

Verbal Negative Polarity Items Weaker than Weak, Stronger than Strong!

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1 Introduction

- (1) Verbal NPis:
 - a. English: can stand, care if, need, dare, can help
 - b. German (Falkenberg, 2001; Richter and Soehn, 2006; Obrembalski, 2008): scheren ‘care’, brauchen+Vinf ‘need’, ausstehen können ‘can stand’, wahrhaben wollen ‘be willing to accept’
- (2) Diagnostic environments for NPI classification:
 - a. Occurrence in the scope of *not every*, *not many*, or *at most*.
 - b. Occurrence in the complement clause of *I don't claim*.
- (3) Behavior of the three types of NPis with respect to the environments in (2):

NPI-Type	(2-a) <i>not every ...</i>	(2-b) <i>I don't claim ...</i>
weak NPI	ok	ok
strong NPI	*	*
verbal NPI	ok	*

Aims of the talk:

- Motivate that V-NPis are an interesting and separate type of NPis. (Sections 2 & 3)
- Show that V-NPis are problematic for previous accounts. (Section 4)
- Describe V-NPis in a representational framework. (Sections 5 & 6)
- Capture data on V-NPis in special constructions and in complement clauses. (Sections 7 & 8)

2 Traditional NPI Contexts

2.1 Strong and Weak NPis

- (4) Occurrence contexts of weak NPis:
 - a. clause-mate sentential negation expressed on the verb:
Peter did not read any books.
 - b. scope of a clause-mate n-word:
Nobody ever read this book.
 - c. scope of *few*, *not many*, *at most*:
At most 10 users have ever borrowed this book.
 - d. restrictor of an n-word:
[No student who has ever studied syntax] could forget this example.
 - e. restrictor of a strong quantifier in a ‘law-like’ sentence:
Most students who’ve ever read of Hegel seem to wear hats.
 - f. restrictor of a strong quantifier in an ‘episodic’ sentence:
At most 10 users who ever borrowed this book read it completely.

- g. *if*-clause in threats and ‘law-like’ sentences:
If you ever say that again, you will regret it, got it?
- h. *if*-clause in promises and ‘episodic’ sentences:
If Pat ever reads *Syntactic Structures*, she’ll enjoy it.
- i. complement clause to a negated neg raising predicate:
John doesn’t think [that Fred ever ate any chocolate].
- j. complement clause to negated matrix predicates others than neg raising predicates:
John doesn’t claim [that Fred ever ate any chocolate].
- k. complement clause to a non-factive adversative predicate:
Government officials have reportedly denied that Vreeland ever served in the Navy.
- l. complement clause to a factive adversative predicate:
Sandy is surprised [that Robin ever ate kale].
- (5) Occurrence contexts of strong NPIs:
- a. clause-mate sentential negation expressed on the verb:
As a result, they don’t pay a red cent, ...¹
- b. scope of a clause-mate n-word:
We filter it because WE DON’T WANT IT AND WILL NEVER SEND A RED CENT TO THEM.²
- c. restrictor of a clause-mate n-word:
[No one with a red cent in his pocket] would support this artist.³
[No reporter who has the slightest understanding of crime] would suggest such a story — trust me on this, this is an editor’s idea.⁴
- d. restrictor of a strong quantifier in a ‘law-like’ sentence:
[Every kid with a red cent in his pocket] would buy this candy bar.⁵
Of course [every person with the slightest knowledge] of science knows that to meet a white crow is the most unlucky thing that can happen to a man, ...⁶
- e. *if*-clause in threats and ‘law-like’ sentences:
If I had a red cent for every variation of a tulip ethernet NIC that was ever made for the alpha, I’d have enough for a decent snack at subway.
- f. complement clause to a negated neg raising predicate:
Personally, I don’t think Paul should pay a red cent for you⁷
- g. complement clause to a non-factive adversative predicate:
I really doubt they are spending a red cent more on gifted kids than on regular kids.⁸
- (6) NPI-licensing contexts that exclude strong NPIs:
- a. scope of *few*, *not many*, *at most*:
* Not many authors earn a red cent with their first novels.⁹
- b. restrictor of a strong quantifier in an ‘episodic’ sentence:
* Every kid with a red cent in his pocket bought this candy bar.
- c. *if*-clause in promises and ‘episodic’ sentences:
* If Pat earned a red cent last night, he had his first lucky day in weeks..
- d. complement clause to negated matrix predicates others than neg raising predicates:
* Pat didn’t claim that Chris gave a red cent to charity.
- e. complement clause to a factive adversative predicate:¹⁰

¹Google search on October 7, 2007. Search pattern: “a red cent”. Web site: <http://marc.info/?l=linux-kernel&m=112458521702385&w=2>.

²Google search on October 7, 2007. Search pattern: “a red cent”. Web site: <http://www.dslreports.com/forum/r18607920-Massive-SPAM-increase-all-with-PDF-attachments>.

³No sentence of this pattern was found on the internet, though.

⁴Google search on March 31, 2009. Search pattern: “no * who has the slightest”. Web site: <http://freefromeditors.blogspot.com/2008/08/journalistic-amnesia-infected-newsrooms.html>.

⁵No sentence of this pattern was found on the internet, though.

⁶Google search on March 31, 2009. Search pattern: “every * with the slightest”. Web site: <http://query.nytimes.com/gst/abstract.html?res=FB0617FB3B5411738DDA10A94DB405B8584F0D3>.

⁷Google search on October 7, 2007. Search pattern: “think * a red cent”. Web site: <http://fametastic.co.uk/archive/20070115/4189/heather-mills-never-wants-to-see-paul-mccartney-again/>.

⁸Google search on October 7, 2007. Search pattern: “doubt * a red cent”. Web site: http://www.ajc.com/blogs/content/shared-blogs/ajc/education/entries/2006/01/05/is_todays_honor.html.

⁹Israel (1996) judges the following sentence as not fully ungrammatical:

(i) ?? Few of them spent a red cent on their outfits.

¹⁰According to Linebarger (1980) the following sentence is grammatical:

(i) I was surprised that she contributed a red cent.

- * Pat is surprised that Chris gave a red cent to charity.
- * I was pleasantly surprised that she contributed a red cent.

2.2 Verbal NPIs

- (7) a. Scope of *not every, not many*:
Not many students care if they miss two lectures.
- b. Complement clause of *I don't claim*:
* I don't claim that Pat cares if I come to her party.
- (8) a. Dutch: hoeven 'need'; talen (naar) 'care (for)', kunnen luchten 'can stand' (Klooster, 1993)
- b. English: can stand, care if, need, dare, can help
- c. German (Falkenberg, 2001; Richter and Soehn, 2006; Obrembalski, 2008): scheren 'care', brauchen+Vin 'need', ausstehen können 'can stand', wahrhaben wollen 'be willing to accept'
- (9) Occurrence contexts of clause-bounded NPIs:¹¹
- a. clause-mate sentential negation expressed on the verb:
(i) I Don't Care If It's 2007.¹²
(ii) Pat can't stand this song.
- b. scope of a clause-mate n-word:
No one cares if you don't watch TV, you're still a lazy blockhead.¹³
- c. scope of *few, not many, at most*:
Democracy loses out in Putin's Russia, but few seem to care if the money's right.¹⁴
- d. *if*-clause in threats and 'law-like' sentences:
If companies cared if their employees drank alcohol occasionally than I'm sure 1/2 the country would be unemployed.¹⁵
- e. complement clause to a negated neg raising predicate:
I don't think he really cares if I'm there or not.¹⁶
- f. complement clause to a non-factive adversative predicate:
I doubt she cares if we change our jobs.¹⁷
- g. complement clause to a factive adversative predicate:
"Um yea I'm fine. You broke my fall" replied Lily surprised James cared if she got hurt.¹⁸
- (10) NPI-licensing contexts that exclude clause-bounded NPIs:
- a. restrictor of a clause-mate n-word:
* No student who cares if he passes the exam hangs around in bars after midnight.
- b. restrictor of a strong quantifier in a 'law-like' sentence:
* Every student who cares if he passes the exam should takes his classes seriously.
- c. restrictor of a strong quantifier in an 'episodic' sentence:
* Every student who cares if he passes the exam next week is sitting in the library right now.
- d. *if*-clause in promises and 'episodic' sentences:
* If Pat cares if she passes the exam, she will soon start studying seriously.
- e. complement clause to negated matrix predicates other than neg raising predicates:
* I don't claim that Pat cares if he passes the exam.
- (11) Generalization:
V-NPIs must be in the scope of a clause-mate NPI-licenser.
Only exception: complement clauses in neg raising construction and adversative predicates.

¹¹Klooster (1993) mentions a number of other possible contexts for verbal clause-bounded NPIs that will not be considered in this thesis. These include negatively biased rhetorical question and comparatives and superlatives.

¹²Google search on October 7, 2007. Search pattern: "care if". Web site: http://www.businessweek.com/innovate/FineOnMedia/archives/2007/09/it_may_be_early.html.

¹³Google search on October 7, 2007. Search pattern: "no * cares if". Web site: <http://akinokure.blogspot.com/2007/07/no-one-cares-if-you-dont-watch-tv-youre.html>.

¹⁴Google search on October 7, 2007. Search pattern: "few * care if". Web site: <http://news.bbc.co.uk/1/hi/world/europe/5167062.stm>.

¹⁵Google search on October 7, 2007. Search pattern: "if * cared if". Web site: <http://www.drugs.com/forum/need-talk/i-am-taking-drug-test-tomorrow-have-question-38765.html>.

¹⁶Google search on October 7, 2007. Search pattern: "think * cares if". Web site: <http://answers.yahoo.com/question/index?qid=20071004230316AAAXAnCz>.

¹⁷Google search on October 7, 2007. Search pattern: "doubt * cares if". Web site: http://blogs.usatoday.com/ondeadline/2006/04/couric_im_leavi.html.

¹⁸Google search on October 7, 2007. Search pattern: "surprised * cared if". Web site: <http://www.veritaserum.com/forums/index.php?showtopic=17305>.

2.3 Apparent Problems for (11)

- (12) Falkenberg (2001) some German verbal NPIs do not occur in neg raising constructions.

?* Ich glaube nicht, dass er ermüdete, sie mit Beweisen seiner Zuneigung zu überschütten.
 I think not that he tired her with tokens of his affection to shower

‘I don’t think he got weary of showering her with tokens of his affection’ (Falkenberg, 2001, p. 85)

English verbal NPIs are not documented well enough to identify a similar subgroup of verbal NPIs.

- (13) V-NPIs in relative clauses 1:
- Well, the null envelope return address just means that there is nobody [who cares if the message can be delivered]; it can be silently trashed.¹⁹
 - I know of no electric appliance [that cares if the frequency is 59 Hz or 60 Hz or 61 Hz].²⁰
- (14) “Pseudo-relatives” (McCawley, 1981)
- I know of no electric appliance [that is in my apartment] [that cares if the frequency is 59 Hz or 60 Hz]
 - *I know of no electric appliance [that cares if the frequency is 59 Hz or 60 Hz] [that is in my apartment].
- (15) V-NPIs in relative clauses 2: “*all-you-need* relatives”
 All he cares is if his store is profitable.²¹
- (16) *all-you-need* relatives are semantically monoclausal:
- no *that* variant: Huddleston and Pullum (2002) (Chapter 12), Fox and Thomson (2007)
 - parallelism to pseudo-clefts:
 - What he cared was if his store is profitable
 - ..., instead what they care is if they have fun or not.²²
- (17) Connectivity in pseudo-clefts:
- What Peter detested was himself.
 - What every student likes is his first syntax class.
 - What we don’t need is any advise from a jerk like you.
- (18) He only cared if he gets his money on time.

3 Weaker than Weak

3.1 Intervention Effects

- (19) No committee will ever accept every proposal.
- $(\forall > \neg > \text{NPI}): \forall y[\text{proposal}(y) \rightarrow \neg \exists x[\text{committee}(x) \wedge \exists t[\text{accept}(x, y) \text{ at } t]]]$
 - $(\neg > \text{NPI} > \forall): \neg \exists x[\text{committee}(x) \wedge \exists t[\forall y[\text{proposal}(y) \rightarrow \text{accept}(x, y) \text{ at } t]]]$
 - $\$ (\neg > \forall > \text{NPI}): \neg \exists x[\text{committee}(x) \wedge \forall y[\text{proposal}(y) \rightarrow \exists t[\text{accept}(x, y) \text{ at } t]]]$
- (20) No committee will budge on every issue under discussion.
- $(\forall > \neg > \text{NPI}): \forall y[\text{issue}(y) \rightarrow \neg \exists x[\text{committee}(x) \wedge \text{budge-on}(x, y)]]$
 - $(\neg > \text{NPI} > \forall): \neg \exists x[\text{committee}(x) \wedge \forall y[\text{issue}(y) \rightarrow \text{budge-on}(x, y)]]$
 - $(\neg > \forall > \text{NPI}): \neg \exists x[\text{committee}(x) \wedge \forall y[\text{proposal}(y) \rightarrow \text{budge-on}(x, y)]]$
- (21) Naturally occurring example:
 (compatible with an “intervention” reading or a wide scope of the universal)
 But then hoh, the stupid snap-and-lock mechanism won’t seem to budge on all four sides of the top railings.²³
- (22) Intervention with neg raising?

¹⁹Google search on October 7, 2007. Search pattern: “nobody who cares if”. Web site: <http://www.greatcircle.com/list-managers/mhonarc/list-managers.199808/msg00022.html>.

²⁰Google search on March 31, 2009. Search pattern: “no * that cares if”. Web site: <http://leapsecond.com/pages/mains/>.

²¹Google search on March 31, 2009. Search pattern: “all he cares is if”. Web site: <http://www.petwalk.com/forum/Cats/2566-NEVER-SHOP-AT-PETSMART.html>.

²²Google search on March 31, 2009. Search pattern: “what * care is if”. Web site: <http://www.mathandchess.com/page/page/5659389.htm>.

²³Google search on July 24, 2008. Search pattern: “budge on all”. Web site: <http://samanthayeap.net/2006/04>.

- a. I don't think most Americans care if they kill each other.²⁴
 - b. I don't think ?all/?most/?many of your friends can make it here until after the orgy; in fact I'm quite sure of it. (Horn, 1978, p. 203)
- (23) Attested German example: Ich persönlich glaube nicht, dass sich viele User darum scheren würden, solange die Seite funktioniert.²⁵
(sentence is equally good without *würden*)
- (24) Constructed examples:
- a. Ich glaube nicht, dass viele Studenten das zu lesen brauchen.
 - b. Ich denke nicht, dass viele Studenten die O-Phasen-Partys missen wollen.

3.2 V-NPIs in non-downward entailing environments

- (25) Ich glaube nicht, dass (ziemlich) genau zwei Politiker an einer Demo teilgenommen haben.
'I don't think that exactly two politicians participated in a demonstration.'
- a. not downward-entailing:
≠ Ich glaube nicht, dass (ziemlich) genau zwei Politiker an einer Anti-Kapitalismus-Demo teilgenommen haben.
'I don't think that exactly two politicians participated in a demonstration against capitalism.'
 - b. not upward-entailing:
≠ Ich glaube nicht, dass (ziemlich) genau zwei Politiker an einer politischen Versammlung im Freien teilgenommen haben.
'I don't think that exactly two politicians participated in a political open-air event.'
- (26) Ich glaube nicht, dass (ziemlich) genau zwei Politiker
I think not that quite exactly two politicians
- a. *einen Schimmer von den Umfrageergebnissen haben. (s-NPI)
the faintest idea about the poll results have
 - b. *jemals auf die Bedürfnisse von Behinderten eingehen. (w-NPI)
ever the needs of handicapped consider
 - c. um ihre Wiederwahl scheren. (V-NPI)
about their re-election care

3.3 More Types of NPIs

- (27) *Negative Polarity Particles* (NPP, Levinson (2007))
- | | |
|------------|--------------------------------|
| NPP | corresponding non-NPI particle |
| a. either | too |
| b. yet | already |
| c. anymore | still |
- (28) a. Weak clause-mate licenser:
In practice, your blog has to publish a site feed (either RSS or Atom) and, of course, not everyone does this either.²⁶
- b. *If*-clause:
I have never been to Amsterdam. * [If I go to Brussels either], I will buy you some Belgian chocolates. (Levinson, 2007)

The discussion of intervention effects in neg raising constructions in Horn (1978) suggests that NPPs are not sensitive to such effects either. The following example from Horn is an instance of the relevant constellation with the NPP *yet*.

- (29) Intervention effects for NPPs?
I don't think #all/ #almost all /most /a majority of/ #many/ #lots of Americans trust the President yet.
(= I think QUANT Americans don't trust the President yet.) (Horn, 1978, p. 203)

²⁴Google search on October 7, 2007. Search pattern: "most * care if". Web site: <http://transcripts.cnn.com/TRANSCRIPTS/0610/12/sitroom.02.html>.

²⁵Google search on June 21, 2009. Search pattern: "glaube nicht * viele * scheren". Web site: <http://opera-info.de/forum/thread.php?threadid=14227>.

²⁶Google search on February 15, 2008. Search pattern: "not everyone * this either". Web site: <http://www.nvunet.com/information-world-review/features/2194213/blogging-beginners-monitoring>.

In (29) the use of *all* or *many* does not lead to ungrammaticality. Horn uses the symbol “#” to indicate that a narrow scope reading of the negation is not available for these examples, i.e. the paraphrase given in brackets is not possible for the quantifiers marked with “#”. Since the NPP *yet* is possible in all cases, it can be concluded that it is immune to intervention effects.

- (30) Difference between V-NPIs and NPPs:
Licensing in the complement of factive adversative predicates
- a. V-NPI: “Um yea I’m fine. You broke my fall” replied Lily surprised James cared if she got hurt. (= (9-g))
 - b. NPP:
 - (i) *I regret that I am in Spain anymore.
 - (ii) *I am surprised that he speaks to her either.

4 Previous Accounts

4.1 General Accounts of NPI Licensing

- (31) Entailment-based accounts
- a. Zwarts (1997):
 - (i) Weak NPIs are licensed in the scope of *downward-entailing* operators.
 - (ii) Strong NPIs are licensed in the scope of *anti-additive* operators.
 - b. Gajewski (2007):
A strong NPI is licensed in the scope of an *intolerant* operator. Neg Raising predicates have a lexical presupposition by which the complement of *I don’t think* is intolerant.

- (32) Distributions accounted for:

NPI-Type	nobody	(2-a) <i>not every ...</i>	<i>I don’t think</i>	(2-b) <i>I don’t claim ...</i>
weak NPI	ok	ok	ok	ok
strong NPI	ok	*	ok	*
verbal NPI	ok	ok	ok	*

Problem: unexpected difference between second and fourth column!

Other Accounts

- Linebarger (1980):
no account for different types of NPIs.
- Pragmatic accounts (Krifka, 1994):
 - NPIs evoke scalar alternatives.
 - A sentence containing an NPI must contain an ASSERT operator. This operator triggers scalar implicatures.
 - If the NPI is unlicensed, there is a conflict between the asserted and the implicated content.
 - Different ASSERT operators for emphatic and non-emphatic NPIs.
 - V-NPIs?
 - * New ASSERT operator? (in the complement clause of *I don’t say* but not in the scope of quantifiers)
 - * If intervention data are correct, V-NPIs need not occur in scale reversal contexts. Consequently, no conflict between asserted and implicated content seems to be derivable.

4.2 Previous Descriptions of Verbal NPIs

- (33) Publications on V-NPIs in various languages:
- a. German: Falkenberg (2001), Obrebalski (2008)
 - b. Dutch: Klooster (1994)
 - c. Norwegian: Johannessen (2003)
 - d. NPPs: Levinson (2007)

4.2.1 Falkenberg (2001), Obrebalski (2008)

- V-NPIs are weak NPIs that require a clause-mate licenser.
- Identification of subclasses within the V-NPIs (*ermüden* vs. *sich scheren*)
- No theoretical interpretation of the observations.
- No systematic relation to other types of NPIs.

4.2.2 Klooster (1994)

- Mechanism for V-NPIs distinct from that for other types!
V-NPIs: Selection by a negative head
other NPIs: Binding à la Progovac (1994); no account for the w/s-NPI contrast.
- Problems in the account of the neg raising facts.

4.2.3 Johannessen (2003)

- Clause-mate licenser required (including yes/no-questions):
NPI verbs must be licensed by a nonveridical operator within their local proposition.
(Proposition = CP [A matrix clause or a proper complement clause])
- Neg raising? Reanalyzed as modal verbs!
- Licensing itself: à la Giannakidou (1999); syntactic feature ([+nonveridical]) that needs to be checked by an appropriate operator.
- Unclear interaction between syntax and semantics

4.2.4 Levinson (2007)

- (34) NPPs are licensed by an environment which is **semantically negative**, that is, both downward entailing and assertive.
- If the observations about intervention effects are true, V-NPIs need not be in DE contexts.
 - Differences between V-NPIs and NPPs with respect to licensing in the complement clause to factive adversatives.

5 A DRT-Based Account of NPI Licensing

- New definition of NPI licensing context as structural configuration in the semantic representation.
- Homogeneous structural restriction on w-NPIs, s-NPIs, and V-NPIs.
- NPI licensing: different NPIs impose different restrictions on their possible embeddedness inside the licensing structure. (Technically encoded as collocational requirements)

5.1 Semantic Representations

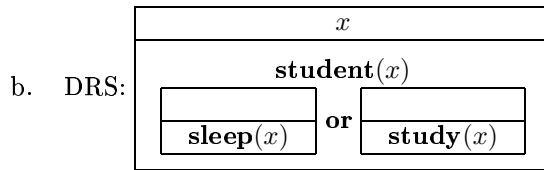
- (35) A student slept.
- a. First-order representation: $\exists x(\mathbf{student}(x) \wedge \mathbf{sleep}(x))$

b. DRS:

x
$\mathbf{student}(x)$
$\mathbf{sleep}(x)$

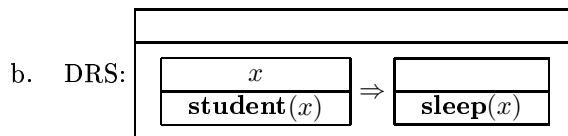
(36) A student was sleeping or studying.

a. First-order representation: $\exists x(\mathbf{student}(x) \wedge (\mathbf{sleep}(x) \vee \mathbf{study}(x)))$



(37) Every student slept.

a. First-order representation: $\forall x(\mathbf{student}(x) \rightarrow \mathbf{sleep}(x))$



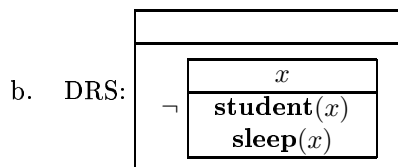
Whereas the first-order representation of (37) is very similar to that of the corresponding sentence with an indefinite subject in (35), the DRT encoding differs considerably for the two sentences. In (37) the overall DRS does not introduce a discourse referent. Instead, such a discourse referent, x , is only introduced in the first argument of the binary connector “ \Rightarrow ”, i.e. in the antecedent of the implication. The second argument of the implication, i.e. its consequent, has an empty universe, but its condition contains an occurrence of the discourse referent x . DRT’s notion of variable binding is such that the occurrence of x in the consequent is bound by the occurrence of x in the universe of the antecedent.

The DRS in (37) could be paraphrased as an overt conditional with an existential in the *if*-part, as in (38).

(38) If there is a student, he sleeps.

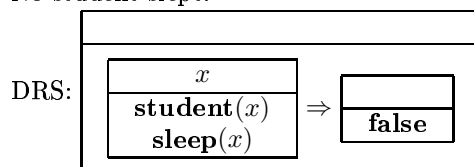
(39) No student slept.

a. First-order representation: $\neg \exists x(\mathbf{student}(x) \wedge \mathbf{sleep}(x))$



Consequently, we can treat negation as a derived notion and reformulate the DRT representation of (39) as in (40).

(40) No student slept.



5.2 A Structural Notion of “Negation”

(41) NPI-licensing DRS:

A DRS K is an *NPI-licensing DRS* iff it is the first box in an implicational DRS condition, i.e. if it occurs in a DRS condition of the form $K \Rightarrow K'$

(42) Structural condition on NPIs:

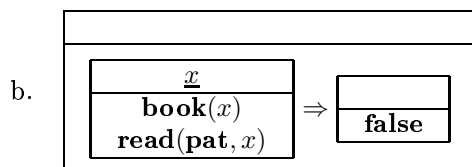
The semantic contribution of an NPI must be included in an NPI-licensing condition.

This covers NPI licensing in:

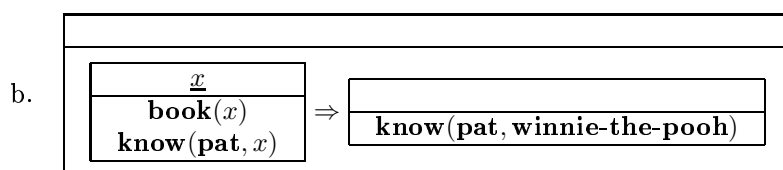
- the scope of negation

- in the restrictor of a universal quantifier
- in the antecedent of a conditional
- with lexical decomposition: in the restrictor and the scope of *few*. (extension to other determiners in Sailer (2008))

(43) a. Pat didn't read any book.



(44) a. If Pat knows any book, she knows *Winnie the Pooh*.

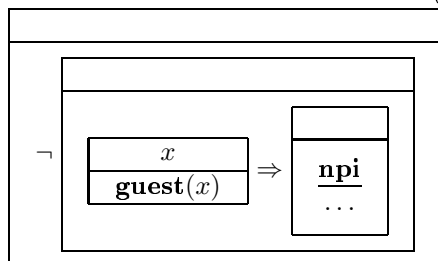


5.3 Measuring Distance in Semantic Representations

- (45) a. Not every guest brought any salad to the party.
 b. *Not every guest lifted a finger to help with the decoration.

In (46) I sketch the schematic DRS for the sentences in (45). I write **npi** for the contribution of the NPI.

(46) Schematic DRS for the sentences in (45):



- (47) Potential Intervener (preliminary):
 An NPI-licensing DRS K is a *potential intervener* for an NPI α in a DRS K' iff
- K is accessible from α in K' , and
 - α is not licensed within K ,
 i.e., there is no NPI-licensing DRS K'' that includes α and from which K is accessible.

For completeness: The “real” definition

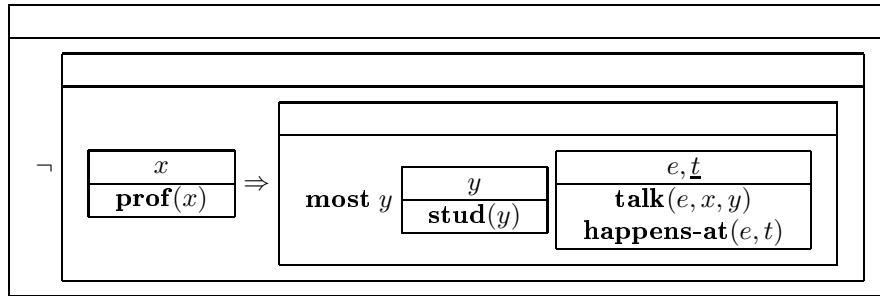
- (48) For each DRS K_0 and each NPI, let K_{npi} be the smallest non-argument DRS that contains the logical form of the NPI:
- a DRS K is a *potential intervener* for the NPI in K_0 iff
 - K is a non-argument DRS,
 - $K \neq K_{npi}$,
 - K_0 is an NPI-licensing DRS that contains K_{npi} and K ,
 - K is accessible from the K_{npi} , and
 - K has a non-empty universe

The definitions in (49) show that NPIs may differ with respect to whether they allow for potential interveners.

- (49) Difference between NPI-types:
- A weak NPI allows for at most one potential intervener.
 - A strong NPI does not allow for a potential intervener.

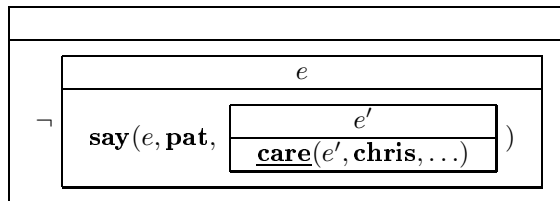
Deriving intervention effects:

- (50)
- Not every professor ever talked to most students.
 - Unavailable intervention reading: not every > most > ever

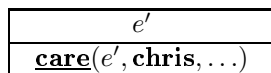


6 V-NPIs in DRT

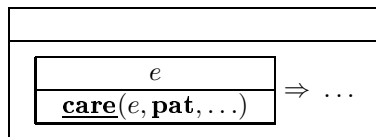
- (51) A V-NPI must be licensed within the semantic representation of the clause in which it is contained.
- (52) No licensing into the complement clause of *don't say*.
- *Pat didn't say that Chris cared who won the race.



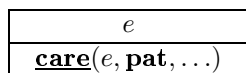
- DRS of the clause containing the NPI:



- (53) No licensing in *if*-clauses:
- If Pat cares who will win the race, he will ask me tomorrow.



- DRS of the clause containing the NPI:



7 "Short Circuited Implicatures"

7.1 Neg Raising

- (54) I don't think ...
- Pat will ever pass this exam. (w-NPI)
 - Pat will lift a finger to help me. (s-NPI)
 - Pat cares who won the election. (V-NPI)
- (55) Horn and Bayer (1984): Neg raising predicates trigger *short-circuited implicatures*, i.e.
- I don't think ϕ
 - implicates (SCI): I think $\neg\phi$.
- (56) Example of an SCIs: Conventionalized, indirect requests

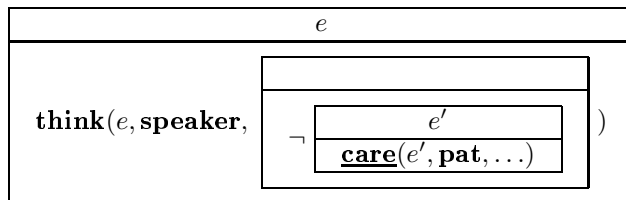
- a. (Please) pass the salt!
Could you (please) pass the salt!
- b. *Are you please able to pass the salt?

Two perspectives on SCIs:

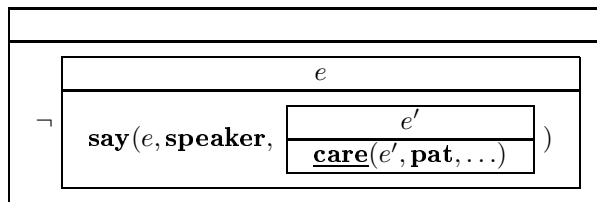
1. SCIs as “idioms” (Sadock, 1972):
I don't think φ is an idiom with the meaning *I think ¬φ*
2. SCIs as implicatures (Morgan, 1978): The relation is an implicature.
 - Morgan’s main argument: the literal meaning is available.
 - but: this is also true for idioms
 - if *please* occurs in (56-a) or there is a strong NPI in neg raising, the literal meaning is no longer available!

⇒ With Saddock’s perspective: Neg raising for V-NPIs follows immediately. (Sailer, 2006)

(57) I don't think Pat cares who won the election.



(58) *I don't say Pat cares who won the election.



s- and w-NPIs

- An s-NPI is excluded in (58) because the DRS

<i>e</i>
...

 is an intervener.
- A w-NPI is possible in (58) because there is just one intervener.

7.2 Other Constructions

7.2.1 In Horn and Bayer (1984)

(59) *I'll be damned if*
I'll be damned if I'll hire you until you cut your hair.
SCI: I won't hire you until you cut your hair.

Explicitly treated as idioms (i.e. as expressions whose semantics differs from the literal meaning in Gajewski (2005)).

(60) Rhetorical questions Why getting married until you absolutely have to?
SCI: You should not get married until you absolutely have to.

7.2.2 As if clauses

Klooster (1994) observes that V-NPIs occur in *as if* clauses:

(61) It took me a while to realise that this entire concept of bebo and myspace is completely and utterly pointless, as if strangers care who I am or what I do and why would those that know me need to read information about me.²⁷

²⁷Google search on June 21, 2009. Search pattern: “as if * care who”. Web site: <http://secore.bebo.com/Profile.jsp?Memberid=9497708>.

- (62) Contrast: SCI vs. calculated implicature:
- a. (i) Als ob es mich interessiert, mit wem du ausgehst!
 - (ii) Als ob es mich schert, mit wem du ausgehst!
 - b. (i) Das interessiert mich jetzt aber, mit wem du ausgehst! (ironically)
 - (ii) *Das schert mich jetzt aber, mit wem du ausgehst!
- (63) Other NPIs in *as if*-clauses:
- a. The Boss is back! (As if he ever left)²⁸ (w-NPI)
 - b. As if the HDD companies will lift a finger — it’s clearly not their problem.²⁹ (s-NPI)
 - c. As if smokers needed yet another reason to quit.³⁰ (NPP)

Plausible paraphrase for an SCI of *as if* ϕ ?

8 Other Types of Matrix Predicates

8.1 *whisper*

No NPI-licensing in the complement clause of *whisper*:

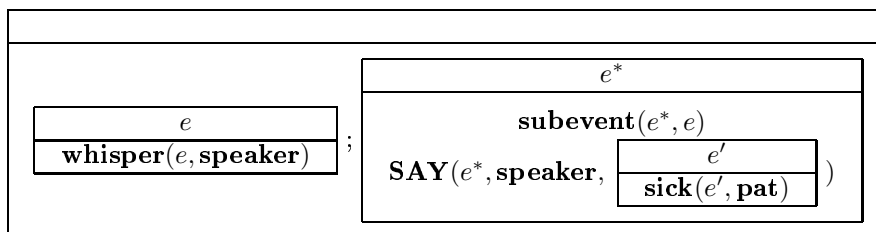
- (64) I don’t whisper that
- a. *Pat ever read my private notes. (w-NPI)
 - b. *Pat lifted a finger to help. (s-NPI)
 - c. *Pat cares who won the election. (V-NPI)

Analysis: *whisper* does not take a “real” semantic complement clause, inspired by Kratzer (2005):

- (65)
- a. Real transitive:
 - (i) Ich bekoche euch.
 - (ii) *Ich bekochen und bekoche.
 - b. Fake transitive:
 - (i) Ich pflücke Blumen.
 - (ii) Ich pflücke und pflücke.
 - c. Real complement clause:
 - (i) Ich sage, dass Chris krank ist.
 - (ii) *Ich sage und sage.
 - d. Fake complement clause:
 - (i) Ich flüstere, dass Chris krank ist.
 - (ii) Ich flüstere und flüstere.

Semantic representation for *whisper that*?

- (66) Conjunction:
- a. Pat didn’t cycle to the office.
 $\neg(\text{cycle}(\text{pat}) \wedge \text{go-to-office}(\text{pat}))$
 - b. Pat didn’t whisper that Chris is sick.
 - (i) Pat said that Chris is sick, but didn’t whisper it.
 - (ii) Pat whispered, but didn’t say that Chris is sick.
 - (iii) Pat neither whispered nor said that Chris is sick.
- (67) I whisper that Pat is sick.

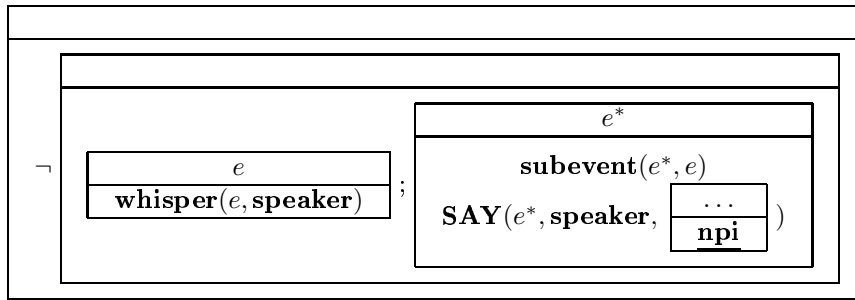


²⁸Google search on June 21, 2009. Search pattern: “as if * ever”. Web site: <http://shiff-happens.blogspot.com/2009/02/bass-is-back-as-if-he-ever-left>.

²⁹Google search on June 21, 2009. Search pattern: “as if * lift a finger”. Web site: <http://forums.macrumors.com/showthread.php?t=37857&page=2>.

³⁰Google search on June 21, 2009. Search pattern: “as if * yet”. Web site: <http://independentsource.com/2006/02/25/as-if-smokers-needed-yet-another-reason-to-quit/>.

(68) *I don't whisper that ...NPI



Matrix negation: Two interveners!

- DRS with e^* in its universe
- DRS with e in its universe

Sideremark: Conjunction is a know intervener for NPI licensing. In the present analysis, the reduction of the *whisper* case to conjunction is a welcome effect!

8.2 *be surprised*

(69) I am surprised ...

- Pat ever read this book. (w-NPI)
- *Pat lifted a finger to help. (s-NPI)
- Pat cares who won the election. (V-NPI)

- Analysis by lexical decomposition (Asher, 1993):
be surprise that $\phi =$
 - assertion: *expect that* $\neg\phi$
 - presupposition: ϕ
- Consequently:
 - DRS for the sentences in (69) like for neg raising.
 - In DRT: presuppositions are part of the representations
 - s-NPIs are excluded because they need to be licensed within the presuppositions as well. (Sailer, 2008)

9 Conclusion

- Fully representational theory of NPI licensing:
 - representational definition of the licenser
 - representational definition of the licensing domain
- Licensing domain differs for different types of NPIs:
 - w-NPI: at most one intervener
 - s-NPI: no intervener
 - V-NPI: licensing within the same clause.
- Predictions of the theory?
 - Integration into Head-driven Phrase Structure Grammar (HPSG) with Lexical Resource Semantics (LRS, Richter and Sailer (2004))
 - A lexical head has access to the semantics of its maximal projection. (Attribute EXTERNAL-CONTENT)
 - V-NPI: licensing domain is the EXTERNAL-CONTENT!
 - To be worked out: This can account for V-NPIs in pseudo-relatives.
 - NP-NPIs cannot have the distribution of V-NPIs!

- Difference to Richter and Soehn (2006):
 - Richter and Soehn assume explicit mentioning of the syntactic domain for all NPIs.
 - They list the NPI-licensing operators.
 - They include operators which are not considered here such as interrogatives, exclamatives, imperatives.
- Future research:
 - More solid empirical basis for the insensitivity to intervention effects needed. (problem: Janina’s talk)
 - Extension to relative clauses
 - Relation to NPPs

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