

# The polysemy of newly derived forms: An investigation of English *-ment* neologisms

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AG 3 - The semantics of derivational morphology: Theory, methods, evidence

## What is known?

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- Many derivational affixes in English are able to produce more than one meaning (see e.g. Bauer et al. 2013, Lieber 2016)
  - E.g. suffix *-er*
    - AGENT (*shooter*)
    - INSTRUMENT (*opener*)
    - INHABITANT (*Londoner*)
    - ...
- Non-arbitrary relationship between base and derivative (see Bauer et al. 2013)

## The problem

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- Affix polysemy remains understudied, especially
  - Contribution of the base
  - ATK nominalizations ('-ation and kin,' Borer 2013)

## Research questions

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1. Which readings does English *-ment* productively produce?
2. Which readings are available for each individual *-ment* derivative?
3. What are the semantic contributions of the base, of the affix, and of the context?

## The data set: Types

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- Neologisms extracted from
  - Oxford English Dictionary (20<sup>th</sup>/21<sup>st</sup> century formations)
  - Corpus of Contemporary American Studies (hapax legomena)
- Restricted to four base verb classes (Levin 1993/VerbNet)
  1. Psych verbs
  2. Change-of-state verbs
  3. Putting verbs
  4. Force verbs
- 69 deverbal *-ment* neologisms

## The data set: Tokens

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- 727 attestations from various corpora (mainly BYU and Google)
- Semantic annotation with common labels, e.g. INSTRUMENT, EVENT

## Exemplary attestations: Eventive

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### ■ EVENT

(1) Hydrides then form and can limit the fuel lifetime due to their **embrittlement** of the cladding. (Google WEB imperial.ac.uk 2014)

### ■ RESULT STATE

(2) I know a lot of our compatriots also feel the same angst, consternation and **confoundment**. (GloWbE NEWS leadership.ng 2012)

## Exemplary attestations: Participants

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### ■ PATIENT

(3) I set down the scrap of doll's dress, a **bedragglement** of loose lace hem (COCA FIC Bk:MournersBench 1999)

### ■ PRODUCT

(4) There is an obvious **embrittlement** and cracking on the nonwoven fabric (Figure 6.5b). (GB ACAD CellBasComp 2014)

1. Which readings does English *-ment*  
productively produce?

## Possible *-ment* readings: Literature

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Gadde (1910), Marchand (1969), Bauer et al. (2013), Lieber (2016)<sup>1</sup>

### ■ Eventive readings

- EVENT
- ACTION
- STATE/CONDITION

### ■ Participant readings

- RESULT
- PRODUCT
- INSTRUMENT/MEANS
- (inanimate) PATIENT/THEME
- LOCATION

## Possible *-ment* readings: Findings

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### ■ Eventive readings

- EVENT
- ACTION
- STATE/CONDITION

### ➤ TRANSPOSITION

### ➤ Subevents:

- CAUSING EVENT
- CAUSED (CHANGE-OF-)STATE

### ■ Participant readings

- RESULT
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## Event structure

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Rappaport Hovav & Levin (1998)

- Simple change-of-state

- Template: [BECOME [ x <STATE> ]]
- *Decay*: [BECOME [ x <DECAYED> ]]
- *Break<sub>intr</sub>*: [BECOME [ x <BROKEN> ]]

- Complex causation event

- Template: [[ x ACT <MANNER>] CAUSE [BECOME [ y <STATE> ]]]
- *Repair*: [[ x ACT <MANNER>] CAUSE [BECOME [ y <REPAIRED> ]]]
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- TRANSPOSITION
- CAUSING EVENT
- **CHANGE-OF-STATE**

## Possible *-ment* readings: Findings

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### ■ Eventive readings

- EVENT
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### ➤ TRANSPOSITION

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- RESULT
- **IMPLICIT PRODUCT**
- INSTRUMENT/MEANS
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- LOCATION
- CAUSER
- STIMULUS

## IMPLICIT PRODUCT

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- A product that is inherently related to the patient

➤ vs. EXPLICIT PRODUCT

(5) Interior is generally very well kept, just some **discolorment on the steering wheel** (Google COMM [sfbay.craigslist.org](https://www.sfbay.craigslist.org) 2017)

## CAUSER

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- Initiates the event, but does not act intentionally or consciously
  - vs. AGENT

(6) You see, almost directly after sipping the potion, I noticed the **befoulment** on Severus's otherwise orderly working area. Yes... the phial in which rested the forbidden love-potion. (Google FIC fanfiction.net 2006)

## STIMULUS

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- Evokes a psych event, i.e. an EXPERIENCER being in or attaining a psychological or emotional state

(7) [...] movies in which racial slurs towards Asians, Latinos, African-Americans (or anyone else) are used; and other `artistic' works which may be an **abashment** to a certain group of people  
(Google COMM revleft.space 2002)

2. Which readings are available for each individual *-ment* derivative?

## Range of readings

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- EVENT

(8) Hydrides then form and can limit the fuel lifetime due to their **embrittlement** of the cladding. (Google WEB imperial.ac.uk 2014)

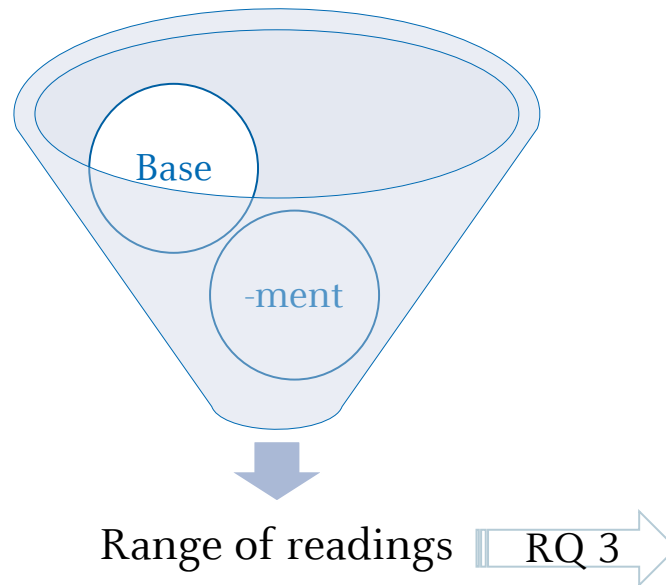
- IMPLICIT PRODUCT

(9) There is an obvious **embrittlement** and cracking on the nonwoven fabric (Figure 6.5b). (GB ACAD CellBasComp 2014)

- ...

## Predictable for each derivative

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3. What are the semantic contributions of the base, of the affix, and of the context?

## Base and affix

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- Recall: Non-arbitrary relationship between base and derivative (Bauer et al. 2013)
- Base provides an array of semantic elements
  - Participants
  - Event structure
- *-ment* selects from this array

## Contribution of the base

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### ■ Base verb

- Creation of an IMPLICIT PRODUCT
  - *embrittle*
  - *discolor*
- LOCATION is a central element (verbs of putting)
  - *emplace*
  - *trap*

### ➤ Derivative

- IMPLICIT PRODUCT reading
  - *embrittlement*
  - *discolorment*
- LOCATION reading
  - *emplacement*
  - *trapment*

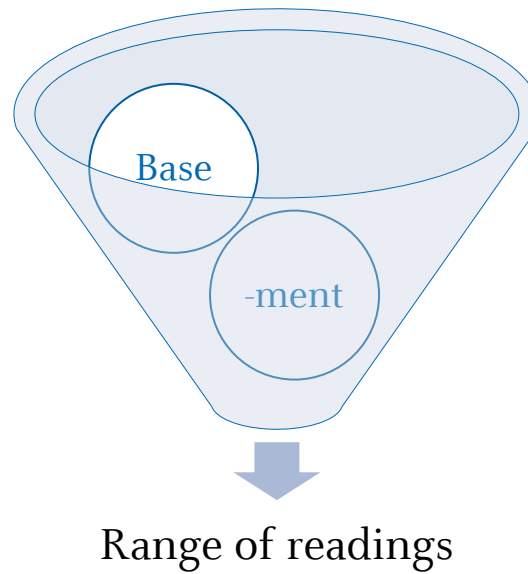
## Contribution of the affix

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- Heeds constraints
  - Animacy constraint (see also Kawaletz & Plag 2015)
    - INANIMATE PATIENT
    - ~~AGENT~~
    - ~~EXPERIENCER~~
- Has preferences (i.e. is partly blocked by competing affixes)
  - Subject-oriented readings readings harder to find in the corpora
    - INSTRUMENT, CAUSER, STIMULUS
    - Speakers prefer other suffixes, such as *-er*

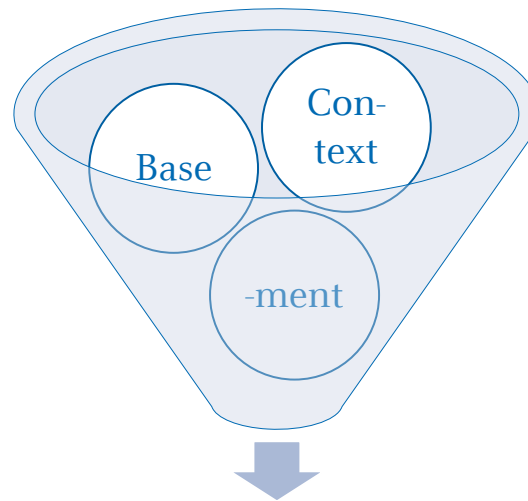
## Contribution of the context

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## Contribution of the context

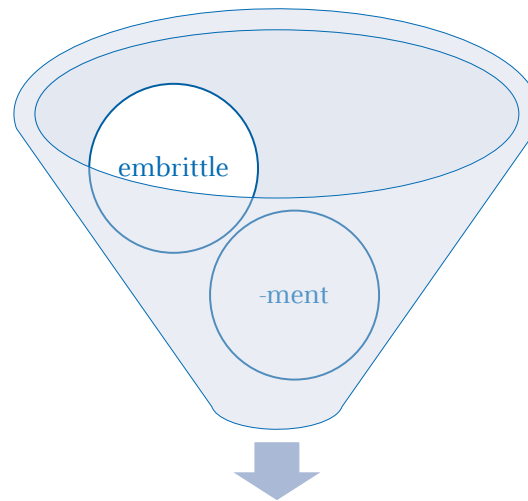
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Disambiguated reading

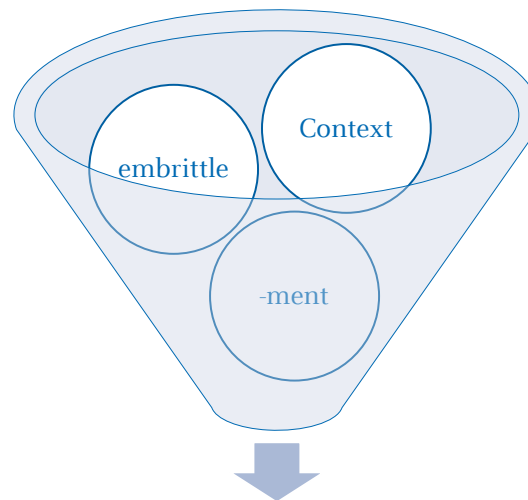
## Example: *Embrittlement*

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## Example: *Embrittlement*

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But: 327 (45%) of  
my attestations  
are ambiguous

## Conclusions

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1. -ment produces a wide range of readings
2. Wide range also for each individual derivative
3. Interplay of base, affix, and context
  - Base: Provides array of semantic elements
  - Affix: Selects from array in a systematic way
  - Context: Disambiguates

## Where do we go from here?

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- Formally model the process
- Identify elements in the base verbs' semantics
  - Decompositional approach
  - Recursive structures
- Kawaletz (in prep.)

## Sources

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Thank you!

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