The Persuasive Impact of High Variance Across Reviewers' Online Ratings

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Abstract

In a series of four experimental studies, the authors identify an important gap: readers of online WOM incorrectly infer that reviewers with high (vs. low) rating variance have more expertise. The authors also examine the diagnosticity of rating variance relative to rating volume, the latter of which consumers rely on more intuitively as a signal of reviewer expertise. The study also reveals the circumstances under which rating variance becomes more diagnostic as a signal of reviewer expertise than rating volume.

Introduction

- Consumers of online WOM use multiple WOM metrics to make inferences about the credibility of reviewers (e.g., Packard & Berger, 2017; Grewal & Stephen, 2018).
- Expert (vs. novice) reviewers are more likely to consider more (positive and negative) attributes when evaluating a product (Brauer et al., 2004; Nguyen et al. 2020).
- As a result, expert reviewers' ratings tend to aggregate towards lower variance (Nguyen et al., 2020).

What remains unanswered...

- Do readers of online WOM <u>correctly</u> infer greater reviewer expertise from low (vs. high) rating variance?
- What are potential downstream consequences of high (vs. low) variance across reviewers' past ratings?
- What is the two-way interactive relationship between rating variance and rating volume (a more intuitive signal of reviewer expertise)?

Study 1: Incorrect Expertise Inferences

Method:

- Participants (N = 205, undergraduate students) evaluated a target reviewer's expertise and discernment based on the reviewer's past ratings (low vs. high variance) (see Figures).
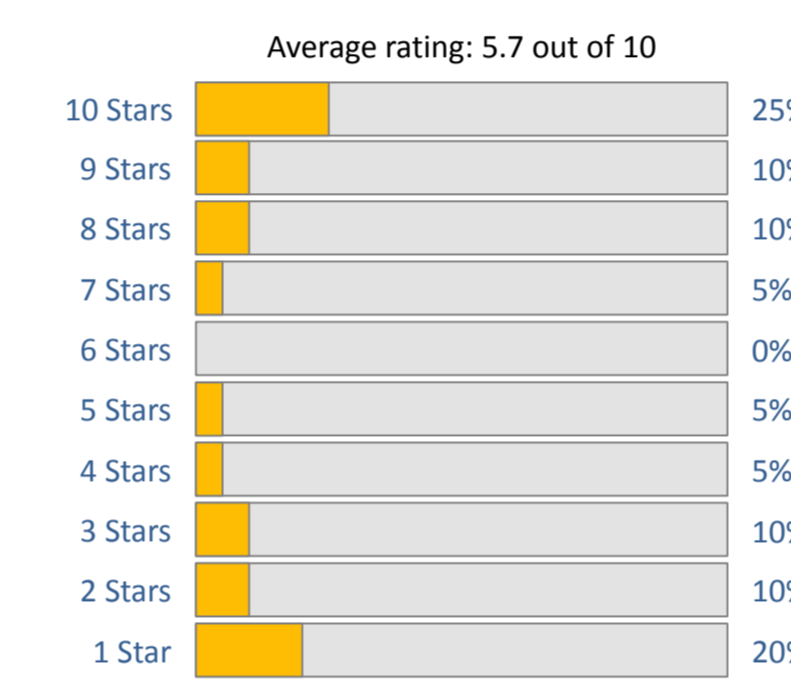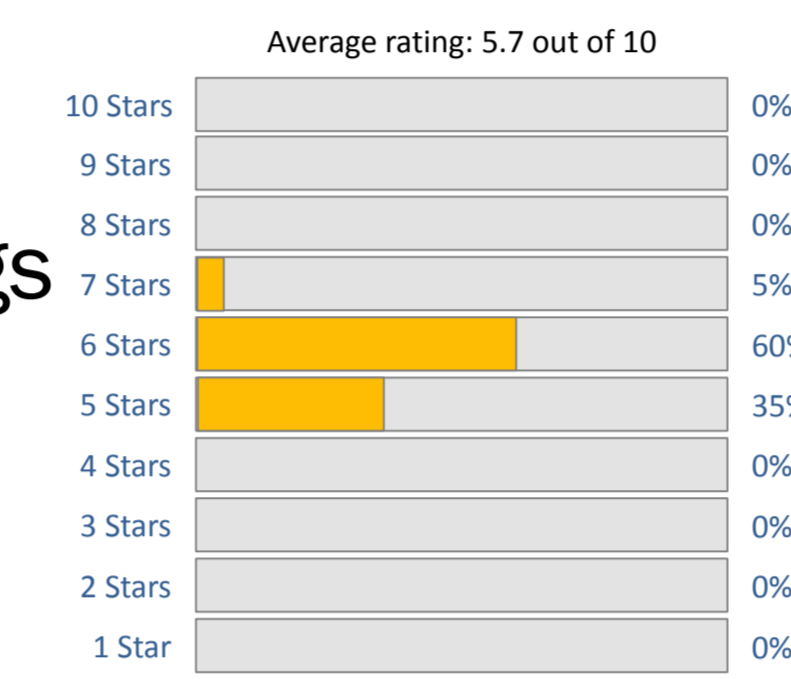
Results:

- The target reviewer was perceived to be more of an expert when his ratings were characterized by high (M = 5.41) compared with low variance (M = 4.38; F(1, 203) = 19.21, $p < .001$)
- Perceived discernment mediated the effect of rating variance on perceived expertise (95% CI = .60, 1.25)

Average rating: 5.7 out of 10

10 Stars	0%
9 Stars	0%
8 Stars	0%
7 Stars	5%
6 Stars	60%
5 Stars	35%
4 Stars	0%
3 Stars	0%
2 Stars	0%
1 Star	0%

Average rating: 5.7 out of 10

10 Stars	25%
9 Stars	10%
8 Stars	10%
7 Stars	5%
6 Stars	0%
5 Stars	5%
4 Stars	5%
3 Stars	10%
2 Stars	10%
1 Star	20%

Study 2: Consequential Choice

Method:

- Participants (N = 217, adult undergraduate students) chose between two wines in a incentive-compatible design. One wine was recommended by a reviewer with higher and the other with lower rating variance.
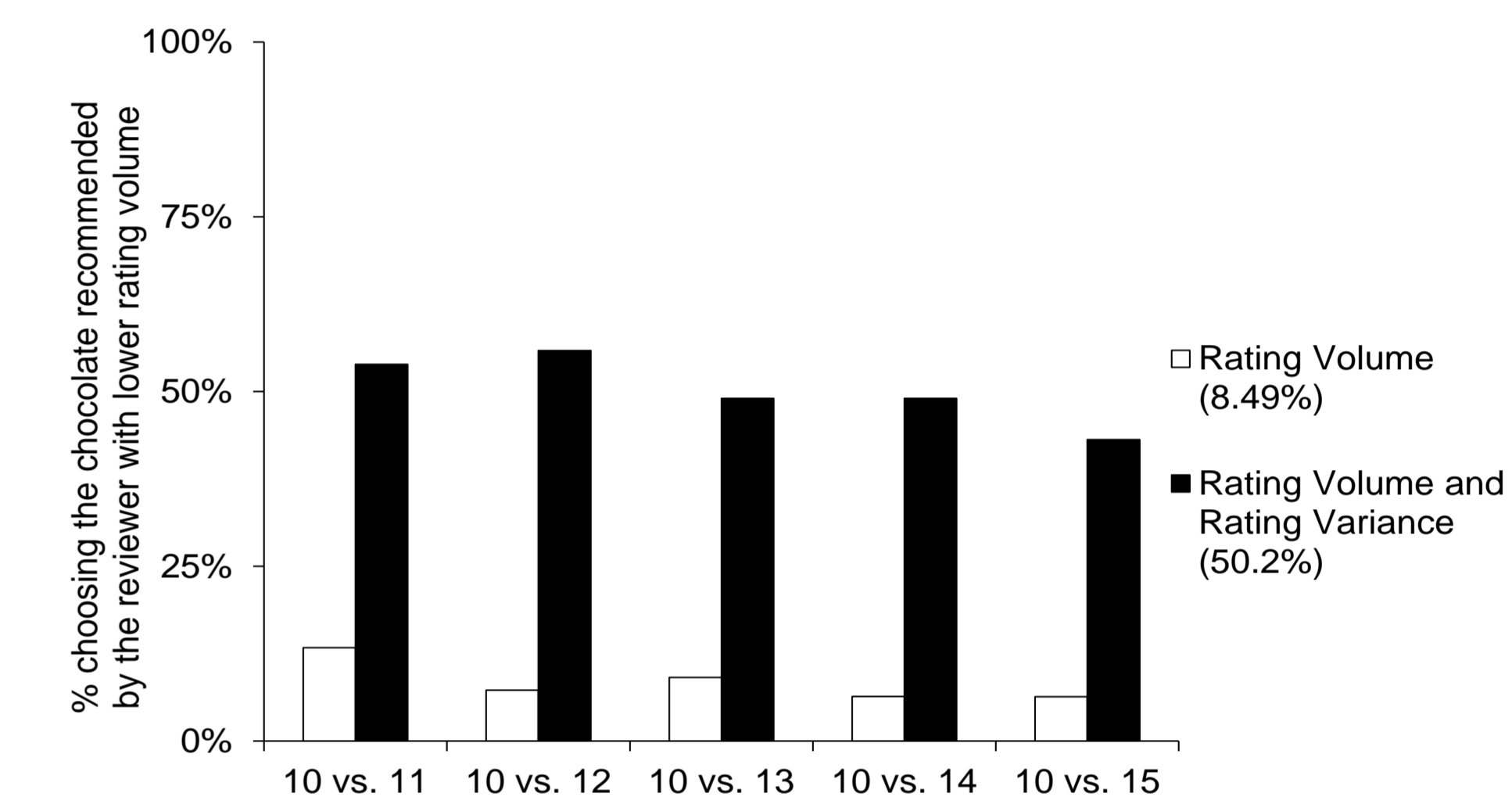
Results:

- The same reviewer was perceived to be more of an expert when his ratings were characterized by high (M = 6.35) compared with low variance (M = 3.34; F(1, 215) = 78.05, $p < .001$).
- Perceived discernment and expertise emerged as significant serial mediators between rating variance and choice (95% CI = .17, .73).
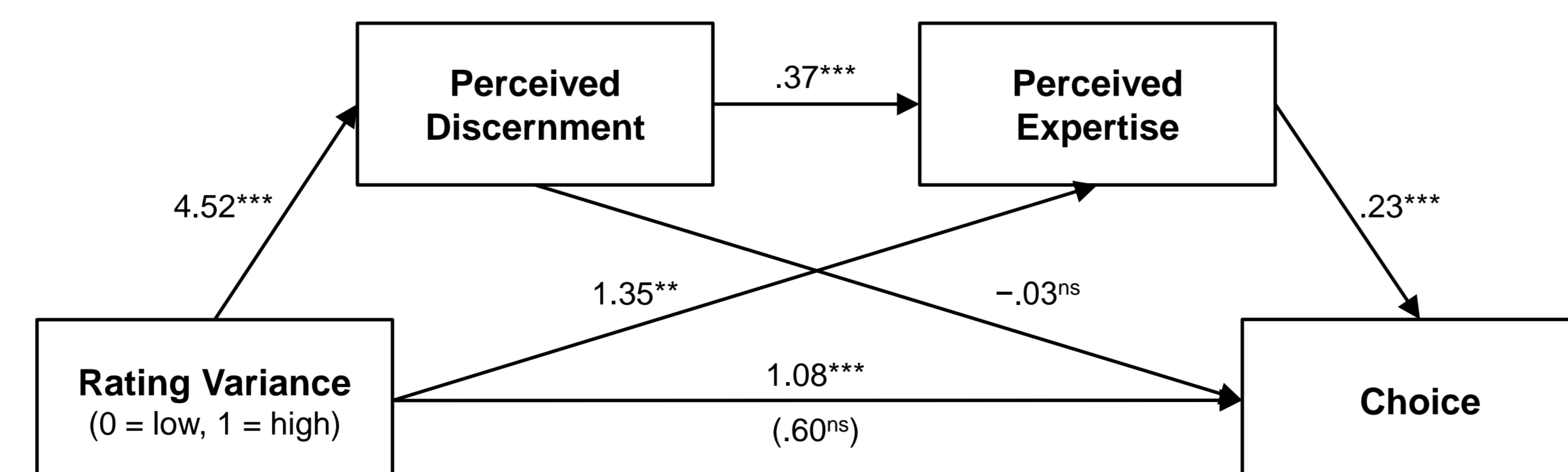
## Studies 3A and 3B: Rating Variance vs. Rating Volume

Method & Results (Study 3A):

- Participants (N = 212 MTurkers) chose between two recommended bars of chocolate in a 2 (display: rating volume vs. rating volume and rating variance) × 5 (combinations: 10 vs. 11, 10 vs. 12, 10 vs. 13, 10 vs. 14, 10 vs. 15) mixed design. Five repeated choices were either made based on rating volume or rating volume and rating variance information.
- Participants more likely chose the chocolate recommended by the reviewer with lower rating volume in the condition with rating volume and rating variance than in the rating volume condition (b = 2.39, $p > .001$) (see Figure).

Method & Results (Study 3B):

- Participants (N = 301 MTurkers) chose between two recommended hotels in a 2 (hotel A's endorser: reviewer with lower or higher rating variance) × 2 (level of rating volume: low vs. high) between-subjects design.
- High (vs. low) rating variance overrode high (vs. low) rating volume as a signal of reviewer expertise when the level of rating volume was high (vs. low) (see Figure).
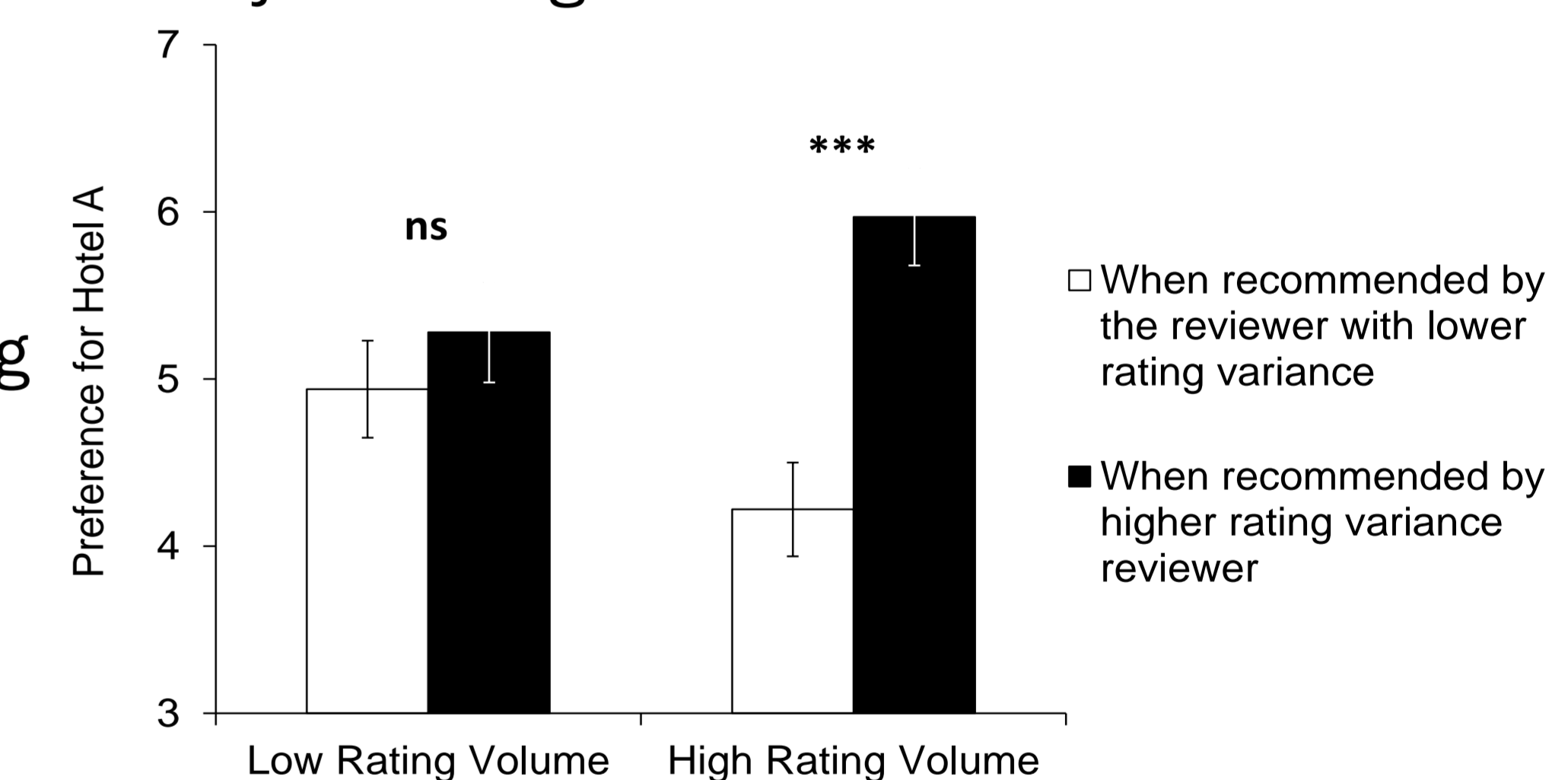
Conclusions

- Consumers of online WOM incorrectly infer greater reviewer expertise from high (vs. low) variance across ratings.
- Incorrect expertise inferences are caused by increased perceptions of discernment.
- Displaying rating variance increases the choice share of products previously purchased by reviewers with lower rating volume.
- Rating variance becomes more diagnostic as a signal of reviewer expertise when the level of rating volume is high (vs. low).

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References:

- Brauer, M., Chambres, P., Niedenthal, P. M., & Chatard-Pannetier , A. (2004). The Relationship Between Expertise and Evaluative Extremity: The Moderating Role of Experts' Task Characteristics. *Journal of Personality and Social Psychology, 86*(1), 5–18.
- Grewal, L. & Stephen, A. T. (2019). In Mobile We Trust: The Effects of Mobile Versus Nonmobile Reviews on Consumer Purchase Intentions. *Journal of Marketing Research, 56*(5), 791–808.
- Nguyen, P., Wang, Li, X., & Cotte, J. (2020). Reviewing Experts' Restraint from Extremes and its Impact on Service Providers. *Journal of Consumer Research*, forthcoming.
- Packard, G. & Berger, J. (2017). How Language Shapes Word of Mouth's Impact. *Journal of Marketing Research, 54*(4), 572–88.