Empirical Perspectives on Positive Polarity Items in German

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Polarity effects have drawn linguists' interest since Klima (1964). Although most attention has been paid to negative polarity items (NPIs), the study of positive polarity items (PPIs) goes back as far as Baker (1970). However, the documentation of PPIs in different languages is still very poor. Our current work aims at collecting and validating PPIs in German.

PPIs tend not to occur in contexts that license NPIs, which comprise n-words (negative particles, negative quantifiers), conditionals, questions, the restrictor of universal quantifiers and superlatives, non-affirmative verbs (*doubt*), adversative predicates (*be surprised*), neg-raising verbs (*believe*), downward-entailing contexts in general (*few, hardly, before, without*), comparative *than*-clauses, too-comparatives, and negative predicates (*improbable*). This also holds for the German equivalents.[1] In other words, these contexts are potential anti-licensors of PPIs. However, prepositional phrases, adjective phrases or relative clauses can shield PPIs from being anti-licensed, or in the case of double negation, they cancel out each other so that PPIs do not get affected. Consider the following examples:

(1)   a. *Hans war mit dem Ergebnis <u>durchaus</u> zufrieden.*
        Hans was with the result definitely content
        'Hans was completely satisfied with the result.'

    b. **Niemand war mit dem Ergebnis <u>durchaus</u> zufrieden.*
        nobody was with the result definitely content
        'Nobody was completely satisfied with the result.'

    c. *Niemand war mit dem <u>durchaus</u> brauchbaren Ergebnis zufrieden.*
        nobody was with the definitely useful result content
        'Nobody was satisfied with the definitely useful result.'

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[1] See Ladusaw (1980) for a generalization of NPI licensing contexts (downward entailingness), which is still a matter of debate. For reasons of space we refrain from discussing this here.

    d. *Niemand <u>bekräfigte</u> *(nicht) die Bedeutung des Klimaschutzes.*
      nobody   confirmed   not   the importance of climate protection
      'There wasn't anyone who did not confirm the importance of climate
       protection.'

All these facts affirm a general parallelism between NPIs and PPIs. Just like NPIs, PPIs can be single- or multi-worded and occur in various parts-of-speech: verbs, e. g. *munkeln* 'rumor', *bekräftigen* 'affirm', the indefinite article *ein* 'a', and most often, adverbs, e. g. *sogar* 'even' or *geradezu* 'downright'. Van Os (1989) suggests that most German intensifying adverbs such as *fast* 'almost' or *ziemlich* 'rather' are PPIs. Moreover, Ernst (2005) claims that speaker-oriented adverbs, e. g. *vielleicht* 'maybe' or *tragischerweise* 'tragically' are also PPIs. Finally, idioms can be positive polar as well, e. g. *jdm. den Lebensfaden abscheiden* 'to kill sb.', *klar wie Kloßbrühe sein* 'to be crystal clear', or *jdm. ein Bein stellen* 'to trip sb. up'.

We collected PPIs from the literature (partly the German translations of English examples) and through our own intuitions. This list of PPI candidates is currently being validated. Firstly, we searched for their co-occurrence with the anti-licensing contexts using the corpora of the Institut für Deutsche Sprache (COSMAS II) and the internet via Google. We retained only those items that do not occur within the immediate semantic scope of negation or anti-additive (AA) expressions.[2] Secondly, the PPI-hood of the items is being corroborated psycholinguistically. In the first of our experiments, on which we report here, we tested 48 PPIs using the method of thermometer judgements (Featherston, in press). In contrast to magnitude estimation, this method yields grammaticality ratings relative to two reference points in order to take into account the behaviour of subjects in giving linear judgments. For each PPI candidate, e. g. *bekräftigen* 'affirm', we came up with a non-PPI counterpart of the same syntactic category and with a semantics as close as possible (*betonen* 'stress' in this case), and then embed them into AA contexts. Our two factors were thus PPI-hood and Context, their crossing yields the following four combinations: PPI in negative context (anti-licensed), PPI in affirmative context (licensed), non-PPI in negative context, and non-PPI in affirmative context. A fifth independent control condition was NPIs in affirmative context (not licensed). 48 German native speakers were asked to give grammaticality judgements on the stimuli, which were split up into four counterbalanced sets. The hypothesis is that only the PPIs are affected by the negative contexts and that anti-licensed PPIs are rated significantly lower than licensed PPIs and non-PPIs in both contexts.

The results are the following: First, we got a similarly low rating for both NPIs without a licensor and PPIs with anti-licensors compared to the other conditions, which affirms the parallelism between NPIs and PPIs. Second, there is a main effect that negated sentences are rated lower than non-negated ones. Third and crucially, PPIs in

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[2] Following Szabolcsi (2004), we assume that it is not DE but the AA that PPIs detest.

negative contexts (anti-licensed PPIs) are judged considerably lower in comparison to the other three combinations, which is in line with our hypothesis. In an ANOVA by subjects, the effects of PPI-hood ($F(1, 47) = 129.078$, $p < 0.001$), of Context ($F(1, 47) = 142.74$, $p < 0.001$) and of interaction between them, PPI-hood×Context ($F(1, 47) = 36.95$, $p < 0.001$) were all highly significant. These data support our categorization of the tested elements as PPIs and simultaneously provide evidence for the assumption about the anti-licensing relation between AA contexts and PPIs. Thus, we have two sorts of evidence that confirm the PPI-hood of a given element: corpus data and the results of our experiment. We shall provide additional support by testing our PPI candidates again, then presenting the items by rapid serial visual presentation (RSVP), in order to get absolute grammaticality judgements. This enables us to build up a robust list of German PPIs. We will add the final PPI list together with their licensing contexts we found in the corpora to an online available database of distributionally idiosyncratic items, which already contains NPIs and cranberry words.

We thus hope to provide a resource for linguists working on polarity phenomena. With about 700 NPIs in Dutch, polarity sensitivity is not a marginal phenomenon and a grammar theory must take it into account. Due to the complex interplay of the logical strength of licensors and their syntactic position with respect to a polarity item, it is important to look at a sufficient amount of data in order to capture the distribution of PPIs as well as NPIs.

References

Baker, Carl Lee. 1970. Double negatives. Linguistic Inquiry 1, 169–186.

Ernst, Thomas. 2005. On Speaker-oriented Adverbs as Positive Polarity Items. In Polarity From Different Perspectives, poster at the Workshop held at New York Univeristy. 11.–13. March 2005.

Featherston, Sam. in press. Thermometer Judgements as Linguistic Evidence. In Astrid Rothe (ed.), Was ist linguistische Evidenz?, Aachen: Shaker Verlag.

Klima, Edward. 1964. Negation in English. In J. A. Fodor and J. Katz (eds.), The Structure of Language, pages 246–323, Prentice Hall, Englewood Cliffs, New Jersey.

Ladusaw, William. 1980. Polarity Sensitivity as Inherent Scope Relations. Garland Press, New York.

Szabolcsi, Anna. 2004. Positive Polarity - Negative Polarity. Natural Language and Linguistic Theory 22(2), 409–452.

van Os, Charles. 1989. Aspekte der Intensivierung im Deutschen. T¨ubingen: Gunter Narr Verlag.