.g., attitudinal nouns allow for scalar inheritance for *out*-
- Frames are well suited for capturing embedded information – allow for decomposition to any depth level



THANK YOU!

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References

- Bauer, L., Lieber, R., and Plag, I. (2013). *The Oxford reference guide to English morphology*. Oxford University Press, Oxford.
- Barsalou, L. W. (1992). Frames, concepts, and conceptual fields. In Lehrer, A. and Kittay, E., editors, *Frames, fields, and contrasts: New essays in semantic and lexical organization*, pages 21-24. Lawrence Erlbaum Associates, Hillsdale, NJ.
- Davies, M. (2008). *The Corpus of Contemporary American English: 400+ million words, 1990-present*. Available online at <https://corpus.byu.edu/cocaf/>.
- Davies, M. (2018). *The 14 billion word iWeb Corpus*. Available online at <https://corpus.byu.edu/iWeb/>.
- Fellbaum, C (ed.). 1998. *WordNet: An Electronic Lexical Database*. Cambridge, MA: MIT Press.
- Kotowski, S. (2020). The semantics of English *out*-prefixation: A corpus-based investigation. *English Language and Linguistics*, 12:1-29.
- Kotowski, S. (in prep.). Modeling the prefix *out*- in frames.
- Löbner, S. (2014). Evidence for frames from natural language. In Gamerschlag, T., Gerland, D., Osswald, R., and Petersen, W., editors, *Frames and concept types, Studies in linguistics and philosophy*, pages 23-57. Springer, Dordrecht.
- McIntyre, A. 2015. Denominal verbs. In Peter O. Müller, Ingeborg Ohnheiser, Susan Olsen & Franz Rainer (eds.), *Word-formation*, 434–50. Berlin and Boston: De Gruyter.
- Morzycki, Marcin. 2009. Degree modification of gradable nouns: Size adjectives and adnominal degree morphemes. *Natural Language Semantics* 17(2), 175–203.
- Paradis, Carita. 2008. Configurations, construals and change: Expressions of DEGREE. *English Language and Linguistics* 12, 317–43.
- Petersen, W. (2007). Representation of concepts as frames. In Skilters, J., Toccafondi, F., and Stemberger, G., editors, *Complex cognition and qualitative science, The Baltic international yearbook of cognition, logic and communication*, pages 151-170. University of Latvia, Riga.
- Schmid, H. 1999. Towards a functional-cognitive lexicology of nouns. In Wolfgang Falk-ner und Hans-Jörg Schmid, eds., *Words, lexemes, concepts - approaches to the lexicon. Studies in honour of Leonhard Lipka*, Tübingen: Narr, 213-226.
- Solt, S. (2015). Measurement scales in natural language. *Language and Linguistics Compass*, 9(1):14{32.
- Talmy, L. (2000). *Toward a cognitive semantics, Vol.II: Typology and process in concept structuring. Language, speech, and communication*. MIT Press, Cambridge, MA.