

Empirical Perspectives on Positive Polarity Items in German

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Introduction



Polarity Items

Non-PIs	PIs	
	NPIs	PPIs
<i>besonders</i> 'particularly'	<i>sonderlich</i> ?'particularly'	<i>ziemlich</i> 'pretty'

- (1) Finanziell sieht es für den Verlag
Financially looks it for the publishing house

(**nicht**) besonders / *(**nicht**) sonderlich / (***nicht**) ziemlich dunkel aus.
not particularly / not ?particularly / not pretty dark out

'For the publishing house, the financial prospects are (not) particularly/*(not) ?particularly/*(not) pretty dim.'



NPI-PPI Parallelism

- NPIs and PPIs behave oppositionally towards negativity, e.g. *yet/already, anymore/still, either/too* in English and *non plus/aussi* in French.
- NPI-licensing contexts are potential anti-licensing contexts for PPIs: e.g. n-words, conditionals, questions, non-affirmative verbs (*doubt*), adversative attitude predicates (*be surprised*), downward-entailing contexts in general (*few, before, without*).
- Just like NPIs, PPIs can be single- or multi-worded and occur in various parts-of-speech.



PPIs: Licensing, Anti-licensing and Shielding

Prepositional phrases, adjective phrases or relative clauses can shield PPIs from being anti-licensed. Double negation is cancelled out so that PPIs do not get affected.

- (2) a. Hans war mit dem Ergebnis durchaus zufrieden.
 Hans was with the result very content
 'Hans was very happy about the result.'
- b. ***Niemand** war mit dem Ergebnis durchaus zufrieden.
 Nobody was with the result very content
 'Nobody was very happy about the result.'
- c. **Niemand** war mit dem durchaus brauchbaren Ergebnis zufrieden.
 Nobody was with the very useful result content
 'Nobody was happy about the very useful result.'
- d. **Niemand** bekräftigte *(**nicht**) die Bedeutung des Klimaschutzes.
 Nobody affirmed not the importance of climate protection
 'Nobody did not affirm the importance of climate protection.'



Data Acquisition



Data Sources

The available data sources for potential PPIs were mainly:

- Literature since Baker (1970), among others, intensifying adverbs in van Os (1989), speaker-oriented adverbs in Ernst (2005)
- Idiom corpus in Soehn (2006)
- Linguists' intuition: Colloquial Compound Similes, e.g. *rattenscharf* 'super hot', *affengeil* 'awesome', etc.



Candidate List of German PPIs

lieber	'rather'
ziemlich	'pretty'
verdient	'deserved'
bekräftigen	'affirm'
leidlich	'middling'
beinahe	'almost'
stocksauer	'pissed off'
affengeil	'awesome'
rattenscharf	'rat hot - very hot'
erstaunlicherweise	'surprisingly'
tragischerweise	'tragically'
glücklicherweise	'fortunately'
zweckmäßigerweise	'advantageously'
jmd. den Lebensfaden abschneiden	'to cut off the life-thread of sb. - to kill sb.'
Ruhe in die Sache bringen	'to bring peace in the affair - to calm sth. down'
klar wie Kloßbrühe sein	'to be clear as dumpling-broth - to be crystal clear'
immer auf dem Sprung sein	'to be always on the go'
...	...



Data Validation



Corpus Evidence and Psycholinguistic Experiments

- Collection of corpus data: PPIs and their contexts “in real life”
 - COSMAS II (IDS Mannheim)
 - Internet (via Google)
- Experiments:
 - Relative acceptability judgements: **Thermometer Judgements**
 - Absolute acceptability judgements: **Speeded Acceptability Judgements** with RSVP (Rapid Serial Visual Presentation)



Thermometer Judgements



Hypothesis and Design

Hypothesis: PPIs in negative (not-licensing or anti-licensing) contexts should be rated lower than PPIs in positive (licensing) contexts and also lower than the non-PPI (non-NPI either, of course) items in all contexts.

Design:

- Stimuli: antiadditive contexts, following Szabolcsi (2004)
- Two factors, resulting in four conditions

	PPI	non-PPI
positive context	I. licensed PPI	III. "licensed" non-PPI
negative context	II. anti-licensed PPI	IV. "anti-licensed" non-PPI

- Fillers: sentences with unlicensed NPIs



Materials

Example of test and filler sentences:

- (3) Sozialhilfebedürftigkeit ist heutzutage
social welfare need is nowadays

[I.]durchaus / [II.]***nicht** durchaus / [III.]sehr / [IV.]***nicht** sehr problematisch.
absolutely / not absolutely / very / not very problematic

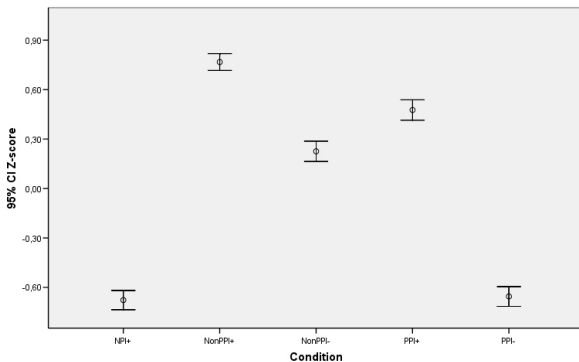
'The need for social welfare is nowadays absolutely/*not absolutely/very/not very problematic.'

- (4) *Hans war jemals am Plattensee.
Hans was ever at the Balaton lake
'*Hans was ever at Lake Balaton.'

Experiment	PPI candidates	Materials
1	48	4 versions with 48 sentences plus 12 fillers for each
2	24	4 versions with 24 sentences plus 6 fillers for each



Results



- Main effect: negated sentences were rated lower than non-negated ones. ($F_1(1, 95) = 356.722, p < 0.001$; $F_2(1, 55) = 257.693, p < 0.001$)
- Unlicensed PPIs were rated considerably lower than the other conditions. ($F_1(1, 95) = 133.861, p < 0.001$; $F_2(1, 55) = 44.495, p < 0.001$)
- Similar low rating for unlicensed NPIs and unlicensed PPIs. This proves the parallelism between NPIs and PPIs towards negation.



Discussion

- Results support the existence of such a category as PPIs.
- Evidence for the assumption about the 'anti-licensing' relation between AA contexts and PPIs.



Speeded Acceptability Judgements



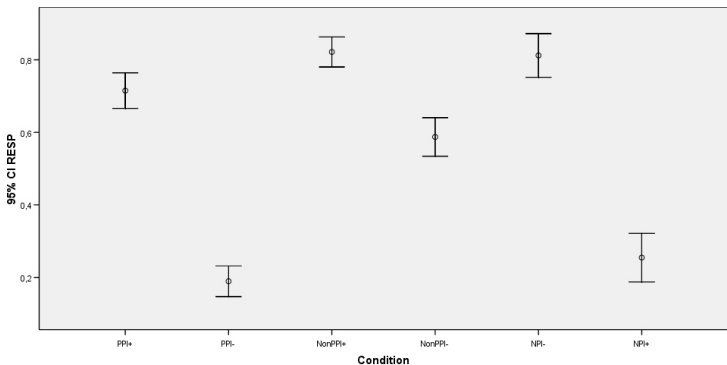
Experiment

- Aim: to prevent subjects from coming up with larger contexts
- word by word presentation
- speeded presentation rate

- Materials:
 - 56 PPIs plus 50 fillers
 - 4 conditions (same as before)



Results



- Main effect: negated sentences were rated lower than non-negated ones.
($F_1(1, 23) = 142.345, p < 0.001$; $F_2(1, 55) = 134.050, p < 0.001$)
- Unlicensed PPIs were rated considerably lower than the other conditions.
($F_1(1, 23) = 58.863, p < 0.001$; $F_2(1, 55) = 20.686, p < 0.001$)
- Again, the results show a parallelism between NPIs and PPIs towards negation.



Discussion: Negation and Un-anti-licensed PPIs

- Negated sentences were rated lower than non-negated ones. Claim: negation is marked and more costly (Wason 1965). Processing of negation often need go beyond narrow context and involve intonation, discourse contrast, etc.
- (5)
- a. Der deutsche Aktienmarkt war sehr schwach. (1.0)
 - b. Der deutsche Aktienmarkt war nicht sehr schwach. (0.0)
 - c. Der deutsche Aktienmarkt war stark.
'The German stock market was very weak/not very weak/strong.'



Discussion: Negation and Un-anti-licensed PPIs

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- (7) a. Der deutsche Aktienmarkt war sehr schwach. (1.0)
b. Der deutsche Aktienmarkt war nicht sehr schwach. (0.0)
c. Der deutsche Aktienmarkt war stark.
'The German stock market was very weak/not very weak/strong.'

- Un-anti-licensed PPIs

- (8) a. Politiker bekräftigten auf der Pressekonferenz die Notwendigkeit des Klimaschutzes. (1.0)
b. **Kein Politiker** bekräftigte auf der Pressekonferenz die Notwendigkeit des Klimaschutzes. (0.67)
c. **Kein Politiker** bekräftigte auf der Pressekonferenz die Notwendigkeit des Klimaschutzes, einige Wissenschaftler allerdings schon.
'(No) politicians affirmed the necessity of climate protection at the press conference(, but some scientists did).'



Conclusion



Validated List of PPIs

bekräftigen / erstmals / munkeln / ungeachtet / unvermindert / ~~verdient~~ / grassieren / lieber / sowieso / ziemlich

Intensifying Adverbs: ausgesprochen / ~~beträchtlich~~ / buchstäblich / definitiv / durchaus / geradezu / leidlich / nahezu / total / überaus

Colloquials: abgefahren / affengeil / geil / rattenscharf / regelrecht / stocksauer / volle Kanne

Speaker-oriented Adverbs: erstaunlicherweise / geheimnisvollerweise / glücklicherweise / möglicherweise / ~~notwendigerweise~~ / tragischerweise / unglaublicherweise / unglücklicherweise / zweckmäßigerweise

Positive Polar Idioms: jmd. ein Bein stellen / jmd. den Buckel runter rutschen / jmd. Gestohlen bleiben / jmd. über die Hutschnur gehen / etwas an den Hut stecken / jmd. den Lebensfaden abschneiden / Mattscheibe haben / sich mausig machen / eine Meise haben / klar wie Klossbrühe/ etwas in der Krone haben / die Ohren steif halten / jm. die Pest an den Hals wünschen / auf jmd. einen Pik haben / Ruhe in die Sache bringen / sattsam bekannt sein / immer auf dem Sprung sein / einen Teufel tun / jm. Zum Teufel wünschen

PPIs and their corpus data will be made available online
in the Collection of Idiosyncratic Items at

<http://www.sfb441.uni-tuebingen.de/a5/codii/>



What's next?

Classification of PPIs per strength, van der Wouden (1997)

Negative Contexts

classic	regular	minimal	other Lic.
<i>not</i>	<i>nothing</i>	<i>at most</i>	questions
<i>without</i>	<i>nobody</i>	<i>seldom</i>	<i>only</i>
<i>not believe, that</i>	<i>never</i>	<i>few</i>	superlative
antimorphic	antiadditive	downward entailing	non-veridical

<i>PPI</i>	<i>Negation</i>			other Lic.
	classic	regular	minimal	
strong	-	-	-	?
medium	-	-	+	+
weak	-	+	+	+



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