Polarizing Ads to Recruit Survey Respondents: A Comparative Study of Facebook Ads and Their Impact on Sample Composition

Zaza Zindel, Bielefeld University
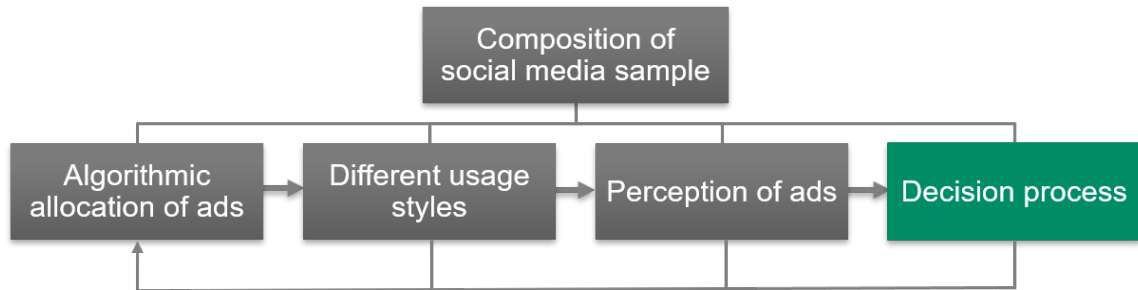Simon Kühne, Bielefeld University
Emilio Zagheni, Max Planck Institute for Demographic Research
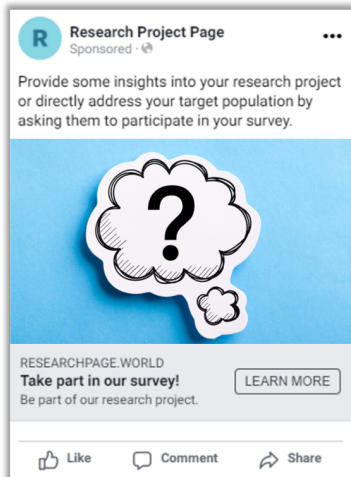Daniela Perrotta, Max Planck Institute for Demographic Research

Factors Influencing the Composition of Social Media Samples

▶ Social Media Recruiting = Convenience Sampling → **self-selection bias**
▶ Samples may contain many engaged people or those wielding strong opinions

Social Media Advertising as a Survey Invitation Letter

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▶ Leverage Saliency Theory *(Groves et al., 2000)*
  → Advertising as a tailored survey invitation letter
▶ Exploring potential context effects through ad design to enhance campaign effectiveness
▶ **Previous Research findings:**
  ▶ Emojis in ad text can reduce recruitment costs *(Zindel et al., 2023)*
  ▶ Newsfeed placement is more effective for generating link clicks than automatic placement by the advertising algorithm *(Zindel et al., 2023)*
  ▶ Ad images can impact cost and sample bias *(Neundorf & Öztürk, 2022; Pötzschke & Braun, 2017)*

Objectives

Objective:
Investigate the effects of different ad images on ad performance and sample composition

Research Questions:

1. How do different ad images affect the ad performance (i.e., cost, completed interviews)?
2. How do different ad images affect the composition of the recruited samples?
3. Do ad images that are thematically linked (loosely or strongly) to the survey topic lead to an opinion-polarized sample?

SoMeRec - Project

▶ Online survey on immigration and climate change with the general population living in Germany and the US (June 21st - July 5th, 2023)

▶ Recruitment via ads on Facebook Newsfeed
  ▶ 5,062 completed interviews (DE: 2,527; US: 2,535)
  ▶ Costs for ads: 4,346.98 € (DE: 889.59 €; US: 3,457.39 €)
  ▶ Average net cost for a complete interview: 0.86 € (DE: 0.36 €; US: 1.36 €)

▶ Comparison sample - Online Access Panel: 3,020 completed interviews (DE: 1,499; US: 1,521)

Ad Experiment

Immigration	Neutral	Climate change

Variation of Facebook Ad Images:

▶ **Two polarizing topics:** immigration & climate change

▶ **Two tendencies in images:** loosely & strongly related to the topic

Experimental Setting:

▶ 15 different images → 30 ads in 30 ad sets in 30 campaigns

Ad Performance - DE

DE					
	Immigration		**Neutral**	**Climate Change**	
	strongly related	loosely related		loosely related	strongly related
Reach	21,106	19,536	16,990	22,606	21,412
Unique Link Clicks	1,731 (8.20%)	1,137 (5.82%)	895 (5.27%)	1,394 (6.17%)	1,203 (5.62%)
Clicked Consent	1,275 (6.04%)	654 (3.35%)	737 (4.34%)	578 (2.56%)	926 (4.32%)
Completed Interview	645 (3.06%)	392 (2.01%)	474 (2.79%)	359 (1.59%)	625 (2.92%)

**Note:** Reach & Unique Link Clicks = Facebook Metrics

Sample Composition - DE

	DE	
	FB	**AP**
Age group		
18-24 years	0.34	8.47
25-39 years	4.82	22.75
40-59 years	42.25	33.29
60-64 years	19.32	8.81
65+ years	33.28	26.68
Gender		
Female	41.70	49.63
Male	58.30	50.37
Education		
Primary	0.08	0.34
Secondary	47.57	65.93
Tertiary	52.35	33.74

► In contrast to previous studies: very high proportion of older population

► A similar age and gender distribution is found across all ad images → General Facebook effect and NOT dependent on ad design

► In strongly topic-related ads: Higher proportion of secondary education level → Ad set effect

Party Preference - DE

DE						
	Immigration		**Neutral**	**Climate Change**		**AP**
	strongly related	loosely related		loosely related	strongly related	
Party preference						
SPD	7.06	15.60	13.39	10.63	6.59	25.16
CDU/CSU	20.96	19.15	17.26	13.00	13.66	23.79
FDP	5.24	5.32	5.36	4.72	5.61	6.13
Bündnis 90/die Grüne	8.88	20.57	23.21	27.56	19.76	17.12
die Linke	3.64	7.45	11.01	9.84	6.83	8.14
AfD	50.11	28.01	25.89	27.56	43.17	16.81
Other	4.10	3.90	3.87	6.69	4.39	2.85

Index: Climate Change Scepticsm - DE

Index: Xenophobia - DE

Scale:
1 = very xenophobic
5 = not xenophobic at all
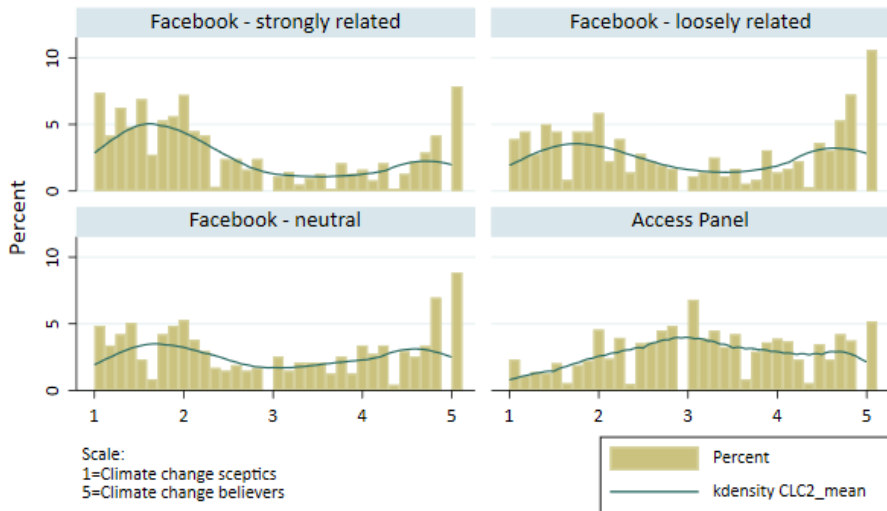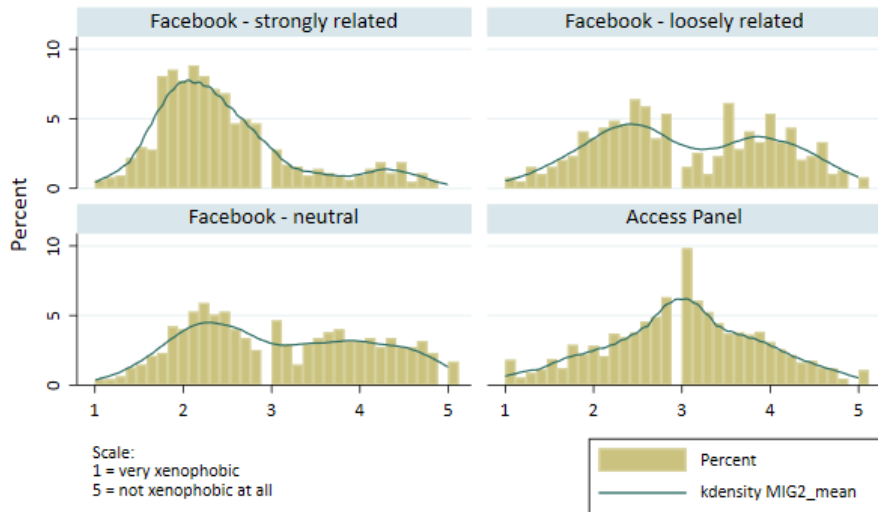
Summary

- **In a nutshell:** Different ad images lead to different samples!

- **Key findings from first descriptive comparison:**
  - Ads strongly related to the topic lead to better ad performance (in terms of cost and completed interviews)
  - However, this comes with a trade-off: the samples exhibit very strong opinions.

- **Important questions:**
  1. Is the use of social media ads suitable for general opinion polls?
  2. Or should their utilization be limited to surveys targeting specific, rare, or hard-to-reach population groups?

Thank you.

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References

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Backup

Ad Images: Selection of Ad Images

Ad Performance - USA

| USA					
	Immigration		**Neutral**	**Climate Change**	
	strongly related	loosely related		loosely related	strongly related
Reach	35,860	39,264	21,996	51,544	41,427
Unique Link Clicks	2,691 (7.50%)	2,707 (6.89%)	1,387 (6.31%)	2,813 (5.46%)	2,528 (6.10%)
Clicked Consent	1,353 (3.77%)	872 (2.22%)	878 (3.99%)	963 (1.87%)	1,441 (3.48%)
Completed Interview	562 (1.57%)	359 (0.91%)	413 (1.88%)	482 (0.94%)	722 (1.74%)

Note: Reach & Unique Link Clicks = Facebook Metrics

Party Preference - USA

USA						
	Immigration		**Neutral**	**Climate Change**		**AP**
	strongly related	loosely related		loosely related	strongly related	
Party preference						
Republican	44.06	30.37	28.61	32.16	51.10	29.65
Democrat	23.16	45.09	45.28	39.44	17.30	40.34
Independent	32.79	24.54	26.11	28.40	31.60	30.01

Index: Climate Change Scepticsm - USA
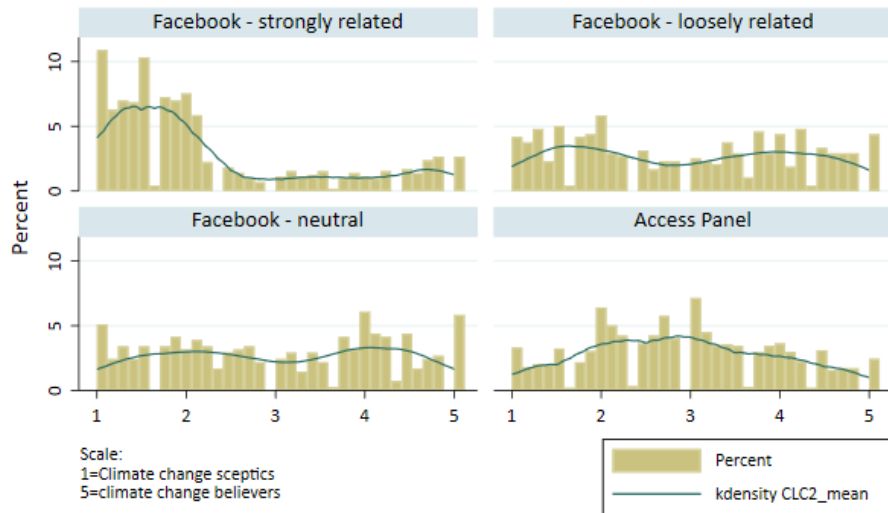
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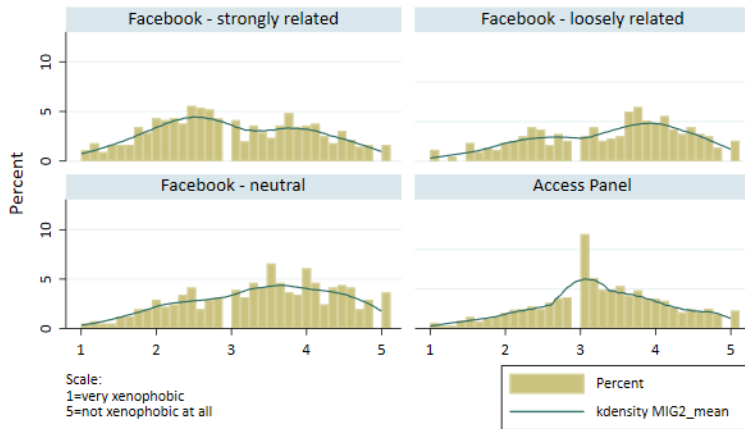
Next steps

▶ Descriptive comparison of age distribution-corrected samples.

▶ Further examine demographic differences between samples using T-statistics and Chi² tests.

▶ Explore affective political polarization between samples as suggested by Reijan (2020).

▶ Conduct variance-analytic comparisons of the samples and verify the graphically observed bimodality.