

gesis

Leibniz Institute
for the Social Sciences

ESRA 2021 Conference
July 16



Assessing Panel Conditioning in a German Probability- based Panel

A Comparison of Respondents with Different Levels of Experience



Fabienne Kraemer, Henning Silber, Bella Struminskaya, Michael Bosnjak, Joanna Koßmann, Bernd Weiß

Background

- Longitudinal surveys represent a major data source for social and other areas of research
- **Validity** and **quality of survey responses** is at stake if data is affected by panel conditioning
- **Panel conditioning effects (PCE)** = artificial changes in respondents' actual behavior, attitudes, and knowledge or respondents' reporting behavior which are caused by prior survey participation (Kalton 1989; Struminskaya, 2020)

Research Questions

Do PCE exist within the GESIS Panel and how large are the effects?

How do PCE affect overall **response quality** within the GESIS Panel?

Assumptions

- Positive Conditioning
 - ▶ Reflection and „Optimizing“: *more **accurate** and **reliable answers, familiarity*** with survey content and process (Kroh, Winter & Schupp, 2016; Sturgis, Brunton & Smith, 2009)
 - ▶ Decreased ***socially desirable responding*** (Waterton & Lievesley, 1989; Wooden & Li, 2014)

- Negative Conditioning
 - ▶ Increased ***satisficing response behavior*** (Schonlau & Toepoel, 2015; Zhang & Conrad, 2014; Kartsounidou et al., 2019)
 - ▶ Increased ***motivated misreporting*** (Bach & Eckman, 2018)

Data

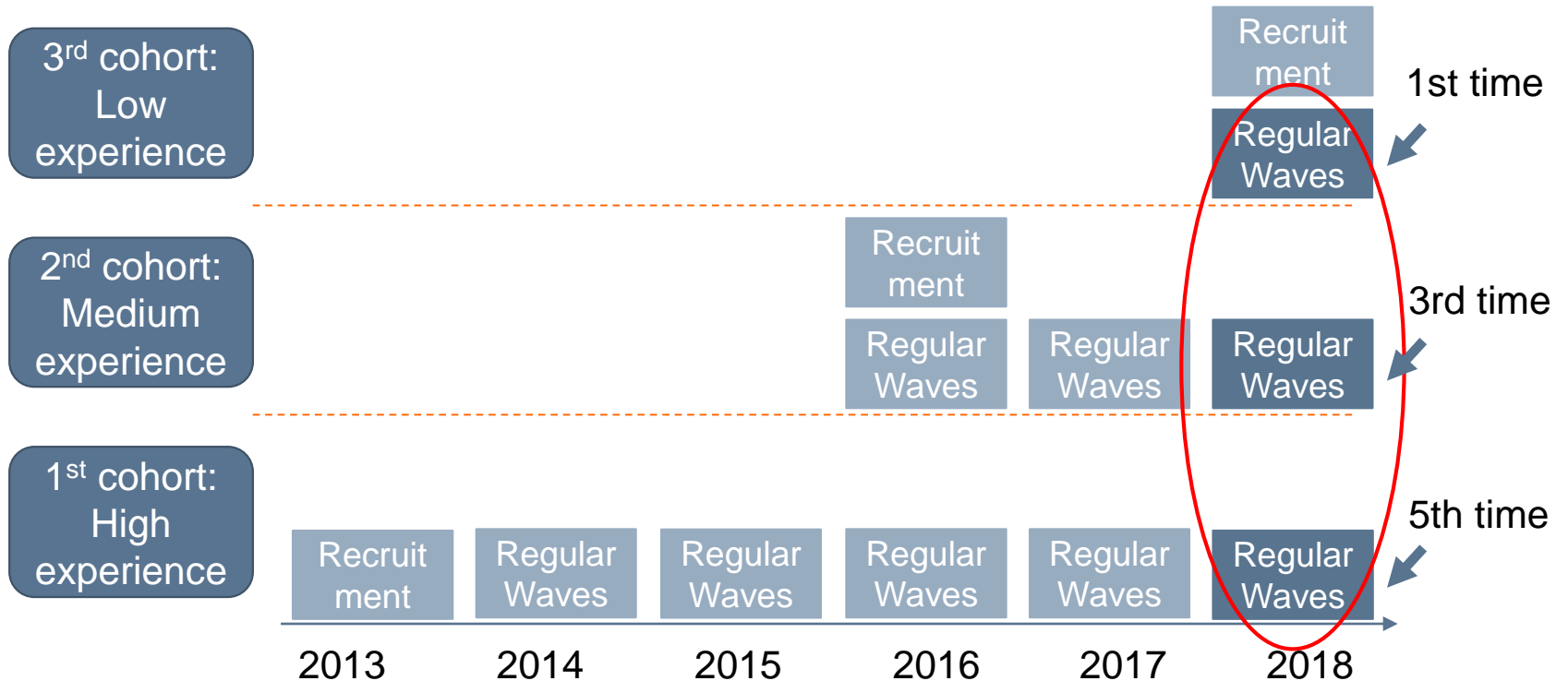
- **GESIS Panel**
 - ▶ Probability-based mixed-mode access panel
 - ▶ Running since 2014 with N=5200
 - ▶ Refreshment samples in 2016 and 2018

 - ▶ **Sample**
 - German-speaking population aged 18 years+ and permanently residing in Germany

 - ▶ **Data Collection**
 - Web-based (ca. 70%) and via mail (ca. 30%)

 - ▶ **Panel Interval**
 - Administered every two months
 - Longitudinal core studies are administered annually

Survey Experience



Data basis: **29th panel wave** (October – November 2018) with annual longitudinal core study on *media usage and work & leisure*

Operationalization

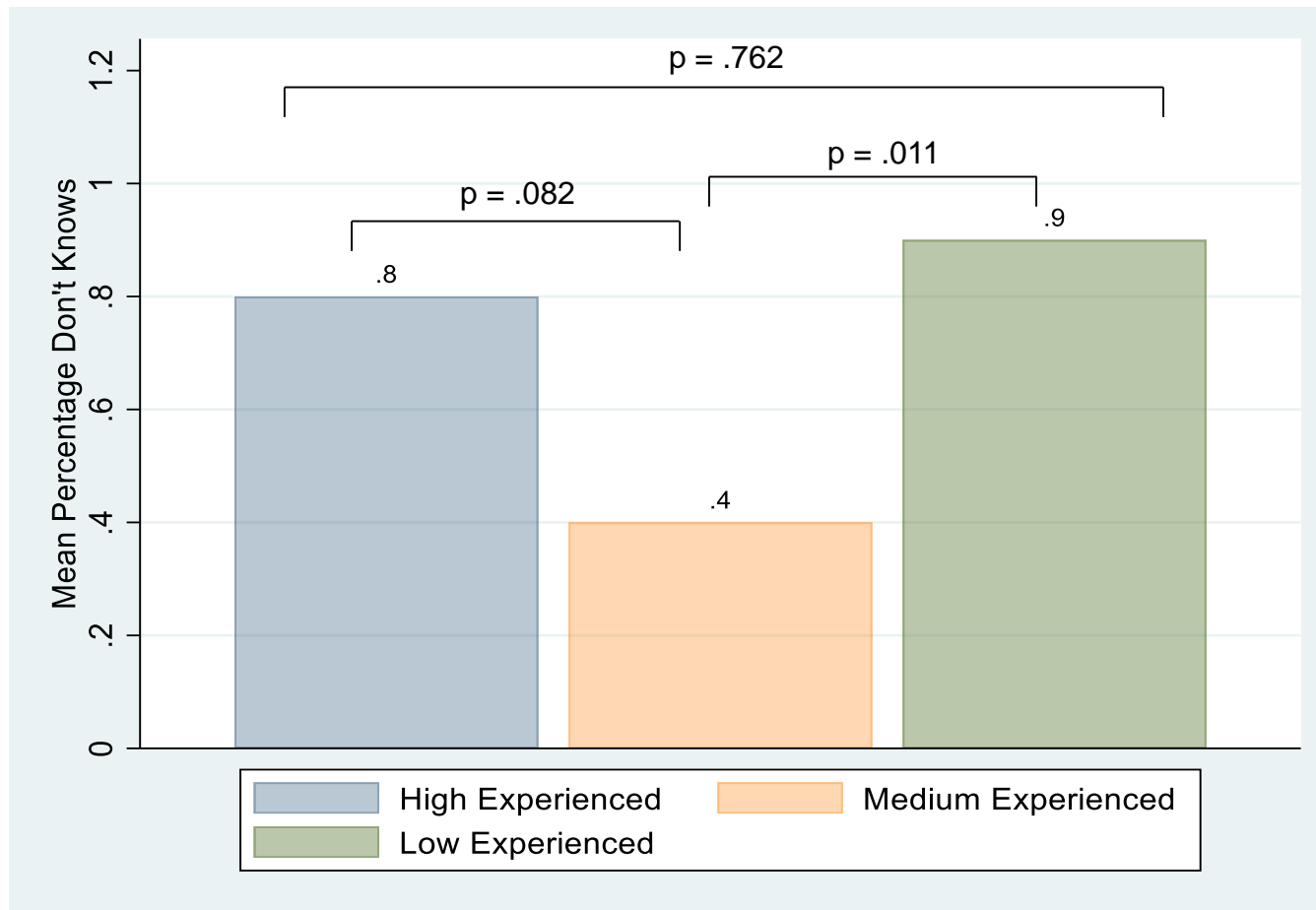
Type of Conditioning		Indicator
Positive Conditioning	Reflection	Prevalence of don't know – answers (proportion)
	Optimizing	Response Latencies (total response time in sec)
	Decreased socially desirable responding	Item nonresponse in sensitive questions (proportion)
Negative Conditioning	Satisficing	Speeding (threshold: 300msec per word * number of words in question) (proportion)
		Non-Differentiation (in GRID questions) (proportion)
		Selection of first response category (proportion)
		Selection of mid-responses (proportion)
	Motivated Misreporting	Number of non-triggered filter questions (proportion)

Methods

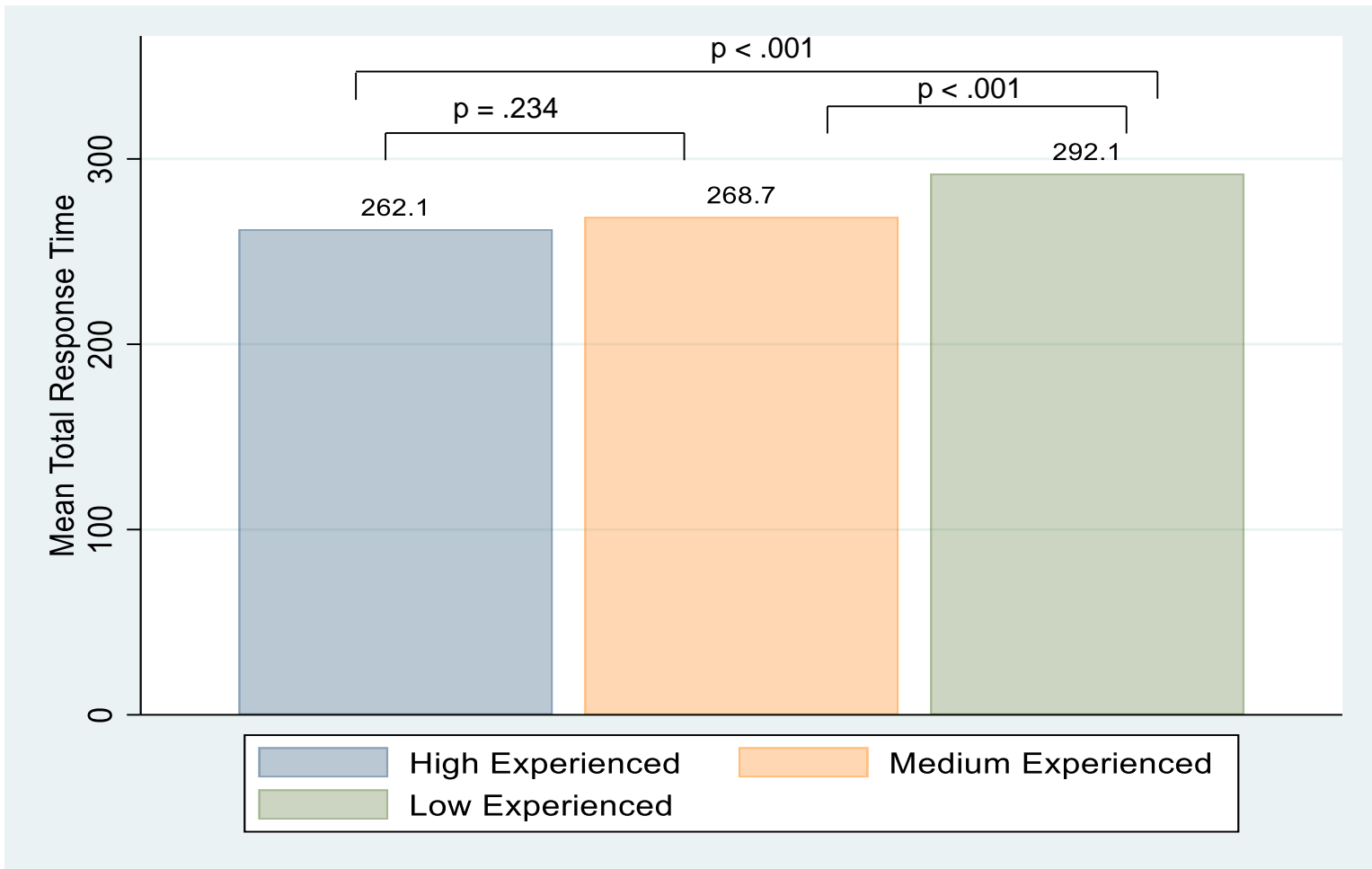
- Analytic Strategy
 - ▶ Generalized linear models for proportion outcomes
 - ▶ Linear regression models for discrete outcomes
- To account for **panel attrition** and **initial differences between the cohorts** we applied calibration weights to balance covariates between groups
- Adjusted p-values for multiple comparisons (Scheffe's method)

Results

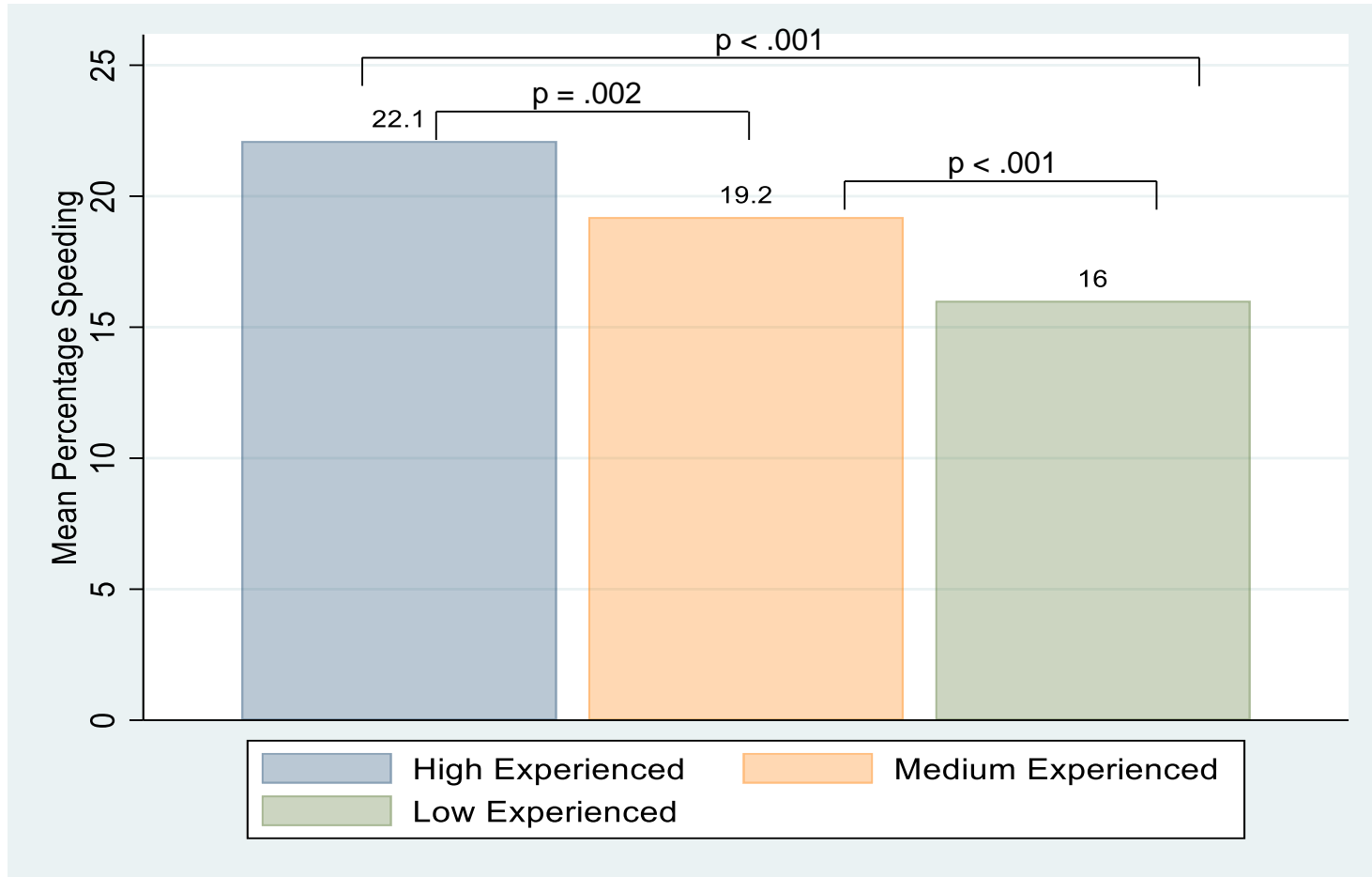
Prevalence of „Don't Know“ - Answers



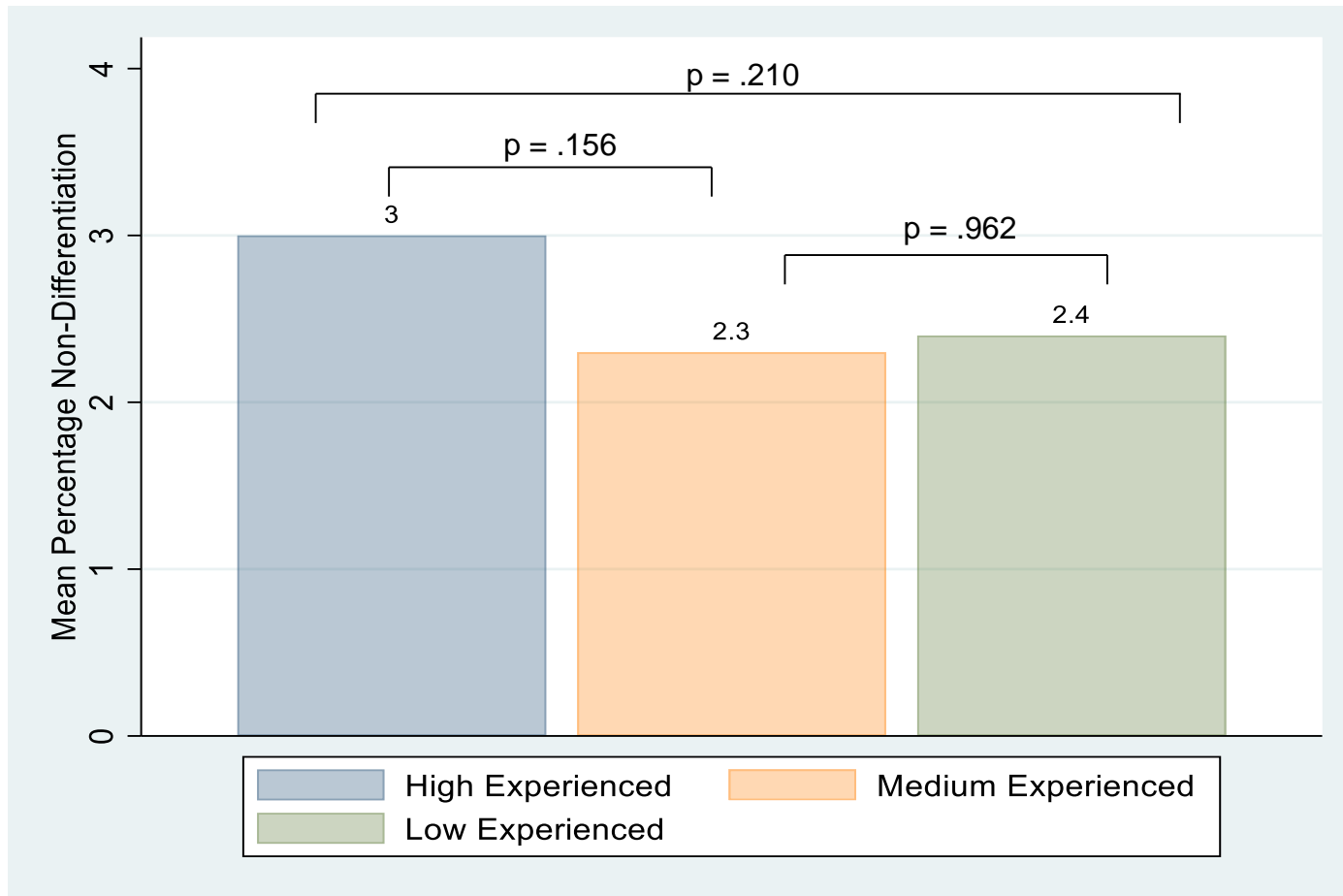
Response Latencies



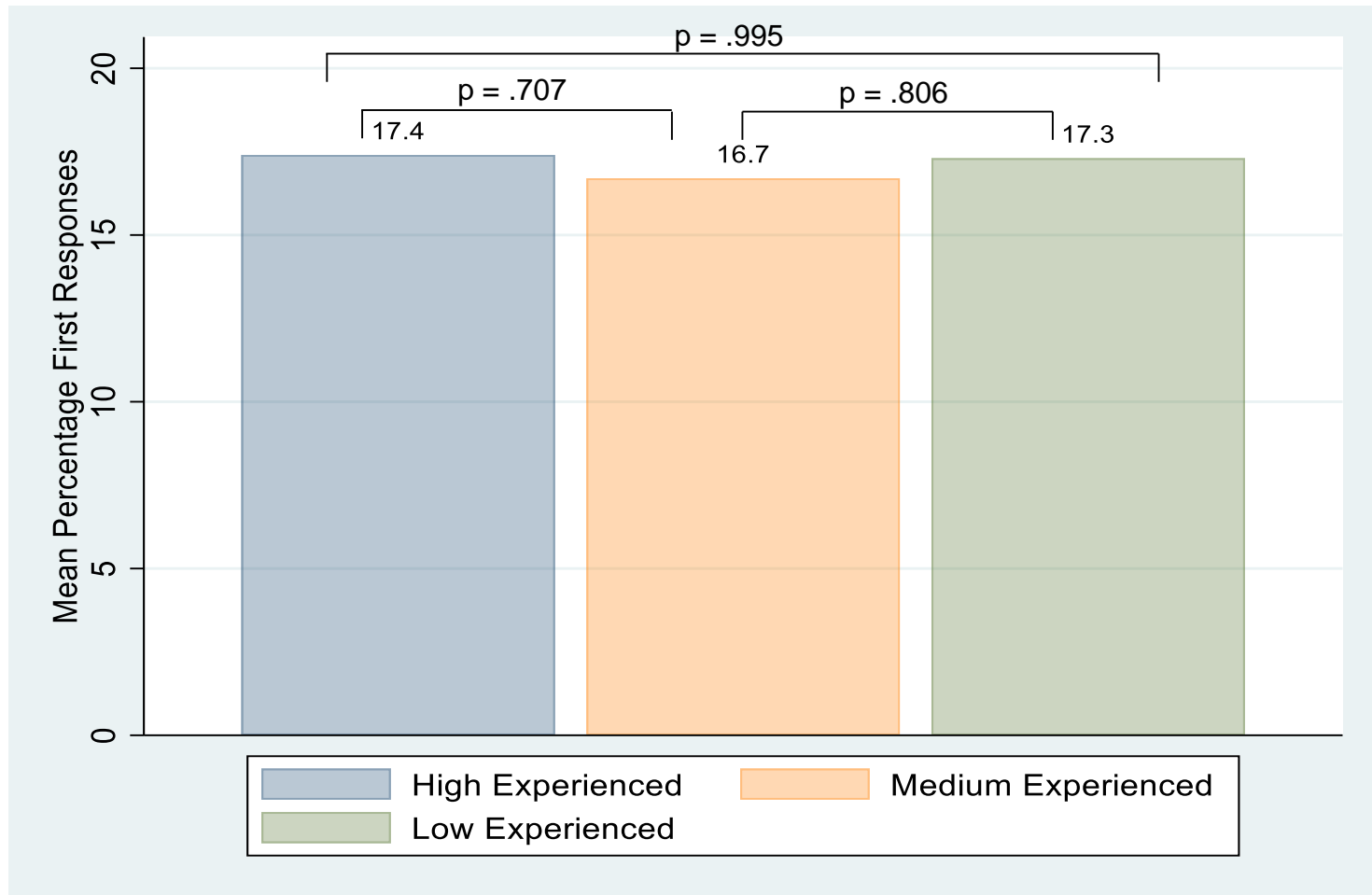
Speeding



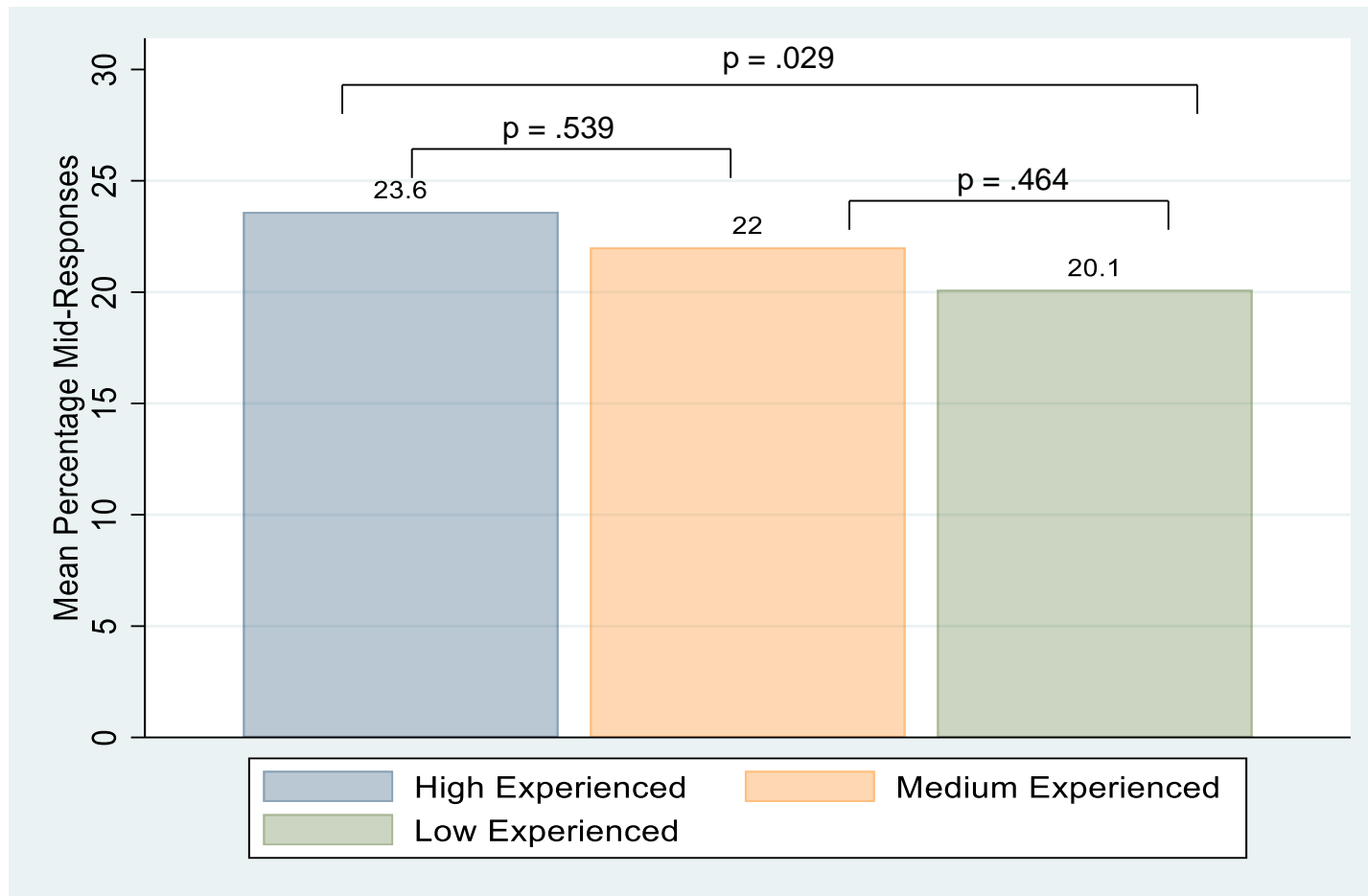
Non-Differentiation



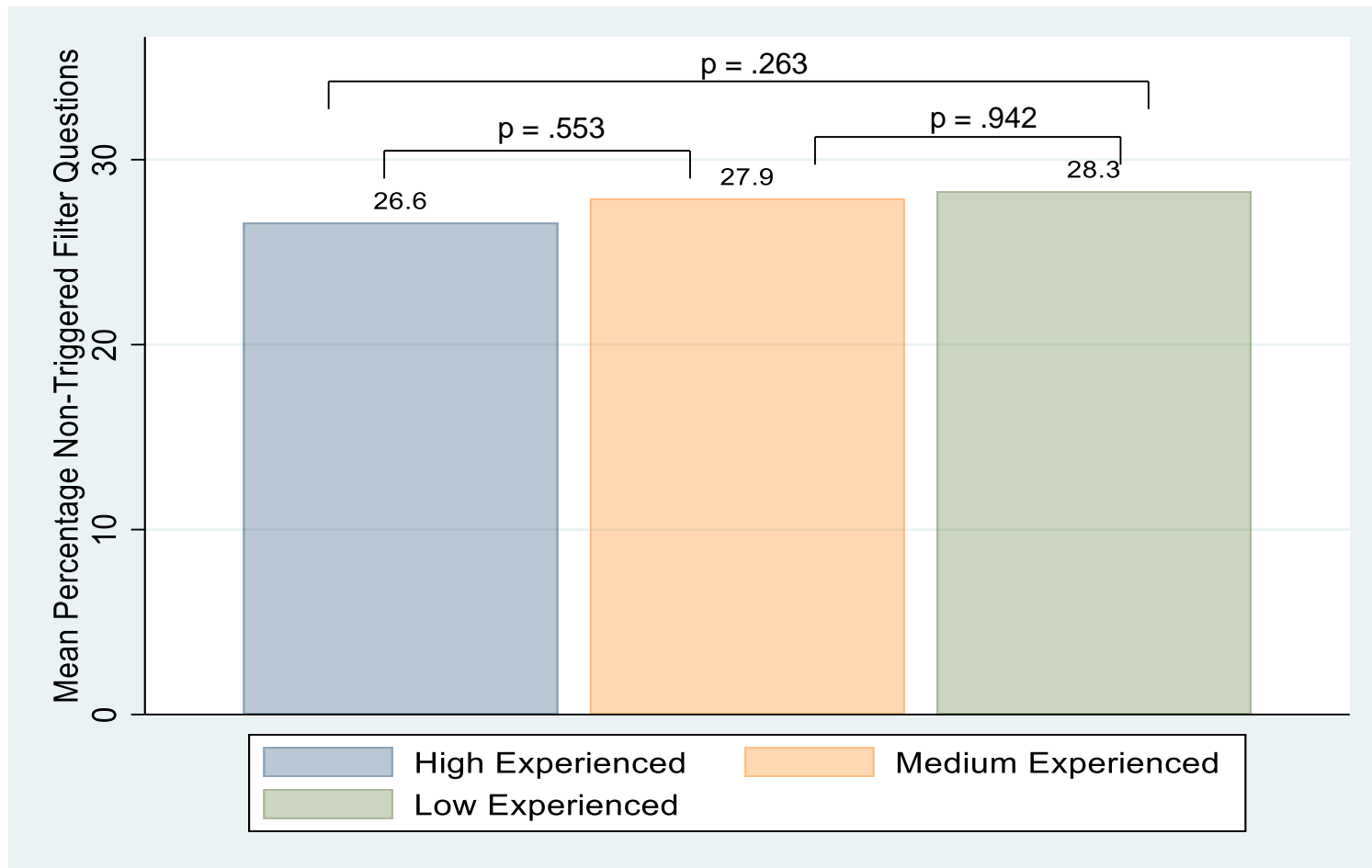
Selection of First Response Categories



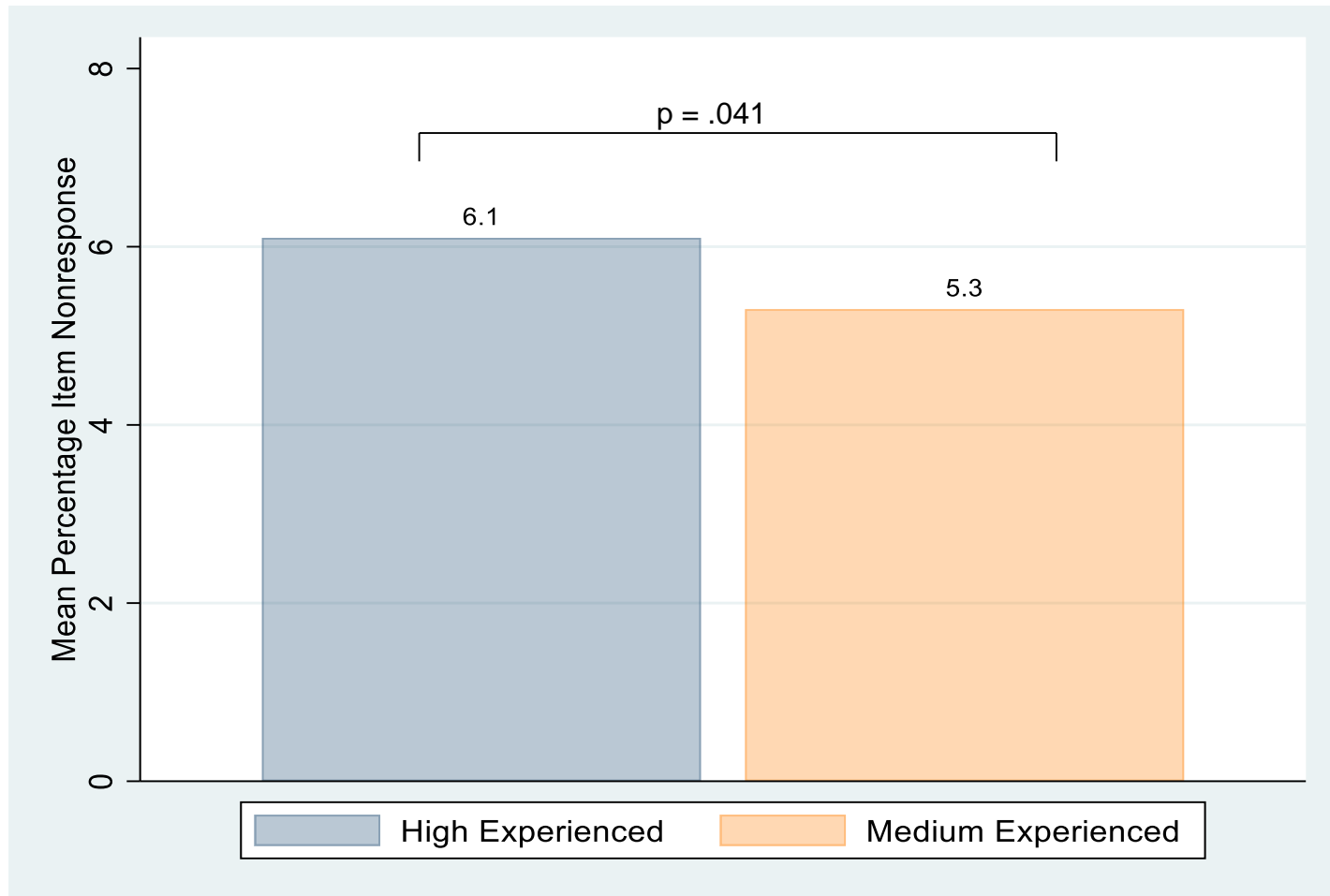
Selection of Mid-Responses



Motivated Misreporting



Social Desirability



Type of Conditioning		Indicator	(Assumed) Effect	Result
Positive conditioning	Optimizing	Prevalence of don't know – answers	decreasing with greater survey experience	(✓)
		Response latencies	shorter with greater survey experience	✓
	Socially desirable responding	Socially desirable responding	decreasing with greater survey experience	X
Negative conditioning	Satisficing	Speeding	increasing with greater survey experience	✓
		Non-Differentiation	increasing with greater survey experience	X
		Selection of first response categories	increasing with greater survey experience	X
		Selection of mid-responses	increasing with greater survey experience	✓
	Motivated misreporting	Potential motivated misreporting	increasing with greater survey experience	X
	Socially desirable responding	Item nonresponse in sensitive questions	increasing with greater survey experience	✓

Implications and Future Research

- Evidence for positive as well as negative panel conditioning
- Overall, most effects are relatively small and partly caused by specific question formats (i.e., Likert-scales and selection of mid-responses)
- However, speeding shows relatively large effects and we find greater SD-bias with greater survey experience
- need for further investigation of underlying mechanisms
- Conditioning on survey content or survey process?
 - ▶ True randomized experiments are necessary to further differentiate the effects and mechanisms

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