

# When Default Options Explain Away Preferences:

A Causal Reasoning Account of Mental State Reasoning from Default Options

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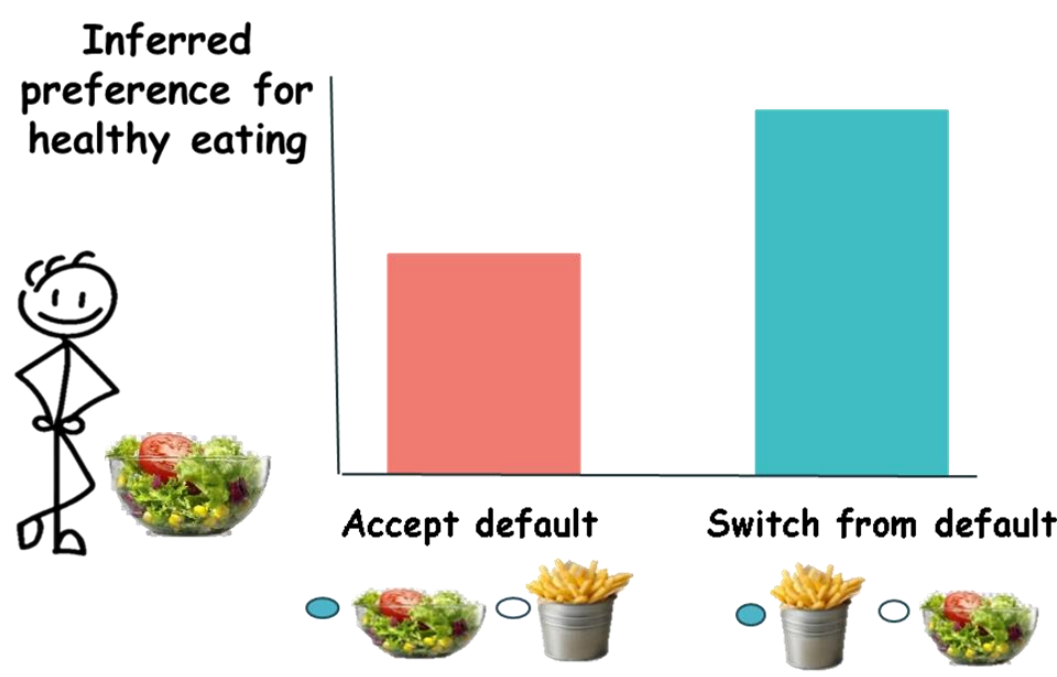
## BACKGROUND

**Defaults** are pre-selected options. A decision-maker (DM) automatically receives the default unless they switch away from it.

### Asymmetric Preference Inferences

People tend to infer that DMs who actively switch from a default have stronger preferences than those who passively accept it.

- **Asymmetric inferences** about a DM's preference for the *same chosen object*.
- E.g., people rated a DM who ordered salad as caring more about healthy eating when the default dish was fries (switch from the default) than when it was salad (accept the default).<sup>1</sup>



### Causal Reasoning Account

Asymmetric preference inferences may result from causal reasoning.

- Typically, people infer that a DM's choice reflects their preference.
- Defaults can provide plausible *alternative* explanations for a DM's choice:
  - Defaults sometimes convey choice-relevant information, e.g., implicit recommendations from the default-setter.<sup>2</sup>
  - Accepting the default may be due to following recommendations, which “*explains away*” the assumption that choice reflects preference.
- One explanation weakens another is a signature of **causal reasoning**.<sup>3,4</sup>

## CURRENT STUDIES

### Design

- 2(Default: Broccoli vs. Chocolate) x 2(Choice: Accept vs. Switch) within subject
- Each participant participated in 4 trials; each trial was a unique condition
- Trials were blocked into pairs, based on Default condition (order counterbalanced)
- 1 pair of trials with girl characters, and 1 with boy characters (order counterbalanced)

	Character Chose <b>Broccoli</b>	Character Chose <b>Chocolate</b>
<b>Broccoli Default Condition</b>	<b>Broccoli-Default Acceptor Trial</b>	<b>Broccoli-Default Switcher Trial</b>
<b>Chocolate Default Condition</b>	<b>Chocolate-Default Switcher Trial</b>	<b>Chocolate-Default Acceptor Trial</b>

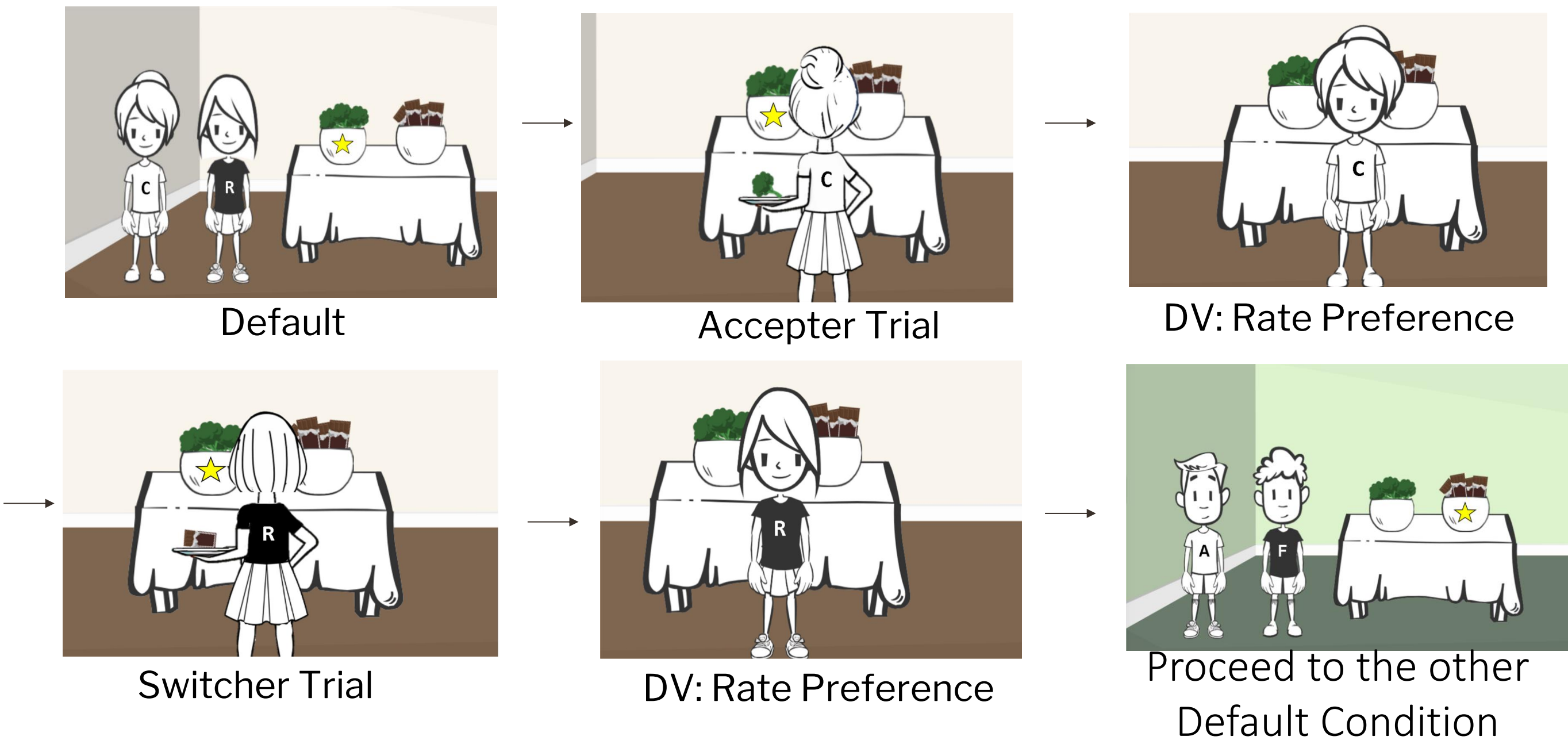
### Participants (Ps)

- Study 1** Adults (Prolific), N = 120, M<sub>Age</sub> = 37.29, 44 men, 74 women, 2 non-binary
- Study 2** Children (7-8yrs, Children Helping Science), N = 120, M<sub>Age</sub> = 8.08, 56 boys, 64 girls

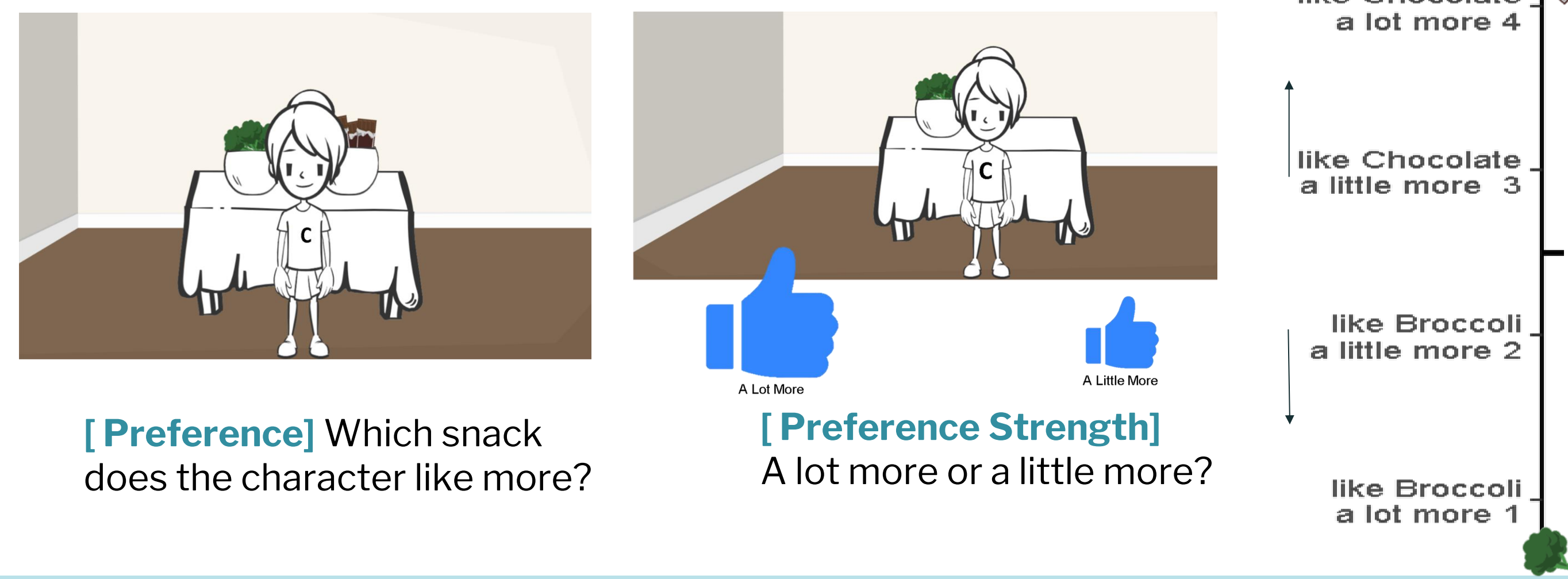
### Procedure

- Ps read illustrated vignettes online about two child characters choosing snacks at school.
- Same procedure in the two studies for developmental comparison.
- Adults (Study 1) read the vignettes with images; the same text was read to the children (Study 2) by an experimenter via zoom.
- Memory check question after the 1<sup>st</sup> trial. Excluded and replaced all Ps who failed.

#### Broccoli Default Condition with Girl Characters



- To facilitate child Ps' comprehension, the **DV (Inferred Preference)** is measured by two binary forced-choice and combined into a 4-point scale.



### References

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## RESEARCH QUESTION & PREDICTIONS

**Research Question:** We tested validity of the **Causal Reasoning Account**, which predicts that:

**Asymmetry occurs** when accepting the default can be explained by plausible reasons other than the DM's preference. For instance,

- Child choosing broccoli when their parents picked it as the default can be likely explained by following the parents' recommendations
- As in past findings<sup>2,5,6</sup>, people will infer that a child who chose broccoli likes it more when it is *not* the default than when it is.

**Asymmetry diminishes** when accepting the default *cannot* be explained by plausible reasons other than the DM's preference. For instance,

- Child choosing chocolate when their parents picked it as the default can be likely explained by their (presumed) preference for chocolate, which is licensed by the default.
- **NOVEL predictions:** People will infer that a child who chose chocolate likes it similarly regardless of the default.

## RESULTS

**Study 1** As predicted, adults made asymmetric inferences when broccoli was the chosen snack, and this asymmetry diminished when chocolate was the chosen snack.

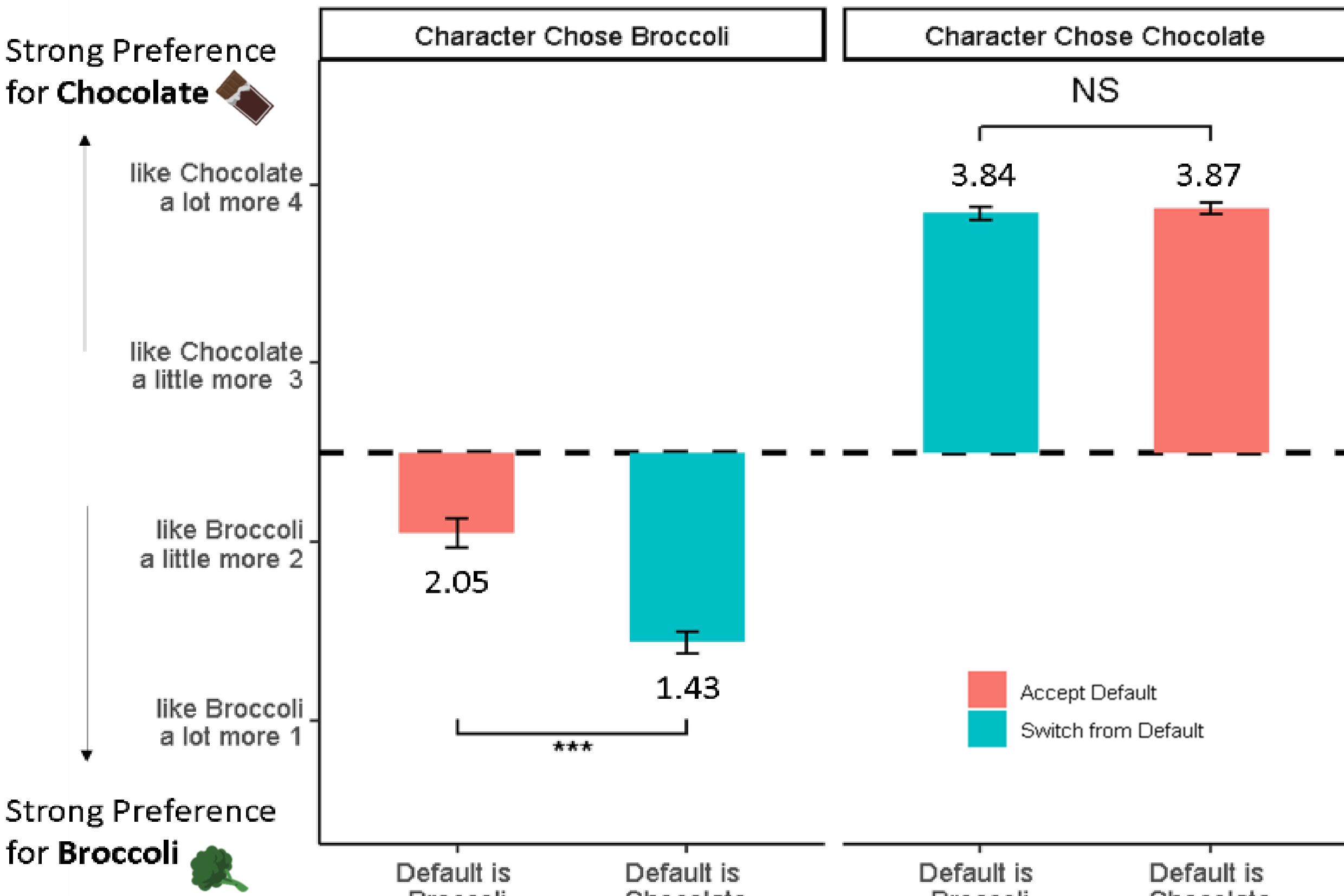


Figure 1: Study 1 results. On average, adults inferred that the character who chose broccoli when it *not* the default liked it more than the character who chose it when it was the default. Adults inferred that the two characters liked chocolate similarly regardless of the default.

**Study 2** Unlike the adults, children made asymmetric inferences when chocolate was the chosen snack, and this asymmetry diminished when broccoli was the chosen snack.

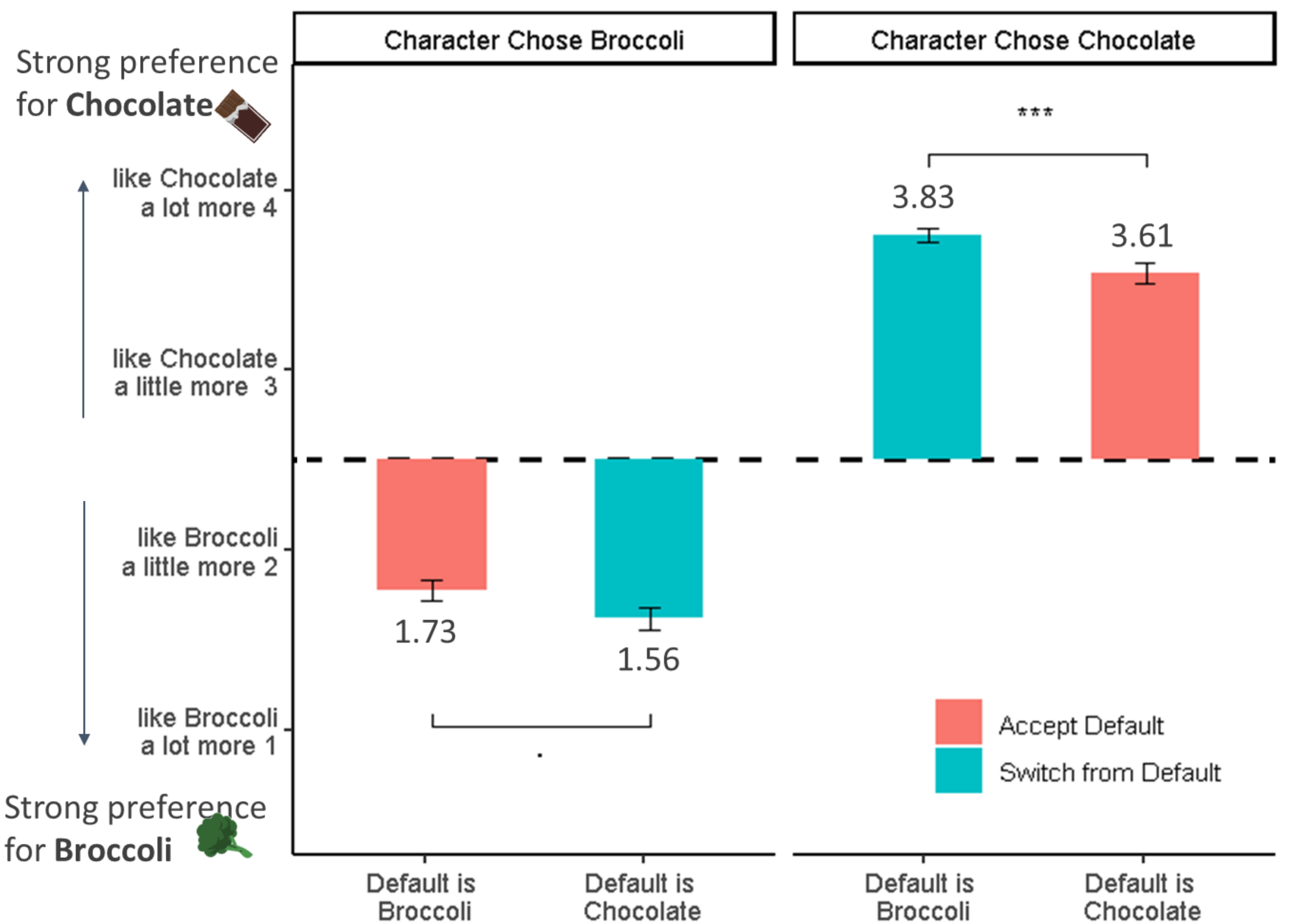


Figure 2: Study 2 results. On average, children inferred that the character who chose chocolate when it *not* the default liked it more than the character who chose it when it was the default. Children inferred that the two characters liked broccoli similarly regardless of the default.

## CONCLUSIONS

- **Study 1** suggest that a classic effect in judgment and decision-making— asymmetric preference inferences from defaults—reflects a process of **rational causal inference** in adults.
- However, **Study 2** suggests children do not make similar inferences by age 8.
  - Perhaps children cannot yet make causal inferences based on defaults
  - Alternatively, children may not see the broccoli default as a plausible alternative reason for choice. Future research is needed.