

The PolQ-AltQ contrast

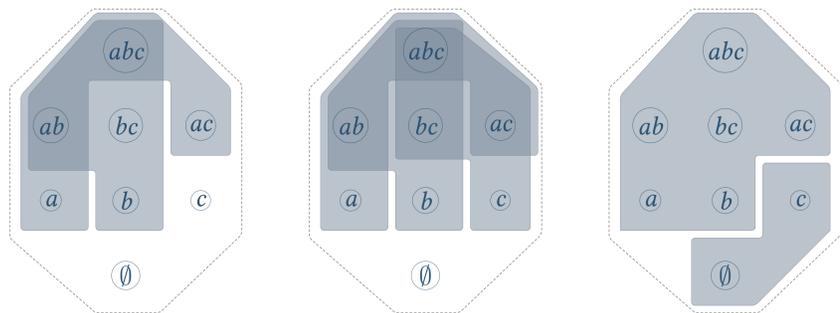
Disjunctive questions like (1) are ambiguous: they can be interpreted as a polar question (PolQ), as an alternative question (AltQ) or as open disjunctive question (OpenQ).

(1) Did Mary drink mineral water or lemonade?

The availability of these readings depends on intonation [1, 12, 10]:

- ▶ When individual disjuncts are pitch accented as in (2a) and (2b), it will be interpreted as a AltQ or OpenQ.
- ▶ The example in (2c) without pitch accents on each disjunct is interpreted as a polar question (PolQ):

- (2) a. Did Mary drink COFFEE[↑] or TEA[↓]? × PolQ, OpenQ ✓ AltQ
 B: #yes B: #no
 B: coffee B: #water
 B: #both B: #neither
- b. Did Mary drink COFFEE[↑] or TEA[↑]? × PolQ, AltQ ✓ OpenQ
 B: #yes B: #no
 B: coffee B: water
 B: ??both B: ??neither
- c. Did Mary drink coffee-or-tea? × AltQ, OpenQ ✓ PolQ
 B: yes B: no
 B: coffee B: water
 B: both B: neither



Main points & Assumptions

- 1 I argue against a purely **syntactic approach** to this puzzle [5, 7, 8, 13, 11]
- 2 Instead, I assume that the interpretational differences between the questions in (2) come directly from **focus marking** [2, 10]
- 3 I argue for a **unified treatment of focus marking** across different question types.
 - ▶ I show that this can be captured in terms of discourse congruence.
 - ▶ I assume that f-marking signals that there are parallel questions to the ones that is being asked [4].
 - ▶ F-marking in questions signals the presence of a higher level strategy, i.e. a set of questions.
 - ▶ Answers must be congruent to this strategy: they must address at least one subquestion in it.

A proposition P is a proper answer to a question Q iff

1. $\llbracket P \rrbracket^o$ resolves $\llbracket Q \rrbracket^o$, and
2. $\llbracket P \rrbracket^o$ is congruent to $\llbracket Q \rrbracket^f$, i.e. resolves at least one subquestion within the strategy signalled by Q (where $\llbracket \varphi \rrbracket$ resolves $\llbracket \psi \rrbracket$ iff $\llbracket \varphi \rrbracket \subseteq \alpha$ for some $\alpha \in \llbracket \psi \rrbracket$)

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The syntactic approach

Many accounts of the PolQ-AltQ contrast assume that AltQs of the form in (2a) involve deletion while PolQs like (2c) do not [13, 8, 6, 11].

(3) Did Mary drink COFFEE_F or (did) she drink TEA? ✓ AltQ × PolQ

Pitch accents on the disjuncts in AltQs are then assumed to be a reflex of this specific underlying structure.

- ▶ Disjunction as union, so a full clausal disjunctive phrase will always denote a proposition with multiple alternatives.
- ▶ Alternatives percolate up using pointwise functional application
- ▶ Default flattening at the clausal level by a flattening operator (\boxminus).
- ▶ In PolQs, a question operator Q will add the complement alternative

- (4) a. $\llbracket or \rrbracket = \lambda P_T. \lambda Q_T. \{P, Q\}$
 b. $\llbracket \boxminus \rrbracket = \lambda P_{\langle st \rangle} \lambda w. \exists p \in P : p(w) = 1$
 c. $\llbracket Q \rrbracket = \lambda P \lambda Q. Q = P \vee Q = \neg P$

The structural difference between PolQs and AltQs is therefore the following:

- (5) a. $Q [\boxminus [CP \dots [XP_1 \text{ or } XP_2]]]$ ✓ PolQ × AltQ
 b. $[\boxminus [CP_1] \text{ or } \boxminus [CP_2]]$ × PolQ ✓ AltQ

Problem: Deletion in AltQs is not always as plausible

- ▶ The AltQ in (6) would have the underlying structure in (6a) where material in the first disjunct is deleted:

- (6) a. Did JOHN or MARY drink coffee?
 b. $Q [\boxminus [\text{Did John drink coffee}] \text{ or } \boxminus [(\text{did}) \text{ Mary drink coffee}]]$

- ▶ All AltQs with non-final disjunctions, like subject disjunctions, would have to involve backwards gapping, but this is generally impossible in English [9]:

- (7) a. *I don't like coffee and/or Bill likes coffee.
 b. *Ann likes coffee and/or Bill likes tea.

- ▶ A possible workaround: Right node raising, i.e. (6) has the following structure:

(8) $Q [\boxminus [\text{Did John drink coffee}] \text{ or } \boxminus [\text{did Mary drink coffee}] \text{ drink coffee}]$

- ▶ However, AltQs do not have the typical prosody that RNR constructions usually exhibit (e.g. a pause after each disjunct)
- ▶ Usually, RNR constructions like (9a) allow for sloppy readings, but this is impossible for sentences like (9b) in which the disjuncts are too small to allow for an RNR reading:

- (9) a. Bill won't, and/but Alice will, pass her math exam.
 b. *John and/or Mary, passed her math exam.

- ▶ (10) patterns with (9b) in this respect, suggesting that an RNR parse is out in these cases as well:

(10) *Will BILL, or ALICE, pass her math exam?

SELECTED REFERENCES [1] Bartels. 1999. *The intonation of English statements and questions*. [2] Beck & Kim. 2006. *Intervention effects in alternative questions*. [3] Biezma. 2009. *Alternative vs. polar questions*. [4] Büring. 2003. *On d-trees, beans, and b-accents*. [5] Farkas Roelofsen. 2017. *Division of labor in the interpretation of declaratives and interrogatives*. [6] Gračanin-Yuksekk. 2016. *Size matters: The syntax of disjunctive questions*. [7] Han & Romero. 2004. [8] Han & Romero. 2004. [9] Hankamer. 1979. *Deletion in coordinate structures*. [10] Meertens, Eggers & Romero. 2018. *The role of multiple accent in alternative questions*. [11] Roelofsen 2015. *The semantics of declarative and interrogative lists*. [12] Roelofsen & van Gool. 2009. *Disjunctive questions, intonation, and highlighting*. [13] Uegaki. 2018. *A unified semantics for the Japanese q-particle "ka" in indefinites, questions and disjunctions*. [14] Zimmermann. 2000. *Free choice disjunction and epistemic possibility*.

Towards a focus approach

F-marking in simple PolQs

- (11) $Q [\boxminus [\text{Did JOHN drink coffee}]_{CP_1}]_{CP_2} ?$
- a. $\llbracket (11) \rrbracket^o = \{ | j \text{ drank coffee } |, | \neg j \text{ drank coffee } | \}$
f-value:
 b. $\llbracket CP_1 \rrbracket^f = \{ | x \text{ drank coffee } | : x \in \text{PEOPLE} \}$
 At the f-value, \boxminus will turn the existential closure of its prejacent into a presupposition (existential focus closure):
 c. $\llbracket CP_2 \rrbracket^f = \{ | x \text{ drank coffee } | : x \in \text{PEOPLE} \}$
 Presupposes: someone drank coffee
 Q will then apply pointwise and therefore yields a set of questions:
 d. $\llbracket (11) \rrbracket^f = \{ \{ | x \text{ drank coffee } |, | \text{someone else drank coffee } | \} : x \in \text{PEOPLE} \}$
 $= \{ \{ | j \text{ drank coffee } |, | \text{smn else drank coffee } | \},$
 $\{ | m \text{ drank coffee } |, | \text{smn else drank coffee } | \},$
 $\{ | c \text{ drank coffee } |, | \text{smn else drank coffee } | \}, \dots \}$

F-marking in disjunctive PolQs

- (12) a. Did [JOHN or MARY]_F drink the coffee? ✓ PolQ
 b. Did John or Mary drink COFFEE_F? ✓ PolQ
 c. [Did John or Mary drink coffee]_F? ✓ PolQ

- (13) $Q [\boxminus [\text{Did John or Mary drink coffee}]_{CP} ?$
- a. $\llbracket (13) \rrbracket^o = \{ | j \text{ or } m \text{ drank coffee } |, | \text{neither drank coffee } | \}$
Narrow focus on disjunction:
 b. $\llbracket (13) \rrbracket^f = \{ \{ | x \text{ or } y \text{ drank coffee } |, | \text{smn else drank coffee } | \} : x, y \in \text{PEOPLE} \}$
Narrow focus elsewhere:
 c. $\llbracket (13) \rrbracket^f = \{ \{ | j \text{ or } m \text{ drank } x |, | j \text{ or } m \text{ drank smth else } | \} : x \in \text{DRINKS} \}$
Broad focus:
 d. $\llbracket (13) \rrbracket^f = \{ \{ | j \text{ or } m \text{ drank coffee } |, | \text{neither drank coffee } | \} \}$

F-marking in OpenQs

- ▶ Both *John* and *Mary* generate focus alternatives: $\llbracket \text{JOHN} \rrbracket^f = \llbracket \text{MARY} \rrbracket^f = \text{PEOPLE}$
- ▶ I assume the f-value of the disjunction corresponds to union, i.e. $\llbracket \text{DisjP} \rrbracket^f = \text{PEOPLE}$

- (14) $Q [\boxminus [\text{Did } [\text{JOHN}_F \text{ or } \text{MARY}_F]_{\text{DisjP}} \text{ drink coffee}]_{CP} ?$
- a. $\llbracket (14) \rrbracket^o = \{ | j \text{ or } m \text{ drank coffee } |, | \text{neither drank coffee } | \}$
 b. $\llbracket (14) \rrbracket^f = \{ \{ | x \text{ drank coffee } |, | \text{someone else drank coffee } | \} : x \in \text{PEOPLE} \}$

F-marking in AltQs

Final falling pitch accent signals list closure [3, 14]:

- ▶ List closure affects focus alternatives: closure intonation restricts focus alternatives to those generated in the ordinary value.
- ▶ I therefore assume that the falling final pitch accent signals the presence of a closure operator \boxminus :

(15) $\llbracket \boxminus [\varphi_1 \text{ or } \varphi_2 \text{ or } \dots \text{ or } \varphi_n] \rrbracket^f = \{ \llbracket \varphi_1 \rrbracket^o, \llbracket \varphi_2 \rrbracket^o, \dots, \llbracket \varphi_n \rrbracket^o \}$

- ▶ Instead of presupposing that one of the f-alternatives is true, \boxminus will enforce a presupposition that one of these restricted alternatives is true.

- (16) $Q [\boxminus [\text{Did } \boxminus [\text{JOHN}_F \text{ or } \text{MARY}_F]_{\text{DisjP}} \text{ drink coffee}]_{CP} ?$
- a. $\llbracket (16) \rrbracket^o = \{ | j \text{ or } m \text{ drank coffee } |, | \text{neither drank coffee } | \}$
 b. $\llbracket (16) \rrbracket^f = \{ \{ | j \text{ drank coffee } |, | m \text{ drank coffee } | \},$
 $\{ | m \text{ drank coffee } |, | j \text{ drank coffee } | \} \}$