

# Framing in context

## Disabling conditions and alternative causes in health communication

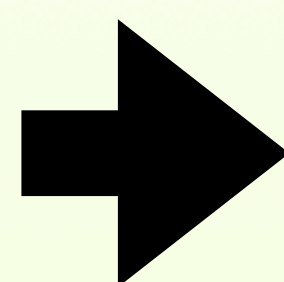
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### Negative (loss) frames

- **Negativity bias / loss aversion hypothesis:** should be generally more persuasive (Meyerowitz & Chaiken 1987, Kahneman & Tversky 1979)
- **Risk matching hypothesis:** should be more persuasive for detection (high risk) behaviour (Rothman & Salovey, 1997)



If you don't quit smoking,  
you won't reduce your risk  
of lung cancer!



If you quit smoking,  
you'll reduce your risk  
of lung cancer!

### Positive (gain) frames

- **Risk matching hypothesis:** should be more persuasive for prevention (low risk) behaviour (Rothman & Salovey, 1997)

### Background beliefs hypothesis:

Inspired by cf. Cummins et al. (1991); Cummins (1995) on conditional reasoning:

- ✦ Many **disabling conditions** → positive frame less acceptable and less persuasive.
- ✦ Many **alternative causes** → negative frames less acceptable and less persuasive.

### The experiment on detection behaviour (N = 716)

- 2x2x2 between participants design
- Experimental items:

**Context:** You have started experiencing some minor symptoms which are consistent with a condition called Colin Syndrome. This is a condition which leads to bruising, weakness in the limbs, and mood swings. It also leads to high blood pressure, which is serious if untreated. The condition is treatable, but it is important to find out early in your illness whether you have Colin Syndrome to allow the best forms of treatment where necessary.

**Positive (negative) frame:** If you (don't) take a swab test, you will (not) know early in your illness whether you have Colin Syndrome.

**No (many) disablers:** Taking a swab test guarantees (does not guarantee) reliable and conclusive results. That's because the swabs are easy (hard) to collect, the testing is unaffected (affected) by personal characteristics, and processing of the swabs is straightforward (difficult).

**No (many) alternatives:** No (several) other effective ways of testing for Colin Syndrome are available. For example, it is not possible (it is possible) to test using blood, urine, or stool samples.

- **Dependent variables** (measured on 7 point scales):

**Perceived acceptability:**

"How acceptable is this statement in this context?"  
1 (Highly Unacceptable) 2 3 4 5 6 7 (Highly Acceptable).

**Attitudes** (semantic differential scales, Buda & Zhang 2000):

"How attractive do you find the swab test as an option?"  
bad ... good / not nice ... nice / unlikeable ... likeable

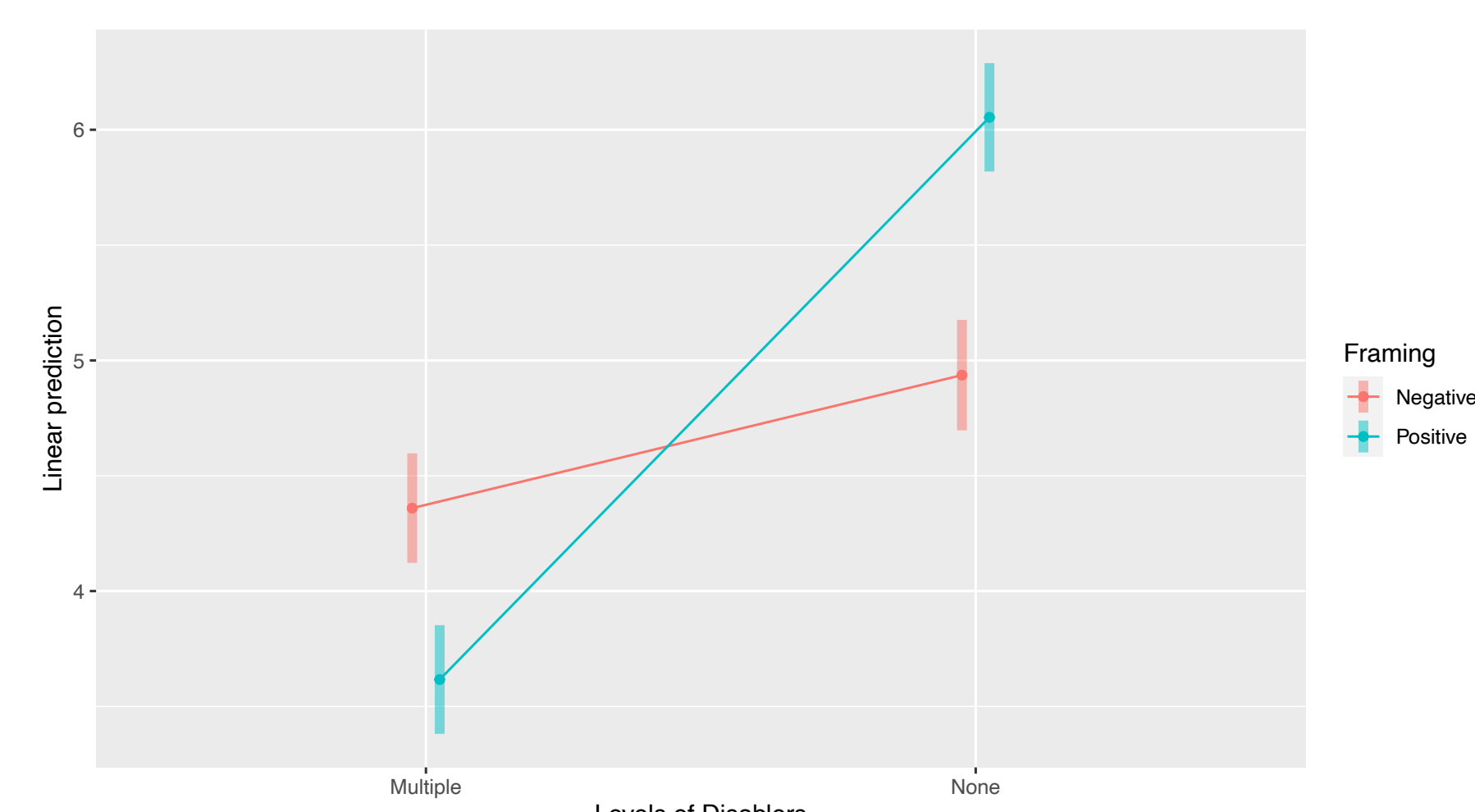
"Would you take the swab test for Colin Syndrome?"  
unlikely ... likely / improbable ... probable / impossible ... possible

"How confident are you that the swab test would work?"  
not confident ... confident / not certain ... certain / feel unsure ... feel sure

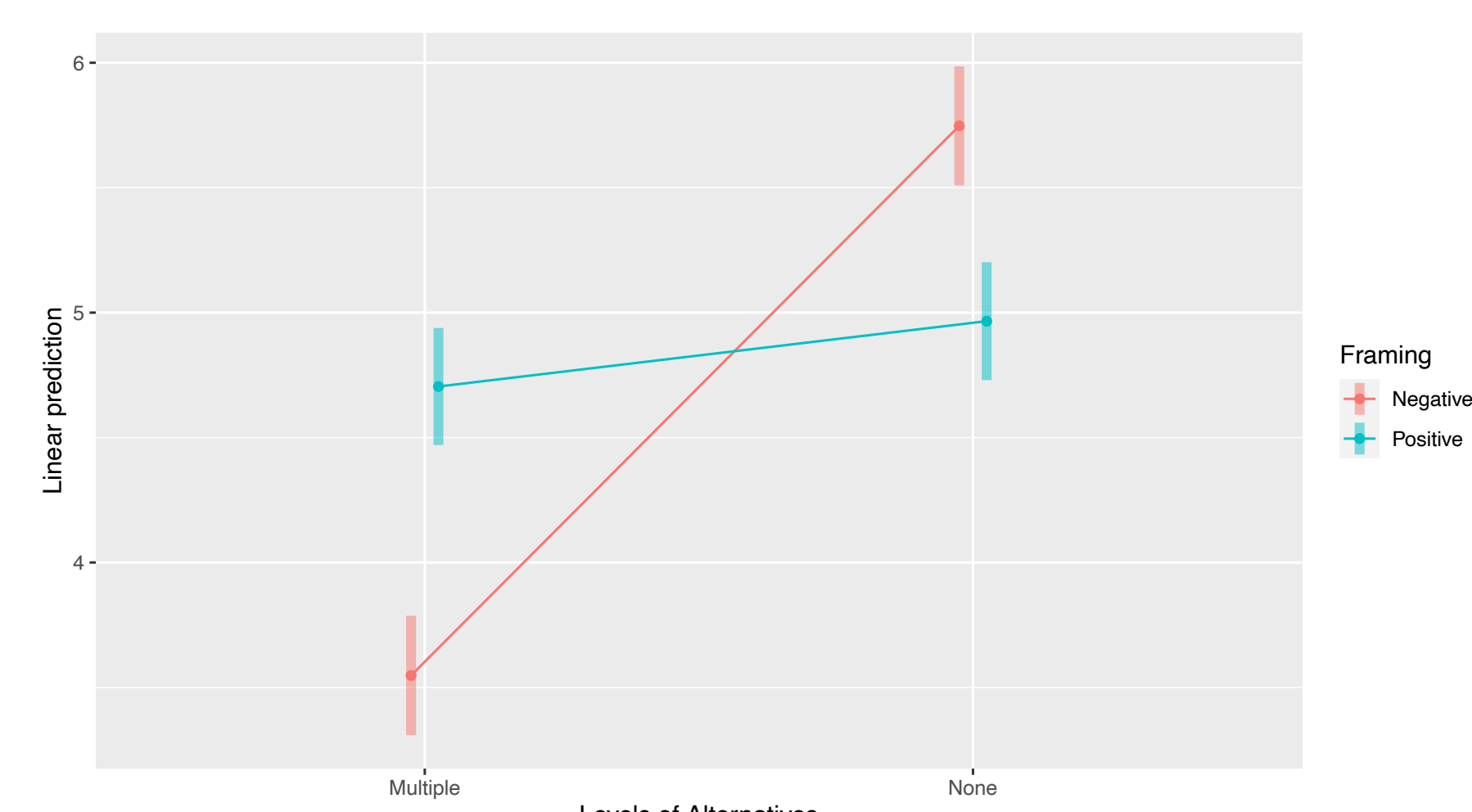
### Acceptability results

Effect	<i>df</i>	<i>MSE</i>	<i>F</i>	<i>ges</i>	<i>p</i>
Fr	1,708	2.60	2.41	.003	.12
Dis	1,708	2.60	156.02***	.18	< .001
Alt	1,708	2.60	104.07***	.13	< .001
Fr: Dis	1,708	2.60	59.46***	.08	< .001
Fr: Alt	1,708	2.60	64.53***	.08	< .001
Dis: Alt	1,708	2.60	0.28	< .001	.60
Fr: Dis: Alt	1,708	2.60	0.33	< .001	.57

Table 1: Three-way ANOVA on Acceptability



Estimated marginal means; the interaction of Framing and Disablers on Acceptability.

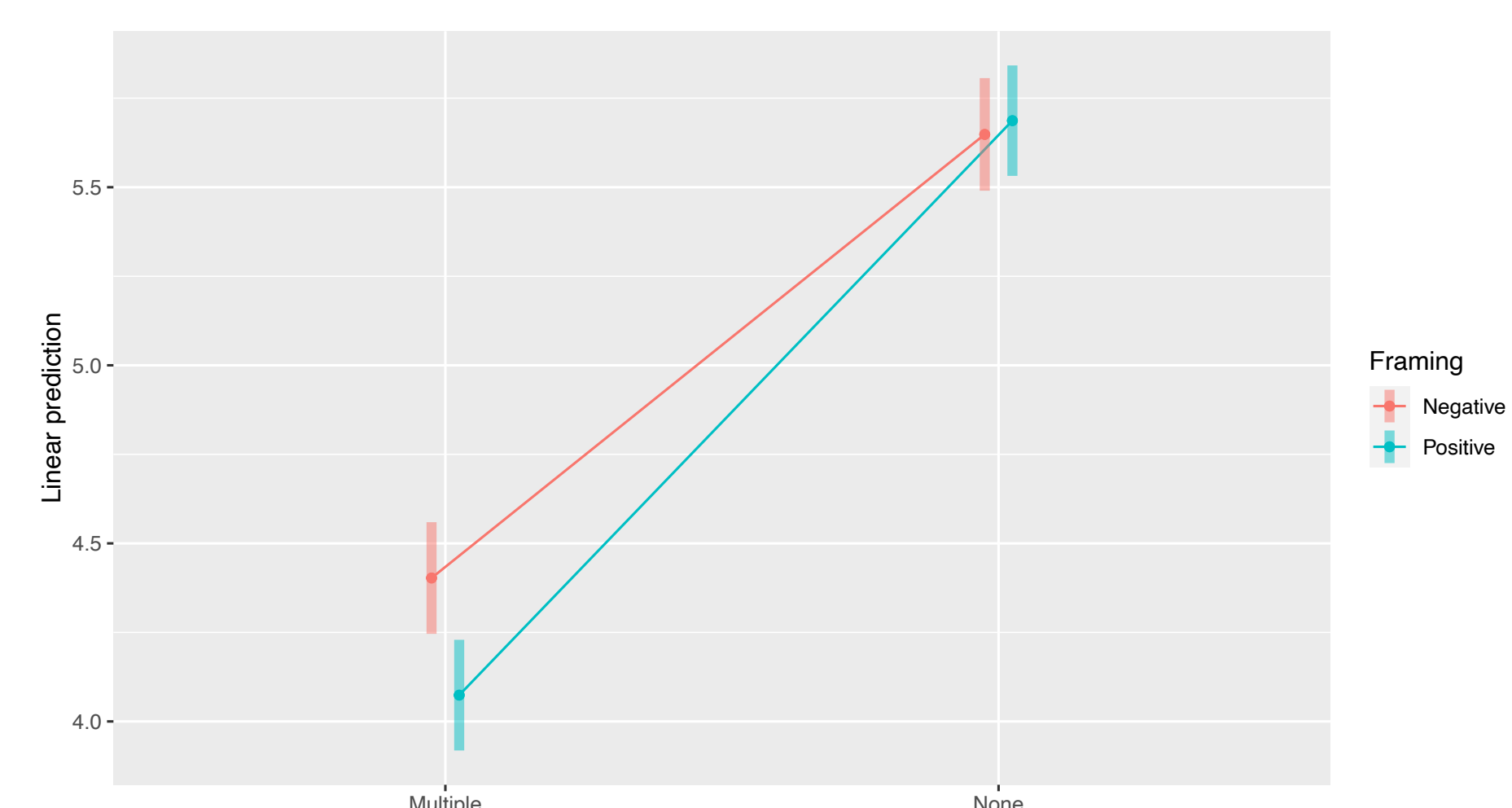


Estimated marginal means; the interaction of Framing and Alternatives on Acceptability.

### Attitude results

Effect	<i>df</i>	<i>MSE</i>	<i>F</i>	<i>ges</i>	<i>p</i>
Fr	1,708	1.13	3.33	.005	.07
Dis	1,708	1.13	322.40***	.31	< .001
Alt	1,708	1.13	19.64***	.03	< .001
Fr: Dis	1,708	1.13	5.33*	.007	.02
Fr: Alt	1,708	1.13	.32	< .001	.57
Dis: Alt	1,708	1.13	31.86***	.04	< .001
Fr: Dis: Alt	1,708	1.13	0.29	< .001	.59

Table 2: Three-way ANOVA on Attitude (Detection).



Estimated marginal means; the interaction of Framing and Disablers on Attitude

### Conclusion:

- The **Acceptability** data support the background-beliefs hypothesis: framing interacted with Disablers and with Alternatives:
  - ✦ positive frames more acceptable than negative frames when there were no disablers
  - ✦ negative frames were more acceptable than positive frames when there were no alternatives.
- The **Attitude** data is less supportive for our hypothesis.
  - ✦ Unpredicted interaction of Disablers and Alternatives.
- A part of a broader project (different DVs, prevention)