

The Impact of Response Scale Direction on Survey Responses in Web Surveys

Ting Yan, Westat

Florian Keusch, University of Mannheim

Mengyao Hu, University of Michigan

Background

One feature of response scales that is understudied is the direction of scales. Previous research found mean shifts under different scale directions. However, it is not quite clear yet whether this effect is independent of other scale features.

It is also not clear what the impact of scale direction is on the reliability of resulting answers.

Methods

LISS Panel Data

Wave 1; n=3,007
(September 2014)

Wave 2; n=2,740
(October 2014)

15 items in both waves

Mindfulness (6), political efficacy (4),
electoral integrity (5)

Experimental factors

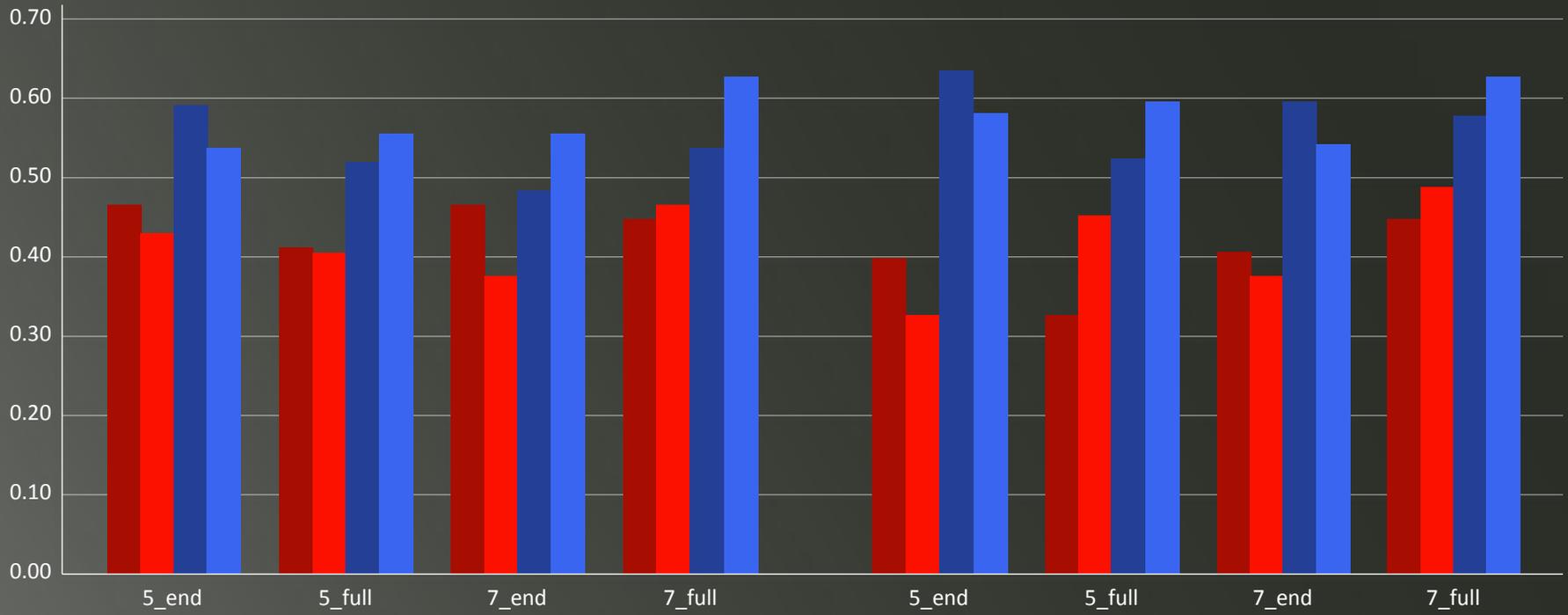
- Scale direction
- Scale type:
Attitudinal vs. Frequency
- Scale length:
5-point vs. 7-point
- Scale labeling:
Fully-vs. End-labeled

- DVs
- % of R choosing from options appearing first on original order
- Internal consistency alphas
- Test-retest reliability coefficients

	W1 Answers		W2 Answers		Alphas		Test-Retest Reliability	
	F Value	Pr > F	F Value	Pr > F	F Value	Pr > F	F Value	Pr > F
Direction	17.35	< .0001	8.23	0.00	0.01	0.93	1.34	0.25
Scale Type	42.20	< .0001	25.52	< .0001	0.24	0.62	4.73	0.03
Scale Length	53.12	< .0001	55.71	< .0001	0.23	0.63	0.03	0.86
Scale Labeling	15.74	< .0001	10.95	0.00	0.18	0.68	0.11	0.74
Direction by								
Scale Type	1.10	0.30	0.33	0.56	0.17	0.68	0.56	0.46
Scale Length	7.71	0.01	0.03	0.87	0.03	0.86	1.80	0.18
Scale Labeling	7.00	0.01	3.65	0.06	0.71	0.40	6.92	0.01
Scale Type by Scale Length	4.84	0.01	3.64	0.03	0.10	0.90	1.28	0.28
Scale Type by Scale Labeling	2.35	0.10	0.80	0.45	0.23	0.79	0.69	0.50
Scale Length by Scale Labeling	3.68	0.03	2.81	0.06	0.15	0.86	2.68	0.07
Scale Type by Scale Length by Scale Labeling	9.75	< .0001	12.28	< .0001	0.09	0.91	0.14	0.87

AGREEMENT SCALE

FREQUENCY SCALE



Conclusion

- Scale direction does affect response distribution
 - Primacy effects observed
 - Interacts with scale type, scale length, and scale labeling
- Scale direction does NOT affect reliability
 - Sig. interaction between direction and labeling
 - High->Low: fully labeled > end-labeled
 - Low->High: fully labeled < end-labeled