Agreeable Research: Comparing Response Patterns in Agreement and Item-Specific Scales

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Study Background

One common type of response bias identified in survey research is acquiescence bias.

Acquiescence bias describes the tendency for survey respondents to choose an 'agreeable' response option rather than a response option that more accurately reflects their viewpoints.

Acquiescence bias is believed to be more prominent with **agreement response formats** and less likely to occur with **item-specific response formats** (e.g., Krosnick & Presser, 2010; Dykema et al., 2021).

Study Background

One issue that has confounded tests comparing agreement and item-specific response formats is scale polarity—generally, bipolar scales are used for agreement formats, while unipolar scales are used for item-specific formats.

For example, one study found that agreement formats had more acquiescence bias and less criterion-related validity compared to item-specific formats (Kuru & Pasek, 2016). However, their agreement scales ranged from "Strongly disagree" to "Strongly agree" (typical of bipolar scales), while most of their item-specific scales ranged from "Never…" to "Always…" or "Not at all…" to "Completely…" (typical of unipolar scales).

Study Purpose

In this study, we aimed to compare agreement and item-specific formats with the same scale polarity.

Since agreement formats are typically bipolar, our primary objective was to compare bipolar agreement and bipolar item-specific response formats.

We hypothesized that bipolar agreement and bipolar item-specific formats would result in the following:

- Similar response distributions and means

- Similar criterion-related validity

Method

Method: Experimental Conditions

This study was an online survey of 30,826 respondents recruited from an opt-in, non-probability panel.

Respondents were presented with two types of items:

- Liking (item-specific) response format
- Agreement response format

Respondents were randomly assigned to additional conditions:

- 1 out of 6 attitude topics
- 5 or 7 response categories
- Horizontal or vertical response orientation
- Liking/agreement question before or after behavioral validation question

Method: Attitude Topics and Question Stems

Liking	Agreement
How much do you like to…	**Would you agree or disagree with the following statement?**

1. drink Coca Cola Classic?	1. I enjoy drinking Coca Cola Classic.
2. eat at McDonald's restaurants?	2. I enjoy eating at McDonald's restaurants.
3. shop at Wal-Mart?	3. I enjoy shopping at Wal-Mart.
4. eat Mexican food?	4. I enjoy eating Mexican food.
5. drink straight black coffee?	5. I enjoy drinking straight black coffee.
6. listen to country music?	6. I enjoy listening to country music.

Method: Response Categories

Response Format	Number of Categories	Response Labels						
Liking	**5**		Dislike very strongly	Dislike	Neither like nor dislike	Like	Like very strongly	
	7	Dislike very strongly	Dislike strongly	Dislike	Neither like nor dislike	Like	Like strongly	Like very strongly
Agreement	**5**		Disagree very strongly	Disagree	Neither agree nor disagree	Agree	Agree very strongly	
	7	Disagree very strongly	Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly	Agree very strongly

Responses were rescaled to range from 0 to 1.

Method: Behavioral Validation Question

On how many different days in the past 30 days would you estimate that you…

- **drank Coca Cola Classic?**

- **ate food from McDonald's restaurants?**

- **shopped at Wal-Mart?**

- **ate Mexican food?**

- **drank straight black coffee?**

- **listened to country music?**

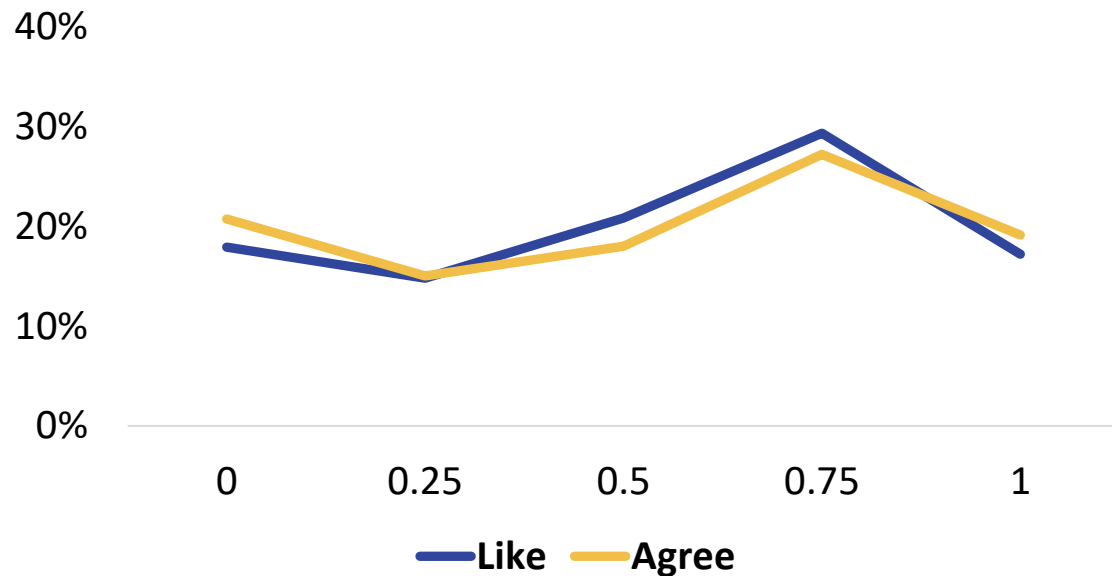**Numeric entry was recoded to 0 days, 1-2 days, 3-7 days, or 8+ days.**

Results

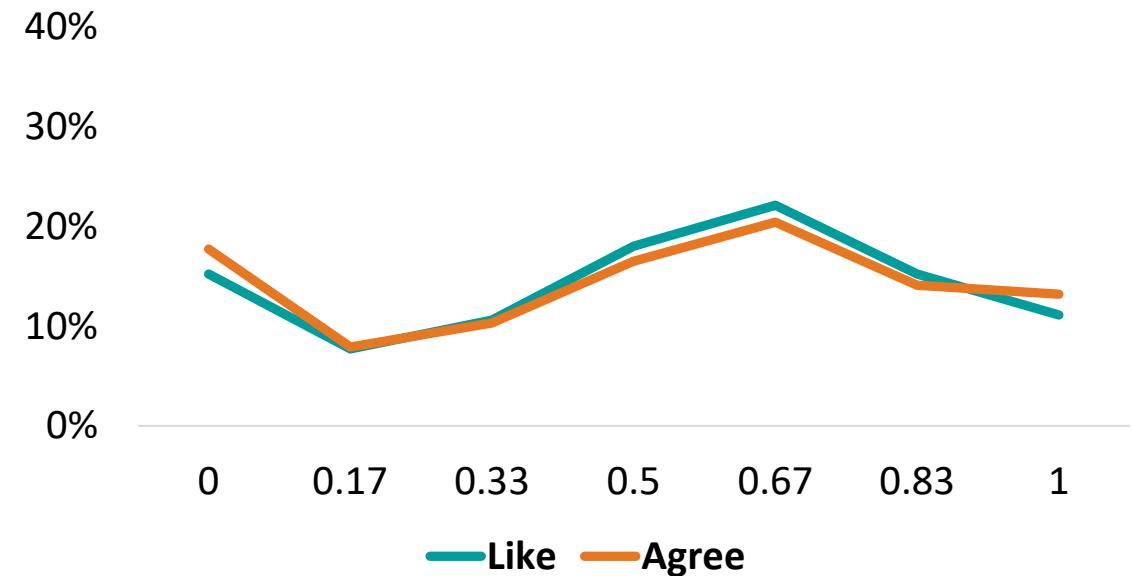# Results: Response Endorsement Proportions

Across all items, the liking and agreement formats showed similar response distributions for both 5- and 7-category scales.

**Response Endorsement Proportions
for 5-Category Scales**

Like   Agree

**Response Endorsement Proportions
for 7-Category Scales**

Like   Agree

Results: Overall Means by Response Format

When looking across all attitude topics, though the liking format had significantly higher mean values than the agreement format (p = .001), it was primarily due to the large sample size. The actual difference was quite small.

Means Across Attitude Topics
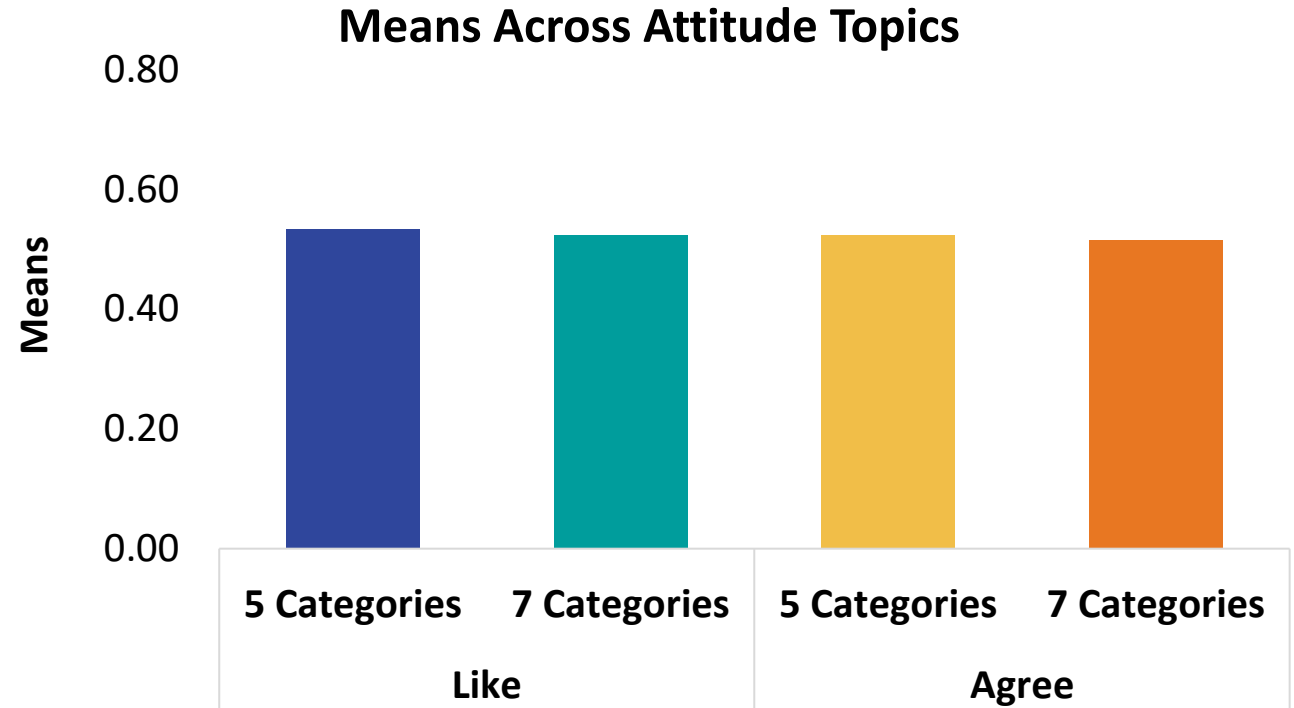
| Response Format	5 Categories	7 Categories	Overall
Liking	0.533	0.524	0.528
Agreement	0.523	0.515	0.519
Overall	0.528	0.520	--

Results: Topic-Specific Means by Response Format

Generally, mean values for the liking format were slightly higher than mean values for the agreement format (*p* < .001).

Means by Attitude Topics

■ Like 5 Categories   ■ Like 7 Categories   ■ Agree 5 Categories   ■ Agree 7 Categories
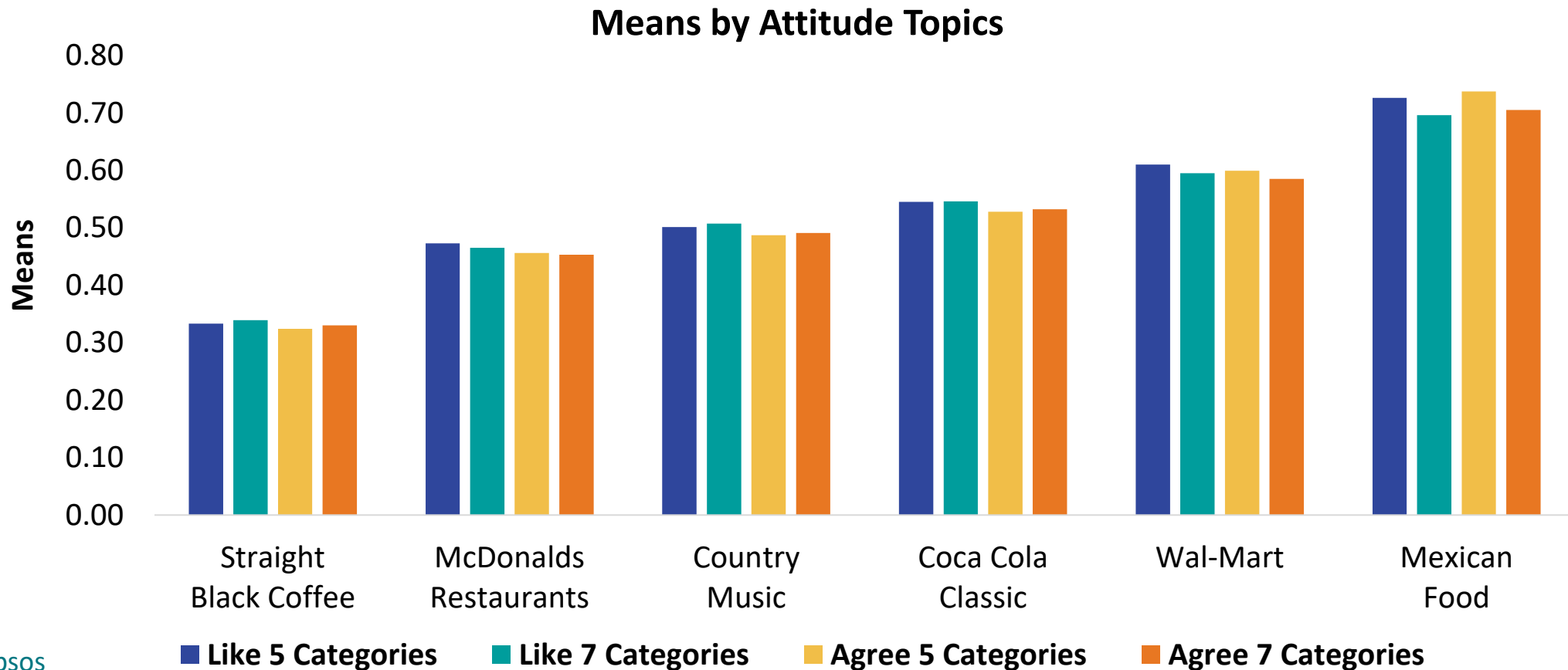
Results: Overall Validity by Response Format

To assess validity, we regressed the attitudinal measures on the self-reported behaviors. Across all attitude topics, the r² was generally comparable regardless of response format or number of categories.

Validity Across Attitude Topics
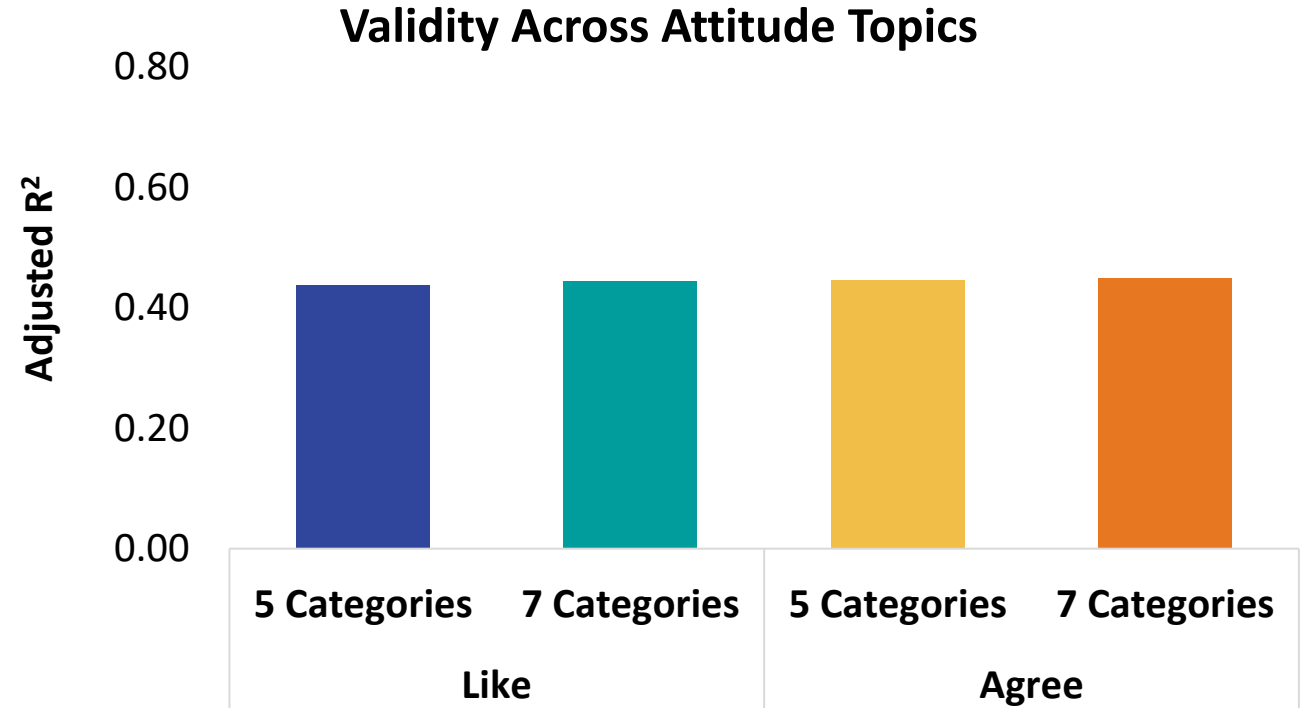
Results: Topic-Specific Validity by Response Format

Similarly, when looking at each attitude topic separately, the r² was generally comparable for liking and agreement formats.

Validity by Attitude Topics

■ Like 5 Categories   ■ Like 7 Categories   ■ Agree 5 Categories   ■ Agree 7 Categories
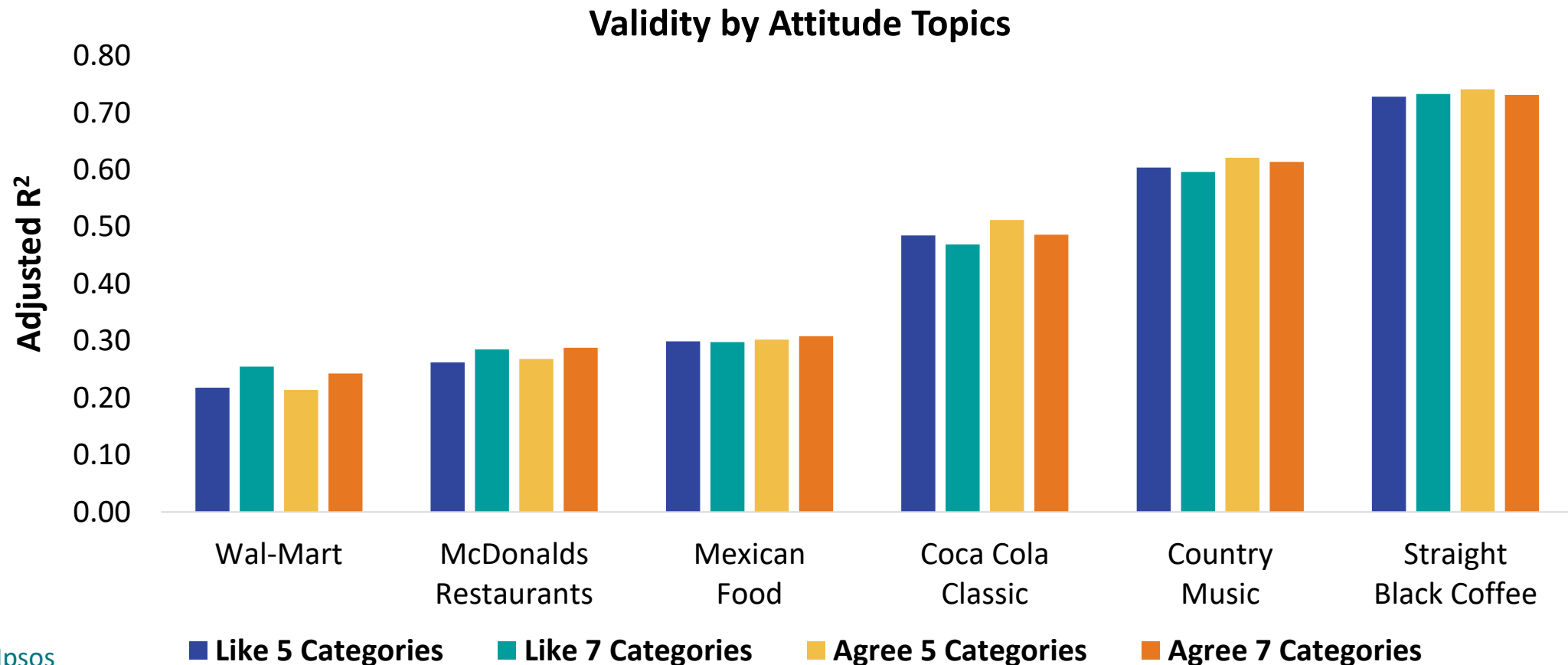
Discussion

Discussion

We found that the liking and agreement response formats were comparable in terms of response distributions, means, and criterion-related validity.

In fact, the liking format (used in this study as an item-specific response format) generally had slightly higher means compared to the agreement format, which goes against the notion that agreement formats lead to more acquiescence bias than item-specific formats.

One thing to note is that, though these differences were statistically significant, the magnitude of the effects were very small.

Discussion

Based on these results, we hypothesize that the effect of more acquiescence bias in agreement formats may be due to scale polarity differences rather than a result of the response format itself.

We have conducted an additional study comparing unipolar and bipolar agreement and liking scales to test this hypothesis, which my colleague, Randall K. Thomas, will be presenting in another session:

Form over Function:
Does Acquiescence Bias in Agreement Scales Really Exist?

Discussion: Limitations

One limitation of the current study is that our study was conducted completely online, and acquiescence bias may be more likely to occur in agreement formats when using interviewer-administered survey modes, such as face-to-face or telephone surveys.

Discussion: Future Research

Another caveat of this study is that the attitudinal items used for the liking and agreement formats are simple and clear. Researchers often use agreement items that are longer and more complex, which are theorized to involve more cognitive processing, often due to the underlying response dimension conflicting with the agreement options given (Dykema et al., 2021).

We are interested in further investigating the effect of bipolar vs. unipolar scales and item-specific vs. agreement response formats using more complex items.

Thank you!

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