# Use-conditional licensing of strong Negative Polarity Items

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# Introduction

- Strong minimizer NPIs: *lift a finger*, *drink a drop*, …
- Canonical observation: More restricted in occurrence than weak NPIs (*ever*, *any*):
  - Strong licensing contexts: *not*, *noone*
  - Weak licensing contexts: *few*

(1)  a.  Alex didn't lift a finger to help.

    b.  Noone lifted a finger to help.

    c.  * Few students lifted a finger to help.

(2)  a.  Alex didn't do anything to help.

    b.  Noone did anything to help.

    c.  Few students did anything to help.

# Classical view: Concentric, homogeneous licensing

- Licensing contexts are ordered in concentric circles:
  antimorphic $\subset$ anti-additive $\subset$ downward-entailing $\subset$   non-veridical
  
  *not*          *noone*,                *few*. …          interrogative, …
  
  [*every* N], …

- Licensing is homogeneous: if an NPI can occur in a context of strength $i$, it can occur in all contexts of strength $i$ or stronger.

- But: Sedivy (1990): Contexts licensing strong minimizer NPIs, but not weak NPIs. Licensing through "negative side message"

- Suggestion: Negative side message can be use-conditional.

# Outline

# Data considered:

- Affirmative sentences with stressed auxiliary
- Affirmative sentences with irrealis modal
- Questions

# Affirmative sentences

- Sedivy (1990)
- Minimizer ok if there is a contextually salient negative "side message"
- However, weak NPIs are not!

(3)  A:  I am disappointed that you don't give a damn
         about my problems.
     B:  But I DO give a damn.
     Side message: It is not true that [I don't give a damn].

(4)  A:  I don't think Bert ever kissed Marilyn Monroe.
     B:  * Bert DID ever kiss Marilyn Monroe.
     Side message: It is not true that [Bert didn't ever kiss M.M.].

# Analogous German data

(5)  jm  ein Haar krümmen
     s.o. a   hair  bend
     'to harm a hair on s.o.'s head'

Occurrence profile: `https://www.english-linguistics.de/codii/`
(Richter et al., 2010)

# *jm ein Haar krümmen* 'harm a hair on s.o.'s head'

- Strong NPI, but occurrence in typically weak contexts (question, conditional)
- though only with special, more negative reading.
- So far, none of discussed contexts in the collection.

# *jm ein Haar krümmen* 'harm a hair on s.o.'s head'

- Possible in Verum construction,
- in which *jemals* 'ever' is excluded.

(6) A: Niemand hat jemals so ein tolles Gemälde gesehen!
'Nobody has ever seen such a great painting!'

B: *Doch, ich HABE jemals so ein tolles Bild gesehen. Erst gestern im Museum.
'That's not true, I DID ever see such a great painting. Just yesterday, in the museum.'

(7) A: Alex ist total lieb und kann niemandem ein Haar krümmen.
'Alex is super-nice and can't do harm to anyone.'

B: Aber er HAT jemandem ein Haar gekrümmt. Er hat einen Einbrecher gestellt und verprügelt.
'But he DID harm someone. He confronted a burglar and beat him up.'

# Affirmative sentences: Irrealis modals

(8)    John (really) should have lifted a finger to help Mary clean up.
       Side message: John didn't lift a finger …

(9)   * John (really) should have eaten any cake.
       Side message: John didn't eat any cake.

# Analogous German data

(10)  Alex hätte echt  auch mal  einen Finger krumm machen können.
      Alex had  really also  once  a     finger  lift           can
      'Alex really could have lifted a finger.'
      Side message: Alex didn't lift a finger.

(11)  Alex hätte echt  *jemals/ 'mal beim    Aufräumen helfen können.
      Alex had  really ever/    once with.the cleaning    help    can
      'Alex really could ever/ once in a while have help cleaning.'
      Side message: Alex didn't ever help cleaning.

## Questions

- Minimizers in questions (Borkin, 1971; van Rooy, 2003):
  - licensed in negatively biased questions,
  - but not in information-seeking questions

  (12) a. Did John lift a finger to help Mary?

  b. Who lifted a finger to help Mary?

- Weak NPIs:
  - Licensed in negatively biased,
  - and information-seeking questions.

  (13) a. Did John ever help Mary?

  b. Who has ever helped Mary?

# NPIs in rising declaratives

- But: Intonation questions: weak NPIs impossible in intonation questions (Progovac, 1992, 277)

  (14)  a.  Mary saw Bill?
        b.  * Mary saw anyone?

- Trinh & Crnič 2011; Escandell-Vidal 2002: Pure intonation questions do not license (minimizer) NPIs in English or Spanish.

  (15)  ¿Ha movido Juan un dedo  por ti?
        has  moved  Juan a   finger for  you
        Has Juan lifted a finger for you?

  (16)  * ¿Juan ha  movido un dedo  por ti?
          Juan   has moved  a   finger for  you?
        *Juan has lifted a finger for you?

# Rising declaratives

- Trinh & Crnič (2011): Rising declarative incompatible with neutral contexts; require that speaker suggest that addressee believes the statement.

  (17) Initiating a phone conversation:
       Is Laura there?/ # Laura's there?

  (18) A: I have to pick up my sister from the airport.
       B: You have a sister?

# NPIs in rising declaratives in German

- Weak NPIs: not possible.
- Minimizers: possible
- Problem: Trinh & Crnič (2011) require that the non-interrogative version needs to be possible.

(19) A: Alex ist jetzt schon zum dritten Mal die Hausaufgaben nicht gemacht.
'Alex has not done the homework for the third time already.'

B: Wie jetzt? Alex hat \*jemals/ schon mal die Hausaufgaben vergessen?
'What? Alex has ever/ once forgotten to do the homework?'

(20) A: Chris war eine große Hilfe beim Aufräumen.
'Chris was a great help with cleaning.'

B: Wie jetzt? Chris hat (tatsächlich) einen Finger krum gemacht, um zu helfen?
'What? Chris really has lifted a finger to help?'

# Theories of NPI licencsing

- Entailment-based approaches (Ladusaw, 1980; Giannakidou, 1998):
  Assume homogenous, concentric behavior
- Scalar approach
  (Krifka, 1995; Eckardt, 2001; Eckardt & Csipak, 2013):
  NPIs are used for statements stronger than their alternatives.
  Minimizers come with non-veridicality assumption ⇒ not compatible
  with denial contexts.
- Representational approach (Sailer, 2007, 2009):
  NPIs licensed in the scope of some operators; shares concentricity
  assumption
- LF-representational approach (Linebarger, 1980, 1987):
  NPIs licensed in the LF of a clause or in the LF of a *Negative
  Implicatum* (NI). But: NI used for weak NPIs under weak licensors.

# Summary

- Minimizers occur in negated sentences, in some other NPI-licensing contexts and in some cases with negative "side message".
- Minimizers in non-negative contexts pose a severe problem to theories of NPI licensing.
- Sedivy (1990): Two types of licensing needed, but not exactly as in Linebarger's work:
  - Type 1 licensing: only with respect to the semantics of the sentence.
  - Type 2 licensing: also with respect to some inferred statement.
- Questions in German: Minimizer NPIs require biased interpretion but do not need interrogative syntax.
- Plan for today: Modify representational theory to include "side messages".

# Basic idea

Semantic representation of a sentence contains more than its core, primary truth conditional content, though the two are distinguishable.

- Homer (2008): "plain meaning" plus a conjunction of its presuppositions.
- Potts (2005): at-issue meaning plus a conjunction of its Conventional Implicatures (CIs) at utterance level
- Discourse Representation Theory (DRT, Kamp et al. (2011)): preliminary representation, expanded through anaphora resolution and presupposition accommodation (van der Sandt, 1992).
- AnderBois et al. (2015): Interaction of at-issue and non-at-issue content with respect to anaphora and presuppositions.
- Gutzmann (2013): use-conditional meaning as felicity conditions.

# Two relevant constellations

- Contrastive use of auxiliaries

  (21)  I DO give a damn.

- Rising declaratives

  (22)  Wie jetzt?! Chris hat (tatsächlich) einen Finger krumm
         gemacht um zu helfen?
         What? Alex lifted a finger to help?

# Critical construction 1: Contrastive use of auxiliaries

- Sedivy (1990, 98): Constrastively used auxiliaries licens strong NPIs. There must be the "denial of a negative presupposition."

    (23)    a.  I DO give a damn.

               b.  It is not true that [I don't give a damn].

- Gutzmann et al. (2020): **VERUM**
    - Only use-conditional semantic contribution.
    - $[\![\textbf{VERUM}(\phi)]\!]^{uc} = \checkmark$ iff speaker wants to prevent the question under discussion to be downdated with $\neg\phi$.

# Contrastive use of auxiliaries

- Use-conditional meaning: type of conventional implicature (Gutzmann, 2013)
- Notation: truth-conditional meaning $\|$ <u>use-conditional meaning</u>
- Use-conditional meaning of Verum: **PreventDownDating** (**PDD**)

(24)  A: I cannot imagine that Peter kicked the dog.
      B: Peter DID kick the dog.                (Gutzmann et al., 2020, 3)

   **kick(peter, the-dog)** $\|$ <u>**PDD(¬kick(peter, the-dog))**</u>

# Critical construction 2: Rising declaratives

- Trinh & Crnič (2011):
    - Explicit representation of **ASSERT** operator and asserter:
      $[[\textbf{ASSERT}(x,\phi)]]^c = [[\phi]]^c$ if (i) $x$ believes $\phi$, and (ii) $\phi$ is not presupposed.
    - Falling declarative: speaker assertion.
    - Rising declarative: hearer assertion
  ⇒ No difference wrt to NPI-licensing expected!

  (25)   * Alex lifted a finger?
           **ASSERT**(**hearer**, **lift-finger**(**alex**))

# Use-conditional meaning of rising declaratives

- Castroviejo (2008); Gutzmann (2013): Use-conditional meaning contributed by intonation:

  (26)  How tall Michael is! $\emptyset$ || it is unexpected how tall Michael is.

  (27)  Obama won the Nobel Prize!
        O. won the NP || it is unexpected that O. won the NP.

- German rising declaratives: truth-conditional meaning as in Trinh & Crnič (2011): **ASSERT**(**addressee**, $\phi$)
  - weakly biased: … || ¬**Believe**(**speaker**, $\phi$)
  - strongly biased: … || **Believe**(**speaker**, ¬$\phi$)

  (28)  What? Alex cleaned the room?
        Primary content: **ASSERT**(**addressee**, **clean**(**alex**))
        Utterance content: … || <u>**Believe**(**speaker**, ¬**clean**(**alex**))</u>

# Basic idea

- Weak NPIs: Require a licenser in the primary content.
- Minimizer NPIs: Require a strong licenser in the utterance content.

# Constraint on weak NPIs

**Licensing condition for weak NPIs:**
The semantic contribution of the item must be in the scope of an NPI-licensing operator at the primary content.

(29)  a.  Alex didn't see anything.
          Primary content: $\neg\exists x(\textbf{see}(\textbf{alex}, x))$

      b.  Few student read anything.
          Primary content: $[\textbf{Few}\, y : \textbf{student}(y)](\exists x(\textbf{read}(x, y))$

(30)  * But, Alex DID eat anything.
        Primary content: $\exists x(\textbf{eat}(\textbf{alex}, x))$
        Utterance content: ... $\parallel$ $\underline{\textbf{PDD}(\neg\exists x(\textbf{eat}(\textbf{alex}, x)))}$

(31)  * Mary saw anything?
        Primary content: $\textbf{ASSERT}(\textbf{hearer}, \exists x(\textbf{see}(\textbf{mary}, x))$
        Utterance content: ... $\parallel$ $\underline{\textbf{Believe}(\neg\exists x(\textbf{see}(\textbf{mary}, x)))}$

# Constraint on minimizer NPIs

**Licensing condition for minimizer NPIs:**
The semantic contribution of the item must be in the immediate scope of a negation in the utterance content of the utterance containing it.

(32)  Alex didn't lift a finger.
      Primary content: ¬**lift-finger**(**alex**)

(33)  * Few students lifted a finger.
      Primary content: [**Few** $x$ :**student**($x$)](**lift-finger**($x$))

(34)  Alex DID lift a finger.
      Primary content: **lift-finger**(**alex**)
      Utterance content: ... || **PDD**(¬**lift-finger**(**alex**)))

(35)  What? Alex lifted a finger?
      Primary content: **ASSERT**(**hearer**, **lift-finger**(**alex**))
      Utterance content: ... || **Believe**(¬**lift-finger**(**alex**))

# Summary

- NPI-licensing shows grammatical reflex of different levels of semantic representation. (primary content vs. utterance content)
- Licensors of minimizers are a subset of licensors of weak NPIs, but:
  - Non-concentricity: different semantic levels for licensing.
  - Non-homogeneity: similar primary content can have different relevant utterance content.

# Afterthought 1: Which expressions are like "minimizers"?

- Here: arbitrary difference, specified as collocational requirement in the lexical entry.
- Sedivy (1990): regular NPIa (*any*) vs. lexical NPIs (*lift a finger*)
- Postal (2005): NPIs contain negation, i.e., they are idioms with a negative component. Adaptation: maybe only lexical NPIs?
  - ► Negation need not be part of the truth-conditional content.
  - ► Even if it is, the negation can take various forms (*Nobody lifted a finger*, *I didn't lift a finger*, *I don't think* Alex *lifted a finger*, …)
  - ► Only rhetorically different from a collocational analysis?
- Language play?
  - ► Why not used in contexts not conventionally associated with negative "side message"?
  - ► Why no licensing through irony?

    (36)   Yeah, you are such a good friend.
           \# You are always the first to lift a finger for others.

- Perhaps: Certain degree of semantic transparency needed (Rizea & Sailer, 2020).

# Afterthought 2: Status of use-conditional meaning

- Use-conditional items: expressions that contribute to the use-conditional meaning.
- Here: expressions that depend on a certain configuration within the use-conditional meaning.

# Conclusion

- NPI theory
  - Minimizers licensed by a subset of the licensors of weak NPIs
  - Minimizers licensed in a superset of the semantic levels of weak NPIs
- Architecture of meaning representation
  - NPI licensing on semantic representations
  - Integration of CI and use-conditional meaning
  - Integrated additional meaning is conventionally associated, necessary for discourse-anaphoric phenomena, felicity, …
- Next steps:
  More data on NPIs in context with negative CI/use-conditional meaning needed.

# Future work

- Levinson (2000): Utterance content extended to contain *generalized conversational implicatures* (GCI)
- Sailer (to appear): Reading-dependent licensing of minimizers derived by licensing in GCI.
- GCIs as key for NPI licensing with irrealis modals and in the restrictor of universal quantifiers.

Thank you for your attention!

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