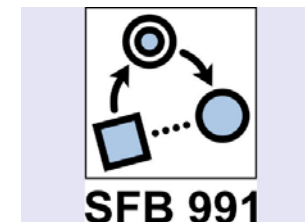


out-prefixed verbs in English: evidence against one “polysemous affix”

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Event semantics workshop, Berlin

11/01/2019



The general problem: polysemy in word-formation

- Many derivational processes can have a number of readings; e.g. English *er*-nominalizations (Bauer et al. 2013; Lieber 2004; Lieber & Andreou 2018):

AGENT: *runner*

EXPERIENCER: *hearer*

INSTRUMENT: *blender*

LOCATION: *diner*

etc.

Today

- Polysemy in *out*-prefixation? (see Bauer et al. 2013:ch.16)

locative nouns outhouse, outstation

locative participle adjectives out-hanging, outstretched

locative verbs outgas (sth.), outsource sth., out-migrate

comparative verbs outrun so., outdollar so., outstubborn so.

- RQ1: what do these two verbal output categories mean / do / how are they used?
- RQ2: how similar are they? Approach feasible with one core meaning (monosemy)? Or different derivational processes/affixes (see the discussion in Booij 2010; Rainer 2015)

Today

- Empirical analysis based on attested examples (descriptive part on comparative cases based on Kotowski to appear)
- Comparing (verbal) locative and comparative *out-*
- Modelling of general cases as descriptive lexeme formation rules in frame semantics

Database (mostly COCA & iWeb; see Davies 2008; 2018):

- ~1,000 attested examples for comparative *out-* (~650 types)
- ~80 attested types for locative *out-* (~60 types)

Polysemy in derivation

Notion of polysemy in derivational patterns far from clear

- What is polysemous?
 - Affixes? (They will have to carry meaning then)
 - Derived words?
- E.g., Plag (1999) for *-ize* or Lieber (2004)/Plag (2003) for *-er* essentially provide monosemy analyses:
 - Affixes carry one highly underspecified meaning
 - Polysemy arises on derivative level (different output categories)
- Lieber (2004) on *over-*:
 - Established as prefix and prepositional free form
 - Prefix polysemy based on polysemy of free form
- Point of departure: **Synchronic semantic relationship** between different senses necessary! (see Rainer 2014; Olsen 2019)

General properties

Comparative

1) On and off camera, more girls are dishing about discharge, **outfarting their friends**, and taking part in other beyond-ribald behavior. (COCA)

2) Women **out-superstition men**. (OED)

- By far most productive sense of *out-* (Schröder 2011)
- Always generates transitive verbs
- Has applicative potential and category-changing potential
- Commonly assumed meaning: ~“X more/better/faster etc. than Y”

Bauer and Huddleston (2002:1679); Bauer et al. (2013:ch.16)

General properties

Locative interpretations

- 1) ...I have to run down to the armory to **outprocess** a **Soldier** mid month. (iWeb)
- 2) The MTL told me once **I outprocess from Keesler** I am off of their books... (iWeb)

- Far less productive (Schröder 2011)
- Variable transitivity (status of PPs as P-Objects or Adjuncts unclear) and some form of causative alternation for some bases
- category preserving (some unclear cases)

“...the semantic uniformity and robust productivity of the category-changing version of the prefix might be taken as evidence that *out-* has evolved into **two distinct homophonous affixes** [...] [T]he existence of **an overlap between the two meanings** in forms derived from verbs might argue for a **polysemy** analysis. We will not decide between these two possibilities here.” Bauer et al. (2013: 347)

The typical “polysemy story”

Basic notions of how space is encoded in language (Talmy 2000: 184)

Figure: ~moving/moveable object; variable orientation; salient issue

Ground: ~reference object, stationary setting relative to a reference frame

Some version thereof uncontroversial for prepositional/locative semantics, e.g.:

1) **Peter** is in **the house**. [static]

2) The MTL told me once **I outprocess from Keesler** I am off of their books... (iWeb) [dynamic]

- PATH leading out
- EDGE of GROUND provides threshold to be crossed

The typical “polysemy story”

1) *The girl outdanced the giant.*

- *Out-*, in this sense, is said to be comparative
- Figure-Ground constellation as metaphorical extension of locative case
- PATH >> SCALAR DIMENSION
- In 1), *the giant* provides a static threshold (the metaphoric EDGE of GROUND)
- *The girl* is the FIGURE, “moving” along the SCALAR DIMENSION, and eventually surpassing the threshold
- Scalar dimensions are (largely) supplied contextually

Cf. Baker (2018); Talmy (2000:ch.3); Tolskaya (2014); for Russian prefixes Zinova (2016)

The typical “polysemy story”

“*out*-V NP ‘surpass/best/beat NP at Ving’

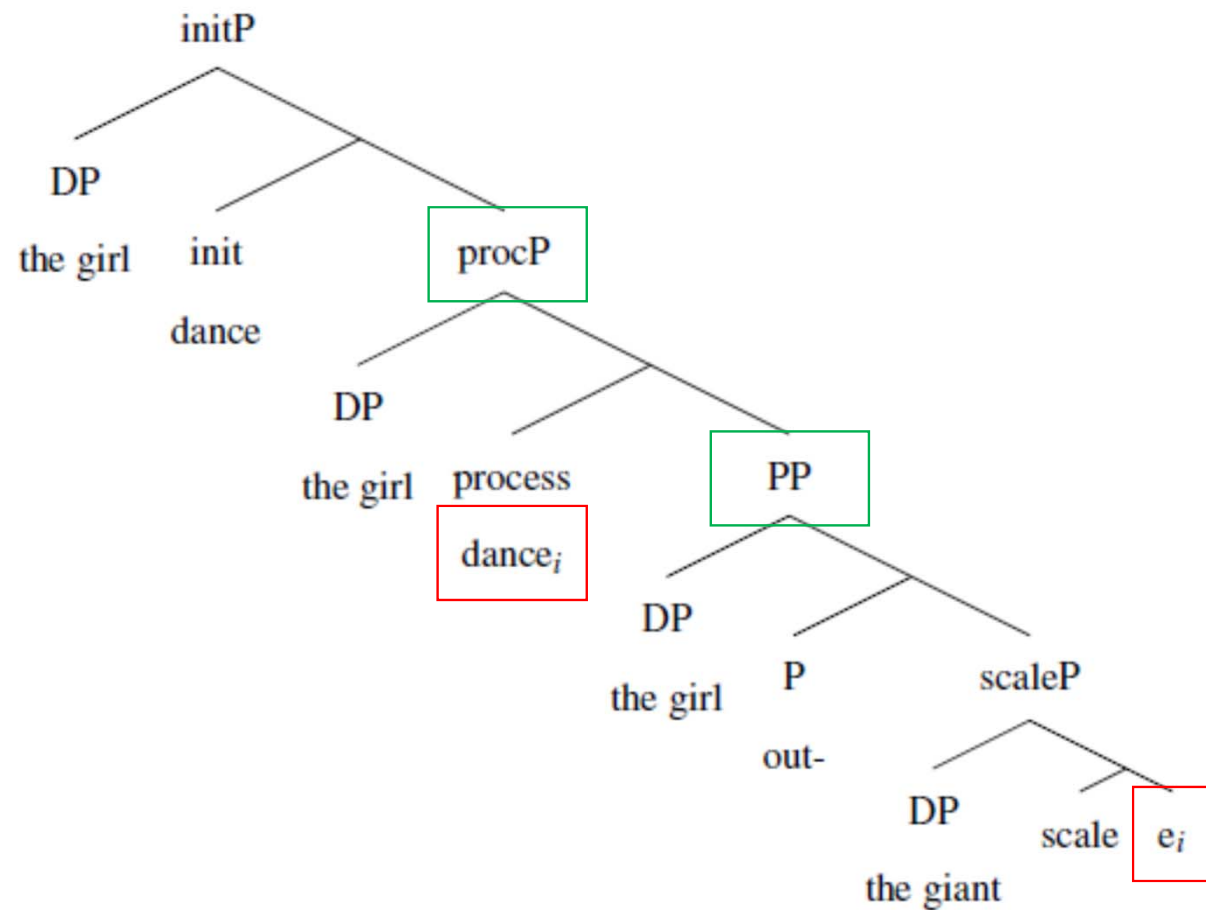
[I ACTed IN-SURPASSMENT-OF him] CONSTITUTED-BY [I played (the melody)]

English: I outplayed him.” (Talmy 2000: 260)

- *out*-prefixation as a satellite pattern lexicalized into **action correlation**
- Basic idea of conflated complex event (see also Levin & Rappaport Hovav 1995; McIntyre 2003)
- MACRO-event: SURPASSMENT of AGENCY and CORE-event: AGENT’s action
- SURPASSMENT presupposes sameness of events

The typical “polysemy story”

The girl outdanced the giant. (from Tolskaya 2014: 8)



Problem for a monosemy analysis: doublets

1a) Hispanics as well as Asians are **out-marrying** by something like 60%. I mean, they marry somebody other than a Latino. (COCA)

1b) In three of four decennial years between 1890 and 1920, black men **out-married** white men. (iWeb)

2a) Mosquito repellent will **outblast** scent. (OED)

2b) Volume was tough to compare [...] So equipped, it **out-blasted** the other two... (iWeb)

- Only ~80 locative cases and thousands of comparative verbs, but 20 doublets
- All VerbNet classes for locatives are also represented for comparative cases (see Kipper et al. 2008)
- Unexpected on account solely relying on base-affix interaction

Problem for any polysemy analysis: stress assignment

1a) Hispanics as well as Asians are **óut-marrying** by something like 60%. I mean, they marry somebody other than a Latino. (COCA)

1b) In three of four decennial years between 1890 and 1920, black men **out-márried** white men. (iWeb)

2a) Mosquito repellent will **óutblast** scent. (OED)

2b) Volume was tough to compare [...] So equipped, it **out-blásted** the other two (iWeb)

- Ultimately depends on theory of stress assignment (when/how?) (e.g. Spencer 1996)
- If stress is a lexical property of derivational affixes/WF-processes (cf. Plag 2003): no polysemy, but partial homonymy

Syntactic frames of locative *out*-verbs

FIGURE **GOAL** **GROUND/SOURCE** **CAUSER** (cf. VerbNet; Talmy 2000)

Intransitive pattern:

- 1) **Japanese women** outmarry **to other ethnicities** (mostly white) by 3:1... (iWeb)
 - 2) The crane ratchets of **the later arrivals** could still be heard clearly as **their crews** outramped. (BNC)
- ~semantics: DO(SUBJECT, MORPH_BASE) &_{CAUSE} BE/BECOME(OUT_OF_GROUND(SUBJECT))

Transitive:

- 3) **Mosquito repellent** will outblast **scent**. (OED)
 - 4) The next morning, **we** out-loaded **the compostable materials** **into the truck** from the big window. (COCA)
- ~semantics: DO(SUBJECT, MORPH_BASE) &_{CAUSE} BE/BECOME(OUT_OF_GROUND(OBJECT))

Comparing argument mapping

- ‘Locative’ *out*- **not a homogenous** group
 - *outmarry to other ethnicities* already includes a metaphorical shift
 - It’s far more versatile wrt realized participants
- One clear generalization: the **one argument that needs to be realized is the FIGURE**
 - Transitive: Figure = Object
 - Intransitive: Figure = Subject
- If *out*-’s semantic core is introducing a marked PATH/SCALE, **arguments are mapped assymmetrically**:
 - Locative-transitive: Figure = Object
 - Comparative: Figure = Subject

Dual nature of comparative *out-*

1) The trick here is to **outsit your neighbors**. Lots of hunters get tired and antsy after spending many hours in a stand, and start coming down to the ground by 10 A.M. or so. (COCA)

Analysis 1—scalar comparison

- 1) means ‘sit on the stand longer than your neighbors’ → the unselected Object serves as a mere threshold

Analysis 2—resultative

- 1) means ‘sit on the stand (possibly longer)—thereby competitor loses out’ → the unselected Object is licensed in a resultative structure (new subevent) (McIntyre 2003; Nagano 2011)

English resultative constructions

1) Bill rolled out of the room. [resultative PP headed by *out*—RP spatial configuration]

2) They drank the pub dry. [resultative AP—Object **unselected by verb**]

- If transitive, typically **causative with Subject causing RESULT and Object being UNDERGOER**

- Always **conflation of two subevents**

- Informal semantics for 2) DO(THEY, DRINK) &_{CAUSE} BECOME(DRY(PUB))

McIntyre (2003) analyzes several English preverbs as resultatives, incl. *out*- (also Nagano 2011)

3) John outdrank Paul. DO(JOHN, DRINK) &_{CAUSE} OUTDONE(PAUL)

4) Repellent outblasts scent. (locative) DO(REP., BLAST) &_{CAUSE} BE(OUT(SCENT))

See Goldberg (1995); Goldberg & Jackendoff (2004); Jackendoff (1996); RH&L (2001); Talmy (2000)

Other resultative uses of *out*

- Resultative particles:

1) knock s.o. out; strike sth. out; die out; elbow s.o. out (see Los 2008)

- Resultative main verb:

2) She threatened to out him as father of her child. (OED)

- No other clearly “comparative” uses of *out* in English

Some historical / cross-linguistic remarks

- remarks in the literature on development assume intermediary step from locative to comparative meaning (Brinton 1988: ch.5; Los et al. 2012: chs.6/7; Nevalainen 1999; Nagano 2011)

Locative (separable prefix ‘out/outside/outward’: *outdrive*, *outflow*) **OE** >>

Intensifying-resultative (*outbaken* ‘bake thoroughly’, *out-tire* ‘tire completely’) **ME** >>

“Comparative” (*outrun*, *outdollar*, *outstubborn*) **EModE**

- Cognate prefixes/particles in other West-Germanic languages incl. completive/resultative readings, but no remotely equivalent comparative uses (e.g. Blom 2005: 182ff.; Fleischer et al. 2012: 406ff.)

German: *ausleuchten* ‘illuminate completely’; *ausrollen* ‘roll to a stop’

Dutch: *uitsluiten* ‘exclude’; *uitspreiden* ‘spread out’

Comparative *out-* is not a classic aspectual telicity marker

- 1) The first all-Australian women's pairing to make the title match in Paris in 46 years, Dellacqua and Barty **were outclassed in 66 minutes**. (iWeb)
- 2) After **being thoroughly outclassed for ten straight minutes** by an opponent no one expected him to defeat, a battered and bruised Tim Boetsch trudged back to his corner [...] (iWeb)

Atelicity/**unboundedness** and **stativity** compatible with resultative semantics (see Goldberg & Jackendoff 2004: 542f.):

- 3) For hours, Bill hammered the metal ever flatter. [property result]
- 4) The rope stretched over the pulley. [stative locative result]

Promiscuity of comparative *out-*

Stative bases (pace e.g. Baker 2018; Levin 1999)

1) At about 6-foot-3, he **outweighs** me by an easy 80 pounds... (COCA)

Change-of-state/Achievement (pace Bresnan 1982; Rappaport Hovav & Levin 2002; Tolskaya 2014)

2) Coke's biggest failure, the so-called "New Coke" of 1985, was an attempt to "**out-sweeten**" Pepsi which had ten more calories of sugar... (iWeb)

3) I was also able to **outspot** him when it came to seeing fish at a distance. (googlebooks)

Adjectival/nominal bases (pace McIntyre 2014; Nagano 2011)

4) JOHNNY CASH, MUSICIAN: You know, we in country music, every once in a while, we'll get together and talk about -- try to **out-poor** each other. Like who is the poorest? (COCA)

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

Problems for the “SCALE=PATH story”

- Object not necessarily a potential Subject-argument of the base

1) Hippos **cannot swim**, which is one interesting fact about them. But when they chase you, **they will basically run** underwater, and they can move around 5 mph. This can be faster than you think. They also **don't tire easy**, so **you better have good cardio to outswim one**. (iWeb)

- Comparisons made regarding **particular scalar dimensions**: to sing—dimensions: loudness (2) v quality (3)

2) Good vocal control is essential, a backing singer must not try to '**outsing**' the **lead vocalist** [...] Whilst most sound engineers and producers will **adjust vocal volumes** in the mix, it is important for singers who have strong voices to remember to **back off the microphone a bit...** (iWeb)

3) I have to admit that LBT is my guilty pleasure, you **can't deny their vocal abilities**. Have seen them live and nobody out there can **outsing them** from a **technical standpoint**. (iWeb)

Problems for the “SCALE=PATH story”

Resultative ~OUTDOING/DEFEATING/NULLIFYING available; no comparison easily available:

- 1) So far, my encounters have relied on me out-witting and **out-sneaking the fierce-looking rat guards**, or occasionally lobbing a bottle at their heads to knock them out while I get away. (iWeb)
 - 2) Whatever you do to stay active this summer, make sure to stay hydrated and to properly fuel with healthy meals pre and post-burn. And remember, **you can never outrun a crappy diet!** (iWeb)
- Although no comparison available, verb is still carries an implicit high-degree reading (sneak well / silently enough)

Cline of interpretation with same base (cf. Jackendoff 1997; RH&L 2001)

1) In the 1988 presidential election, **Hispanic women outvoted Hispanic men** 52 percent to 48 percent, according to a survey...

- ??What Hispanic women did to Hispanic men was outvote them.

2) The United States, for the first time, in history, has no veto power. We have no weighted voting. **We can be outvoted by two small countries.**

- What two small countries did to the US was outvote them.

3) In 1998, a group of Dominican nuns [...] showed up at the annual GE shareholders meeting to demand the company educate the public about the risks of its discharge of industrial waste into local rivers. **The resolution was outvoted...**

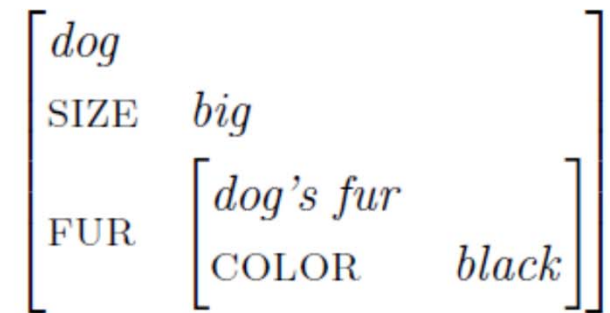
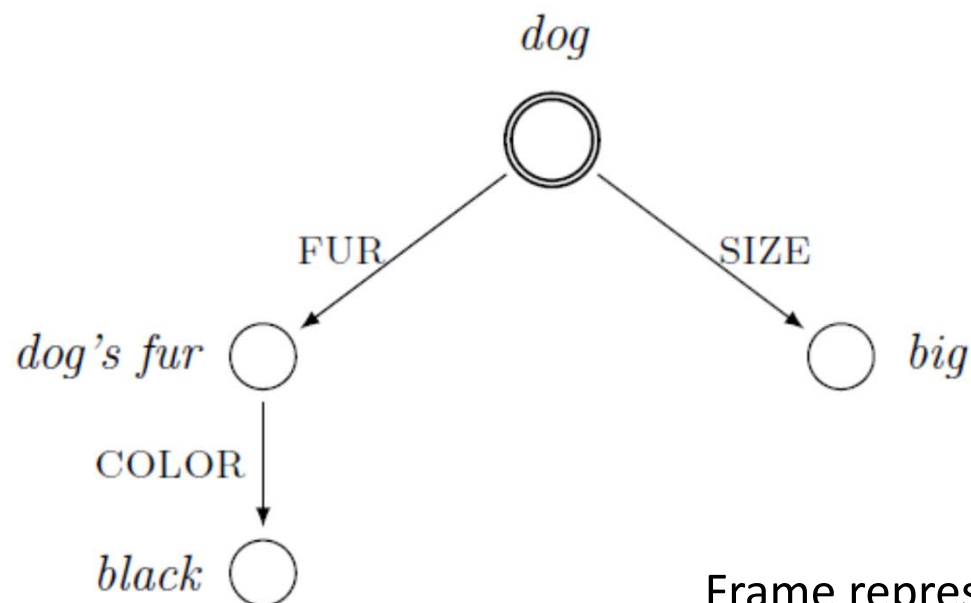
- What the shareholders meeting did to the resolution was outvote it.

Taking stock

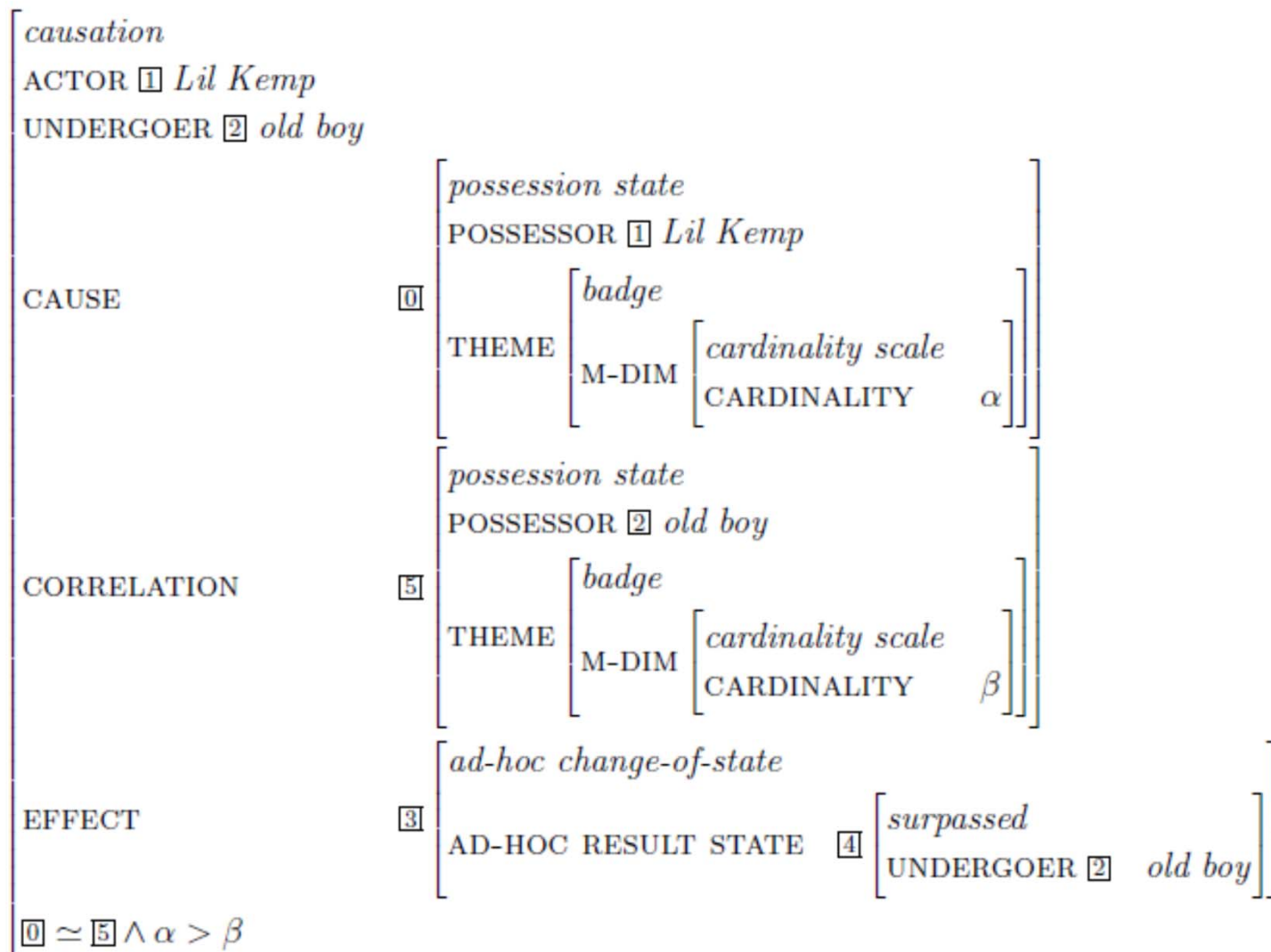
locative <i>out-</i>	comparative <i>out-</i>
differences	
autostressed	stress-preserving
not very productive	highly productive
category-preserving	regularly POS-changing
variable transitivity	always transitive
adds 1/2 subevents	adds 2/3 subevents
FIGURE realized depending on transitivity	“FIGURE” Subject
applicative potential unclear	clearly applicative
realization of GROUND flexible / non-obligatory	“GROUND” Direct Object
no stative bases	stative bases
commonalities	
resultative (change-of-location)	(weakly) resultative (CoS)
subevent adding	subevent adding
scalar element (on PATH analysis)	clearly scalar meaning component

Frame semantics

- A frame is a recursive attribute–value structure (Barsalou 1992; Löbner 2014; Petersen 2007)
- Attributes are unique to the attribute holder and take a single value at one point in time
- Frames unify the representation for linguistic and extra-linguistic knowledge

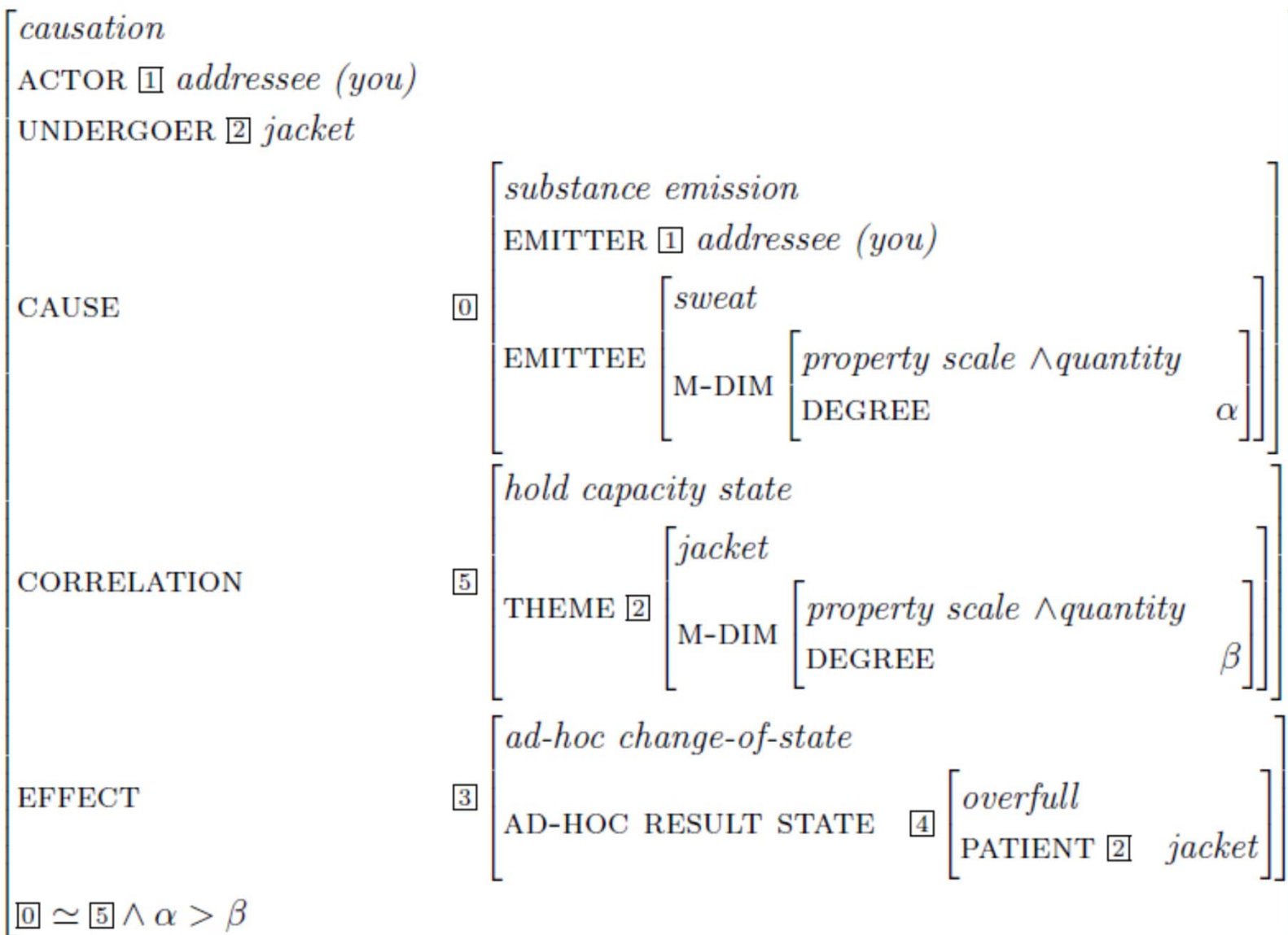


Frame representations for *a big black dog*



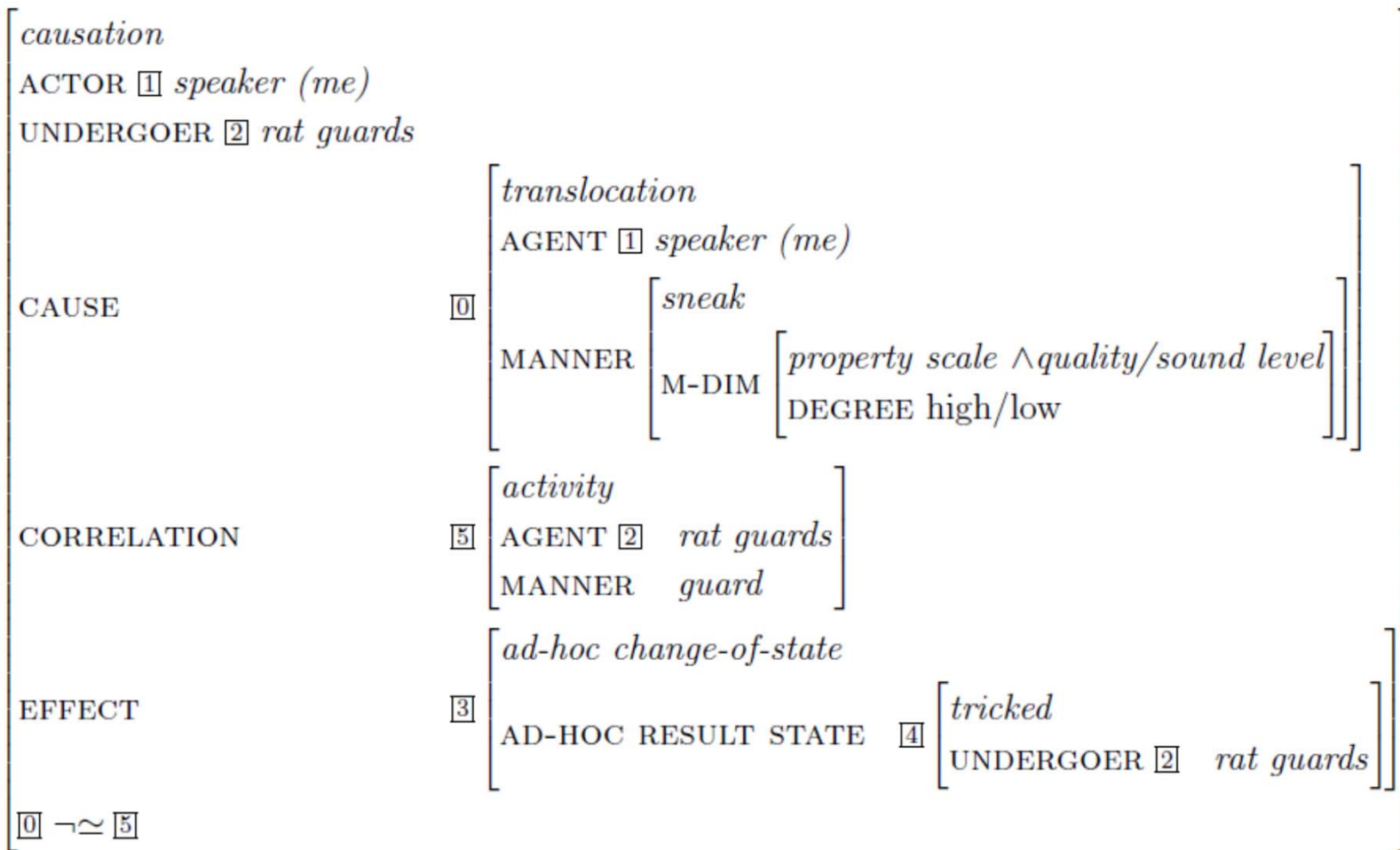
- See Kallmeyer & Osswald (2014) for causation frames
- Case with (mere?) scalar comparison
- Cause & correlation are sufficiently similar (same)
- Context assigns cardinality scale ('have more badges')
- Cause & correlation can be stative
- CoS is presumably one of mere 'being surpassed', and taken as effecting ad-hoc property (see Barsalou 1983)

Figure 1: There was an old boy with 'a lifetime of badges' on his hat. Excuse me, but we have those too. (Step forward Lil Kemp who could outbadge him any day).



- Case with scalar comparison and clear-cut result state
- Shows that cause & correlation can be aspectually and conceptually quite distinct

Figure 1: if you outswheat the jacket...



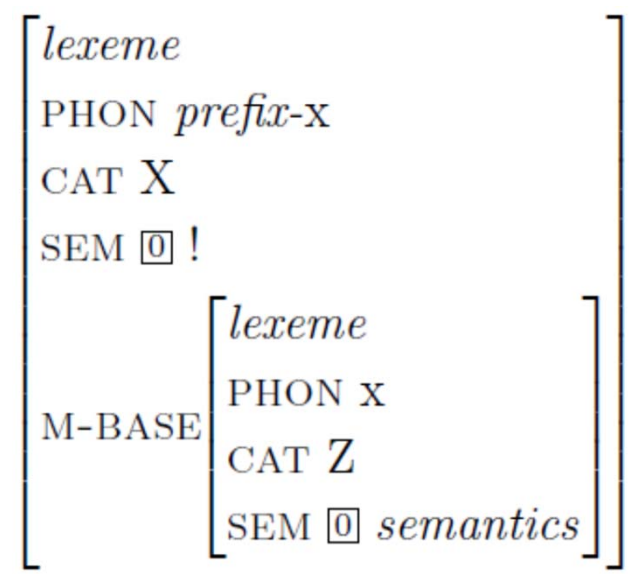
- Case without scalar comparison
- Similarity / compatibility difficult to infer
- Result state (defeated or tricked) inferrable

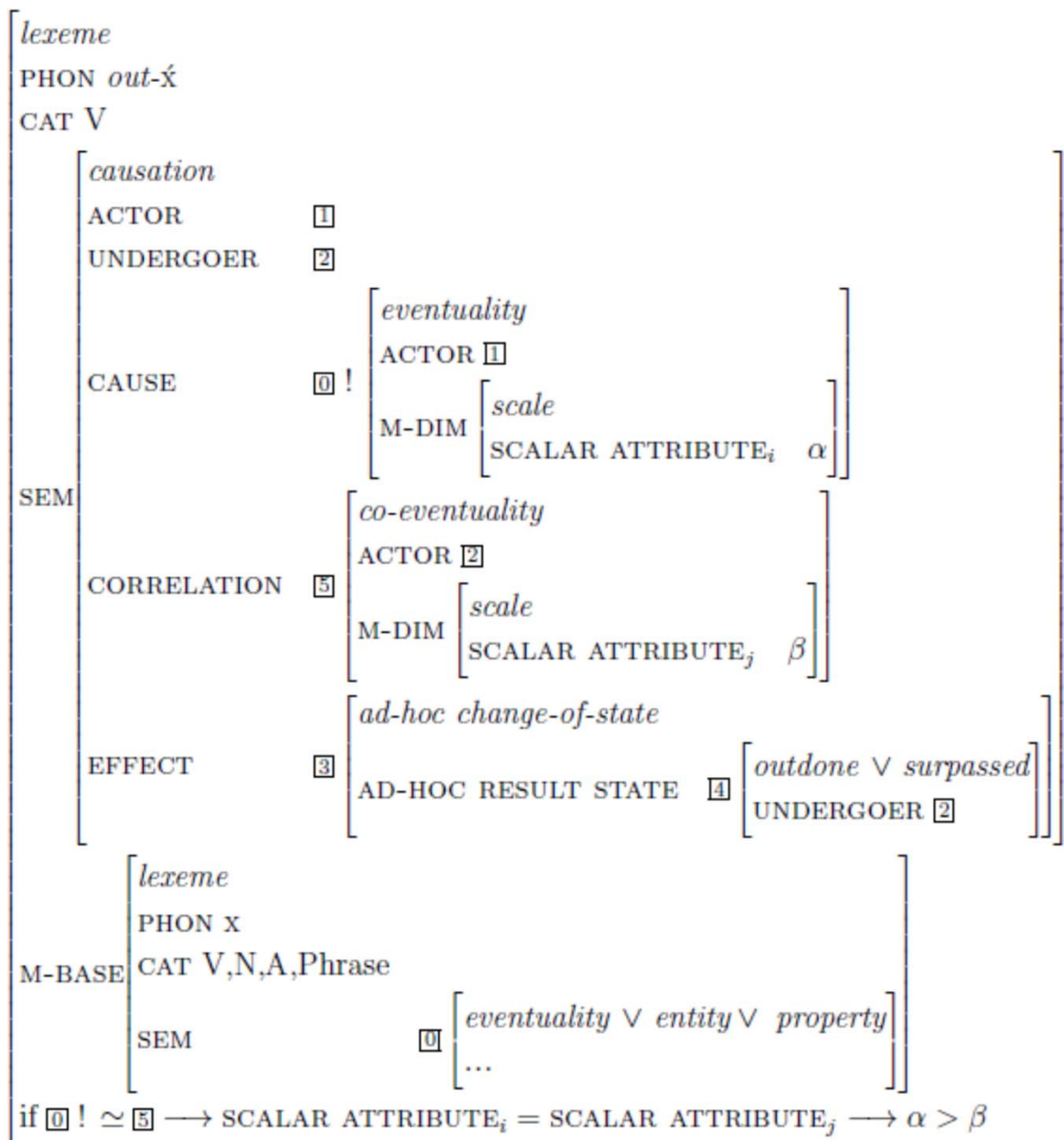
Figure 1: out-sneaking the fierce-looking rat guards...

Derivation in frame semantics

Different mechanisms proposed in the literature:

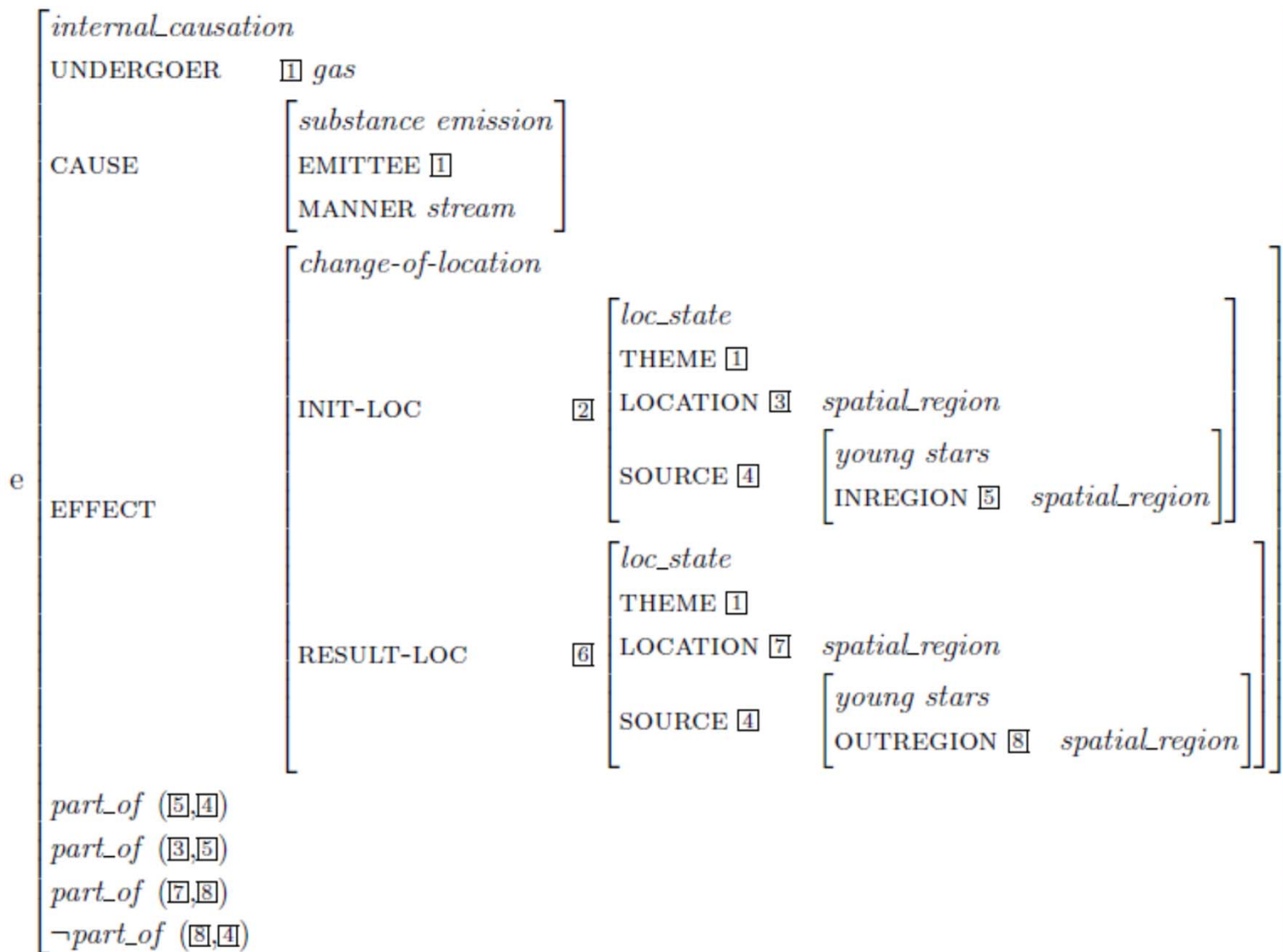
- E.g., referential shifts on nodes in structure of base (cf. Plag et al. 2018 for *ment*-nominalizations), unification of base and affix representations (cf. Zinova 2016 for prefixation in Russian)
- I will follow Andreou (2017) who proposes lexical rules (cf. Bonami & Crysman 2016; Koenig 1999) operating on and manipulating base structures
- Make use of descriptive rules that generalize over attestations and in consequence the lexicon





Ifr for “comparative” *out-*

- Making use of Talmy’s CORRELATION as a functional attribute
- Assumption of 2/3 new subevents added to the base structure
- Making use of Andreou’s (2017) “0!”-notation for structure copying (see Sag 2012)
- As constraint on input, Ifr coerces any base into an eventuality and searches for similarity / compatibility of CAUSE on CORRELATION

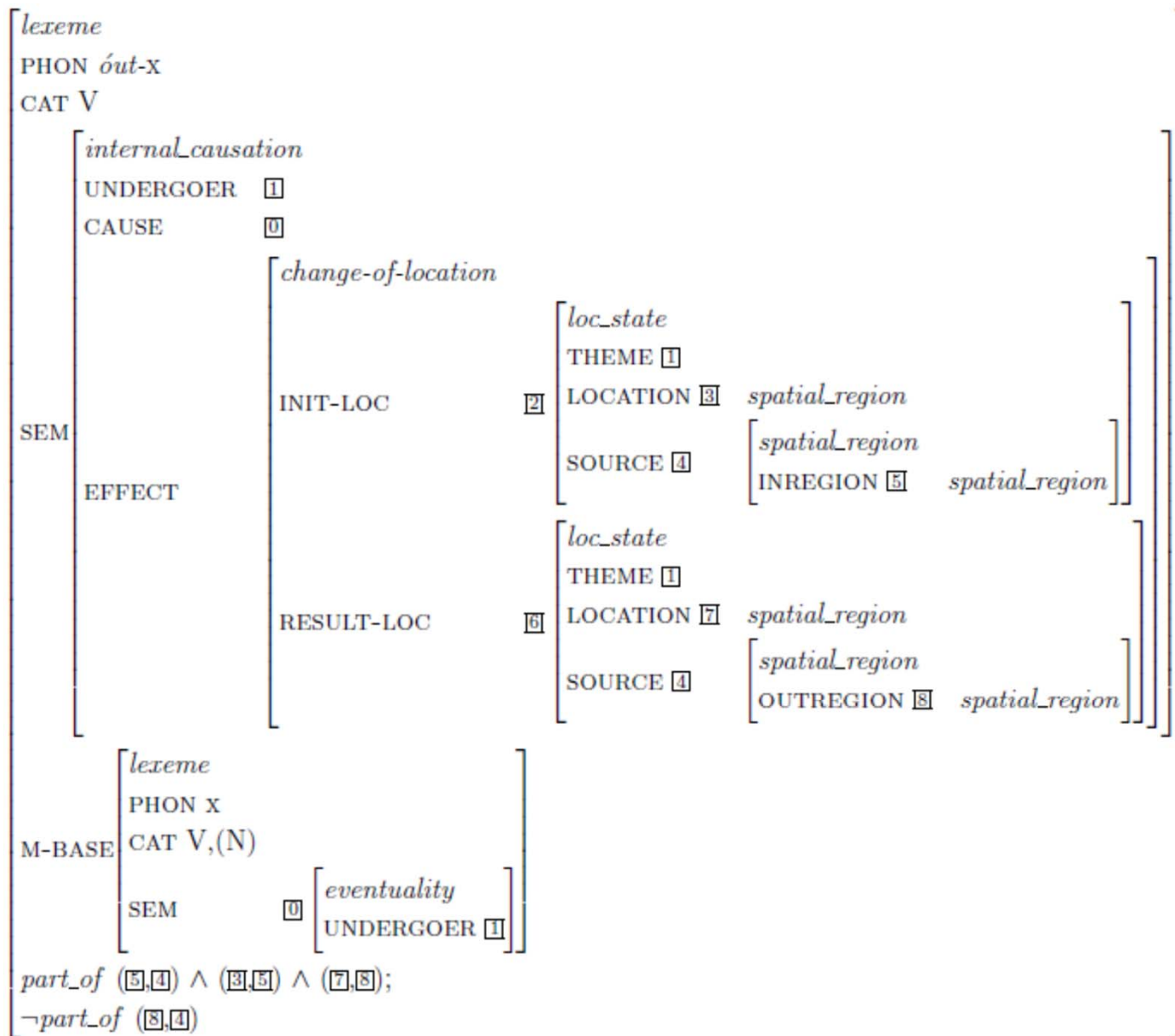


Frame for:

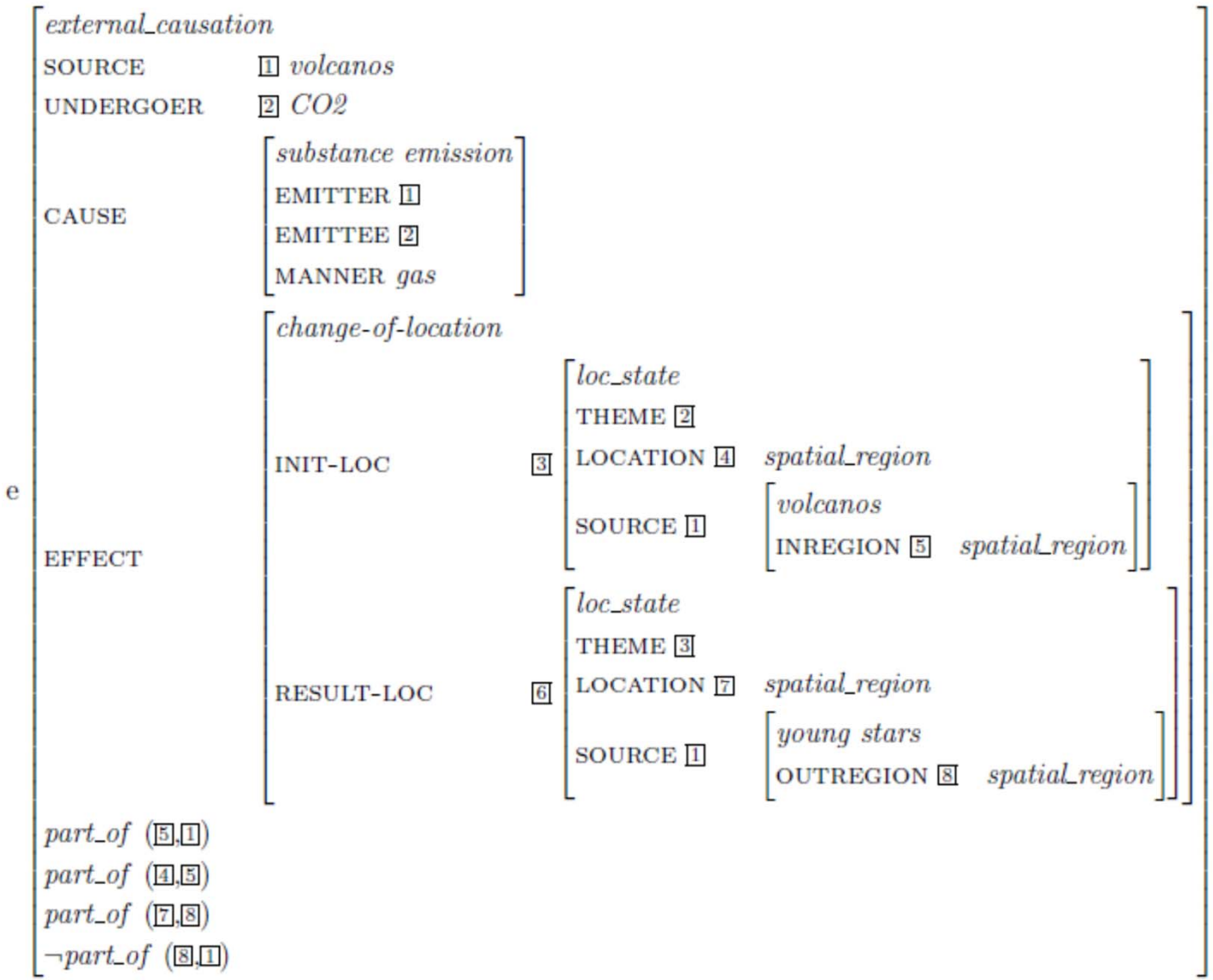
In turn, **gas out-streaming from the young stars** in the clusters can feed and energise the black hole.

- See Kallmeyer & Osswald (2014) for causation frames
- Assumption of a new subevent added to the base structure
- Cf. Fleischhauer et al. (to appear); Kaufmann (1995); Talmy (2000) for spatial semantics

Figure 1: gas out-streaming from the young stars

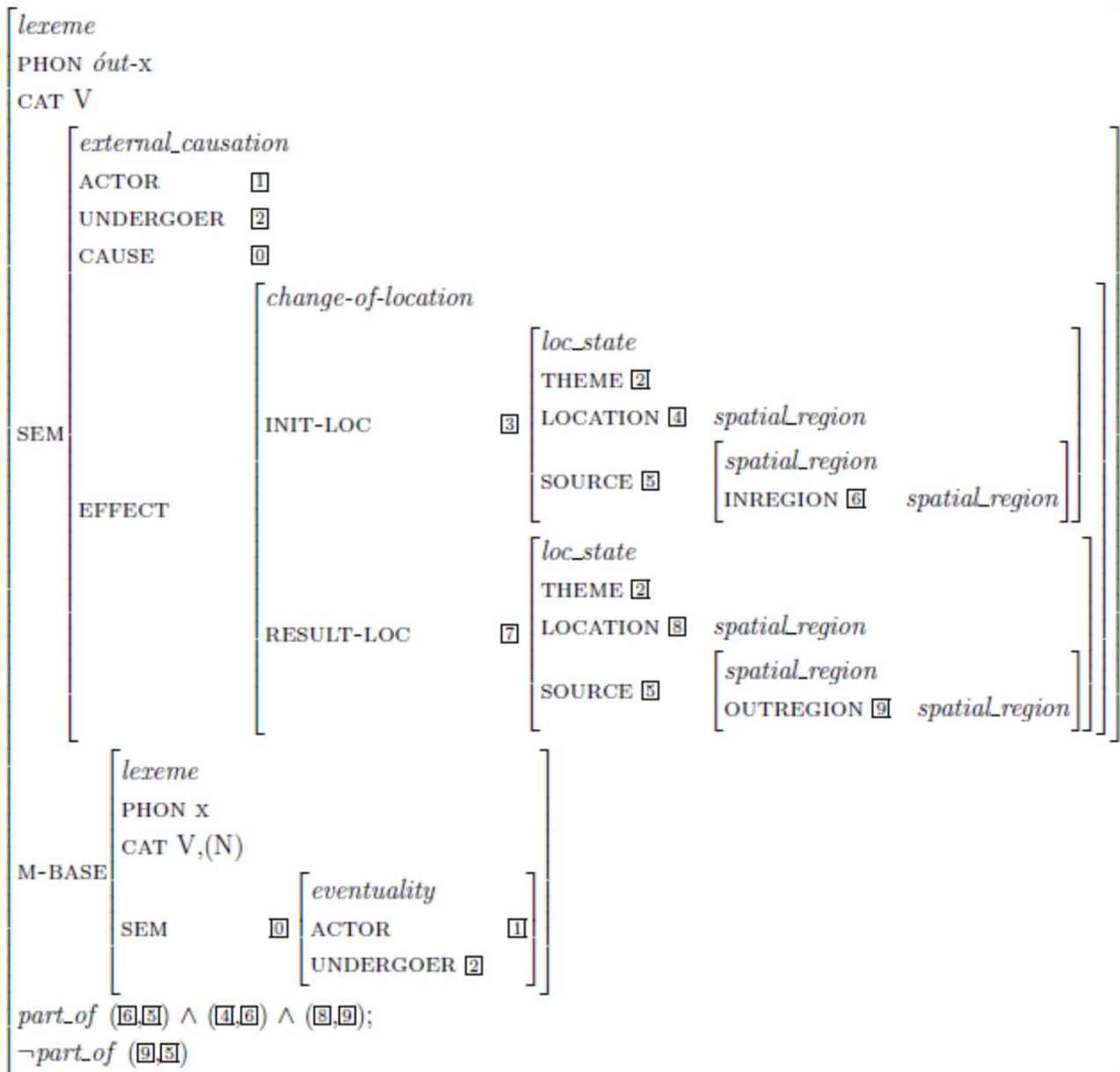


General **lexeme formation rule**
for intransitive pattern



Frame for:
 Our **volcanos** outgas enough **CO2** to keep the biosphere in balance.

Figure 2: volcanos outgas enough CO2



General **lexeme formation rule**
 for transitive pattern

Conclusion

- Discussed a variety of examples for locative/comparative *out*-
- Argued that they fall in the resultative spectrum
- Differences between two senses outweigh commonalities
- If we assign one core meaning to *out*- (e.g., scalar threshold): unclear what is gained because of large amount of structure needed to disentangle senses
- Synchronically, the semantics can thus not easily be mapped (there's obviously a historical story to tell)
- Rather, locative and comparative *out*- have developed into homophones (only partial ones as indicated by stress assignment)

Thank you

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