

Using AI in Qualitative Research

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Introduction

GenAI is rapidly transforming qualitative research. Most applications focus on post-collection tasks: transcription, coding, and thematic analysis. A critical gap exists in examining GenAI as an active participant during data collection itself.

This study investigates AI-generated personas as methodological augments — structured tools that improve research design, reflexivity, and validity without replacing human participants.

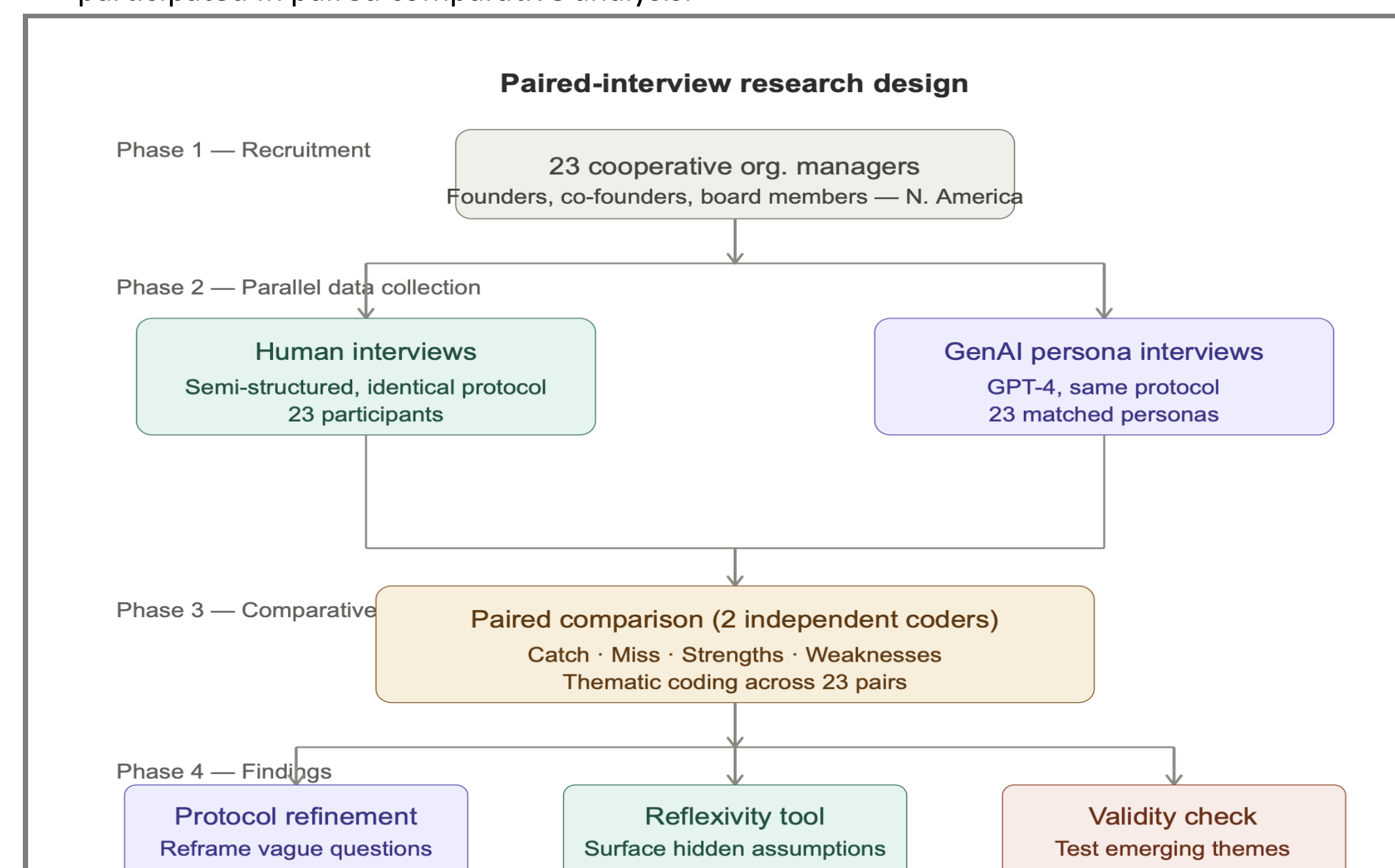
Prior work shows GenAI excels at structural coherence but lacks emotional depth and contextual grounding (Hamilton et al., 2023; Wachinger et al., 2025). Our study leverages these differences as methodological assets.

Research Goal

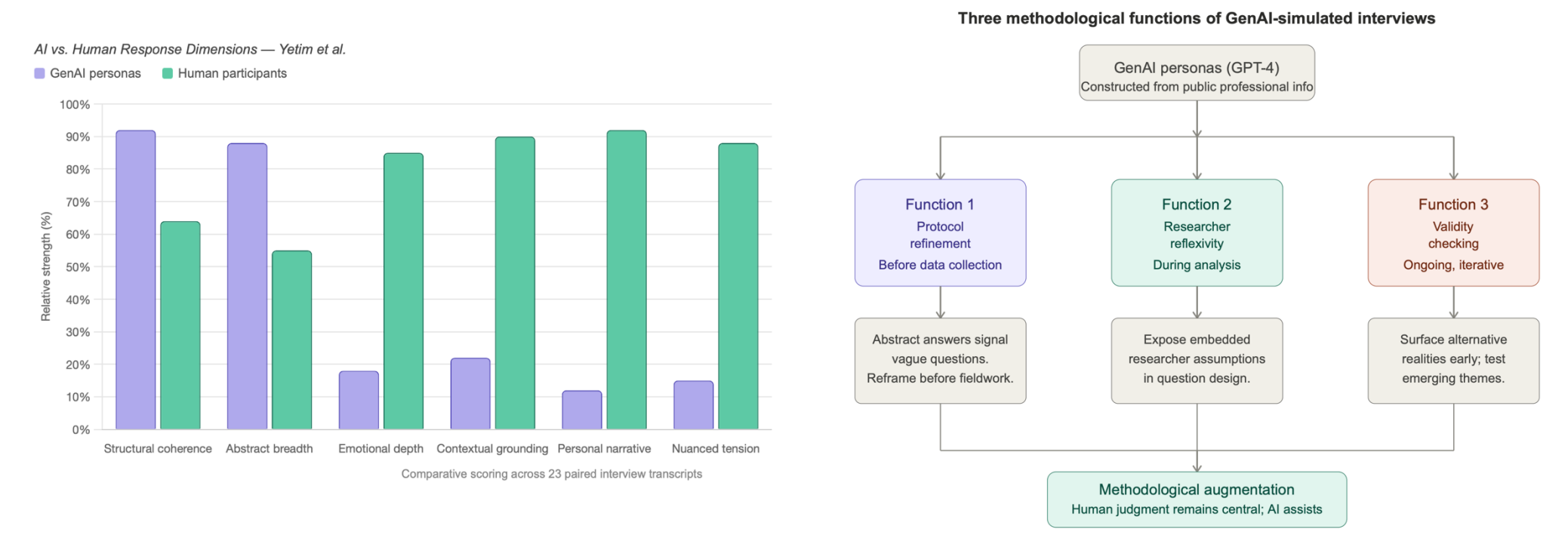
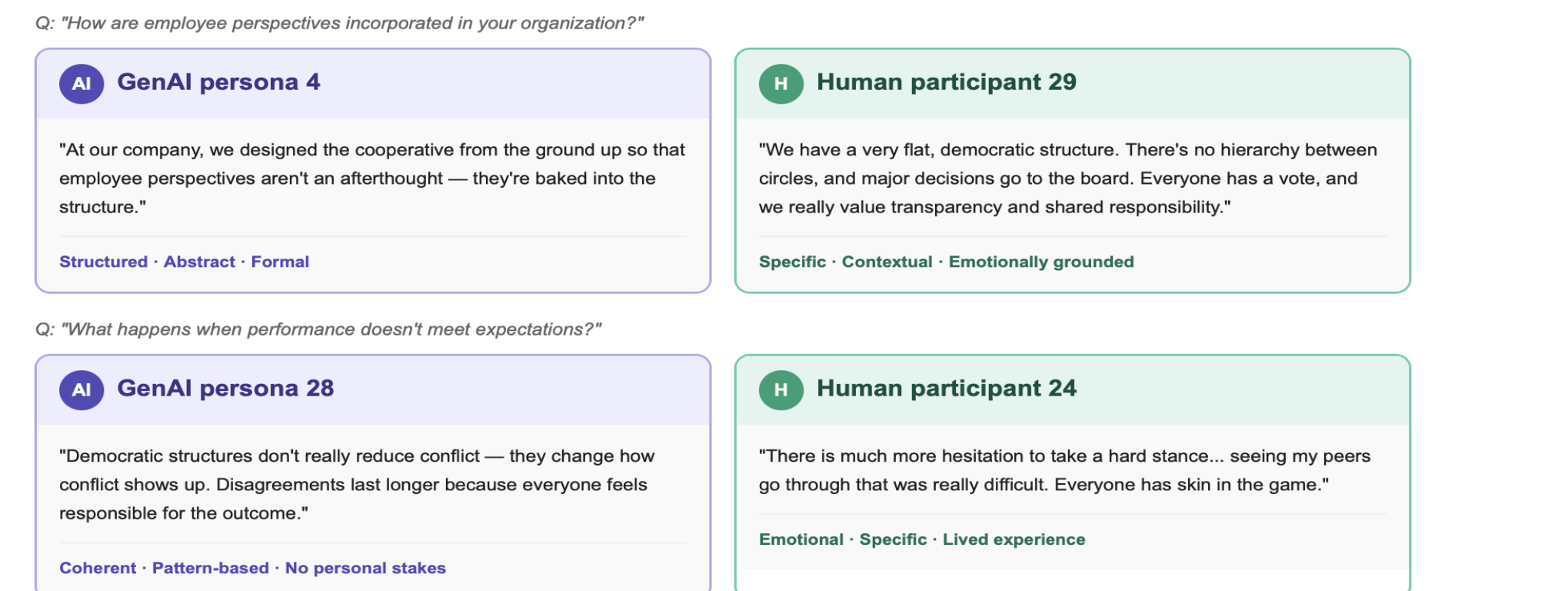
Emerging question: Can AI simulate meaningful interaction and contribute to knowledge creation, not just processing?

Methods

- 23 semi-structured interviews with top managers in cooperative organizations across North America.
- For each participant, a GPT-4 persona was created from public professional info and given identical interview questions.
- Two researchers coded 23 human-AI pairs across four categories: Catch, Miss, Strengths, Weaknesses.
- Conducted GenAI interviews using the original guide, ensuring procedural consistency, and participated in paired comparative analysis.



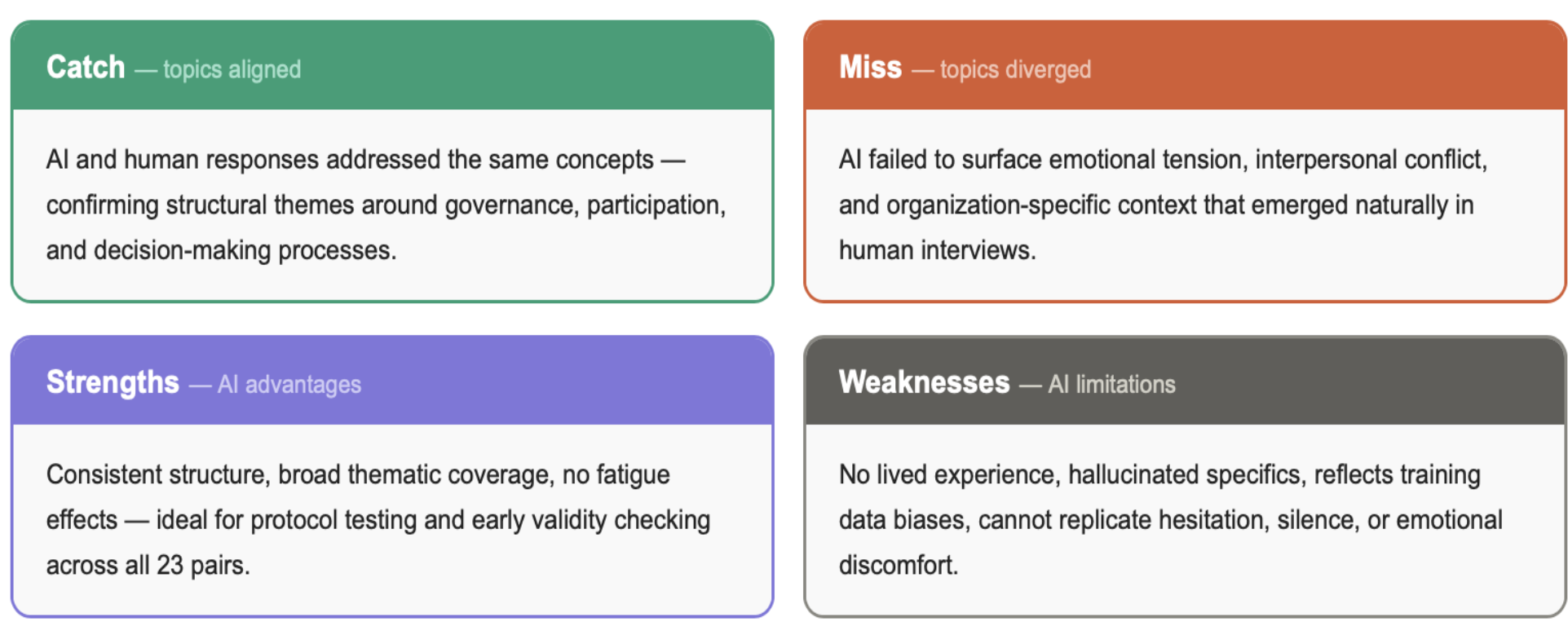
Figures and Results



Abstract GenAI responses flagged vague questions, enabling researchers to reframe prompts before human data collection.

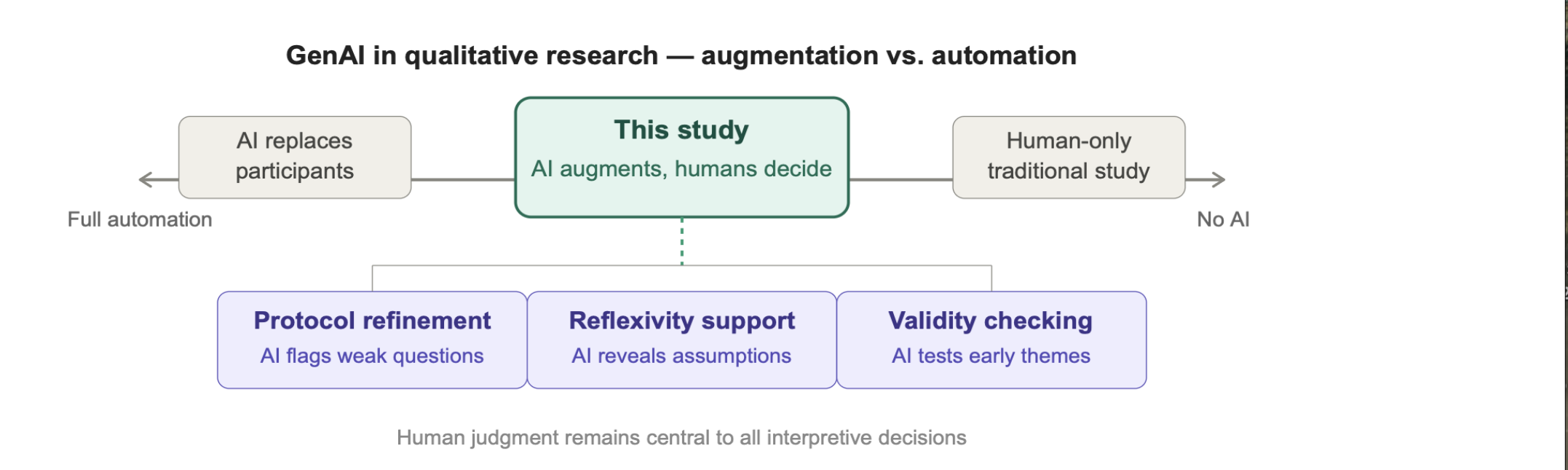
AI-human comparisons exposed embedded assumptions in question design that pushed responses toward formal mechanisms.

GenAI personas surfaced alternative organizational realities that challenged early themes, later confirmed by human data.



Diagnostic framework applied by two independent coders across 23 human-AI interview pairs

Conclusion



GenAI contributes meaningfully to qualitative research when positioned as a methodological augment, not a participant substitute.

- GenAI's abstract responses diagnose weak question design.
- AI comparisons surface hidden researcher assumptions.
- Early validity checks guide deeper human inquiry.

Acknowledgments

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