

How Generative AI is Transforming the Consumer Insights Industry

Neeraj Arora
University of Wisconsin-Madison



Points indicate opportunity over medium-term

Lower relative priority Higher relative priority

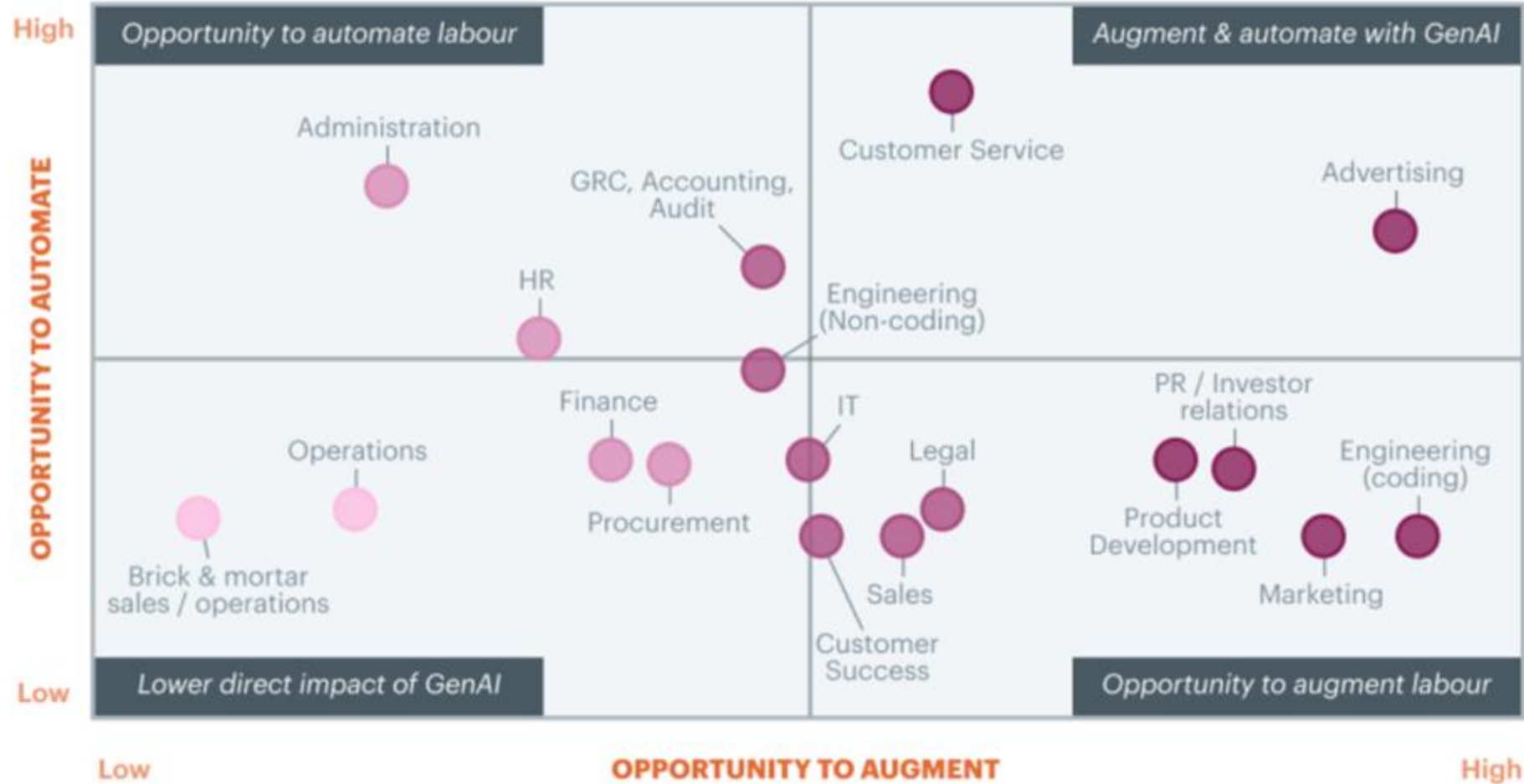
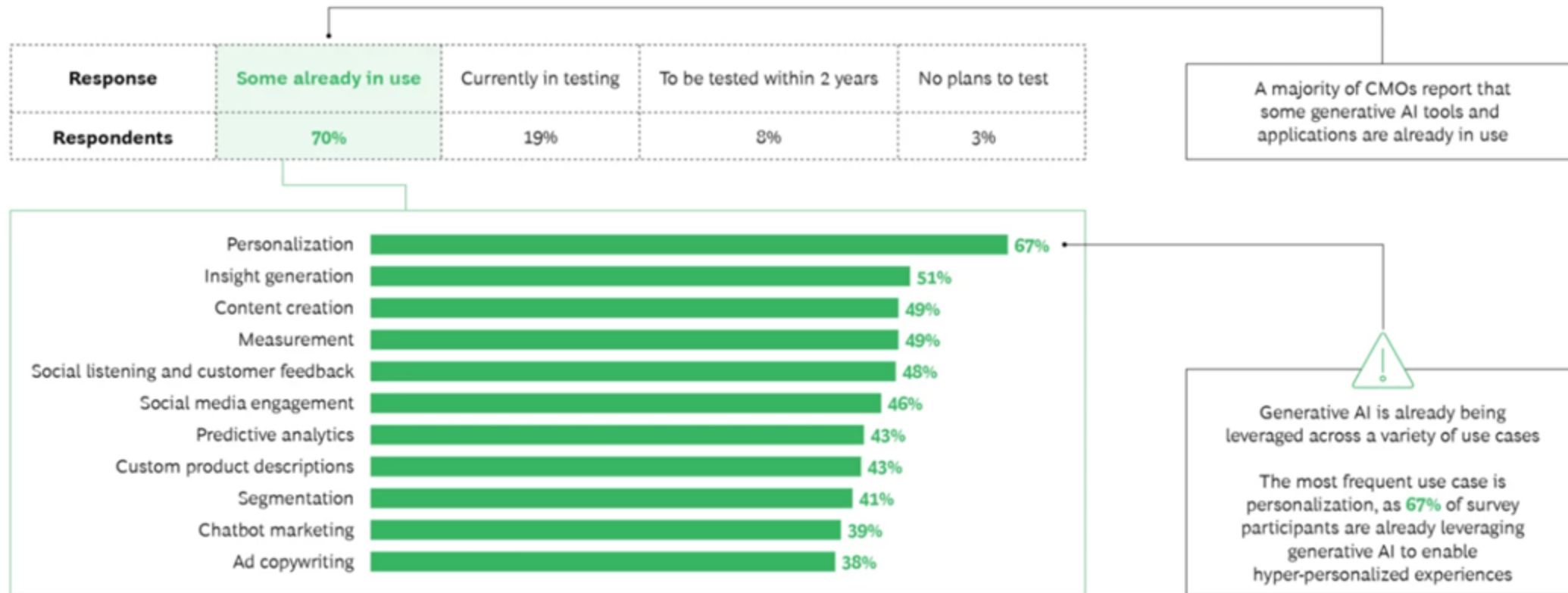


Exhibit 1 | Most Companies Have Already Implemented or Tested Generative AI to Address a Wide Range of Marketing Challenges

Where you work, what is the present situation regarding tools and applications using generative AI?



Source: BCG Generative AI Survey, April 2023 (n = 211).

<https://www.bcg.com/publications/2023/generative-ai-in-marketing>

AI–Human Hybrids for Marketing Research: Leveraging Large Language Models (LLMs) as Collaborators

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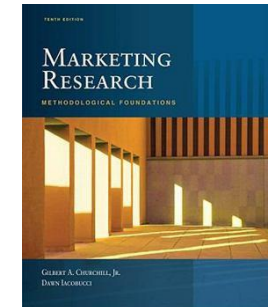
Neeraj Arora , Ishita Chakraborty , and Yohei Nishimura

Abstract

The authors' central premise is that a human–LLM (large language model) hybrid approach leads to efficiency and effectiveness gains in the marketing research process. In qualitative research, they show that LLMs can assist in both data generation and analysis; LLMs effectively create sample characteristics, generate synthetic respondents, and conduct and moderate in-depth interviews. The AI–human hybrid generates information-rich, coherent data that surpasses human-only data in depth and insightfulness and matches human performance in data analysis tasks of generating themes and summaries. Evidence from expert judges shows that humans and LLMs possess complementary skills; the human–LLM hybrid outperforms its human-only or LLM-only counterpart. For quantitative research, the LLM correctly picks the answer direction and valence, with the quality of synthetic data significantly improving through few-shot learning and retrieval-augmented generation. The authors demonstrate the value of the AI–human hybrid by collaborating with a *Fortune* 500 food company and replicating a 2019 qualitative and quantitative study using GPT-4. For their empirical investigation, the authors design the system architecture and prompts to create personas, ask questions, and obtain responses from synthetic respondents. They provide road maps for integrating LLMs into qualitative and quantitative marketing research and conclude that LLMs serve as valuable collaborators in the insight generation process.

Large Language Models in Marketing Research: An Adoption Framework

Research Stages	How LLMs can assist		
	Exploratory e.g., Depth Interview	Descriptive e.g., Survey	Causal e.g., A/B tests
Study Design	Create/streamline discussion guide	Create survey questionnaire	Create concepts and A/B Tests
Sample Selection	Determine sample characteristics	Determine sample characteristics	Determine sample characteristics
Data Collection	Synthetic respondents	Synthetic respondents	Synthetic respondents
Data Analysis	Summarization/Theme extraction, visualization	Statistical analysis and models, visualization	Statistical analysis and models, visualization



Research Questions We Ask

- Investigate how LLMs could be used for **qualitative** and **quantitative** marketing research
- Study the possible role LLMs could play in
 - Recruiting respondents, Collecting data, Analysis
- How well do the synthetic respondents perform **vis-a-vis data provided by humans**
 - Qualitative, Quantitative

Qualitative research



Objectives:

- Insights on Friendsgiving via real-life language, emotions, experiences, etc.

Methodology

- Online in-depth interview

Human Evaluation: Prolific Study

	<i>Dependent variable: Scoring Dimensions</i>			
	Score (Clarity)	Score (Relevance)	Score (Depth)	Score (Insight)
	(1)	(2)	(3)	(4)
Intercept	3.818*** (.08)	3.436*** (.09)	3.001*** (.07)	2.929*** (.10)
LLM Generated	.137 (.013)	-.085 (.114)	.680*** (.108)	.498*** (.112)
Answer Length	-.0001 (.072)	.0007 (.004)	.001* (.004)	.007* (.004)
N	992	992	992	992
No of evaluators	248	248	248	248
No of blocks	5	5	5	5
Evaluator Demographics	Y	Y	Y	Y
Log Likelihood	3044.4	3251.8	3113.9	3179

Note:

*p<.1; **p<.05; ***p<.01

Qualitative research: What we find

- LLMs generated **new themes** from qualitative data that humans did not
- LLMs as **analysts** are comparable to humans
 - Key ideas, themes, summarizing
- Human-LLM hybrids appear to outperform human-only or LLM-only alternatives
- Upshot: The future of qualitative marketing research is hybrid
 - **Humans and LLMs contribute complementary strengths**

LLM as an Interview Moderator

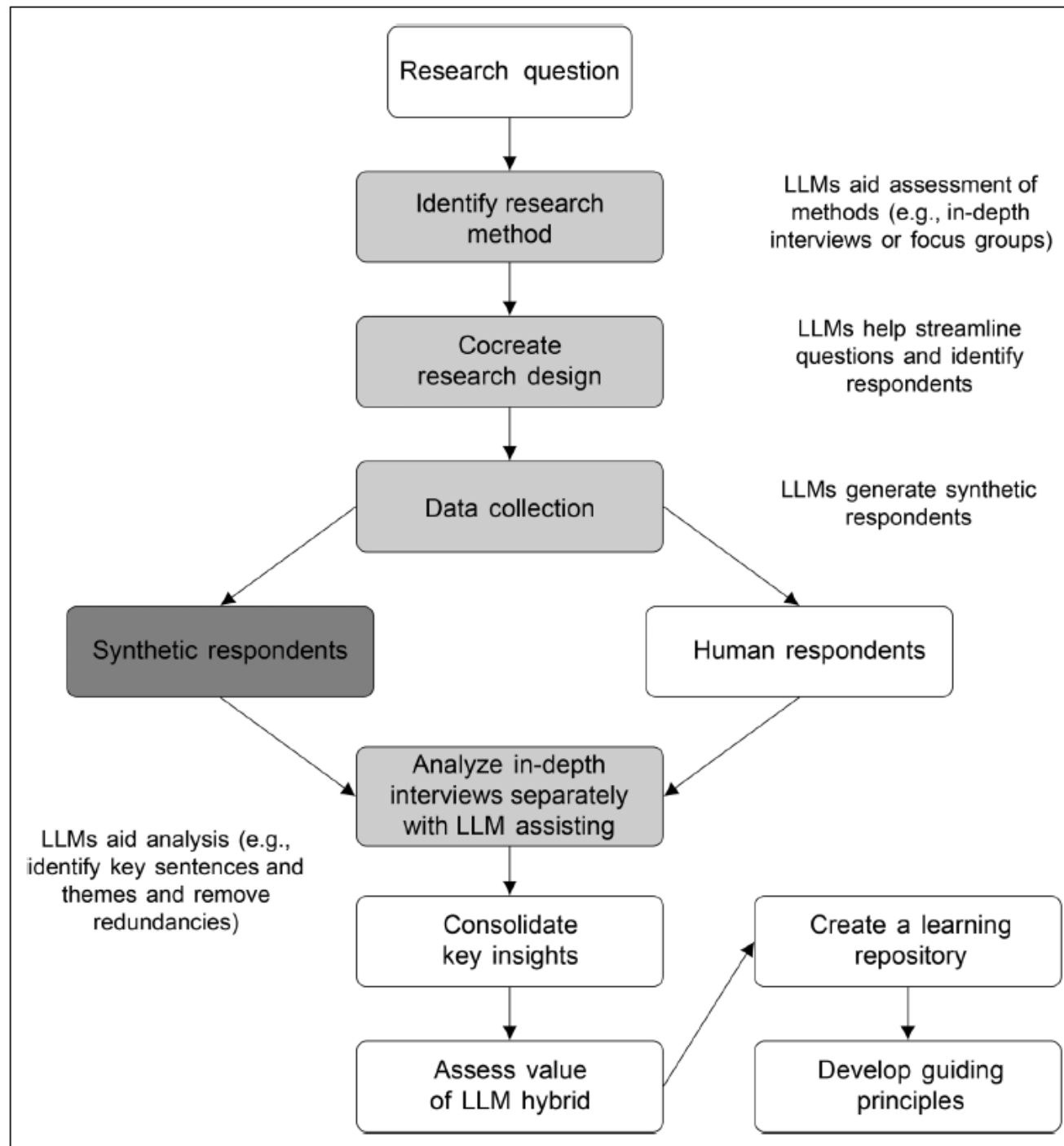
Flow	Prompts / Generated texts / Scores
Question	What do you like about celebrating Friendsgiving? What are you looking forward to most about this year's Friendsgiving?
LLM Answer	I love the sense of community and camaraderie that Friendsgiving brings. It's a time to relax, laugh, and enjoy each other's company. What I'm looking forward to most this year is seeing everyone and sharing our multicultural feast. I can't wait to hear everyone's gratitude shares and see who wins our game tournament!
LLM Score	relevancy: 70, depth: 60, clarity: 90, insightful: 65, overall (average) : 71.25 < threshold
LLM Probe	Can you elaborate on the multicultural feast and the game tournament? How do these elements contribute to the overall Friendsgiving experience?
LLM Additional Answer	The multicultural feast is a reflection of the diversity within our friend group. Everyone gets to share a piece of their heritage through food, which sparks conversations and brings us closer. It's not just about eating, but learning and appreciating our different backgrounds. The game tournament, on the other hand, adds a level of friendly competition and fun. It's a break from the seriousness of everyday life and allows us to bond over shared enjoyment. Both elements, the feast and the games, create a warm, inclusive atmosphere and contribute to the overall sense of camaraderie and unity that defines our Friendsgiving.
LLM Score	relevancy: 90, depth: 70, clarity: 95, insightful: 80, overall (average): 83.75 >= threshold
	(Goes to the next question)

Innovative companies

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LLMs for Qualitative Research: A Road Map



Quantitative research (Refrigerated dog food)

Objectives:

- Know attitudes toward the product
- Purchase likelihood, Liking



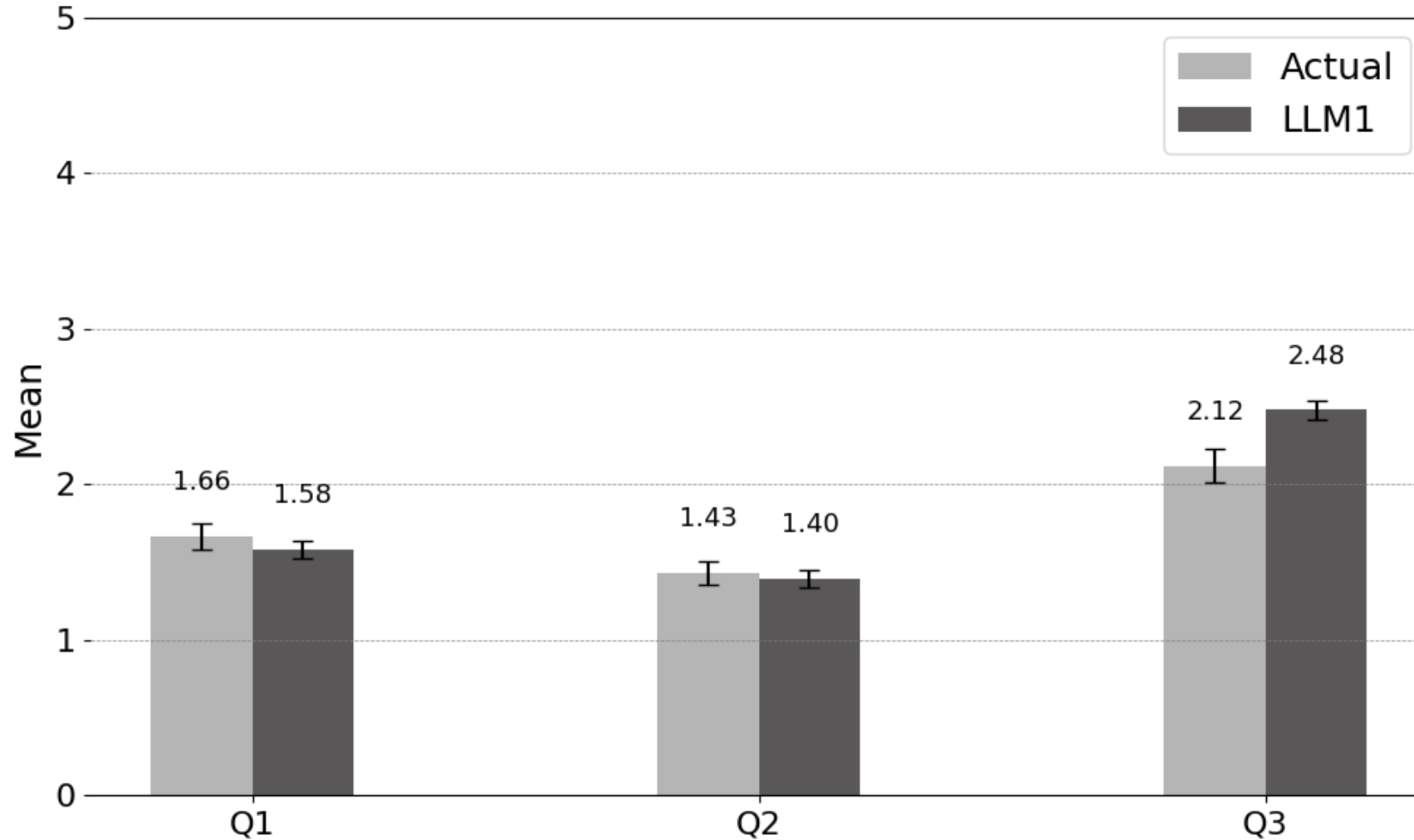
Methodology

- Online survey, n=600

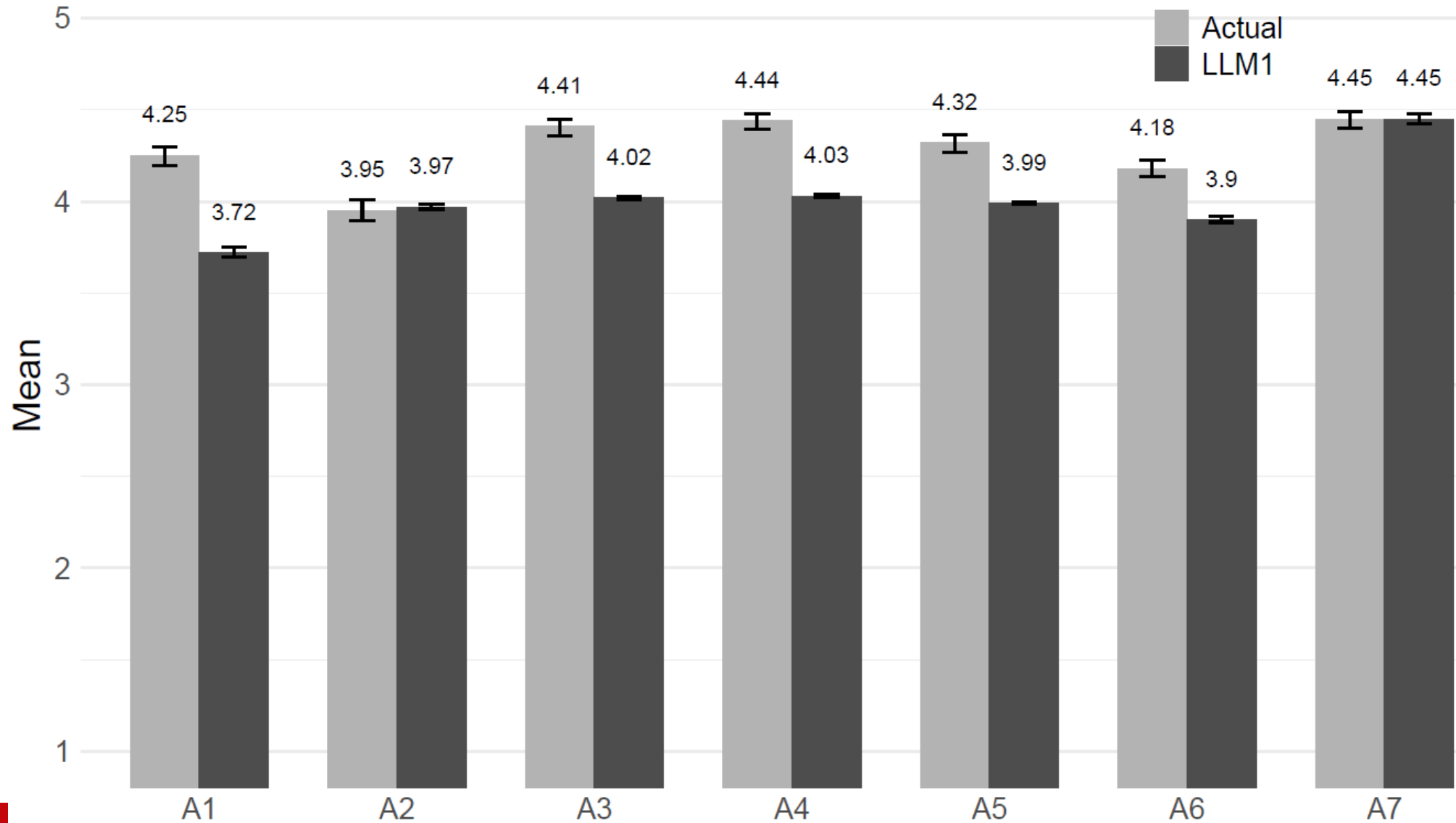
Evaluation Criteria of generated survey

1. Are mean of scores similar?
 2. Are variances of scores similar?
 3. Are scores consistent internally?
- LLM1: Zero-shot
 - **LLM2: + In-context learning with historical data**
 - **LLM3: + Retrieval-Augmented Generation (RAG)**

Concept evaluation: Purchase likelihood, Liking, Uniqueness



Attitudinal measures



Quantitative research: What we find

- A zero-shot LLM picks the answer direction well, but the generated answers are biased and are less heterogeneous
- **In-context learning** with historical questions and answers + **RAG** help LLMs generate better answers
 - Gains in heterogeneity, internal consistency

Two innovative companies



Twin-2K-500: A dataset for building digital twins of over 2,000 people based on their answers to over 500 questions

42 Pages • Posted: 23 May 2025

[Olivier Toubia](#)

Columbia University - Columbia Business School, Marketing

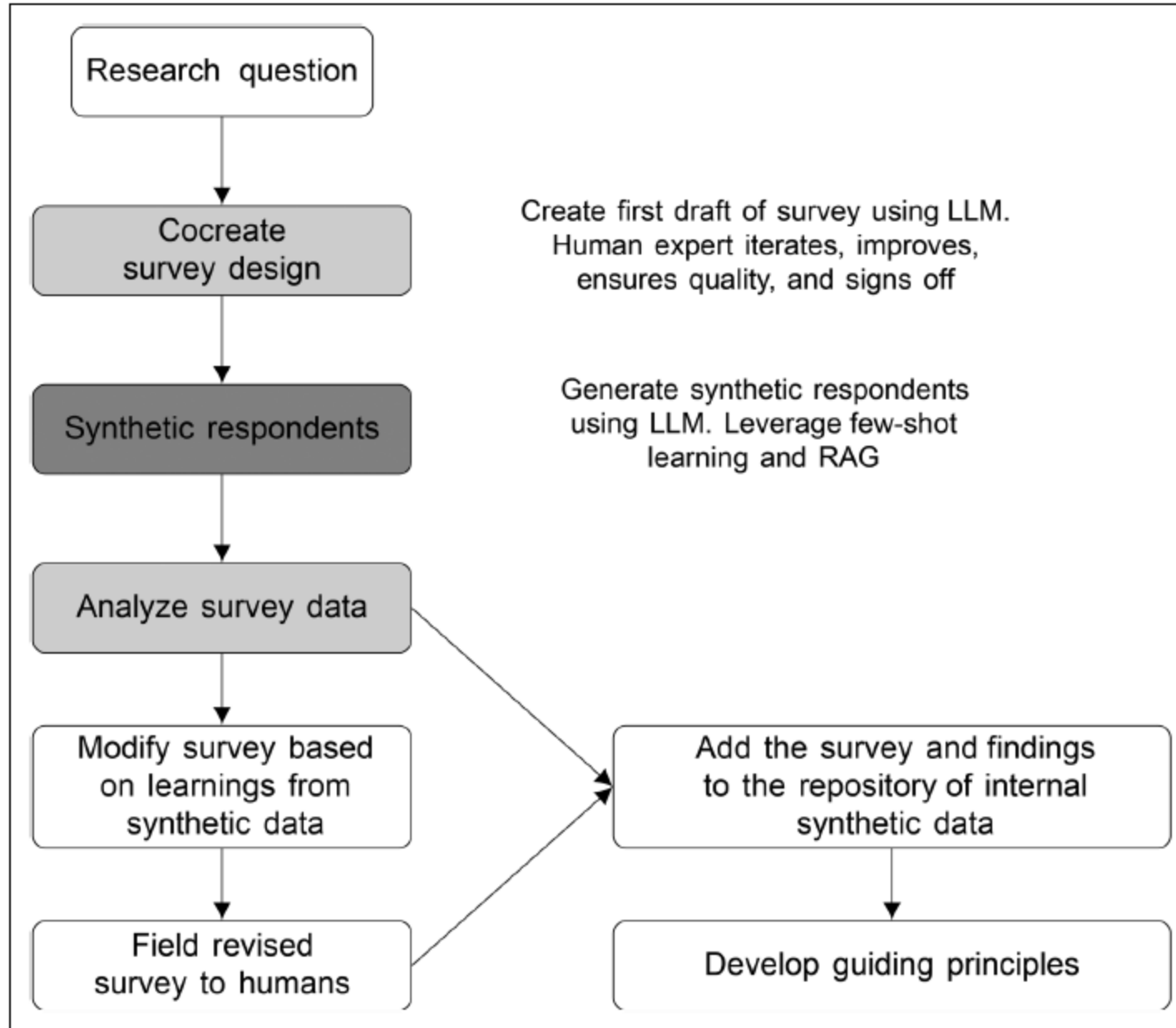
[George Gui](#)

Columbia University - Columbia Business School, Marketing

[Tianyi Peng](#)

Columbia University

LLMs for Quantitative Research: A Road Map



How GenAI is Transforming the Insights Industry

- Faster, Cheaper Insights
 - More frequent, timely research
- Digital twins will have an increasing role to play
 - Better research
 - Interactive research (persona chatbots)
- Qualitative research at scale will see growth
 - Richer insights

Thank you!

neeraj.arora@wisc.edu

[linkedin.com/in/neeraj-arora100](https://www.linkedin.com/in/neeraj-arora100)

Article



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