

Events in the semantics of non-deverbal nominalizations

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Derivational semantics

- Two central questions
- 1. Which kinds of readings are possible with a given affix?
- 2. Which affix is chosen to express a given reading?

What is known?

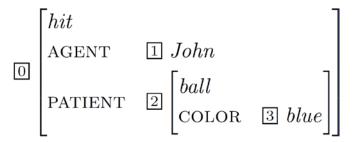
- Non-arbitrary relationship between base and derivative (e.g. Bauer et al. 2013, Ferret & Villoing 2015, Kawaletz 2021)
 - Verb requires instrument participant (e.g. to wrap, to refresh)
 - Nominalization can denote INSTRUMENT (e.g. wrap, refreshment)
- Deverbal *-ment* nominalization: Interplay of base and affix (Kawaletz 2021)
 - Base offers array of semantic elements
 - Affix selects from this array in a systematic way
 - Range of readings
 - Disambiguation in context

What is needed?

- Precise characterization of the interaction between base and affix
 - Identify potential targets in the base's semantics
 - Decompositional semantic approach
 - ➤ Here: Frames (Barsalou 1992a, b; Löbner 2013)

Frames

- Fundamental representation of knowledge in human cognition
- Applicable to linguistic phenomena
- Recursive, typed attribute-value structures



Derivational semantics in frames

- Verbal bases (Plag et al. 2018, Kawaletz 2021)
 - Decompose semantics of base and derivative in frames
 - Model process of derivation in lexeme formation rules (LFRs; Riehemann 1998, Koenig 1999, Bonami & Crysmann 2016)

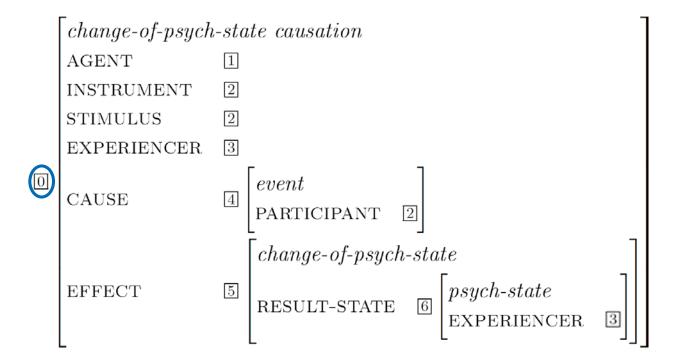
Illustration: $endull \rightarrow endullment$

- endull: to render dull (OED Online)
- endullment (Kawaletz 2021)
 - Eventive readings
 - Transposition of a complex event
 - Subevents
 - Causing event
 - Change-of-psych-state
 - Psych state
 - Participant reading: Stimulus

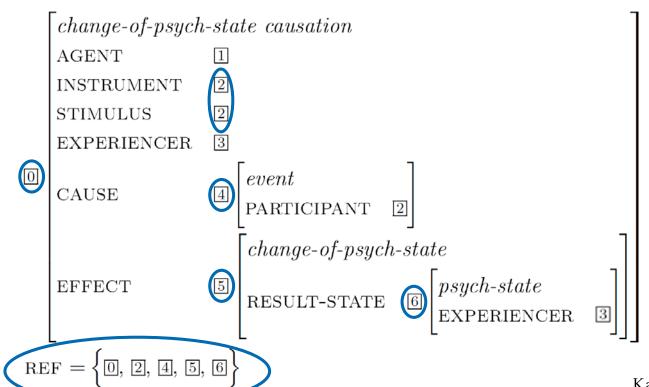
Exemplary attestations

- Transposition of a complex event
 - (1)What we see now is backslosh from the Raj. [...] All of this is well-thought-out, like a military campaign of blitzkrieg endullment. [...] [W]e're getting enstupidated at a hell of a pace. (Google BLOG unz.com 2006)
- Change-of-psych-state
 - (2)Endullment is the dulling of people's minds as a result of their nonparticipation (GB NONFIC ManagingTeamEnvironment 1998)

Frame for verbs like *endull*



Frame for nominalizations like *endullment*



Kawaletz (2021, 154)

LFR: PSYCH STATE readings of deverbal -ment nouns

M-BASE

- LFRs
 - Input: Lexical entry
 - Output: Lexical entry
 - Systematically related
 - Form
 - Part of speech
 - Meaning

```
\begin{bmatrix} lexeme \\ PHON & \mathbf{Z} \\ CAT & V \\ \end{bmatrix}
\begin{bmatrix} SEM & s-frame & \mathbf{y} \begin{bmatrix} event \\ \cdots & \mathbf{z} & psych-state \end{bmatrix} \end{bmatrix}
```

Kawaletz (2021, 158)

Interim conclusion: Deverbal nominalization

- Process can be modeled straightforwardly with frames and LFRs
- -ment targets elements in the base verb frame
 - Event structure
 - Participants
- Extend this approach to other kinds of bases: How about nouns?

Nominal bases

- Research tends to focus on deverbal nominalizations (e.g. Barker 1998; Alexiadou 2010; Kawaletz & Plag 2015)
- Many nominalizing suffixes also attach to nominal bases (Plag 1999, 2004; Bauer et al. 2013)
 - architecture, candidature
 - artefaction, ozonation
 - *illusionment*, *devilment*

Nominal bases: What do we know?

- "the verbal relation is **implied by context** or **can be inferred** from the nature of the non-verbal base. [...] Such interpretations follow from the sort of activities that the base nouns **could conceivably be involved in.**" (Bauer et al. 2013: 233)
 - → Vague description
- Eventive elements found in/inferred from non-eventive bases (e.g. Pustejovsky 1996)
- Decomposition necessary to find eventive structures in nominal bases (Kawaletz 2021)
- We will see:
 - Some non-verbal bases like *illusion* eventive themselves
 - Other non-verbal bases as devil not straightforwardly eventive

Nominalizations: denominal and eventive

- All our denominal *-ment* derivatives are eventive:
- (3) The IPP were probably under the illusionment that everything was fundamentally the same. (NOW Galway Advertiser 2017)
- (4) While all this devilment was going on (COCA WEB 2012)
- (5) The illusion occurs because the visual system receives different stories from these two sources of information (COCA WEB 2012)
- →eventive base
- (6) He is not a man, but a devil. (COCA FIC 2015)
- → non-eventive base

Research questions

- Can we model the semantics of eventive nominal bases and their respective derivatives similar to deverbal formations?
- What about nominal bases which are not analyzable parallel to verbs?
 - Is it possible to find an event in the semantics of not straightforwardly eventive nominal base words?
 - If yes, how can we model the semantic representation of these eventive structures in the nominal base?

Illusion → *Illusionment*

(7) The illusion occurs because the visual system receives different stories from these two sources... (COCA WEB 2012)

- Base *illusion* definition OED:
 - "The fact or condition of being deceived or deluded by appearances, [...] a mental state involving the attribution of reality to what is unreal"
 - "Something that deceives or deludes by producing a false impression"
- *Illusion* involves a *deceive/delude*-event

Illusion → *Illusionment*

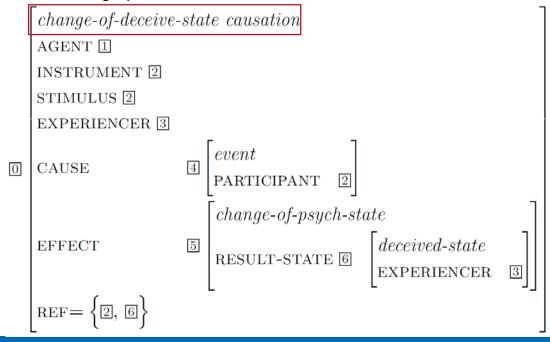
derivative *illusionment*:

(8) One can only be disillusioned if once one lived within illusions [...] This way of being that one recognizes only retrospectively may be called "illusionment," a state of being apprehended in the very process of its falling apart. (Google ACAD journals.sagepub.com 2018)

- *Illusionment* as a state someone is in
- Do we find this state in the representation of the base *illusion*?

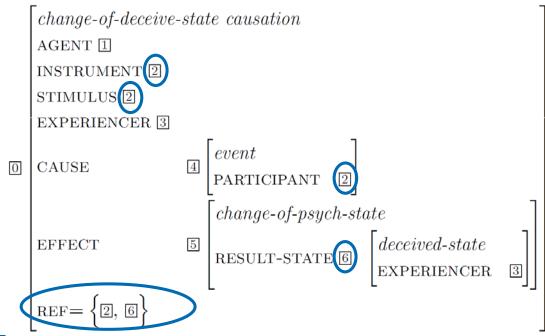
Analysis - base illusion

- Base can be modeled as a DECEIVE-STATE CAUSATION (deceive, delude)
- In parallel to the psych verbs

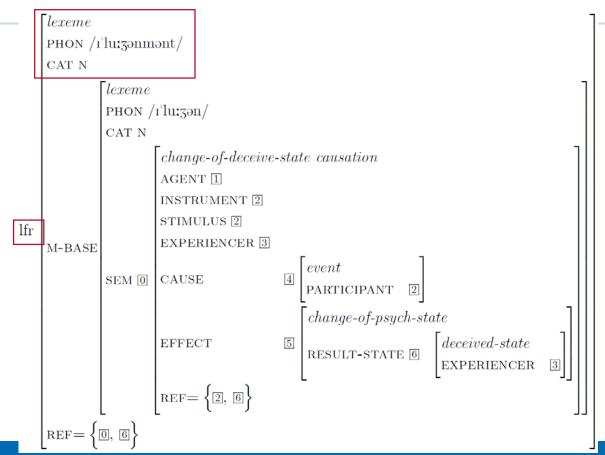


Analysis - base illusion

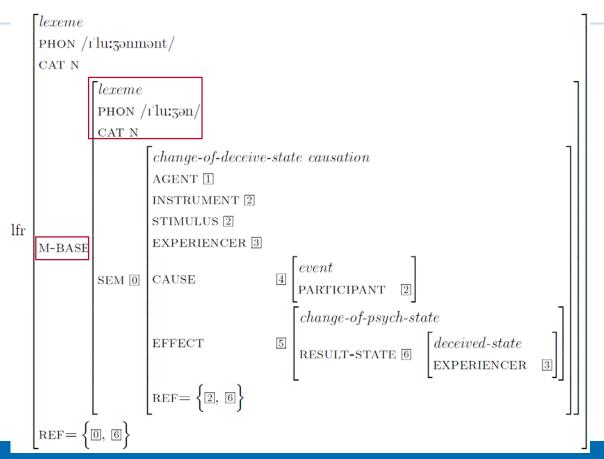
- Base can be modeled as a DECEIVE-STATE CAUSATION (deceive, delude)
- In parallel to the psych verbs



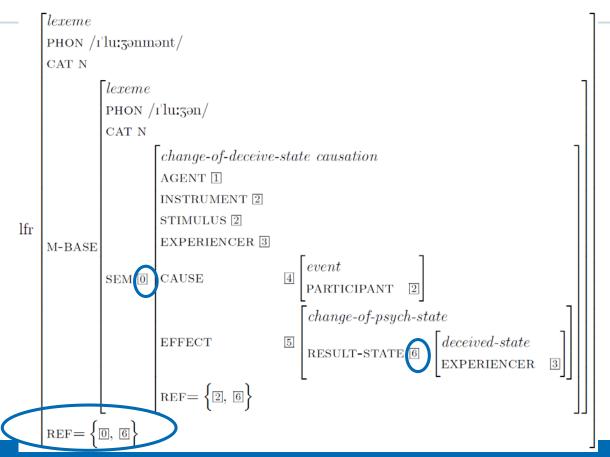
Analysis - derivative *illusionment*



Analysis - derivative *illusionment*



Analysis - derivative *illusionment*



- devilment in different readings:
- Activity-readings:

(17) [...] the biggest devilment that goes on in these elections are what we call deceptive practices people are going to get robocalls [...]" (COCA WEB 2012)

Property-readings:

(18) She's of a mind it'll wash any devilment right out of me (COCA FIC 2019)

- Devilment related to attitudinal noun devil
- Both possible readings in base

- (9) A devil, by its very nature, can not change (COCA FIC 1999)
 (10)*devil occurred/happend → find no event-denoting contexts
- Definition base devil OED:
 - "the supreme spirit of evil, the tempter and spiritual enemy of mankind, the adversary of God; Satan. "
 - "A very wicked or cruel person"
 - "A sin, vice, or evil quality personified"
- No event denoted
- Readings 2/3 to analyze *devil* as attitudinal noun

Attitudinal nouns

(11) you made a **total idiot** out of me (COCA MOV 1990)

- Denote (mostly) people (also objects; cf. crap)
- Lexical semantics: **profile single** (highly restricted sets of) properties, behaviors, or character traits
- Properties usually gradable
 - (12) a **total** idiot [-> high degree of idiocy]
- Systematically ambiguous: (habitual) activities and/or character properties
 - (13) You are being an idiot. (14) You are an idiot.

see Morzycki 2009; Paradis 2008; Schmid 1999

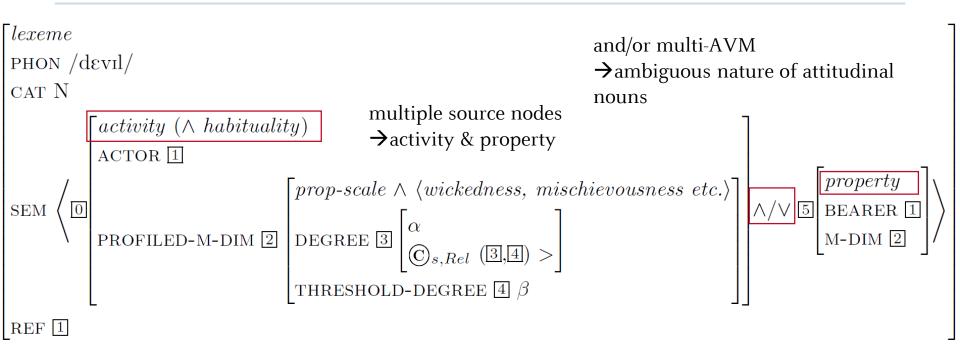
Evidence *devil* is attitudinal noun:

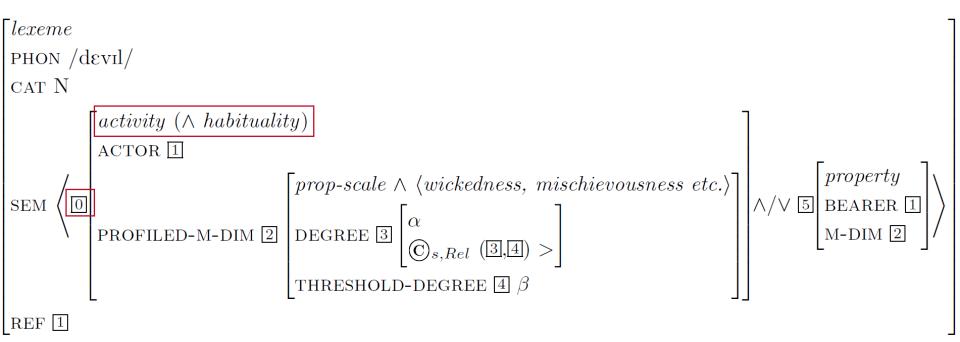
(15) Can you tell this little guy is a total devil? He s going to give his Momma a run for her money and break a few hearts in his lifetime, I'm sure."

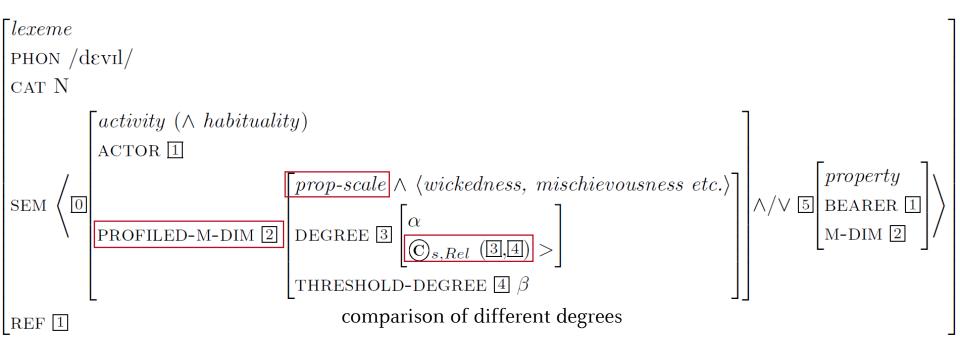
(iWeb lovegrowswild.com 2014)

- (16) Well, it wasn't always so nice either, for she was pretty tough at times too. A real devil she could be, the one I got for a wife." (COCA WEB 2012)
- attitudinal noun as
 - indefinite article → general attitudinal noun not "the devil"
 - *total/real* are degree modifiers → scalar meaning attributes

```
\lceil lexeme \rceil
PHON /devil/
CAT N
            activity (\land habituality)
            ACTOR 1
                                       \lceil prop\text{-}scale \land \langle wickedness, mischievousness etc.} \rangle \rceil
                                       DEGREE 3
            PROFILED-M-DIM 2
                                       THRESHOLD-DEGREE 4\ \beta
REF 1
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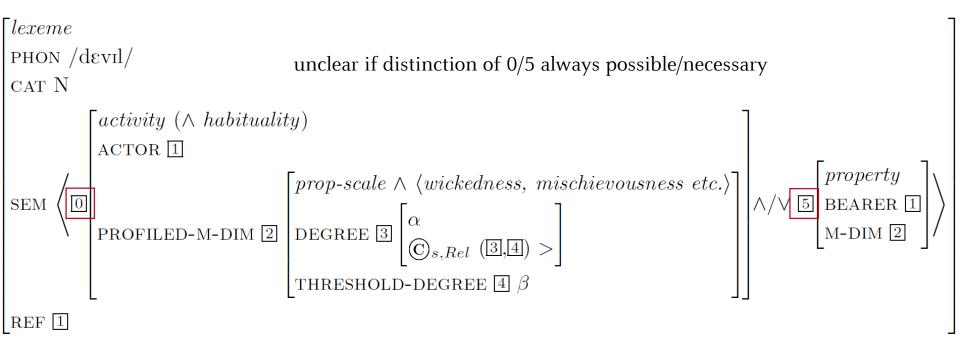






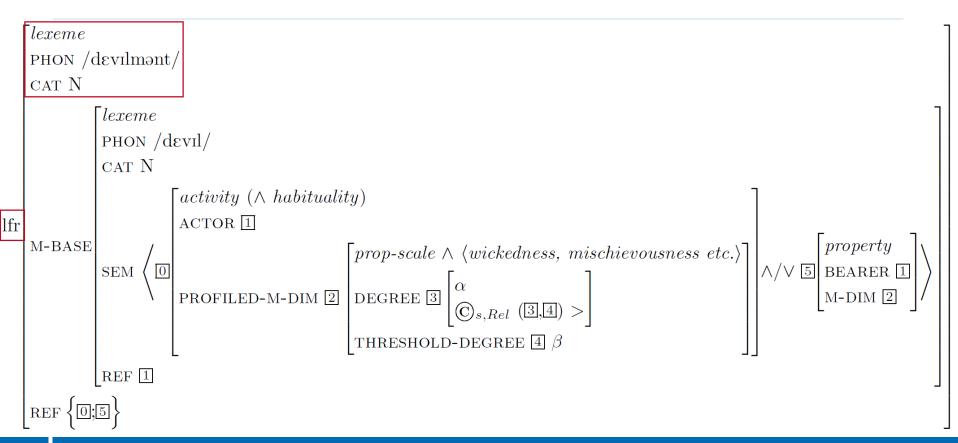
```
\lceil lexeme \rceil
PHON /devil/
CAT N
             \lceil activity \ (\land \ habituality) \rceil
             ACTOR 1
                                         prop\text{-}scale \land \langle wickedness, mischievousness etc. \rangle
SEM
                                          THRESHOLD-DEGREE 4 \beta
REF 1
```

```
lexeme
PHON /devil/
                                                             same comparison of different degrees
CAT N
           \lceil activity \ (\land \ habituality) \rceil
            ACTOR 1
                                     [prop\text{-}scale \land \langle wickedness, mischievousness etc. \rangle]
SEM
                                     DEGREE 3
                                     THRESHOLD-DEGREE 4\ \beta
REF 1
```

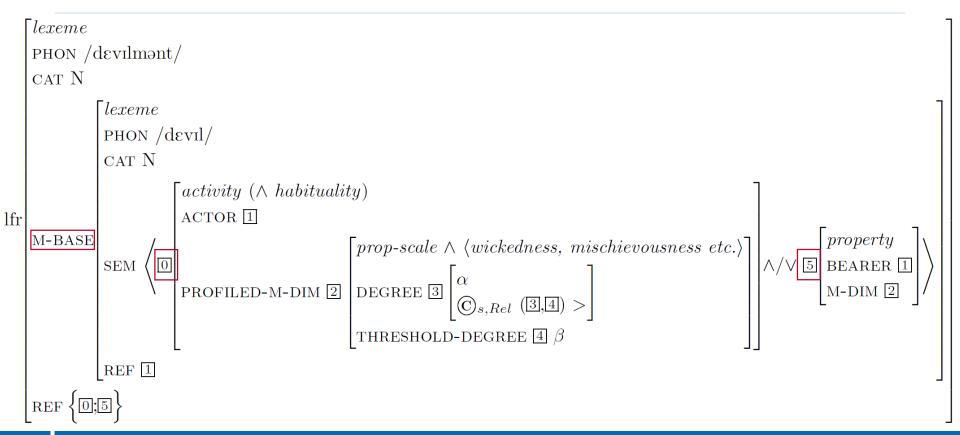


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lexeme
                                                  semantics of devil as an attitudinal noun:
 PHON /devil/
                                                  referring to participant-attribute of eventuality(-like) structures
 CAT N
                activity \ (\land \ habituality)
                 \left| \begin{array}{c} prop\text{-}scale \land \langle wickedness, \ mischievousness \ etc. \rangle \\ \text{DEGREE } \boxed{3} \left[ \begin{array}{c} \alpha \\ \boxed{\bigcirc s,Rel \ (\boxed{3},\boxed{4})} > \end{array} \right] \right| 
                                                     THRESHOLD-DEGREE 4\beta
REF 1
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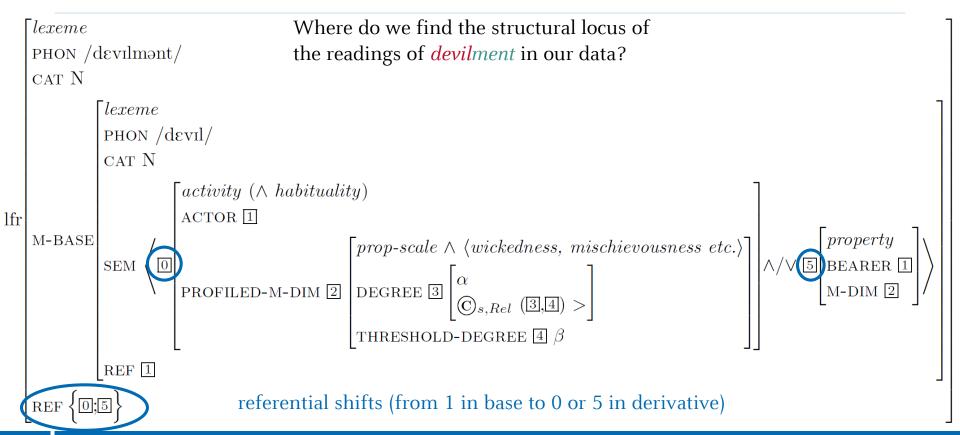
Analysis - derivative *devilment*



Analysis - derivative *devilment*



Analysis - derivative *devilment*



Summary

- Meaning shifts on semantic structure of base words for both (*illusionment*, devilment)
- -*ment* nominalizations from nominal bases analyzable:
 - eventive bases allow for analysis parallel to deverbal formations (illusionment)
 - non-eventive bases: decomposition allows for retrieving eventive structures for eventive nominalizations (*devilment*)

Conclusion

- All denominal -ment nominalizations in our data have event-related interpretations.
- Decomposition reveals event structure for the interpretation of the nominalization.
- Frame semantics useful tool
 - for decomposition of derivatives and bases
 - to show meaning shift of base and derivative

Next Steps

- Same analysis for other event-related nominalization with non-verbal bases?
 - nominalizing suffixes -age, -ance, -ation, -er, -ee, -ure
 - noun-to-verb-conversion
- Frame semantics as unified format for analysis of nominalizations?

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Appendix - data set -ment

- Nominal bases *-ment*
 - 14 derivatives
- Some bases can count as nominal or verbal
 - Frequency criterion
- 1 attitudinal noun
 - Also reveals event structure
 - Examples -ee: biographee, debtee

bankment	allurement
basement	contestment
bombardment	figurement
concernment	illusionment
devilment	patchment
gruntlement	provisionment
puzzlement	trapment