Emphatic *any*, discourse relations, and probability

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1 Emphatic uses of *any*

Key example

\(1\)

\(a\) I was lost all alone in the middle of a desert I was lucky that I got any help (at all)!
\(b\) I was lost all alone in the middle of a desert I was lucky that I got some help!

- Both (1-a) and (1-b) are felicitous, albeit with different interpretations.
- In (1-a) the use of *any* is *emphatic*.
  - *Any* bears prosodic stress.
  - and/or is used in combination with *at all*,
  - does not seem to be syntactically licensed/required.

\(2\)

\(a\) I was lost all alone in the middle of a desert I didn’t have any idea where to go.
\(b\) *I was lost all alone in the middle of a desert I didn’t have some/an idea where to go.

- The difference between (2-a) and (2-b) is grammatical. Here, we ignore echoic readings of (2-b) where *some idea* refers to a specific idea.
  - *Any* does not necessarily bear stress.
  - The use of *at all* is not necessary, even difficult.
  - *Any* is syntactically licensed, its use is mandatory.

1.1 Discursive effects of emphatic NP/FCI

\(3\)

\(a\) ?I was lost all alone in the middle of a desert I was lucky that I got any help (at all). But the guy was more kind than very helpful.
\(b\) I was lost all alone in the middle of a desert I was lucky that I got some help. But the guy was more kind than very helpful.

- The emphatic use of *any* has an effect on the following discourse segment.
- In (3-b) it appears easier to minimize the received help.

\(\Rightarrow\) discourse markers give clues about the discursive effects of *any*.
2 Traditional analysis of NP/FCI

2.1 Kadmon & Landman (1993)

Widening/strengthening

Kadmon & Landman (1993)

- We go back to an analysis à la Kadmon & Landman (1993) in terms of widening and strengthening.
- Because this analysis has been thought to account for all kinds of uses of any, be it an NPI or an FCI.
- But, as already noted by Krifka (1995), this analysis fits especially (or even only) NP/FCI that are used emphatically.

- Negative Polarity Item any

A: - Will there be French fries tonight?
B: - No, I don’t have [potatoes]$_D$.
A: - Have you just a couple of potatoes that I could fry?
B: - Sorry, I don’t have [ANY potatoes]$_{D'}$.

- Free Choice Item any

A: - [An owl]$_D$ hunts mice.
B: - A healthy one, that is?
A: - No, [ANY owl]$_{D'}$.

- Where $D \subset D'$ (widening)
- and $S_{D'}$ entails $S_D$ (strengthening)

2.2 Problems

Problems with strengthening and widening

No strengthening between polar questions (van Rooy, 2003)

A: - Are John and Mary sick?
B: - Is John sick?

- $(6\text{-}a) \rightarrow (6\text{-}b)$: a negative answer to $(6\text{-}a)$ doesn’t answer $(6\text{-}b)$.

No widening in most cases (Jayez, 2010)

A: - Pick [any apple]$_{D'}$ in this basket! (Vendler, 1967)
B: - Pick [an apple]$_D$ in this basket!

- Where $D \not\subset D'$. Paradoxically, the first occurrence of the term FCI is illustrated by an example where widening cannot be applied.

Reduction of a bias in favour of a negative answer
a. Have you been to China? (recently)
b. Have you ever been to China? (in your life)

- A speaker uses (8-b) instead of (8-a) when he thinks it is unlikely that his addressee has been to China.
- Using (8-b) instead of (8-a) the speaker enlarges the domain of situations over which ranges the question.
- The speaker reduces the negative bias, or in probabilistic terms, he increases the probability of the positive answer wrt. the probability of the negative one.

**Widening as Equity**

- Jayez & Tovena (2007) reinterpret *widening as equity* among the alternatives composing the quantificational domain of *any*.
- An NP like *any N* quantifies over a domain where each entity is as likely as the others to satisfy the proposition of the host sentence.
- A speaker who uses (8-a) invites his addressee to a total freedom of choice or in probabilistic terms maximizes for each entity the probability to satisfy the proposition of the host sentence.

### 3 Probabilistic approaches

#### 3.1 Entropy

- Roughly, the *entropy* over an experiment, e.g. the roll of a dice, increases with the reduction of the differences between the probability of each possible outcome.
- Entropy is *maximal* when all possible outcomes are equally probable, and is *null* when only one outcome is possible.
- In *information theory*, *entropy* is defined as a measure of uncertainty or choice.

**Two reinterpretations of Kadmon & Landman (1993)**

- van Rooy (2003) accounts for *NPIs* while Jayez (2010) accounts for *FCIs*.
- But both of them reinterpret the fundamental proposal of Kadmon & Landman (1993) in a probabilistic framework: the probability of asserting the sentence $S$ is increased with the increase of the average probability of each alternative triggered by the NP/FCI.

**Unifying both analysis**

- We can extend van Rooy (2003)’s analysis of assertions containing an NPI and Jayez (2010)’s analysis of NP/FCI and then unify both analyses.
- We propose a new analysis of NP/FCI that unify the two accounts by postulating that NP/FCI mark a bias reduction in the conversation, stemming from the equity between the alternatives triggered by the NP/FCI to satisfy the proposition of the host sentence.
Emphasis and discursive effects

- The notions of *widening* and *strengthening* rely on a comparison between a sentence containing an NP of the form *any* $N$ and the same sentence containing an NP of the form *a* $N$ or a bare plural.

- Kadmon & Landman (1993)’s analysis, and consequently van Rooy (2003) and Jayez (2010), fit especially those NP/FCI that we qualified as *emphatic*.

- Both probabilistic analyses presented above account only for the use of NP/FCI that are used (even licensed) with particular discursive effects.

3.2 Discourse Relations

Emphatic NP/FCI and discourse markers

- We propose to link probabilistic approaches of NP/FCI and probabilistic approaches of *discourse markers*.

- Our proposal is motivated by:
  1. similarities between the behaviour of NP/FCI and that of discourse markers in terms of *discursive effects*,

Probabilistic interpretation of discourse


- An assertion modifies the (subjective) probabilities of other propositions in the epistemic base $S$ of the speaker.
  - With $p$ the asserted content, the probability measure $P_S(.)$ becomes $P_{S⊕p}(.) = P_S(.|p)$.

- A speech act is oriented towards an argumentative *goal*.
  - $p$ argues for a goal $H$, iff. the assertion of $p$ raises the probability of $H$: $P_{S⊕p}(H) > P_S(H)$.

- The strength of the argumentative bound is measured by a relevance function $r$:
  - $p$ argues for $H$ iff. $r_H(p) > 0$
  - $p$ is a better argument than $p'$ for $H$ iff. $r_H(p) > r_H(p')$

Argumentative markers

- The semantics of some discourse markers can be treated in argumentative terms:
  - “$A$ but $B$”: there must be an $H$ such that
    - $P_{S⊕A}(H) > P_S(H)$
    - $P_{S⊕B}(H) < P_S(H)$
  - “$A$ and $B$”: $A$ and $B$ must both argue independently in favour of the same goal.
  - “$A$ so $B$”: $P_{S⊕A}(B) > P_S(B)$
too marks the argumentative similarity between its host and the antecedent of its presupposition.

... 

- Those descriptions interact and predict the discursive effects of the combination of those markers (Winterstein, 2010).

⇒ Does the use of any carry such effects?

3.3 Combining both approaches

Emphatic NP/FCI and argumentative effects

(9) a. I’m glad you got us tickets.
   b. I’m glad you got us any tickets.

   • The use of any in (9-b) marks that all tickets have the same probability to satisfy the speaker.
   • A priori, the probability of being satisfied was lower than it is after the assertion (bias reduction).
     - Let’s consider the propositions $T_i$ ($i \in [1, n]$) related to getting the ticket $t_i$.
     - $\forall i, j : P_{S\oplus T_i}(\text{glad}(t_i)) = P_{S\oplus T_j}(\text{glad}(t_j))$ and $P_{S\oplus T_i}(\text{glad}(t_i)) > P_S(\text{glad}(t_i))$
     - $\Rightarrow \forall i, j : r_{\text{glad}(t_i)}(T_i) > 0$ and $r_{\text{glad}(t_j)}(T_j) > 0$

⇒ Getting any ticket argues in favour of “I’m glad of my ticket” (among other potential goals...)

Interaction with but

(10) a. I’m glad you got us tickets, but they’re not front row.
   b. #I’m glad you got us any tickets, but they’re not front row.

   • The conjunct introduced by but, must argue against the first.
   • “the tickets are not front row” argues against the fact that the speaker is glad of his tickets.
     - $r_{\text{glad}(t_{\sim fr})}(T_{\sim fr}) < 0$
   • The previous constraint is incompatible with the constraint imposed by any (assuming that the goal of the second conjunct is $\text{glad}(t_{\sim fr})$)
   • The bare plural in (10-a) does not impose equity between the tickets, therefore it is not contradictory with the conjunct introduced by but.

Conclusion

1. Emphatic uses of any have observable discursive effects in their combination with other discursive markers.

2. It is possible to combine probabilistic approaches of the elements at play in the key examples: NPI, FCI and discourse markers.

3. The notion of emphatic use can be linked with French quoi que ce soit which is used emphatically in nearly all its licensing contexts.
Bibliography


