What Gives a Diagnostic Label Value? Common Use Over Informativeness

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1. Motivation (Hemmatian & Sloman, 2018)

- Use of label to explain a property is common and intuitive: "**Can't sleep**, **because** I have **insomnia**."
- Could be due to labels' **social utility (communicative convenience)** or **epistemic utility (labels carrying generalizable information)**
- The two are confused: **Commonly used (entrenched)** labels seen as explanatory even when **vacuous.** Does this extend to **clinical labels**?

2. Hypothesis

Circular and incoherent but **commonly used** clinical diagnostic labels (**no epistemic utility but high social utility**) are **considered explanatory (higher epistemic utility)** by both laypeople and experts

3. Design

- **14 psychiatric and non-psychiatric** diagnoses, some after current or historical categories, each with 3 symptoms
- **Mixed design** (N = 1054): epistemic utility and label entrenchment manipulated within subjects, disorder type between subjects
- Experiments 1 & 2 on **mTurk**, Experiment 3 on **Prolific.co**, Experiment4 with **mental health professionals** recruited through online listservs.

4.1. Results: Experiment 1 (n = 361)
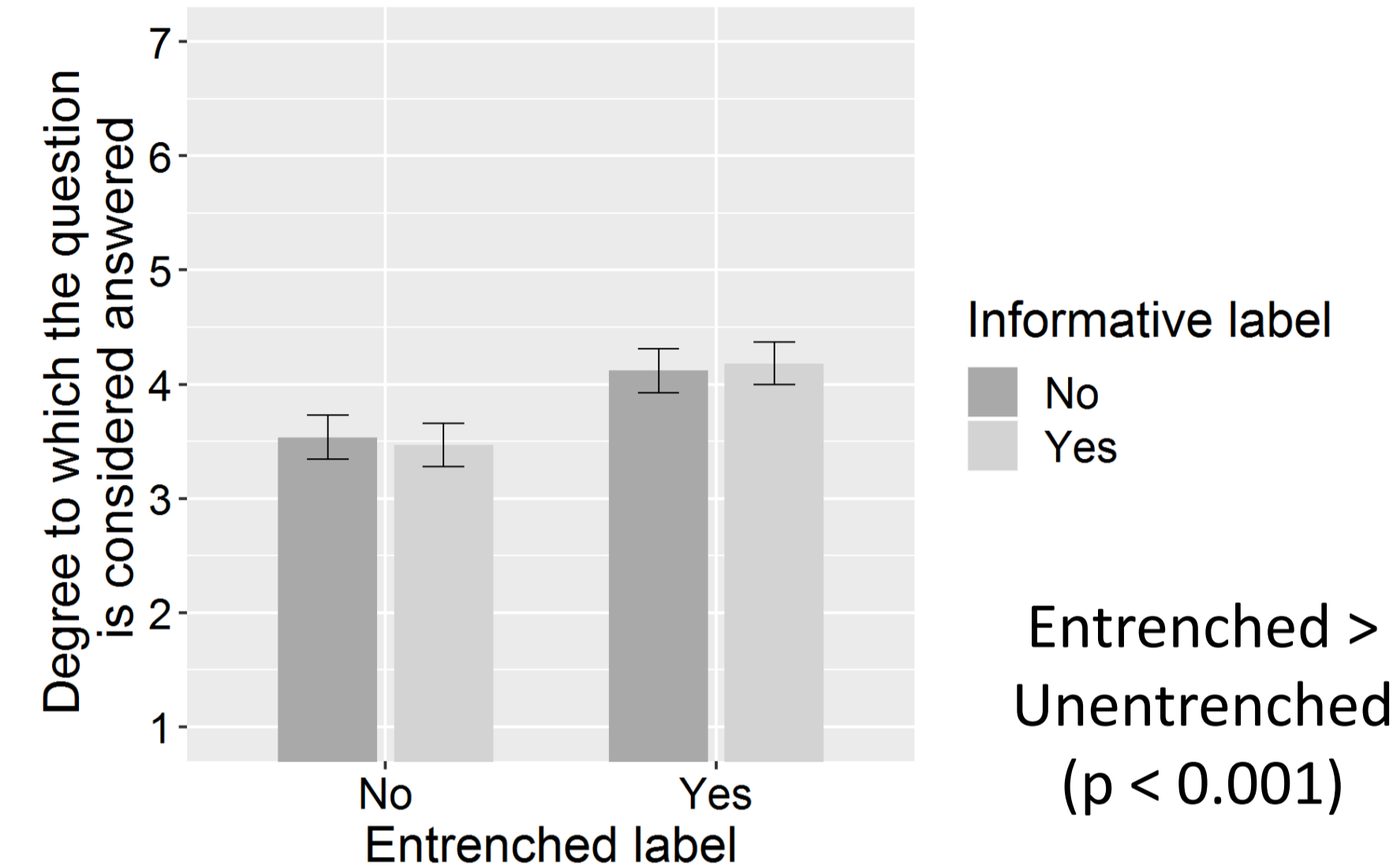
Example Shortened Scenario

A psychiatrist named John… came across a patient who had unfounded worries about being infected by parasites...He **asked** two psychiatrist **colleagues**: **"Why does he show these symptoms?"**…One of them responded:**"Because he has perreptophobia."** …John's colleagues had encountered several patients with similar symptoms before.

Entrenched condition: They had found that the **name accepted by the community of mental health experts** … is **perreptophobia**.

Unentrenched condition: They … found **no previous record** … and **decided to name it** perreptophobia **themselves**.

Both: **Nothing else is known** about **perreptophobia**.

DV (explanatoriness, i.e. epistemic utility): To what extent did the response "because he has perreptophobia" answer John's question about why the patient showed the symptoms? (1-7)

Degree to which the question is considered answered. Informative label: No / Yes. Entrenched label: No / Yes. Entrenched > Unentrenched ($p < 0.001$)

- **Common use** enhances perceived **explanatory value** and **beliefs in a common cause for symptoms**, despite **clear circularity** and **no contribution** from **the community**
- Effect **persists** regardless of whether label offers **novel descriptive info** (manipulation not shown)
- **Regardless of** explicit awareness and memory of manipulation, reflectiveness, familiarity with label, and comprehension

4.2. Results: Experiment 2 (n = 360)

Example Shortened Scenario

Two psychiatrists encountered patients who had an unconventional fear of winds…
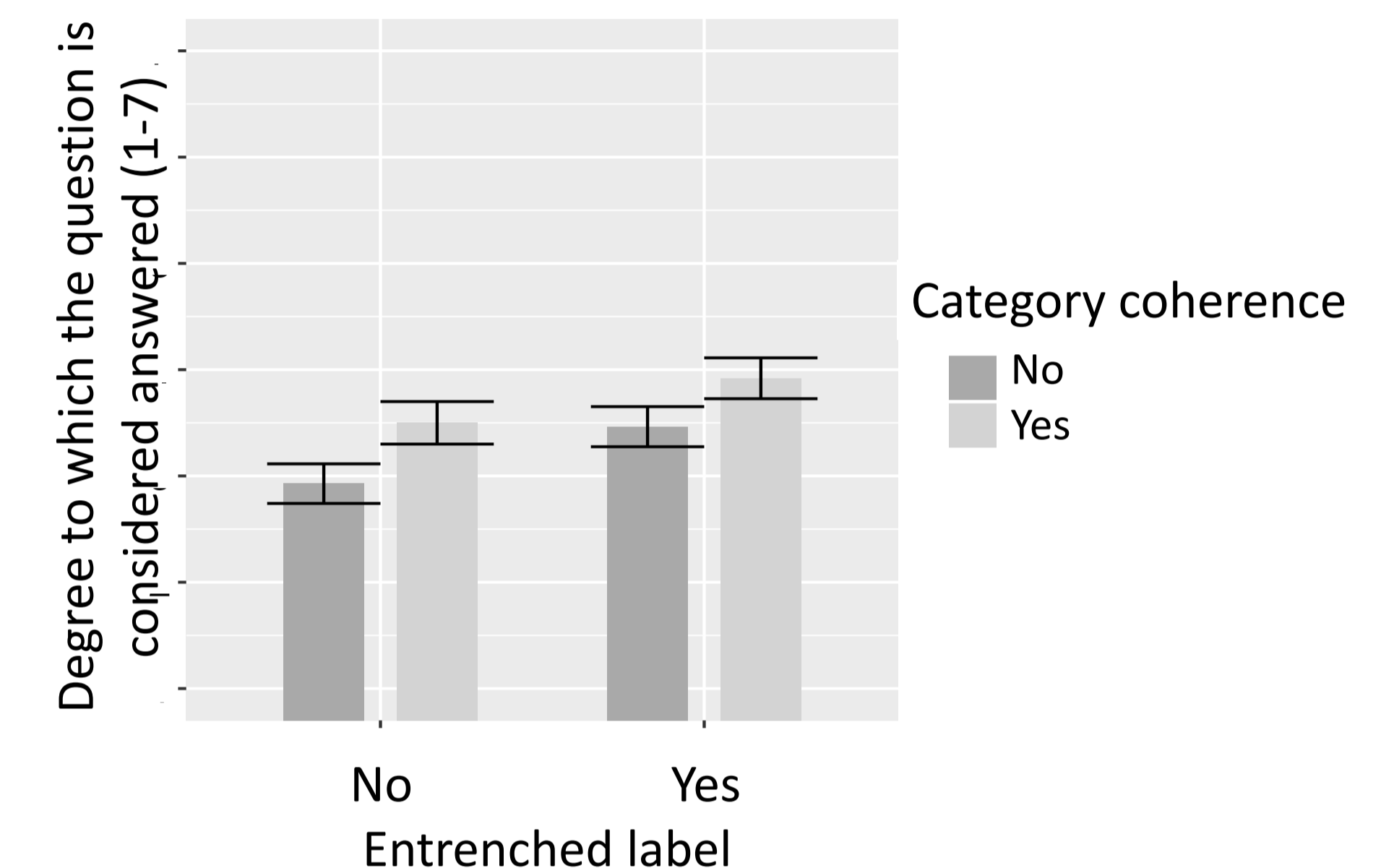
Entrenchment manipulation: **Like Exp. 1**

Coherent condition: all symptoms are caused in every patient by emotionally difficult past experiences having coincided with strong winds.

*Incoherent condition:*They also learned/discovered … that **the symptoms occur together by accident and have no common cause**.
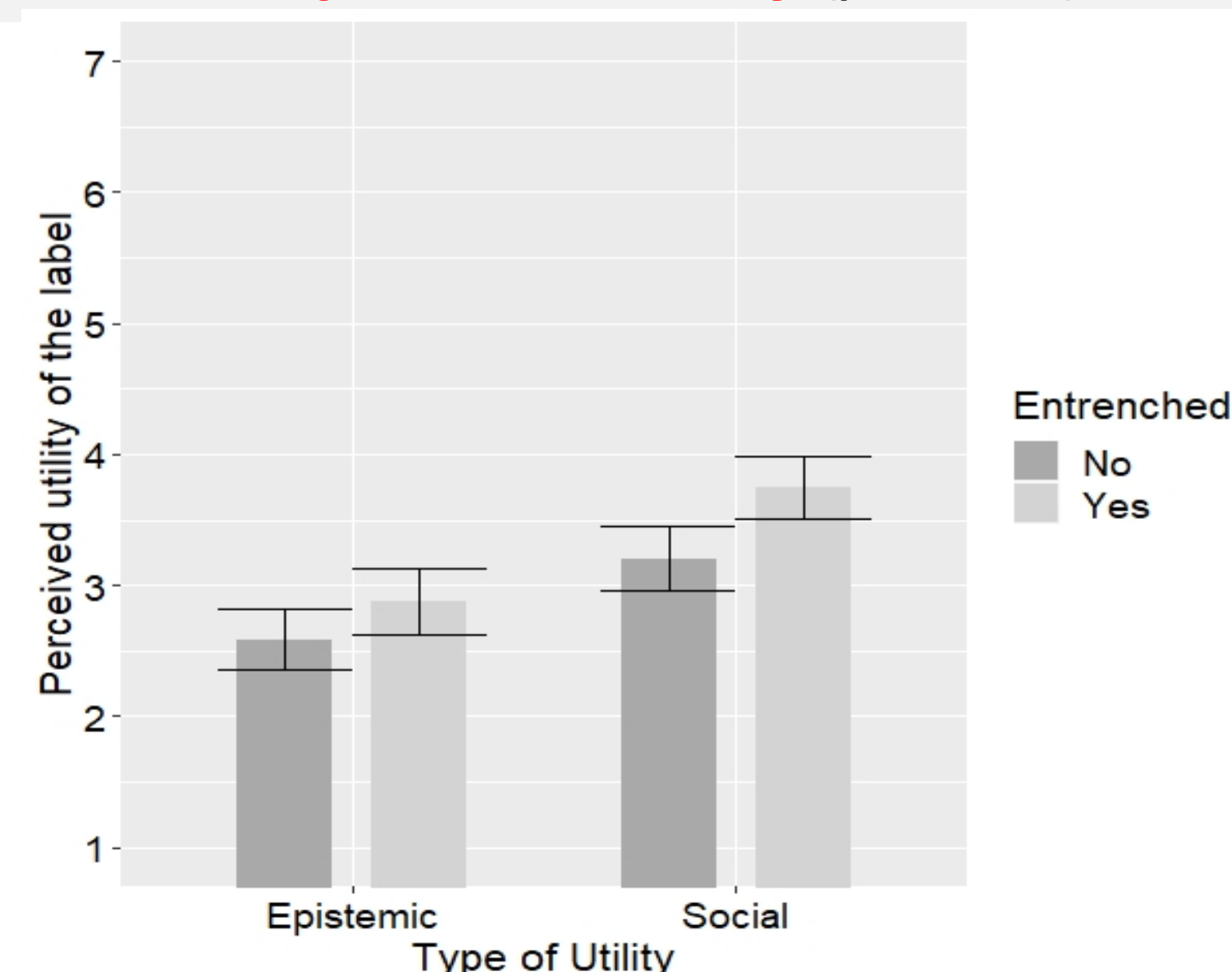
… **Nothing else is known** about **favoniphobia**.

Sofia, another psychiatrist, came across a patient … **She had never seen these symptoms in a single patient or heard the name** favoniphobia **before**. Sofia asked her two colleagues: **"Why does she show these symptoms?"**…responded: **"Because she has favoniphobia."**

Degree to which the question is considered answered (1-7). Category coherence: No / Yes. Entrenched label: No / Yes. Entrenched > Unentrenched ($p < 0.001$)

- Effect **persists** and induces **beliefs in a common cause** even if the **category** is **random and incoherent**
- Effect remains **regardless of expert consensus** about the **causal information** (manipulation not shown)
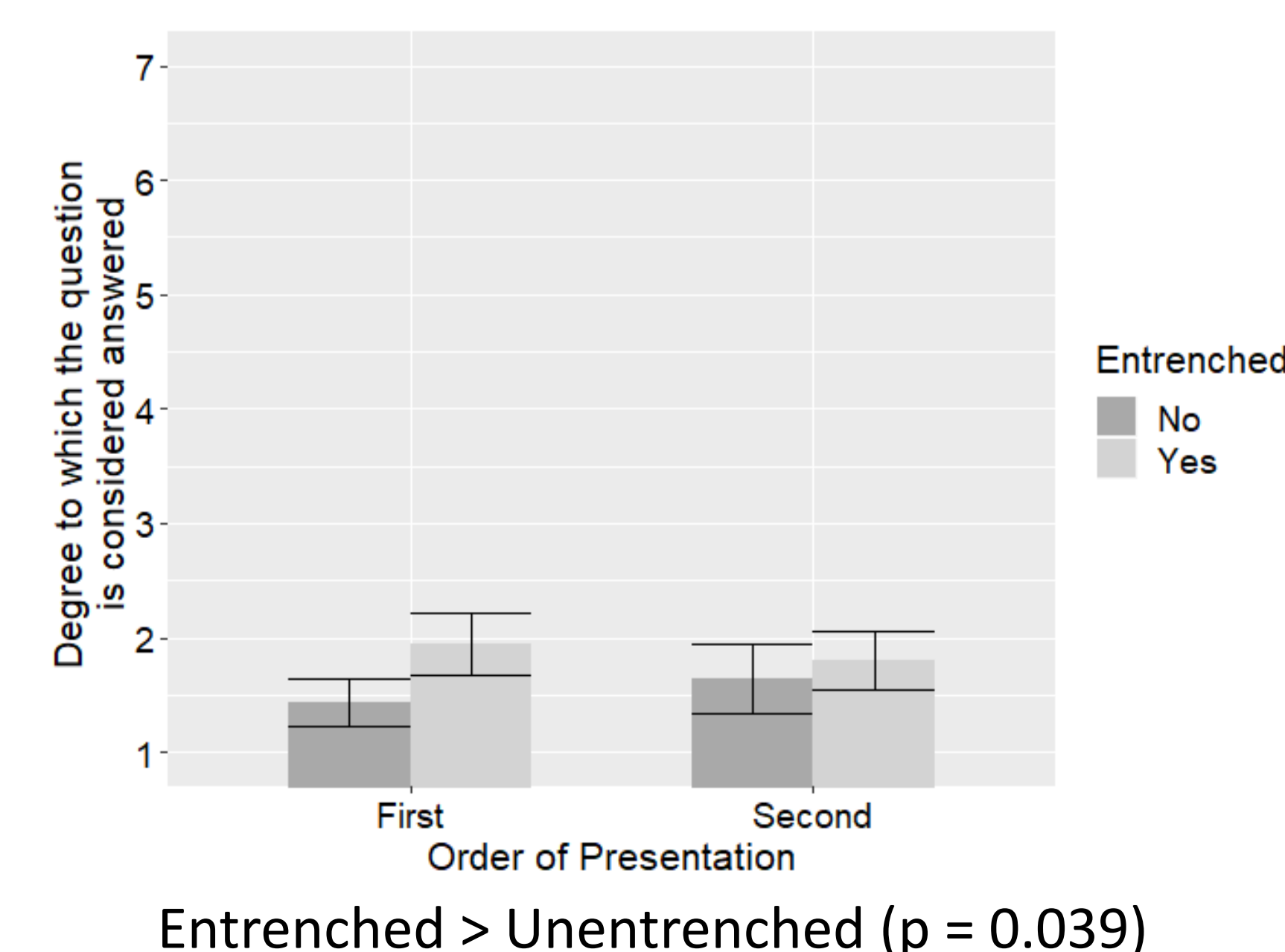
4.3. Results: Experiments 3 (n = 201)

- Label's **descriptive, causal, interventional and predictive utility** all explicitly denied. Belief measures confirmed participant acceptance of scenario contents
- **Explanatory value of label(epistemic)**and **probability of use in conversations (social)** separately measured
- **Common use** enhanced **not only social utility ratings,** (p <.001) **but also epistemic utility** (p<.001) ratings.

Perceived utility of the label. Type of Utility: Epistemic / Social. Entrenched: No / Yes.

4.4. Results: Experiments 4 (n = 201)

- **Mental health experts** consider **uninformative labels** bad explanations **in general** but still **prefer commonly used** circular labels
- **Order effect**: bringing attention to manipulation eliminates the effect **unlike in laypeople**

Degree to which the question is considered answered. Order of Presentation: First / Second. Entrenched: No / Yes. Entrenched > Unentrenched ($p = 0.039$)

5. Conclusions

- Clinical **diagnostic labels used by a community** seen as **better explanations** even if: 1) **Clearly uninformative** & applied to **incoherent categories**
  2) Regardless of explainers' or recipients' expertise or **familiarity**
- **Common use** increased **belief in a common cause** for symptoms even when respondents were informed and **acknowledged that no causal relation exists**.
- **Experts show the effect** but suppress intuitions if manipulation is transparent

- **One explanation**: since social and epistemic value often go together, habitual use of social cues to gauge informational value results in overreliance on them (see *Two Systems for Thinking with a Community,* Hemmatian & Sloman, 2020)

6. References

Hemmatian, B. & Sloman, S.A. (2018). Community appeal: explanation without informatiozn. *Journal of Experimental Psychology: General, 147*(11), 1677-1712.

7. Preprint and Contact Info

Zoom link for poster session:

https://brown.zoom.us/j/9877930177

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