The Advice Less Taken
On the Consequences of Receiving Unexpected Advice

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STATISTICAL MODELING in PSYCHOLOGY
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How many chocolate bars?

You will have a **second try incl. advice** on the next slide!
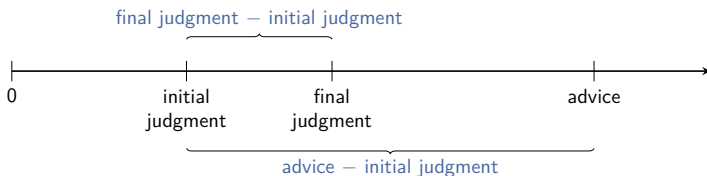
How many chocolate bars?

One participant's guess: **129**

Did you change your estimate on the second try?

- If you did change your estimate, in which direction and **by how much**?

  - Weight of Advice: $\text{WOA} = \dfrac{\text{final judgment} - \text{initial judgment}}{\text{advice} - \text{initial judgment}} \times 100$

- Do the judgment formation processes (specifically advice weighting) depend on the **conventionally high expectation of advice** in traditional advice taking experiments?

Lower expectation of advice may trigger . . .

A. ... lower levels of construal $\Rightarrow$ less assimilative mindset

    – Construal Level Theory (e.g., Trope & Liberman, 2010)

B. ... closing mental jobs $\Rightarrow$ less open mindset

    – Evaluative Priming (e.g., Alexopoulos et al., 2012)

C. ... cognitive dissonance $\Rightarrow$ coping

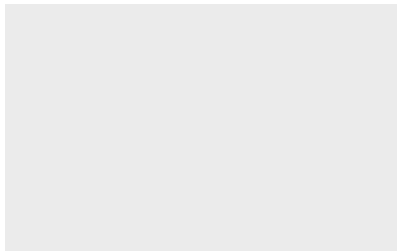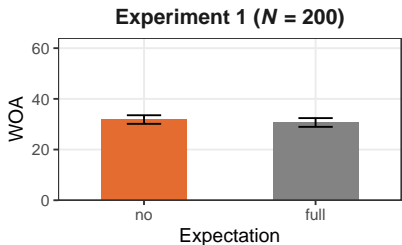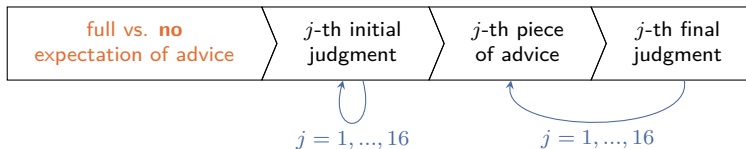   – Cognitive Dissonance (e.g., Knox & Inkster, 1968; Liberman & Förster, 2006)

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Lower expectation of advice implies . . .

1. ... a reduced weighting of unexpected advice.

   – Less assimilative mindset (Alexopoulos et al., 2012; Trope & Liberman, 2010) and/or cognitive dissonance (Knox & Inkster, 1968; Liberman & Förster, 2006)

2. ... diminished benefits from wise crowds.

   – Reduced advice weighting $\Rightarrow$ attenuated increase in accuracy from initial to final judgment (e.g., Larrick et al., 2012)

3. ... internal sampling interference.

   – More narrow and less Thurstonian sampling (Juslin & Olsson, 1997; Sniezek & Buckley, 1995; Thurstone, 1927) + law of large numbers $\Rightarrow$ more extreme and noisy (normalized) initial judgments
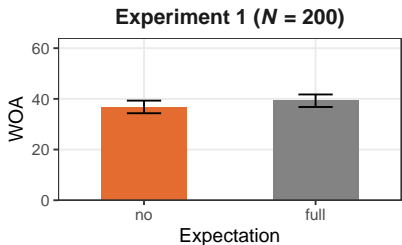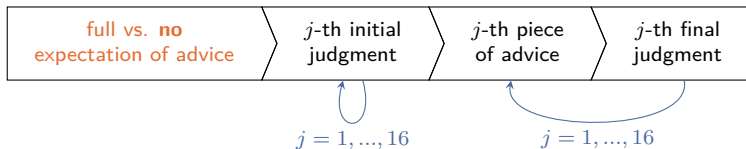
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Between Designs: Deterministic Expectations

| full vs. **no** expectation of advice | j-th initial judgment | j-th piece of advice | j-th final judgment |

$j = 1, ..., 16$ $j = 1, ..., 16$

Experiment 1 (N = 200)

Note. One–sided * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ for fixed effects of expectation in multilevel models with random intercepts for participants and items. Data and material is available at \href{https://osf.io/bez79/}.

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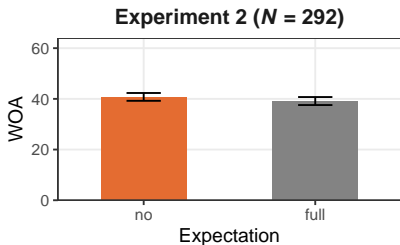
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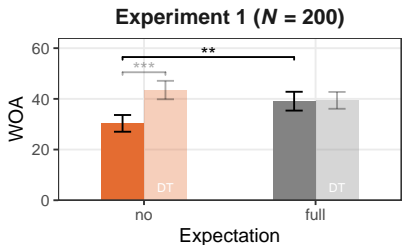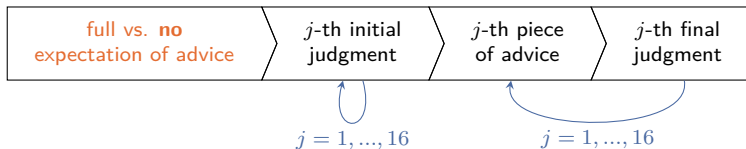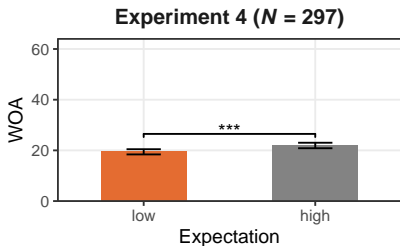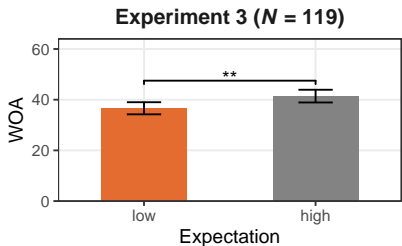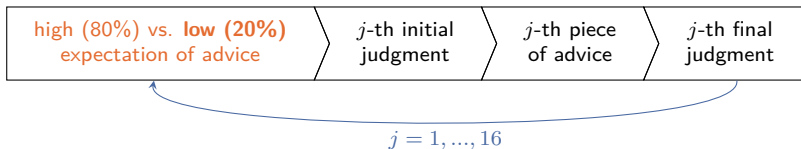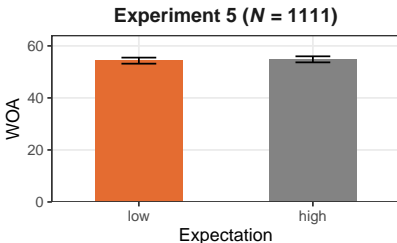
Between Designs: Deterministic Expectations

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Within Designs: Probabilistic Expectations

| high (80%) vs. **low (20%)** expectation of advice | j-th initial judgment | j-th piece of advice | j-th final judgment |

$j = 1, ..., 16$
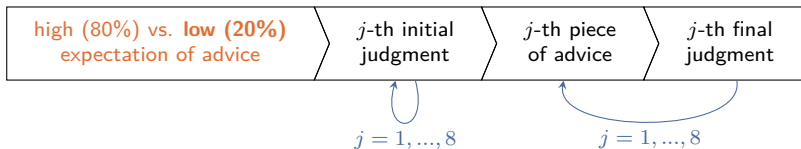

Note. One–sided * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ for fixed effects of expectation in multilevel models with random intercepts for participants and items. Data and material is available at \href{https://osf.io/bez79/}.

Between Design: Probabilistic Expectations

high (80%) vs. **low (20%)** expectation of advice	j-th initial judgment	j-th piece of advice	j-th final judgment

$j = 1, ..., 8$ $j = 1, ..., 8$

Experiment 5 (*N* = 1111)

Conclusion and Outlook

- **Weighting of unexpected advice reduced** **in within designs** (Experiments 3&4) $\Rightarrow$ The conventional paradigm fails to capture a class of judgment processes in which expectations to receive advice are low

    - **Uncertainty** about the availability of external support: Important boundary condition for the ecological study of advice taking

- **Limitations and future research:**

    - Salience of uncertainty (i.e., trial-by-trial contrast): necessary but also sufficient

    - Natural confounding of advice and revision opportunities

    - Extensions to other measures of advice taking (e.g., sampling; Hütter & Ache, 2016)

    - Hypothesis testing vs. estimation: Continuous expectations proper (Cumming, 2014)

Thanks for your attention!

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References

Alexopoulos, T., Fiedler, K., & Freytag, P. (2012). The impact of open and closed mindsets on evaluative priming. **Cognition and Emotion**, *26*(6), 978–994. https://doi.org/10.1080/02699931.2011.630991

Cumming, G. (2014). The new statistics: Why and how. **Psychological Science**, *25*(1), 7–29. https://doi.org/10.1177/0956797613504966

Hütter, M., & Ache, F. (2016). Seeking advice: A sampling approach to advice taking. **Judgment and Decision Making**, *11*(4), 401–415. https://doi.org/10.15496/publikation-13917

Juslin, P., & Olsson, H. (1997). Thurstonian and brunswikian origins of uncertainty in judgment: A sampling model of confidence in sensory discrimination. **Psychological Review**, *104*(2), 344–366. https://doi.org/10.1037/0033-295X.104.2.344

Knox, R. E., & Inkster, J. A. (1968). Postdecision dissonance at post time. **Journal of Personality and Social Psychology**, *8*(4), 319–323. https://doi.org/10.1037/h0025528

Larrick, R. P., Soll, J. B., & Mannes, A. E. (2012). The social psychology of the wisdom of crowds. In J. I. Krueger (Ed.), **Social judgment and decision making** (pp. 227–242). Psychology Press.

Liberman, N., & Förster, J. (2006). Inferences from decision difficulty. **Journal of Experimental Social Psychology**, *42*(3), 290–301. https://doi.org/10.1016/j.jesp.2005.04.007

Sniezek, J. A., & Buckley, T. (1995). Cueing and cognitive conflict in judge-advisor decision making. **Organizational Behavior and Human Decision Processes**, *62*(2), 159–174. https://doi.org/10.1006/obhd.1995.1040

Thurstone, L. L. (1927). A law of comparative judgment. **Psychological Review**, *34*(4), 273–286. https://doi.org/10.1037/h0070288

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. **Psychological Review**, *117*(2), 440–463. https://doi.org/10.1037/a0018963