

# Bagel Problem and NPI-PPI Distribution

**Proposal.** We will discuss the distribution of two types of polarity sensitive items with a similar empirical pattern: the Bagel problem items (BPIs) and the positive polarity items (PPIs). Namely, BPIs and PPIs cannot be interpreted in the scope of clausemate negation, where an alternative element with the same meaning has to be used: an n-word instead of a BPI, and a negative polarity item (NPI) instead of a PPI. We will explore the hypothesis that this pattern is due to the ability of BPIs and PPIs to move (overtly or covertly) above negation and thus create scope ambiguities, while their alternative items cannot do so. This ability is to be understood as a *syntactic* ability to move from a position lower than negation to a position higher than it — BPIs and PPIs are syntactically able to outscope negation and thus create scope ambiguities with respect to it, regardless of their inverse scope over negation being semantically or pragmatically well-formed in a particular context. As they can move to a position higher than negation and they have alternative items with the same meaning that cannot do so, BPIs and PPIs are prohibited from its scope in an attempt to avoid scope ambiguities — we will refer to this hypothesis as the *minimizing scope ambiguity hypothesis*.

**The Bagel problem.** The Bagel problem is a phenomenon consisting of the existence of certain NPIs that are unacceptable in the scope of clausemate sentential negation, while they are acceptable in other NPI-licensing contexts, such as the scope of superordinate negation, antecedents of conditionals etc. This is puzzling as downward-entailingness (DE) is considered to be the relevant semantic requirement for the NPI licensing (Ladusaw, 1979): negation, as an antimorphic operator, should be able to license every NPI in its scope. This phenomenon seems to be connected with the existence of n-words in the language — n-words (negative concord items) have been argued to be existential indefinites that are obligatorily in the scope of clausemate negation with which they enter into an Agree relation (Zeijlstra, 2004).

BPIs that have been identified so far are Serbian *i-words* (Progovac, 1994), Polish *kolwiek-pronouns* (Blaszczak, 2008), and Russian *libo-items* (Pereltsvaig, 2006). In these languages, in the scope of clausemate negation only n-words are licensed, as in (1):

Serbian

- (1) Nisam upoznala nikoga/\*ikoga.  
neg.aux.1PS meet n-word-anybody/\*BPI-anybody  
I haven't met anybody.

To show that BPIs are able to scope above negation, we have to embed negation inside another DE environment — as BPIs are a type of NPIs, when they move above negation they need to be in the scope of a DE operator for semantic reasons. For the reasons of space, let us see just the Russian example:

Russian<sup>1</sup>

*if* >>  $\exists$  >>  $\neg$ , \**if* >>  $\neg$  >>  $\exists$

- (2) Esli on ne znal čego-libo, on ne stesnialsja sprašivat' drugix.  
if he neg know BPI-anything, he neg ashamed ask others  
If there was something he didn't know, he wasn't ashamed to ask others.

The n-word cannot scope existentially above negation even when negation is embedded inside another DE environment, as we can see in (3):

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<sup>1</sup>This example is taken from Pereltsvaig (2006), footnote 9.

$$if \gg \neg \gg \exists, *if \gg \exists \gg \neg$$

- (3) Ako ne razumeš ništa od toga, pozovi me.  
 if neg understand.2sg n-word-anything of this, call me  
 If you understand nothing, call me.

According to the hypothesis explored here, as BPIs can move above negation and n-words cannot, the n-words block the use of BPIs in the scope of clausemate negation in order to avoid scope ambiguities.

**NPI-PPI distribution.** PPIs cannot be interpreted in the direct scope of antimorphic operators — the sentence (4) only has the meaning in which *something* scopes above negation:

$$\exists \gg \neg, *\neg \gg \exists$$

- (4) John didn't do something.

To get a reading in which an existential indefinite scopes below negation, one would have to use an NPI *anything* instead of *something* in (4).

If this pattern was really due to the possibility of *something* to scope above negation, we would expect *anything* not to be able to outscope negation with an existential force. This seems to be the case:

$$if \gg \neg \gg \exists, *if \gg \exists \gg \neg$$

- (5) If John doesn't do anything, he will fail the exam.

The reading 'If there is something John doesn't do, he will fail the exam' is reported not to be available for (5). *Anything* is thus not able to move above negation — its scope options with respect to negation are more similar to those of n-words than to those of BPIs. As English PPIs are able to move above negation, and English NPIs are not, in line with the minimizing scope ambiguity hypothesis one is forced to choose an NPI in the scope of an antimorphic operator: this would derive the PPI behavior of *something*, *someone* etc.

Let us now discuss the environments where both NPIs and PPIs can be used with the same meaning. These are the scope of non-clausemate negation, rescuing contexts, antecedents of conditionals, nuclear scope of DE and Strawson-DE operators like *at most*, *only NP*, *few...*, restrictor of the universal quantifier and questions. We will try to argue that the fact that the complementary distribution of NPIs and PPIs breaks down in these environments is compatible with the minimizing scope ambiguity hypothesis. As superordinate negation, questions, antecedents of conditionals and restrictors of universal quantifiers are islands for covert quantifier movement, PPIs cannot create ambiguities on syntactic grounds and thus both NPIs and PPIs are acceptable. Rescuing contexts cease to be problematic once we accept the light negation proposal (Schwarz and Bhatt, 2006). Finally, the scope of DE-quantifiers in subject position are still an open issue under this hypothesis — I have only speculations about them for the time being.

Another thing to note is that it seems that some NPIs can move (overtly or covertly) above negation (BPIs), while n-words and some other NPIs (like English *any*-items) cannot. While it is clear why n-words cannot outscope negation once we accept the theory of negative concord by Zeijlstra (2004), I have no explanation why certain NPIs can outscope negation while others cannot.

## References

- Blaszczak, J. (2008). The puzzle of kolwiek-pronouns in polish. In J. Jayez and L. Tovena (Eds.), *Free Choice: Facts, Models and Problems. Workshop Proceedings, 20th European Summer School in Logic, Language and Information*, Hamburg, Germany, pp. 3–12.
- Ladusaw, A. W. (1979). *Polarity sensitivity as inherent scope relations*. Ph. D. thesis, University of Texas at Austin.
- Pereltsvaig, A. (2006). Negative Polarity Items in Russian and the Bagel Problem. In A. Przepiorkowski and S. Brown (Eds.), *Negation in Slavic*, pp. 153–178. Bloomington: Slavica Publishers.
- Progovac, L. (1994). *Negative and positive polarity: a binding approach*. Cambridge University Press.
- Schwarz, B. and R. Bhatt (2006). Light negation and polarity. In R. Zanuttini, H. Campos, E. Herburger, and P. Portner (Eds.), *Crosslinguistic research in syntax and semantics: Negation, Tense and Clausal Architecture*, pp. 175–198. Washington DC: Georgetown University Press.
- Zeijlstra, H. (2004). *Sentential Negation and Negative Concord*. Ph. D. thesis, University of Amsterdam.