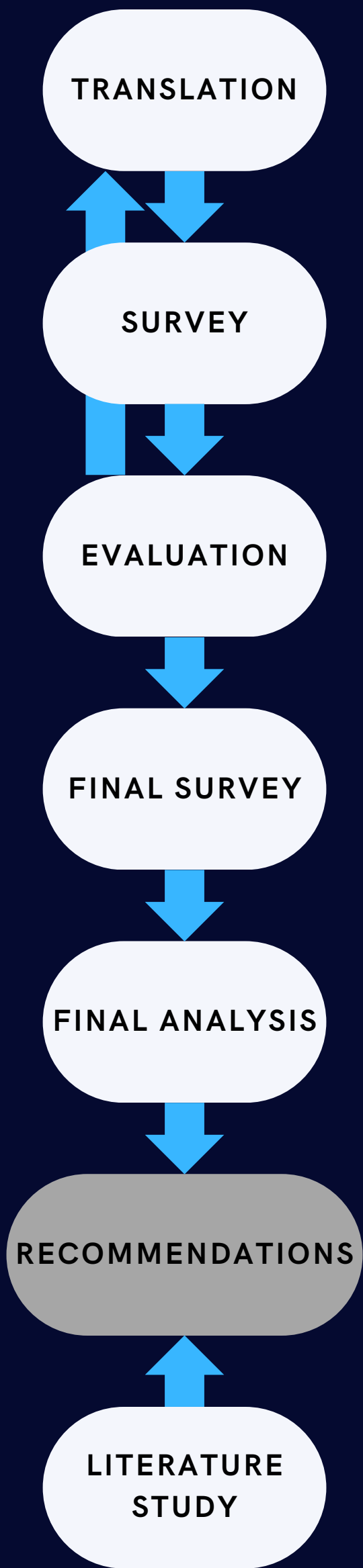# Cultural Differences and Similarities in Perceptions of Artificial Social Agents (ASAs)

RESEARCH QUESTION: WHAT ARE THE DIFFERENCES AND SIMILARITIES OF THE ENGLISH AND GERMAN HUMAN-ASA INTERACTION INTERPRETATIONS?

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Method flow (Fig. 1):
TRANSLATION → SURVEY → EVALUATION → FINAL SURVEY → FINAL ANALYSIS → RECOMMENDATIONS → LITERATURE STUDY

Fig. 1: Method visualization.

1. Background

- ASAs are used in various scenarios [1].
- People communicate with ASAs often [1].
- Culture may affect perception of human-ASA interaction [2, 3].
- Standardized questionnaire for interaction evaluation created in English [1].
- Currently only English and translated Chinese version of questionnaire exist [1, 4].
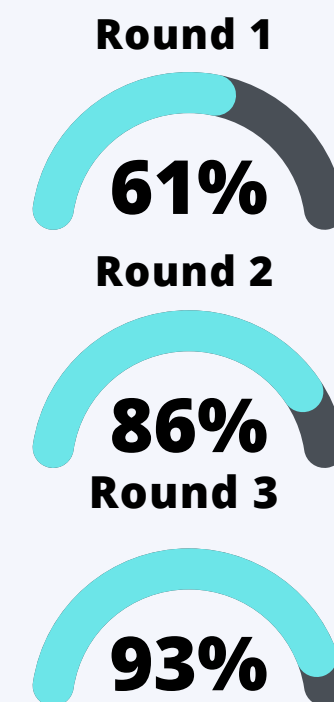
2. Method (see Fig. 1)

1. Experts translate original questionnaire.
2. We publish survey with English and German questions.
3. We find correlation of translations to original phrases.
4. Redo 1-3 for any items with bad correlations.
5. Create final survey with English questions and good translations.
6. Run survey on large sample size.
7. Evaluate similarities & differences in German/English answers.
8. Evaluate cultural differences between mixed-English and German-English answers.
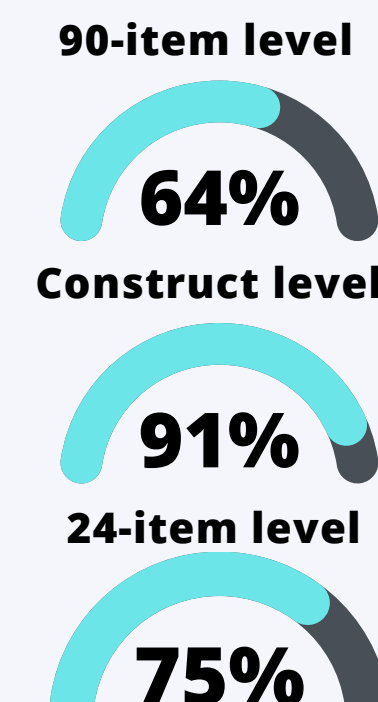9. Additional step - literature study for future ASA recommendations.

3.1 Analysis Methods Intraclass Correlation Coefficient

- ICC values range [0;1].
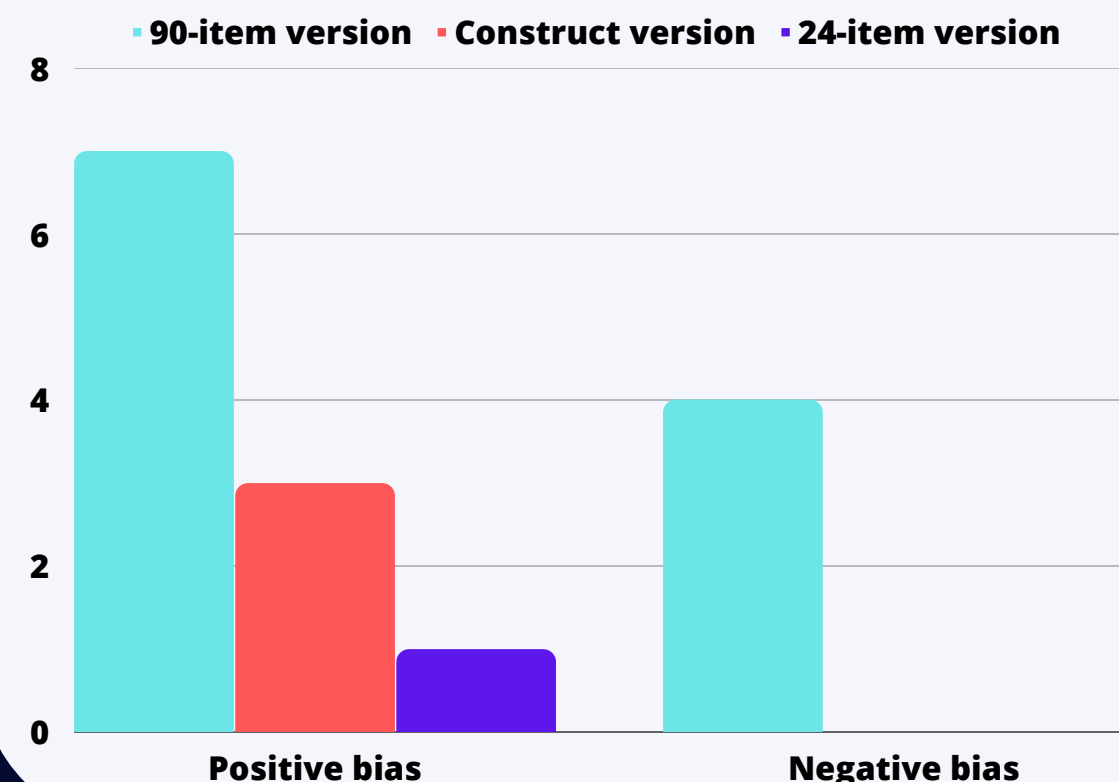- Good - above 0.6 [5].
- Excellent - above 0.75 [5].

3.2 Analysis Methods Bias and Culture

- 95% Credibility Intervals that exclude zero = bias.

4.1 Successful translations

Round 1
61%

Round 2
86%

Round 3
93%

4.2 Good+ correlation

90-item level
64%

Construct level
91%

24-item level
75%

4.4 Comparison between cultural backgrounds

- German sample rated more positively:
  - Agent's Personality Presence (APP).
  - Social Presence (SP).
- German sample rated more negatively:
  - Interaction Impact on Self-Image (IIS).

4.3 Variation between En. and Ger.

Legend: ■ 90-item version ■ Construct version ■ 24-item version

(Bar chart: Positive bias — 90-item version ≈7, Construct version ≈3, 24-item version ≈1; Negative bias — 90-item version ≈4)

5. Conclusions

- German questionnaire is comparable to original.
- Little variation is present.
- Culture makes a difference (APP, SP, IIS).

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