Use-conditional licensing of strong negative polarity items[1]

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Abstract. Negative polarity items like *lift a finger* are widely assumed to occur in a subset of contexts in which NPIs like *ever* are licensed. However, Sedivy (1990) points to contexts in which *lift-finger*-type NPIs but not *ever*-type NPIs can occur. The paper adds German rising declaratives to these contexts. It is argued that the relevant contexts have a use-conditional meaning and that *lift-finger*-type NPIs, in contrast to *ever*-type NPIs, can be licensed through use-conditional meaning. This idea is formalized as occurrence constraints of NPIs within semantic representations.

Keywords: conventional implicature, enriched semantic representation, minimizer, negation, negative polarity item, rising declarative

1. Introduction

In this paper, I contrast the distribution of strong negative polarity items with minimizer semantics such as *lift a finger* or *drink a drop* with that of weak negative polarity items such as *ever* or *anybody*. Following Sailer (2021), I will refer to the first group as *lift-finger*-type NPIs, to the second as *ever*-type NPIs. In the literature, *lift-finger*-type NPIs are claimed to occur only anti-additive context, i.e., they are licensed in the immediate scope of clausal negation and negative indefinites, but not in the scope of simply downward-entailing expressions such as *few*, see (1).

(1) a. Alex didn't lift a finger to help. No one lifted a finger to help.
b. *Few students lifted a finger to help.

In other NPI-licensing contexts, such as *if*-clauses, the restrictor of *every* and polar questions, *lift-finger*-type NPIs are only licensed under certain pragmatic conditions (Borkin, 1971; Linebarger, 1980; Heim, 1984; van Rooy, 2003; Hoeksema, 2012). Generally, in these cases, there is some expectation or other inference involved in which the NPI would be in the scope of a negation, see (2).

(2) Every restaurant that charges so much as a dime for iceberg lettuce, ought to be closed down. (Linebarger, 1980: 107)
Inference: A restaurant should not charge so much as a dime for iceberg lettuce.

The common observation is that *lift-finger*-type NPIs occur in a proper subset of the contexts that allow for *ever*-type NPIs. This generalization is built into all current theories of NPI licensing. Sedivy (1990) shows that this cannot be maintained empirically. She discusses two contexts in which *lift-finger*-type NPIs can be used felicitously, but *ever*-type NPIs are excluded. Both contexts lack an overt negation: clauses with contrastively used auxiliaries, see (3), and the scope of modals when there is an irrealis inference, see (4).

(3) a. I DO give a damn.
b. *Bert DID ever kiss Marilyn Monroe. (Sedivy, 1990: 98)

[1]I am grateful to the reviewers and the audience of *SuB 26* for comments and suggestions. All errors are mine.

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(4) a. John should have lifted a finger to help Mary clean up.
b. *John should have eaten any healthful tofu. (Sedivy, 1990: 99)

Sedivy concludes from such data that NPIs like *give a damn* and *lift a finger* can be licensed by a contextually salient negative "side message," while NPIs like *ever* and *anything* cannot. I will develop this line of thinking further, arguing that *lift-finger*-type NPIs can be licensed in a conventionalized side-message that has the status of a *conventional implicature* or *use-conditional* meaning (Potts, 2005; Gutzmann, 2013), i.e., within an *enriched semantic representation*, whereas *ever*-type NPIs need to be lilcensed in the compositionally derived semantic representation. Nonetheless, *ever*-type NPIs are compatible with more licensors than *lift-finger*-type NPIs.

I will extend the empirical basis of use-conditional NPI licensing to the occurrence of NPIs in non-inverted yes/no questions, so-called rising declaratives. This context has not been discussed in detail in the NPI literature. I will look at English and German data. The paper complements and extends the observations and analysis in Sailer (2021).

2. Challenging licensing contexts

As the data in the introduction illustrated, the only cases in which *lift-finger*-type NPIs are licensed without any doubt or additional requirements are what is called *negated clauses* in descriptive grammars such as Huddleston and Pullum (2002: 786–787). All other licensing contexts are subject to additional, pragmatic restrictions – even if they have the same entailment properties as negated clauses, i.e., even if they are anti-additive. In this section, I will look at the occurrence of *lift-finger*-type NPIs in clauses that are not morpho-syntactically negative and in which we do not find *ever*-type NPIs.

As observed in Sailer (2021), the sentences containing a *lift-finger*-type NPI in (3a) and (4a) require a context in which a "negative side message" is salient. Such a context, however, is not sufficient to license *ever*-type NPIs, see (5) vs. (6), from Sailer (2021: 352).

(5) 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].

(6) 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 Marilyn Monroe].

We find analogous data in German. I will start my discussion German with the expression *jm ein Haar krümmen* 'to harm a hair on s.o.'s head' (lit.: to s.o. a hair bend), but include other *lift-finger*-type NPIs later. They will be contrasted with the *ever*-type NPI *je(mals)* 'ever'.

The NPI *jm ein Haar krümmen* occurs in the *Collection of Distributionally Idiosyncratic Items* (CoDII, `https://www.english-linguistics.de/codii/`, Richter et al. 2010), a lingustic resource in which 167 German NPIs – but also Romanian NPIs, as well as German Positive Polarity Items and German and English bound words – are described and illustrated with corpus examples. As observed in Schaebbicke et al. (2021), CoDII documents occurrences of *lift-*

finger-type NPIs in contexts in which we only expect *ever*-type NPIs and even in contexts without a licensor. For our NPI, the following non-negative contexts are documented in CoDII:[2] A rhetorical *wh*-question in (7), an *if*-clause with a non-desirable consequence in (8), a sentence with the simple downward-entaling adverb *kaum* 'barely' in (9).[3]

(7) Wem hab ich denn ein Haar gekrümmt?
to.whom have I PRTCL a hair bent
'Whom would I have done the slightest harm?'
Side message: I think I haven't done any harm to anyone.

(8) Wenn X ein Haar gekrümmt wird oder gar den Märtyrertod stirbt, dürfte das neue
if X a hair bent is or even the maryr's death dies might this new
Wellen der Gewalt auslösen.
waves of violence unleash
'If any harm is done to X or he even dies a martyr's death, this would probably unleash new waves of violence.'
Side message: No harm should be done to X, nor should s/he die a martyr's death.

(9) Den sieben edlen Recken wird kaum ein Haar gekrümmt ...
to.the seven noble warriors is barely a hair bent
'The seven noble warriors hardly get hurt.'
Side message: The seven noble warriors didn't really get hurt.

The two contexts illustrated for English in (3) and (4) have not been included in CoDII as they are not considered NPI-licensing contexts in the literature. However, CoDII has a category "Exception(s)" for occurrences of NPIs that fall outside the classified contexts. For the NPI *jm ein Haar krümmen*, example (10) is given under "Exception(s)". It is part of a newspaper report of the trial against an alleged serial killer. The author of the report expresses a biased opinion on the claim that the accused did not harm the victim.

(10) Ob 99,96 viel gegen 0,04 Prozent sind und wie wahrscheinlich es daher ist, daß X
if 99.96 a lot against 0.04 percent are and how likely it thus is that X
Y ein Haar gekrümmt haben könnte, werden die Geschworenen entscheiden
to.Y a hair bent have could will the jury decide
müssen.
must
'The jury will have to decide if 99.96 is a lot in comparison to 0.04% and how likely it is therefore that X has done any harm to Y.'
Side message: Someone claimed that X did no harm to Y.

When consulting my own introspection, I find the same pattern for German as reported by Sedivy for English. The construction that is usually assumed to be parallel to the English cases in (3) is so-called *Verum focus* (Höhle, 2019; Gutzmann et al., 2020). In this construction, there is stress on the inflected verb in Verb-Second clauses, and on a complementizer or a clause-

[2] `https://www.english-linguistics.de/codii/codiinpi/de/list-of-single-npis/jemandem-ein-haar-kruemmen.xhtml`, last checked 24.1.2022.
[3] I have kept the original spelling of the examples, but anonymized examples (8) and (10).

initial *wh*-constituent in Verb-Final clauses. The construction requires a contextually salient proposition, whose truth is then assessed – see Section 3 for some details.

In (11), speaker A introduces the salient negative proposition that Alex can't do harm to anyone. In the reply, speaker B rejects this salient proposition. As indicated, it is possible to use a *lift-finger*-type NPI not only in A's original utterance, but also in B's reply, even though there is no classical NPI-licensor in the latter.

(11) A: Alex ist total lieb und kann niemandem ein Haar krümmen.
Alex is totally nice and can to.nobody a hair bent
'Alex is super-nice and can't do harm to anyone.'
B: Aber er HAT jemandem ein Haar gekrümmt. Er hat einen Einbrecher verprügelt.
but he HAS to.someone a hair bent He beat up a burglar.
'But he DID harm someone. He beat up a burglar.'

If the salient proposition is not negative, Verum focus cannot be used to license a *lift-finger*-type NPI. This is shown in (12). The salient proposition is that Alex said something during a lecture. As shown in (12a), this can be affirmatively asserted using Verum focus. However, the *lift-finger*-type NPI *einen Ton sagen* 'say a word' (lit.: a tone say) is not licensed.

(12) A: Es heißt, dass Alex während dem Vortrag geredet hat.
'People say that Alex talked during the lecture.'
a. B: Stimmt. Alex HAT da geredet.
correct Alex has there talked
'That's right. It is true that Alex talked then.'
b. B: *Stimmt. Alex HAT da einen Ton gesagt.
correct Alex has there a tone said
Intended: 'That's right. It is true that Alex has said something.'

The dialogue in (13) is parallel to the one in (11), but it contains the *ever*-type NPI *jemals* 'ever'. The NPI is licensed in A's utterance, but it cannot occur in B's reply, even though the context is exactly as above. This shows that Verum focus can act as a licensing context for *lift-finger*-type NPIs, but not for *ever*-type NPIs in German.

(13) A: Alex ist total nett und kann niemandem jemals weh tun.
Alex is totally nice and can to.nobody ever pain do
'Alex is super-nice and can't ever do harm to anyone'
B: *Aber er HAT jemals jemandem weh getan. Er hat einen Einbrecher verprügelt.
but he HAS ever to.someone pain done ...
Intended: B: 'But he DID harm someone at some point. He beat up a burglar.'

Höhle (2019) assumes that there is a meaning component, Verum, in the above clauses, which he paraphrases with a predicate like *it is true that*. This allows him to indicate the scope of Verum. He argues that Verum can be in the scope of negation, see (14).

(14) Es heißt, dass Karl ein Drehbuch geschrieben hat
'People say that Karl wrote a screenplay '
... aber Karl HAT kein Drehbuch geschrieben.
but Karl has no screenplay written
'but it is not true the Karl wrote a screenplay' (Höhle, 2019: 397) [my translation]

A *lift-finger*-type NPI cannot occur if the negation takes scope over Verum, see (15). However, it is licensed if the negation is in the scope of Verum, as in (16).

(15) A: Es heißt, dass Kim dir beim Aufräumen geholfen hat.
'People say that Kim helped you clean up.'
a. B: Unsinn. Kim HAT mir beim Aufräumen nicht geholfen.
nonsense Kim has me at.the clean-up not helped
'Nonsense. It is not true that Kim helped me clean up.'
b. B: Unsinn. *Kim HAT beim Aufräumen keinen Finger krumm gemacht.
nonsense Kim has at.the clean-up no finger bent made
Intended: 'Nonsense. It is not true that Kim lifted a finger to clean up.'

(16) A: Es heißt, dass Kim dir beim Aufräumen gar nicht geholfen hat.
'People say that Kim didn't help you clean up at all.'
a. B: Stimmt, Kim HAT mir beim Aufräumen gar nicht geholfen.
correct Kim has me at.the clean-up not at all helped
'Correct. It is true that Kim didn't help me clean up at all.'
b. B: Stimmt, Kim HAT beim Aufräumen keinen Finger krumm gemacht.
correct Kim has at.the clean-up no finger bent made
'It is true that Kim didn't lift a finger to clean up.'

We find a different behavior for the *ever*-type NPI *jemals* 'ever'. This NPI is fine in either scopal order between the negation and Verum, see (17a) versus (17b).

(17) a. A: Es heißt, dass Kim jemandem von dem Drehbuch erzählt hat.
'People say that Kim told someone about the screenplay.'
B: Unsinn. Kim HAT niemandem jemals von dem Drehbuch erzählt.
nonsense Kim has to.nobody ever about the screenplay told
'Nonsense. It is not true that Kim has ever told anyone about the screenplay.'
b. A: Es heißt, dass Kim niemandem von dem Drehbuch erzählt hat.
'People say that Kim told no one about the screenplay.'
B: Stimmt. Kim HAT niemandem jemals von dem Drehbuch erzählt.
correct Kim has to.nobody ever about the screenplay told
'Correct. Kim hasn't ever told anybody about the screenplay.'

To summarize, a *lift-finger*-type NPI can occur in a Verum focus sentence if there is a salient negated proposition. It does not matter if Verum focus is used to contradict this proposition, as in (11) or to confirm it, as in (16). This suggests that the idea of a negative side message, as indicated in (5) is not fully correct. What is important is the existence of a *salient negative proposition*. For an *ever*-type NPI, the contextually given salient proposition is not relevant, but rather whether there is a negation in the sentence containing the NPI.

Let me now turn to the second context that I want to look at in this paper, yes/no-questions. As discussed in the literature, prominently in Borkin (1971) and van Rooy (2003), *lift-finger*-type NPIs can only occur in yes/no-questions if they come with a negative bias. *Ever*-type NPIs, on the other hand, are fine in an information-seeking readings as well. Relevant examples are given for English and German in (18), which only has a negatively biased reading, and (19), which can, but need not, have a negative bias.

(18) Did Alex lift a finger to help Kim? Hat Alex einen Finger krumm gemacht?
has Alex a finger bent made

(19) Did Alex ever help them? Hat Alex ihnen jemals geholfen?
has Alex them ever helped

The questions in (18) and (19) are grammatically marked as interrogative clauses. Both in English and German, yes/no-questions start with a finite verb. Both languages also allow for a question interpretation of declarative clauses, so called *rising declaratives*. As already noted in Progovac (1992: 277), *ever*-type NPIs cannot occur in such rising declaratives, see (20).

(20) Mary saw Bill/ *anybody? (Progovac, 1992: 277)

Escandell-Vidal (2002) shows that *lift-finger*-type NPIs can be licensed in biased yes/no questions in Spanish and English, see (21), but not in rising declaratives, as in (22).

(21) a. ¿Ha movido Juan un dedo por ti?
has moved Juan a finger for you
b. Has Juan lifted a finger for you? (Escandell-Vidal, 2002: 874)

(22) a. ¿Juan ha movido un dedo por ti?
Juan has moved a finger for you
b. *Juan has lifted a finger for you? (Escandell-Vidal, 2002: 874)

I will present German data that challenge the generalization that NPIs are banned from rising declaratives. The *lift-finger*-type NPI *einen Finger krumm machen* 'lift a finger' is used felicitously in a rising declarative in (23). The example is chosen in such a way that speaker A makes a certain claim which does not contain the NPI. Speaker B doubts the truth of A's claim, which B expresses with a rising declarative that contains the relevant NPI. However, the *ever*-type NPI *jemals* 'ever' cannot occur in the same type of rising declarative context, see (24).[4]

(23) A: Chris war eine große Hilfe beim Aufräumen.
'Chris was a great help with cleaning.'
B: Wie jetzt? Chris hat (tatsächlich) einen Finger krumm gemacht, um zu helfen?
how now Chris has actually a finger bent made to help
'What? Chris really has lifted a finger to help?'
Side message: The speaker thinks that Chris hasn't lifted a finger to help.

[4]Seeliger (2015) looks at the NPI-licensing potential of negated inverted and non-inverted yes/no-questions. I restrict myself to non-negated interrogatives, but distinguish two types of NPIs.

(24) A: Alex hat jetzt zum dritten Mal die Hausaufgaben nicht gemacht.
'Alex has not done the homework for the third time.'
B: Wie jetzt? Alex hat *jemals/ schon mal die Hausaufgaben vergessen?
How now? Alex has ever/ once the homework forgotten
'What? Alex has ever/ once forgotten to do the homework?'
Side message: The speaker thinks that Alex never forgot to do the homework.

This shows that this type of German rising declaratives is another instance of a construction in which *lift-finger*-type NPIs can occur but *ever*-type NPIs are not licensed. However, in the present examples, the side message is not a claim made in the context but rather a negative bias on the speaker side, just as found in the case of ordinary yes/no-questions with *lift-finger*-type NPIs such as in (18).

Before closing this section, I will briefly highlight again how problematic the presented data are for existing acounts of NPI licensing. I will only mention some representative publications for the individual approaches.

First, entailment-based approaches that try to model different types of NPIs, such as Zwarts (1981), van der Wouden (1997), or Giannakidou (1998), assume that *lift-finger*-type NPIs should occur in a subset of the contexts in which *ever*-type NPIs can occur. The basic insight that *lift-finger*-type NPIs are more restricted with respect to their licensors is clearly relevant, however, these analyses are not directly compatible with the data discussed here.

Second, the LF-representational approach of Linebarger (1980, 1987) proposes that NPIs must be in the immediate scope of a negation at LF. This condition can be satisfied in the sentence containing the NPI or in a *Negative Implicatum* of this sentence. This sounds very similar to Sedivy's (1990) idea of a negative side message. However, Linebarger uses the Negative Implicatum to license *ever*-type NPIs in contexts that are not overtly negative, such as the scope of *few*. While the idea of an indirect licensing seems to be exactly what is needed for our data, Linebarger's implementation of it does not capture the present data.

Third, scalar approaches (Kadmon and Landman, 1993; Krifka, 1995; Eckardt, 2005; Eckardt and Csipak, 2013), assume that an NPI triggers alternatives and is used to make a strong – or emphatic – statement in comparison to the use of any of its alternatives. Eckardt and Csipak (2013) explicitly discuss the difference between *lift-finger*-type NPIs and *ever*-type NPIs. They argue that *lift-finger*-type NPIs come with an additional *non-veridicality condition*, i.e., with the additional assumption that, for example *s.o. gives a damn* cannot be true in the current world. This cannot explain the patterns observed here as the speaker commits to someone "giving a damn" or "harming a hair on s.o.'s head" in the cases with a stressed auxiliary in (3) and with Verum focus in (11).

The analysis that I will propose in this paper is an instance of a *representational, collocational approach*, as pursued in a number of papers within *Head-Driven Phrase Structure Grammar* (Richter and Soehn, 2006; Sailer, 2007; Rizea and Sailer, 2020). This type of account assumes that there is a level of semantic representation and that NPIs come with the requirement that they must be in a particular constellation to other elements in this representation. For example, an NPI can be lexically specified that its meaning contribution must occur as a subexpression of a formula $\neg\alpha$ in the semantic representation of the sentence containing the NPI.

The above-mentioned representational approaches largely suffer from the same limitation as the entailment-based approaches: they assume that *lift-finger*-type NPIs are restricted to a subset of contexts that allow for *ever*-type NPIs. Richter and Soehn (2006) offers a way out of this in that the authors distinguish between the *strength* of the licensor and the *level of representation* in which the licensing needs to occur. Richter and Soehn (2006: Section 6) propose that the German NPI *beileibe* 'certainly' requires either an anti-additive licensor in the semantic representation of the sentence containing it or an anti-morphic licensor in a presupposition of the utterance containing the NPI.

(25) Es gab beileibe genug Streitpunkte.
it gave certainly enough controversial issues
'There were certainly enough controversial issues.'
Presupposition: Someone claims that there were not enough controversial issues.
(Richter and Soehn, 2006: ex. (22))

Sailer (2021) is an attempt to work out this idea in more detail. To do this, a semantic representation is assumed not only for the combinatorically computed truth-conditional content of an utterance, but also for additional meaning components. In the following, I will refine that approach and apply it to the data discussed in this section.

3. Enriched semantic representations

In this section, I will propose that the contexts discussed in in Section 2 come with an *expressive* or *use-conditional* meaning contribution that is relevant for the licensing of *lift-finger*-type NPIs. This meaning contribution is conventionally associated with the discussed contexts. I propose that this type of meaning contribution should be integrated into the semantic representation of an utterance, what I will refer to as the *conventional content* of a sentence.

Gutzmann (2013) presents a typology of items with use-conditional semantics, which covers *Conventional Implicatures* (Grice, 1975; Potts, 2005) and *expressive meaning* (Potts, 2007). Use-conditional semantics subsumes conventionalized, speaker-oriented content that is truth-conditionally independent of the compositionally computed primary content of an utterance, but may interact with it. Use-conditional meaning is never *at issue*, but, as the name suggests, determines the felicity of an utterance. Use-conditional meaning can be contributed by any type of linguistics expressions: Lexical items such as attributive *damn* (Potts, 2005) or "coloured terms" such as slurs (Gutzmann and McCready, 2016); syntactic constructions such as appositive relatives (Potts, 2005); or intonational patterns such as the *unexpectedness intonation* ascribed to exclamatives – see Gutzmann (2013: 16–19).

Gutzmann (2013) uses the notation in (26a), in which the primary or truth-conditional content is given below a horizontal line, and the use-condition content above that line. I will express the same in (26b), separating the truth-conditional content and a list of use-conditionally associated meanings by a vertical line with the markings *tc* and *uc* on its sides. The use-conditional part is a list, as their could be several elements in an utterance that introduce use-conditional meaning.

(26) I hear your damn dog barking =

a. $\dfrac{\text{damn dog}}{\text{I hear your dog barking}}$ (Gutzmann, 2013: 5)

b. I hear your dog barking $^{tc}|^{uc}$ ⟨damn dog⟩

The use-conditional content is projective, and typically projects globally (Potts, 2005), but there are cases of non-global projection such as indirect speech or other types of embedding in which an embedded speaker can be plausibly assumed (Bach, 1999; Bonami and Godard, 2007; Schlenker, 2013). In this sense, use-conditional meaning projects to the level of the utterance, though we may need a notion of an embedded utterance.

I will go through the two contexts discussed in detail in this paper, i.e. (i) stressed auxiliaries/Verum focus, (ii) German rising declaratives. The first context has already been characterized in Sailer (2021), but I will slightly modify the analysis here.

3.1. Stressed auxiliaries/Verum focus

Höhle (2019) provides a paraphrase of Verum in terms of a predicate like *it is true that S*. This allows him to capture the meaning of Verum also in embedded clauses such as (27) and narrow scope of Verum with respect to negation, see (28).

(27) Wenn Hannah meint, Karl SCHREIBT ein Drehbuch,
if Hannah thinks Karl writes a screenplay
(dann sollte sie sich schon mal um einen Produzenten kümmern)
then she should start looking for a producer
Paraphrase: 'If Hannah thinks that it is true that Karl is writing a screenplay, …'
(Höhle, 2019: 394) [my translation]

(28) Ich hoffe, dass Karl ihr zuhört … 'I hope Karl is listening to her'
aber Hannah denkt, er HÖRT ihr nicht zu.
but Hannah thinks he listens to.her not PRTCL
'but Hannah thinks that it is not the case that it is true that he listens to her.'
(Höhle, 2019: 396) [my translation]

This analysis is based on the surface material and just introduces a truth-predicate whenever there is a Verum focus. This predicate interacts scopally with other operators. Such an approach may capture the occurrence pattern of *ever*-type NPIs, for which the Verum operator seems to be ignorable. However, it does not offer any natural way to capture the NPI-licensing behavior of Verum focus, as there is no negation associated with Verum focus that could act as licensor for *lift-finger*-type NPIs.

Matters are different in Gutzmann et al. (2020). The authors present a use-conditional analysis of Verum in a variety of typologically diverse languages. They argue that the phenomenon under discussion is not focus but rather that there is a lexical operator VERUM that comes with the use-conditional semantics in (29), i.e., an utterance is felicitous (✓) in a context c if there is a question under discussion $?p$ and the speaker wants to prevent that it is downdated with $\neg p$.

(29) $[\![\text{VERUM}]\!]^{u,c}(p) = ✓$ if the speaker c_s wants to prevent that QUD(c) is downdated with $\neg p$. (Gutzmann et al., 2020: 39)

In this analysis, the negative proposition $\neg p$ is contextually salient and could be connected to the NPI-licensing behavior of Verum. Gutzmann et al. (2020) only look at non-negated and unembedded uses of Verum and the use-conditional meaning contribution in (29) is connected to the speaker in the present context.

This makes the wrong predictions for cases such as (28) in which Verum is in the scope of negation. If the negation has scope over Verum, then $?p$ would be the question *Is Karl listening to Hannah?*. According to Gutzmann et al. (2020), the purpose of Verum should be to prevent this question to be downdated with *Karl is not listening to Hannah*. However, this is exactly what it is downdated with.

Contrary to Höhle's (2019) interpretation of the data, we could assume that Verum takes scope over the negation. In this case, the question under discussion would be *Is it true that Karl is not listening to Hannah*? Then, (28) would be used to prevent this question to be settled to *Karl is listening to Hannah* (by double negation). This option poses yet another problem: If Verum always takes scope over negation, (15b) should be paraphrased as *It is true that Kim didn't lift a finger to clean up.*, i.e., the *lift-finger*-type NPI should be licensed, which it is not.[5]

In Sailer (2021: 358) I adopt the analysis of Gutzmann et al. (2020) almost directly. This is shown with an example in (30). As can be seen, I introduce an explicite negation into the use-conditional meaning contribution of Verum.

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

b. Peter kicked the dog $^{tc}|^{uc}\langle$**prevent-downdate**$(\neg$(Peter kicked the dog)$)\rangle$

The fundamental problem of my adaptation, and presumably of Gutzmann et al.'s original account as well, is that what is relevant to Verum is the question under discussion and, maybe, the negative answer to it. However, we saw in Section 2 that the licensing of *lift-finger*-type NPIs depends on whether there is a salient proposition within which the NPI is licensed.

To solve these problems, I make the following two changes to my earlier adaptation of Gutzmann et al. (2020). First, I assume that there is an explicit propositional operator, TRUE, as part of the primary truth-conditional content. Second, whenever TRUE has some proposition p in its scope, one of the following three must be contextually salient: p, $\neg p$, or $?p$. In other words, I propose that the formal Verum element is interpreted as an element with both truth-conditional and use-conditional meaning contribution. This is stated in (31).

(31) $\text{TRUE}(p)\,^{tc}|^{uc}\langle$**salient-utt**$(q)\rangle$, where $q \in \{p, \neg p, ?p\}$

The operator TRUE is an identity function, but we find evidence for its presence as its argument is relevant for the use-conditional semantics and, as we will see in Section 4, it acts as an intervener for NPI licensing. For the use-conditional meaning I assume a predicate **salient-utt(erance)** that identifies a proposition or question that is salient in the discourse.[6]

[5]Goodhue (2022)Section 8.2 argues that embedded uses of Verum, in particular in *if*-clauses like (27), pose a severe challenge for a use-conditional approach as Gutzmann et al. (2020). I am not fully convinced by this argument, as discussing what happens in the case of p is a way to (temporarily) prevent the QUD from being downdated with $\neg p$.

[6]The proposition p may contain free variables. These are existentially bound in q. This can capture the interaction

3.2. Rising declaratives

I will follow the line of research according to which rising declaratives have the same kind of denotation as falling declaratives, but have a different discourse function.[7] Whereas falling declaratives come with a speaker commitment to the expressed proposition, the speaker does not commit to the proposition in rising declaratives – but, the speaker may suggest that the hearer does (Gunlogson, 2001; Truckenbrodt, 2006; Trinh and Crnič, 2011).

There are different uses of rising declaratives, but it is not fully clear if these correlate with different intonational patterns – see Jeong (2018) and Goodhue (2021) for diverging positions. The subtype of rising declaratives that is relevant for *lift-finger*-type NPIs are *contradictory questions* as in (32a) and *incredulous questions* as in (32b), i.e., cases in which the speaker has doubts about the truth of the expressed proposition.

(32) a. A: Please apologize to him.
B: I was wrong and I should apologize? No way.
b. A: John went to the airport to pick up his sister.
B: John has a sister? (Jeong, 2018: 307)

I will largely follow the analysis of rising declaratives in Trinh and Crnič (2011). They propose an ASSERT operator that takes two arguments: the person to which the assertion is ascribed and the asserted proposition. A proposition is asserted by a person x iff the that person believes that the proposition is true and the proposition is not part of the common ground, i.e. if it is not presupposed (Trinh and Crnič, 2011: 654). The relevant definition is given in (33).

(33) $[\![\text{ASSERT}_x(\phi)]\!]^c = [\![\phi]\!]^c$ if (i) x believes ϕ, and (ii) ϕ is not presupposed.

The difference between falling and rising declaratives is modelled by varying the asserter-argument x: x is the speaker, Sp, in the case of a falling declarative and the addressee, Add, in rising declaratives. Since the definition in (33) states that the discourse participant x to whom the assertion is ascribed believes the asserted content p, it follows from the second condition that the other participant cannot have p in their own background. For rising declaratives, this means that the speaker does not commit to the asserted proposition. This is an elegant account that is compatible with the various readings, which just differ with respect to the type of non-commitment of the speaker.

Assigning rising and falling declaratives the same semantics immediately captures the non-occurrence of *ever*-type NPIs – as noted in Gunlogson (2008) and Trinh and Crnič (2011), for example. However, it is not clear how the observed licensing of *lift-finger*-type NPIs in German

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of Verum with quantifiers and interrogative and relative elements. In (i), the open proposition "x read the book" is in the scope of Verum, and q would be "there is some x such that x read the book."

(i) Ich kenne nur wenige Leute, die dieses Buch gelesen haben, 'I only know few people who read this book'
aber jeder, DER das Buch gelesen hat, ist davon begeistert.
but everyone who the book read has is of.it thrilled
'but everyone who DID read the book, is thrilled.' (Höhle, 2019: 408)

[7] See Farkas and Roelofsen (2017) and Jeong (2018) for papers that assume an underlying interrogative semantics for rising declaratives. Rudin (2019) addresses this issue explicitly, and uses embedded rising declaratives as arguments in favor of a non-interrogative semantics for rising declaratives.

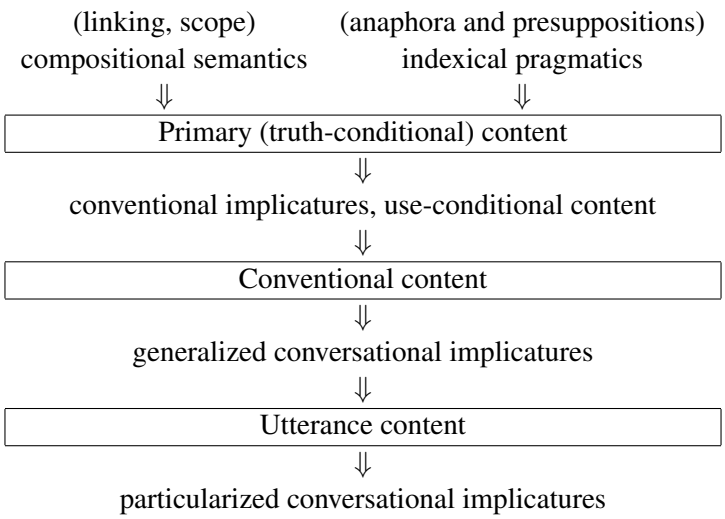

Figure 1: Model of the semantics-pragmatics interaction from Sailer (2021: 357)

could be captured. For this reason, I propose to mark the degree of speaker non-commitment as part of the use-conditional content of an utterance.

(34) $\text{ASSERT}_{Add}(\phi)^{\,tc}|^{uc}\left\langle \textbf{convinced}_{Sp}(\neg\phi)\right\rangle$

In this section, I have introduced my assumptions on Verum focus and rising declaratives. In both cases, there is a secondary, use-conditional meaning component in addition to the primary, truth-conditional meaning.

I presuppose a sign-based architecture of grammar such as Head-Driven Phrase Structure Grammar or Construction Grammar. A linguistic sign consists of a phonological, syntactic, but also semantic and pragmatic representation. Consequently, I assume that both the truth-conditional and the use-conditional meaning are part of the *meaning representation* of a linguistic expression. In other words, the semantic representations given in this section are part of the linguistic properties of the corresponding utterances. The architecture of the semantics-pragmatics interface is given in Figure 1, which is based on Levinson (2000). The primary, truth-conditional content of an utterance is based on its compositional semantics and is resolved with respect to linking, scope, anaphora, and presuppositions. The secondary content is arrived at by integrating adiditional, conventionally attached meaning components, i.e. what I referred to here as use-conditional meaning. I call the result of this the *conventional content*. The conventional content is represented as in (26b). In Sailer (2021) I also describe how generalized conversational implicatures can be added to this to arrive at the *utterance content*.

4. Analysis

In this section, I will show how the differences in the licensing of *lift-finger*-type NPIs and *ever*-type NPIs can be modelled in core cases known from the NPI literature, but also in the challenging cases that I concentrated on in this paper. The basic idea is that *ever*-type NPIs are very flexible with respect to their licensor, but they require licensing within the primary content of a sentence. *Lift-finger*-type NPIs, on the other hand, can only be licensed by negation, but

their licensing is checked at the level of the conventional content, i.e., they can be licensed in the primary or the secondary content. The licensing conditions that I assume here are given in (35) and (36). They are slightly adapted from Sailer (2021: 360, 362). I remain agnostic here as to what exactly constitutes a classical *NPI-licensing environment* because I am primarily interested in contexts that allow for *lift-finger*-type NPIs.

(35) Licensing condition for *ever*-type NPIs, adapted from Sailer (2021: 360):
The semantic contribution of an ever-type NPI must occur in an NPI-licensing environment within the primary truth-conditional content of a clause containing the NPI.

(36) Licensing condition for *lift-finger*-type NPIs, adapted from Sailer (2021: 362):
The semantic contribution of a lift-finger-type NPI must occur in the (immediate) scope of negation within the utterance content of the utterance containg the NPI (which includes the conventional content).

I will briefly illustrate these conditions. I will look at examples with the two types of NPIs co-occurring in the scope of strong and a weak NPI licensor in (37). The semantic representations will be given very schematically. For instance, I will indicate the position of the NPI semantics in these schematic formulæ as **npi**.

(37) a. Alex didn't do anything/ lift a finger.
$\neg(\ldots \mathbf{npi} \ldots)\,{}^{tc}|^{uc}\,\langle\rangle$
b. Few students did anything/ *lifted a finger.
$[\mathbf{Few}x : \mathbf{student}(x)](\ldots \mathbf{npi} \ldots)\,{}^{tc}|^{uc}\,\langle\rangle$

In (37a), the NPI-licensing environment is the scope of negation. This context is fine for both types of NPIs. Contrary to this, the scope of the downward-entailing quantifier *few students* in (37b) is only a licensor according to (35), but not according to (36). This more restricted licensing condition of *lift-finger*-type NPIs accounts for the core distributional differences among the NPIs types within the truth-conditional, primary content.

The situation changes when we look at cases of stressed auxiliaries or Verum focus. In (38), I show the semantic representations of examples analogous to those in Sedivy's (1990) from (3). In both examples, I assume that the salient utterance in the use-conditional meaning is of the form $\neg p$. There is no NPI-licensor in the primary content of (38a). Consequently, the *ever*-type NPI cannot appear. Note that it does not matter if the indefinite *anyone* is given wide or narrow scope with respect to Verum, i.e., with respect to the operator TRUE.

(38) a. *Bert DID kiss anyone.
$\textsc{true}(\exists x(\mathbf{kiss}(\mathbf{bert},x)))\,{}^{tc}|^{uc}\,\langle\mathbf{salient\text{-}utt}(\neg\exists x(\mathbf{kiss}(\mathbf{bert},x)))\rangle$ ($any > \textsc{true}$)
$\exists x(\textsc{true}(\mathbf{kiss}(\mathbf{bert},x)))\,{}^{tc}|^{uc}\,\langle\mathbf{salient\text{-}utt}(\neg\exists x(\mathbf{kiss}(\mathbf{bert},x)))\rangle$ ($\textsc{true} > any$)
b. I DO give a damn.
$\textsc{true}(\mathbf{give\text{-}damn}(\mathbf{speaker}))\,{}^{tc}|^{uc}\,\langle\mathbf{salient\text{-}utt}(\neg\mathbf{give\text{-}damn}(\mathbf{speaker}))\rangle$

The *lift-finger*-type NPI in (38b), on the other hand, can be licensed use-conditionally: Its semantic contribution appears in the immediate scope of negation in the use-conditional part of the conventional content. This is sufficient for the licensing according to (36).

We saw in the German examples that a *lift-finger*-type NPI is only licensed by Verum if there is a salient negative proposition, i.e., if the salient utterance has the form $\neg p$. In a case where the

salient utterance is non-negative, such as (15b) the NPI is not licensed. I provide the relevant constellation in (39).

(39) *Unsinn. Kim HAT beim Aufräumen keinen Finger krumm gemacht.
nonsense Kim has at.the clean-up no finger bent made
$\neg\text{TRUE}(\textbf{lift-finger}(\textbf{alex}))\,{}^{tc}|^{uc}\,\langle\textbf{salient-utt}(\textbf{lift-finger}(\textbf{alex}))\rangle$

In the conventional content in (39), there is no negation in the use-conditional content, but there is one in the truth-conditional content. This would be sufficient to license an *ever*-type NPI, as in (17a). However, the operator TRUE acts as an intervener and, consequently, the *lift-finger*-type NPI is not in the immediate scope of the licsensor. This shows that the operator TRUE has the same intervention property as predicates such as *claim*: A negated occurrence of *claim* can license *ever*-type NPIs in its propositional complement, but not *lift-finger*-type NPIs, see (40).

(40) a. Alex didn't claim that Kim ever helped clean the apartment.
b. *Alex didn't claim that Kim lifted a finger to help clean the apartment.

The analysis developed here captures the contrast between *lift-finger*-type and *ever*-type NPIs in Verum focus constructions: A *lift-finger*-type NPI is licensed if the sentence is a reaction to a salient proposition in which the NPI would be licensed. An *ever*-type NPI is licensed if the sentence itself contains a proper licensor.

The licensing constraints on the two types of NPIs in rising declaratives follow under the assumptions I made in Section 3. I argued that, in German, *lift-finger*-type NPIs can occur in non-negated contradictory or incredulous rising declaratives, whereas *ever*-type NPIs cannot. The relevant semantic constellation is given in (41). Note that the same proposition occurs as the argument of ASSERT and the scope of the negation in the use-conditional part of the representation.

(41) $\text{ASSERT}_{Add}(\ldots\textbf{npi}\ldots)\,{}^{tc}|^{uc}\,\langle\textbf{convinced}_{Sp}(\neg(\ldots\textbf{npi}\ldots))\rangle$

Given this conventional content, there is no NPI licensor in the primary content. Consequently, an *ever*-type NPI cannot be licensed. This captures the ungrammaticality of (24). As there is a negation in the secondary content, a *lift-finger*-type NPI can occur. I illustrate the constellation for *lift-finger*-type NPIs with the conventional content of example (23) in (42).

(42) Chris hat tatsächlich einen Finger krumm gemacht . . . ?
Chris has actually a finger bent made
$\text{ASSERT}_{Add}(\textbf{lift-finger}(\textbf{chris}))\,{}^{tc}|^{uc}\,\langle\textbf{convinced}_{Sp}(\neg\textbf{lift-finger}(\textbf{chris}))\rangle$

In this section, I showed that the enriched semantic representations that I tried to motivate for the relevant contexts in Section 3 interact in an empirically desired way with the licensing constraints of *ever*-type and *lift-finger*-type NPIs. The analysis keeps the insight that *ever*-type NPIs are compatible with a larger variety of licensors than *lift-finger*-type NPIs. Nonetheless, by including use-conditional meaning, it is possible to capture cases in which *lift-finger*-type NPIs are licensed but *ever*-type NPIs are not.

5. Conclusion

The data presented in Sedivy (1990) have presented an often untackled and never systematically approached challenge for theories of NPI licensing. In this paper, I propose a solution that fits into an overall theory of NPI licensing and conserves insights from accounts of the core distributional patterns of NPIs. In this concluding section, I want to address some open issues as well as a number of interesting perspectives that arise.

It is by now acknowledged that there is a wide variety of different types of NPIs – see Schaebbicke et al. (2021) for a very recent and strongly empirical illustration of this point. In the present paper, I only looked at two types, referred to descriptively as *lift-finger*-type and *ever*-type NPIs. I modelled this distinction as an arbitrary distributional restriction which is not derived systematically from the lexical semantics of the items (as attempted in pragmatic approaches). I did not try to derive the two classes by independent criteria either. While Sedivy (1990) makes the same distinction, she characterizes the two types as *regular* versus *lexical* NPIs, suggesting that there could be such an independent basis for the difference. It might be tempting to adapt the Postal's (2005) idea that all NPIs are idioms with a negative component. This analysis could be restricted to *lift-finger*-type NPIs, all of which seem to be idiomatic expressions. While such an analysis would at least identify *lift-finger*-type NPIs as a natural class, the very data discussed in this paper are problematic for such an analysis, as exactly these NPIs occur without any over marking of negation.

It is an empirical shortcoming of this paper that I could not present German and English data fully in parallel. There seem to be sufficient data available on Verum type constructions to assert a parallelism between the NPI licensing in this context. For rising declaratives, however, I could only present data on NPIs in German – and even these have not been elicited systematically. It is well possible that English rising declaratives do not allow for *lift-finger*-type NPIs in incredulous or contradictory readings. Such a data constellation would point to a difference in the conventionally encoded meaning of rising declaratives. In this case, however, there should be additional evidence for postulating such a difference.

In this context, it would be worth to look at NPI licensing in other contexts of incredulity, such as the *incredulity response construction* discussed in Akmajian (1984) and Lambrecht (1990), illustrated in (43) for English and German.

(43) a. Him wear a taxedo?! You must be crazy!
b. Der und einen Smoking anziehen? Du hast sie wohl nicht alle!
he and a taxedo wear You must be crazy!
(Lambrecht, 1990: 221)

In Sailer (2002) I tentatively suggest that *ever*-type NPIs but not *lift-finger*-type NPIs are possible in the German incredulity response construction, see (44).

(44) *Peter und ein Sterbenswörtchen sagen?
Peter and a dying word say
Intended: 'As to Peter's saying something, the speaker has doubts.'

This contrast to the data reported on rising declaratives can be related to the different positions in discourse. According to Lambrecht (1990: 222–223), an evaluative statement such as the

second sentence in (43) is (an optional) part of the incredulous response construction. I find such a continuation more redundant with (23) than in (43b), see (45).

(45) Chris hat einen Finger krumm gemacht, um zu helfen? ?Du hast sie wohl nicht alle!
'Chris lifted a finger to help?' 'You must be crazy!'

This points to a subtle but clearly characterizable difference between incredulity uses of rising declaratives and the incredulity response construction, at least in German. In the present approach, the two constructions would come with different use-conditional meaning, which would correlate with the difference in their NPI-licensing behavior.

In this paper, I have extended a representational theory of NPI licensing to data in which more restricted NPIs can occur in contexts that don't allow for otherwise more flexible NPIs. This is achieved by integrating use-conditional semantics into the semantic representation of a linguistic sign. Such a representational theory imposes the requirement that the NPI-licensing structure be explicitly triggered through conventionally attested properties of the linguistic sign.[8] This leads to the prediction that *lift-finger*-type NPIs cannot be licensed by purely contextually conditioned inferences such as particularized conversational implicatures. Irony is considered a prominent example in which a particularized conversational implicature expresses that a speaker intends to communicate the negation of which they literally say (Grice, 1975: 53) – see also Dynel (2013). The interaction of irony and NPI licensing is illustrated in (46).

(46) [Said ironically:] Yeah, you are such a good friend! ...
a. You are always the first to help me!
b. #You always lift a finger to help me!
Communicated: You are a lousy friend. You never lift a finger to help me.

The continuation in (46a) can express the intended ironic meaning. The *lift-finger*-type NPI in (46b), on the other hand, is not felicitous – even under an ironic interpretation. This is correctly predicted under a representational account in which only conventionally associated meaning components are part of the linguistic representation.

In this paper, I have tried to point to a set of data that challenge standard assumptions and theories of NPI licensing. I have sketched a possible modelling of the data as constraints on semantic representations that include truth-conditional as well as use-conditional content.

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[8]Levinson (2000) shows that generalized conversational implicatures are systematically predictable on the basis of the semantic representation of an utterance. I argue in Sailer (2021) that they are relevant for the licensing of *lift-finger*-type NPIs – to capture the pragmatic conditions of the licensing of these NPIs in the restrictor of a universal quantifier and biased questions, as observed in Linebarger (1980) and Heim (1984).

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