

How Do Comparisons Shape Responses to Likert-Type Behavioral Frequency Judgments?

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Introduction

- Likert or verbal frequency estimates of a behavior (e.g., not often, very often) do not neatly and consistently map onto numerical estimates of behavior frequency (e.g., Conrad et al., 1998; Schwarz, 1999; Woltz et al., 2012).
- This may be because vague verbal frequency estimates might inadvertently induce people to make comparisons, leading to differing interpretations of frequency (Schwarz & Oyserman, 2001; Parducci, 1965)
- The Current Research:** Examines how social and other comparisons of behavioral frequency influence Likert-type ratings about the self's "absolute" frequency of behavior engagement
- Comparisons-Inform hypothesis:** Only relevant comparisons (i.e., global, local, temporal, expert) predict self-Likert frequency estimates.
- Shared-Method hypothesis:** Relevant and irrelevant comparisons (i.e., a distant social group) predict self-Likert frequency estimates, possibly due to the similar format of Likert-type scales.

Method

Three pre-registered studies, total $N = 689$ undergraduates (510 women, 166 men, 13 unreported, $M_{age} = 19.11$ years)

Procedure: RPs provided self Likert-type frequency, self common-rule, and 5 direct comparison estimates for eight health-related behaviors (all counterbalanced). In Study 3, RPs also provided 5 non-self common-rule estimates.

Behaviors: Eating red meat, flossing teeth, washing face, eating breakfast, eating fish, washing hands, drinking caffeinated beverages, drinking alcoholic beverages

Measures (examples)

Self Likert-type: *How often do you eat fish? (1 = Never, 7 = Very often)*

Self common rule: *How many times a month do you eat fish? (0-30)*

Direct comparisons: *How often do you... (-3 = significantly less than..., +3 = significantly more than...):*

Local: *...eat fish compared to your close peers?*

Global: *...eat fish compared to the average person?*

Expert: *...eat fish compared to what experts recommend?*

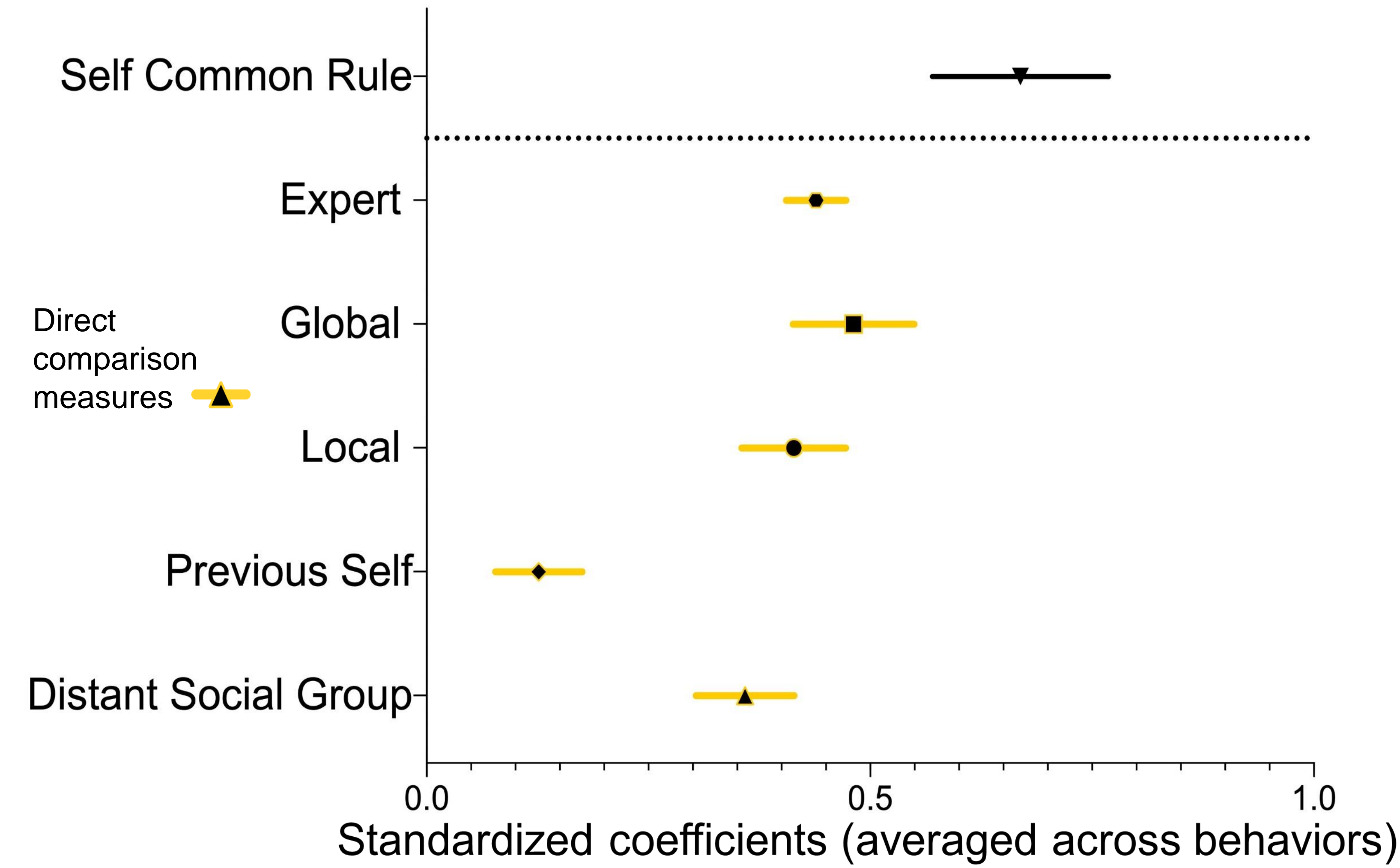
Temporal: *...eat fish compared to a year ago?*

Distant social group: *...eat fish compared to the average European person?*

Non-self common rule (global comparison example, Study 3):

How many times a month does the average person eat fish? (0-30)

Study 1 and 2 Results (Total $N = 455$)



The values below the dotted line reflect the extent to which each comparison predicts self Likert-type responses beyond what is predicted by self common-rule estimates, from a series of hierarchical regressions.

Relevant comparisons were predictive of self Likert-type frequency responses (average $R^2 = .175$), but the irrelevant comparison was also predictive (average $R^2 = .088$).

Measures	1.	2.	3.	4.	5.	6.
1. Self-Likert	-					
2. Self Common-Rule	.67	-				
3. Expert Comparison	.69	.59	-			
4. Global Comparison	.71	.59	.70	-		
5. Local Comparison	.66	.54	.62	.75	-	
6. Temporal Comparison	.30	.27	.29	.30	.27	-
7. Distant Social Group Comparison	.61	.51	.62	.73	.58	.24

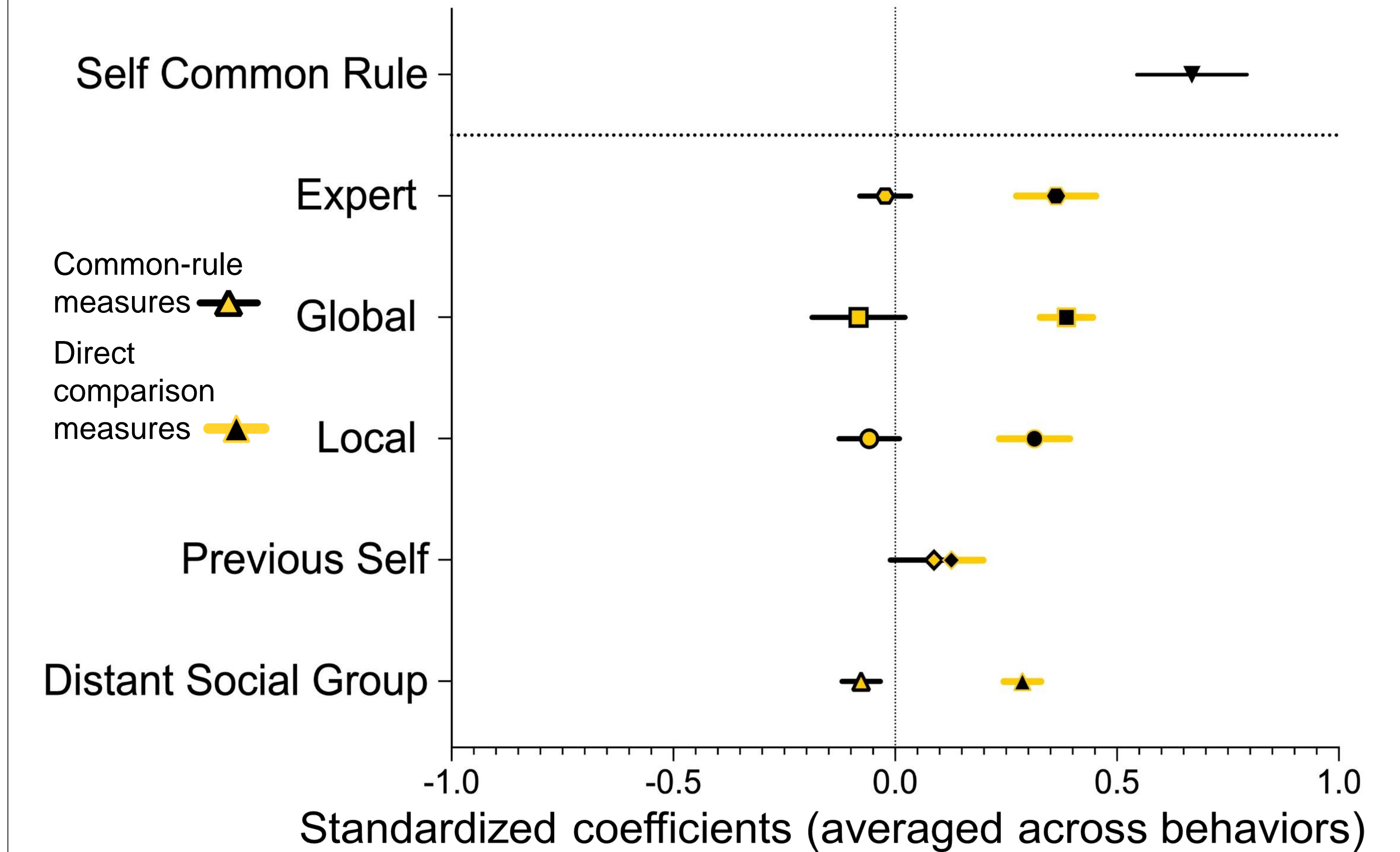
Correlations (averaged across behaviors) between measures. All significant at $p < .001$.

References

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- Woltz, D. J., Gardner, M. K., Kircher, J. C., & Burrow-Sanchez, J. J. (2012). Relationship between perceived and actual frequency represented by common rating scale labels. *Psychological Assessment*, 24(4), 995-1007.

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Study 3 Results ($N = 234$)



The values below the dotted line reflect the extent to which each common-rule or comparison predicts self Likert-type responses beyond what is predicted by self common-rule estimates, from a series of hierarchical regressions.

Common-rule measures were largely not predictive of self Likert-type frequency responses (average $R^2 = .008$).

Of note, the irrelevant comparison was significantly predictive (average $R^2 = .058$), but the irrelevant common-rule measure was not (average $R^2 = .006$), which strengthens the Shared-Method hypothesis.

Conclusion

- Direct comparisons, even about a distant social group, predicted self-Likert ratings above and beyond self common-rule measures (Studies 1 and 2).
- But common-rule estimates about the same comparison groups (Study 3) did not predict self-Likert frequency ratings.
- The wide scope of comparative responses that seem to predict the Likert-type frequency response suggests that a similar question format might be an underlying reason for the effects.
- This research helps further the understanding of the nuances of Likert-type question formats.