You like this.

You dislike this.

Sensitivity to False Answers

Yimei Xiang
yxiang@fas.harvard.edu
Harvard University

Overview

FA-sensitive (cf. intermediately exhaustive) readings of indirect-Qs:

John knows Q.

a. **Completeness**: John believes a complete true answer of *Q*.
b. **FA-sensitivity**: John doesn't believe any false answers of *Q*.

Goal: to characterize the sensitivity to false answers (FAs) in interpreting indirect-Qs.

1. Both *over-affirming* (OA) and *over-denying* (OD) are involved in FA-sensitivity.
2. The unacceptability of OA/OD varies by Q-type: *asymmetry of FA-sensitivity*.
3. The asymmetry of FA-sensitivity is related to Completeness: *FA-Principle*.

Q-Type: Mention-All vs. Mention-Some

MA-Qs: Non-exhaustive answers must be ignorance-marked.

(1) Who made the swimming team?
(*w: only John and Mary made the team.*)

a.	John and Mary.	Complete
b.	John did, I don't know if anyone else did.	Partial
c.	/JOHN ∨did ...	Partial

MS-Qs: Non-exhaustive answers needn't to be ignorance-marked.

(2) Where can Sue buy a bottle of wine?
(*w: only LiquorA and LiquorD sell wine.*)

a.	From LiquorA.	Complete
b.	From LiquorA or LiquorD.	Complete

Completeness

1. Complete = *Maximally Informative* (Fox 2013)

(3) Maximally informative members of $\alpha_{<st,t>}$: $\{p : p \in \alpha \wedge \forall q \in \alpha[q \not\subset p]\}$

MA-Q: {J made the team, M made the team, J+M made the team}
MS-Q: {◇(S get a bottle from *a*), ◇(S get a bottle from *d*)}

2. In a ◇-Q, the ◇ embeds a covert *O*-operator associated with the *wh*-trace. This *O* provides a non-monotonic environment for the *wh*-item. (Xiang 2015)

(4) $O(p) = p \wedge \forall q \in \mathscr{A}lt(p)[p \not\subseteq q \rightarrow \neg q]$

(5) Who can serve on the committee?
a. Gennaro+Danny+Jim can serve. $\not\Rightarrow$ b. Gennaro+Danny can serve.
$\Diamond O[\text{serve}(g+d+j)]$ $\Diamond O[\text{serve}(g+d)]$

FA-sensitivity (I): Experiments

who/where	Fact	OD	MS	MA	OA
a	Yes	No	?	Yes	Yes
b	No	?	No	?	Yes
c	No	No	No	No	?
d	Yes	Yes	Yes	Yes	Yes

In each experiment, all the visually distinguishable differences on the proportion of acceptances are statistically significant. (Logistic mixed effect models, $p < .005$)

1. Both OA and OD are involved in FA-sensitivity.
2. The unacceptability of OA/OD varies.

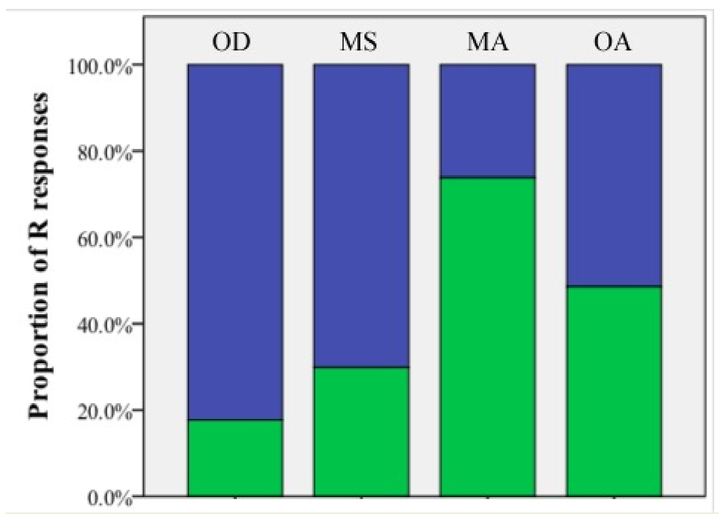
In Exp-MA, subjects who accepted MS-MA ($N = 28$) rejected OD significantly more than OA. (Binomial test, 89%, $p < .05$)

3. The unacceptability of OA/OD varies by Q-type.

Exp-MA (reanalyzing K&R 2011)

Four individuals *abcd* were trying out for the swimming team. Only *ad* made it.

Did _____ correctly predict *who made the swimming team?*

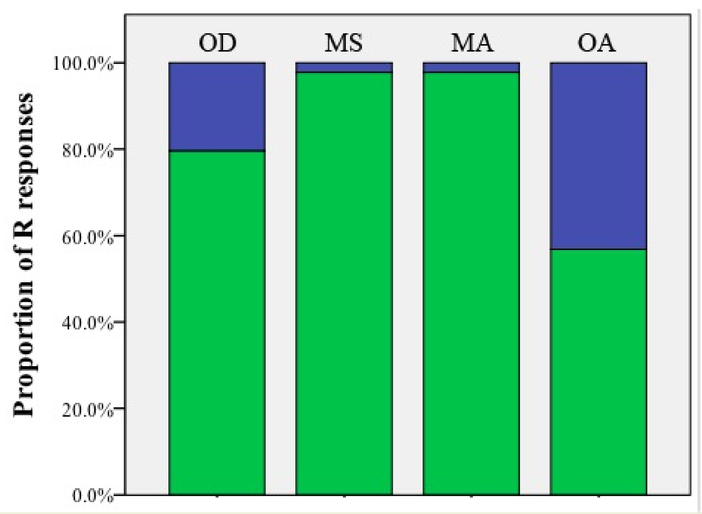


OD is worse than OA. ($N = 107$)

Exp-MS

There are four liquor stores *abcd* in the considered area. Only *ad* sell wine.

Did _____ correctly tell Sue *where she could buy a bottle of wine?*



OA is worse than OD. ($N = 88$)

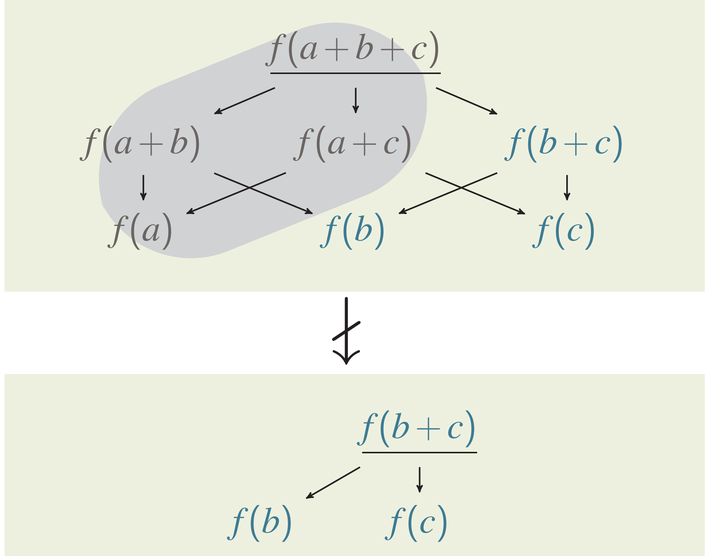
FA-sensitivity (II): Analysis

FA-Principle:
Every maximally informative answer in the updated answer space must entail a complete true answer.

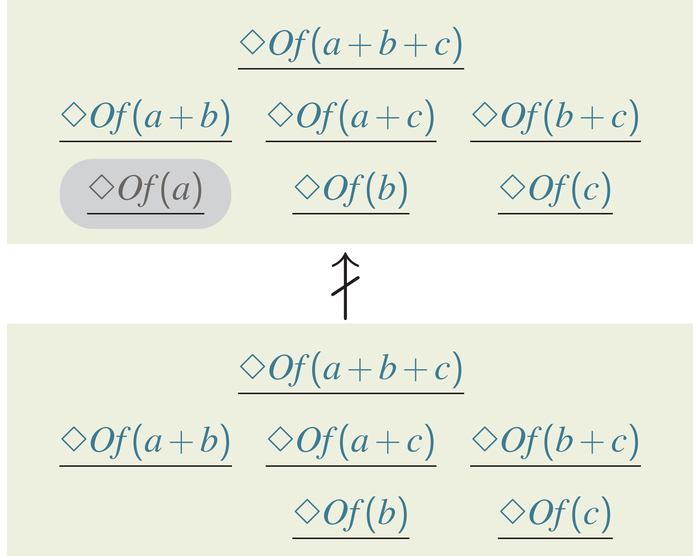
Example: OD violates the FA-Principle in MA-Qs.

1. Let all the answers be true. Complete true answer:
$$f(a+b+c)$$
2. Overly denying $f(a)$ rules out all the shaded answers.
Maximally informative member in the updated space:
$$f(b+c)$$
3. $f(b+c) \not\Rightarrow f(a+b+c)$ (f is distributive)

Answer space of MA-Qs



Answer space of MS-Qs



Selected References

[1] Fox, D. 2013. Mention-some readings of questions. Class notes, MIT seminars.
[2] Klinedinst, N. and D. Rothschild. 2011. Exhaustivity in questions with non-factives. *Sem&Prag*.
[3] Xiang, Y. 2015. Uniqueness, mention-some, and mention-all. Presentation at ZAS, Berlin.

Acknowledgements

I thank Emmanuel Chemla, Gennaro Chierchia, Alexandre Cremers, Danny Fox, Martin Hackl, Andreas Haida, Daniel Lassiter, Jesse Snedeker, Wataru Uegaki, and the audiences at LangCog, LFRG, and ImPres1 for comments and discussions! All errors are mine.