Trading Beliefs—Statistics

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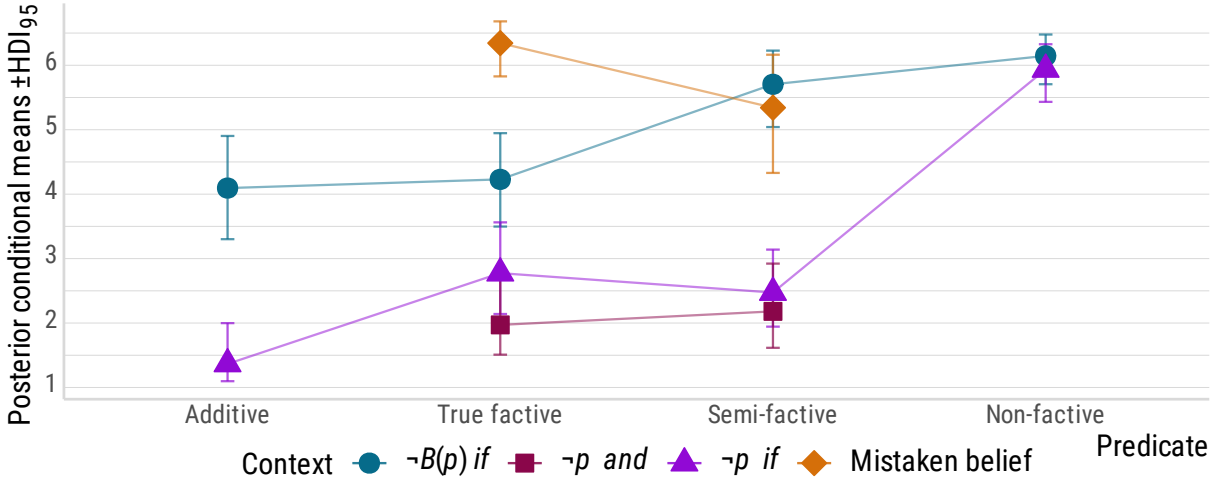
Statistical Analysis We fit two Bayesian cumulative probit mixed models, one for each sub-experiment, in R (4.3.2; R Core Team 2023) using *brms* (Bürkner 2021). 40k iterations, $N(0,1)$ slope priors.

$$\text{Y} \sim \text{PREDICATE} * \text{CONTEXT} + (1 + \text{PREDICATE} * \text{CONTEXT} \mid \text{ITEM}) + (1 + \text{PREDICATE} * \text{CONTEXT} \mid \text{ID})$$

The estimates and HDIs in the plot below are based on the posterior conditional effects of the models detailed above, calculated using the *emmeans* package (Lenth 2019).



Bayes Factor analyses (note that these probably slightly favor the null due to the uninformative priors.) Positive values support difference hypotheses, negative ones support the null.

Parameter	$\log_{BF}$
●: *realize* vs. *be angry*	4.73
●: *realize* vs. *too*	4.66
●: *be angry* vs. *too*	–1.52

Parameter	$\log_{BF}$
▲: *realize* vs. *be angry*	–1.66
▲: *realize* vs. *too*	2.35
▲: *be angry* vs. *too*	2.79

Parameter	$\log_{BF}$
● vs. ▲: *be angry*	4.20
◆: *be angry* vs. *realize*	2.15