

How do individuals' confidences about their judgments affect group judgments?

Medium-level confidence will decrease accuracy

Masaru Shirasuna¹

Hidehito Honda¹

¹: Otemon Gakuin University (Japan)



SUMMARY

Background A group judgment (e.g., made by a majority rule) often becomes more accurate than individual judgments, known as *wisdom of crowds*. On the other hand, individuals sometimes have overconfidence.

Purpose We aimed to obtain the theoretical evidence about how individuals' confidence about judgments affected accuracy of group judgments.

Method *Behavioral experiments*: participants were asked to answer binary choice tasks and to rate their confidence for each question. *Computer simulation*: we made hypothetical groups and simulated group judgments, manipulating members' confidence levels (low/medium/high) and group sizes.

Results Individuals with medium confidence did not so improve accuracy of group judgments (as accurate as low-confidence group's judgments). When aggregating individuals with medium (or low) confidence, wisdom of crowds were not achieved clearly.

Discussion It is implied that medium-confidence group does not always perform better than low-confidence group (probably due to overconfidence). To avoid decreasing accuracy of group judgments, it may be important that there are individuals with diverse-level confidences in the group.

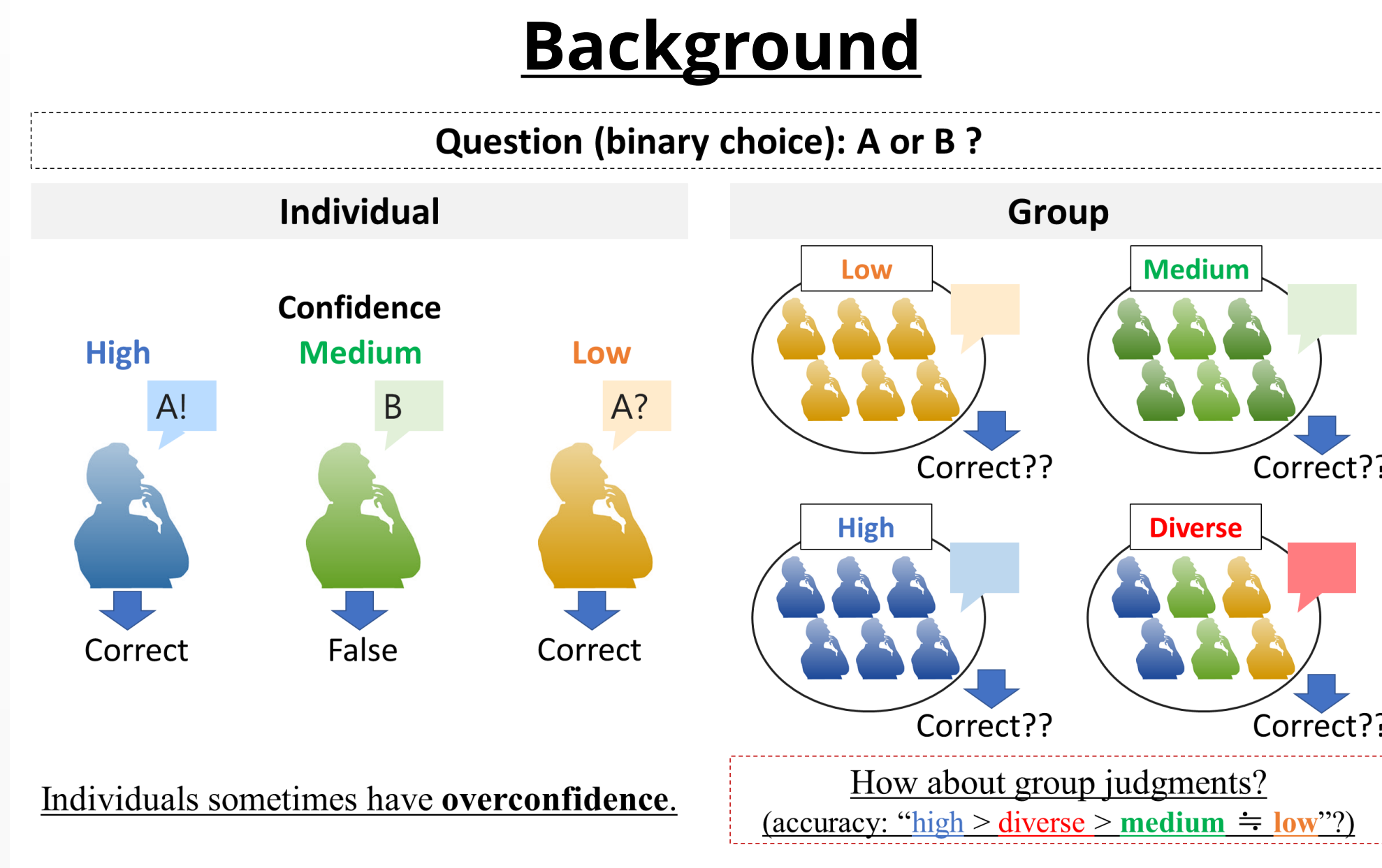
Keywords Confidence; Accuracy; Wisdom of crowds; Group judgments; Computer simulation

Contact (to the first author)
m.shirasuna1392@gmail.com

PsyArXiv (preprints & supporting materials)
<https://psyarxiv.com/xnk4p>

Zoom Link

<https://zoom.us/j/97319364644?pwd=U091b0gremVKY3JFS0o0ZTdZRFIDQT09>

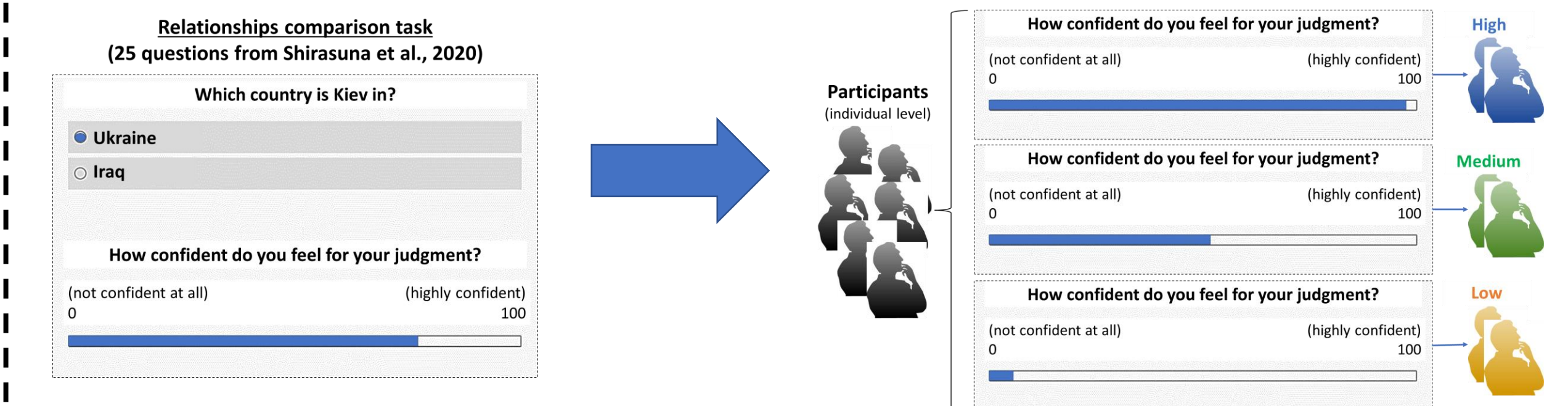


Method (N = 149) (25 questions)

(For each question...)

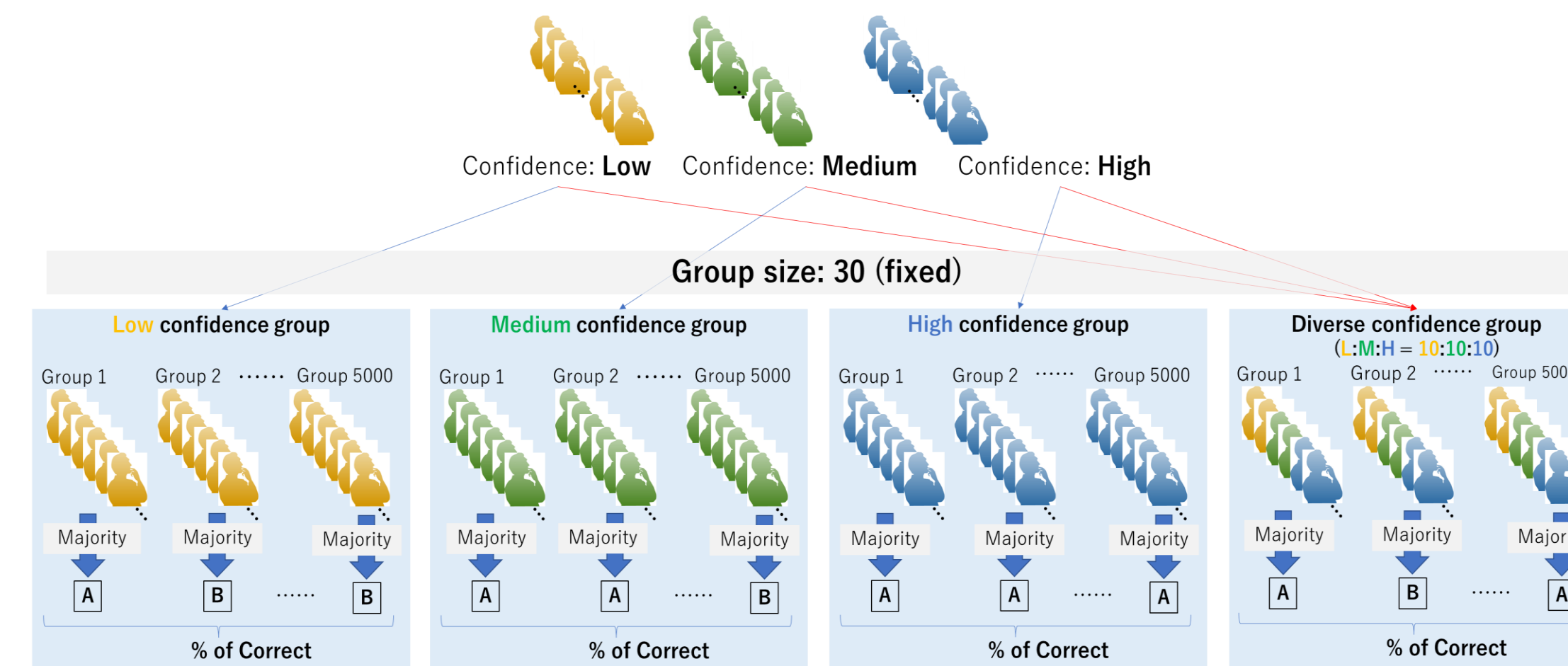
Behavioral experiment (individual judgments)

- Binary choice task
- Confidence categorization (low/medium/high)

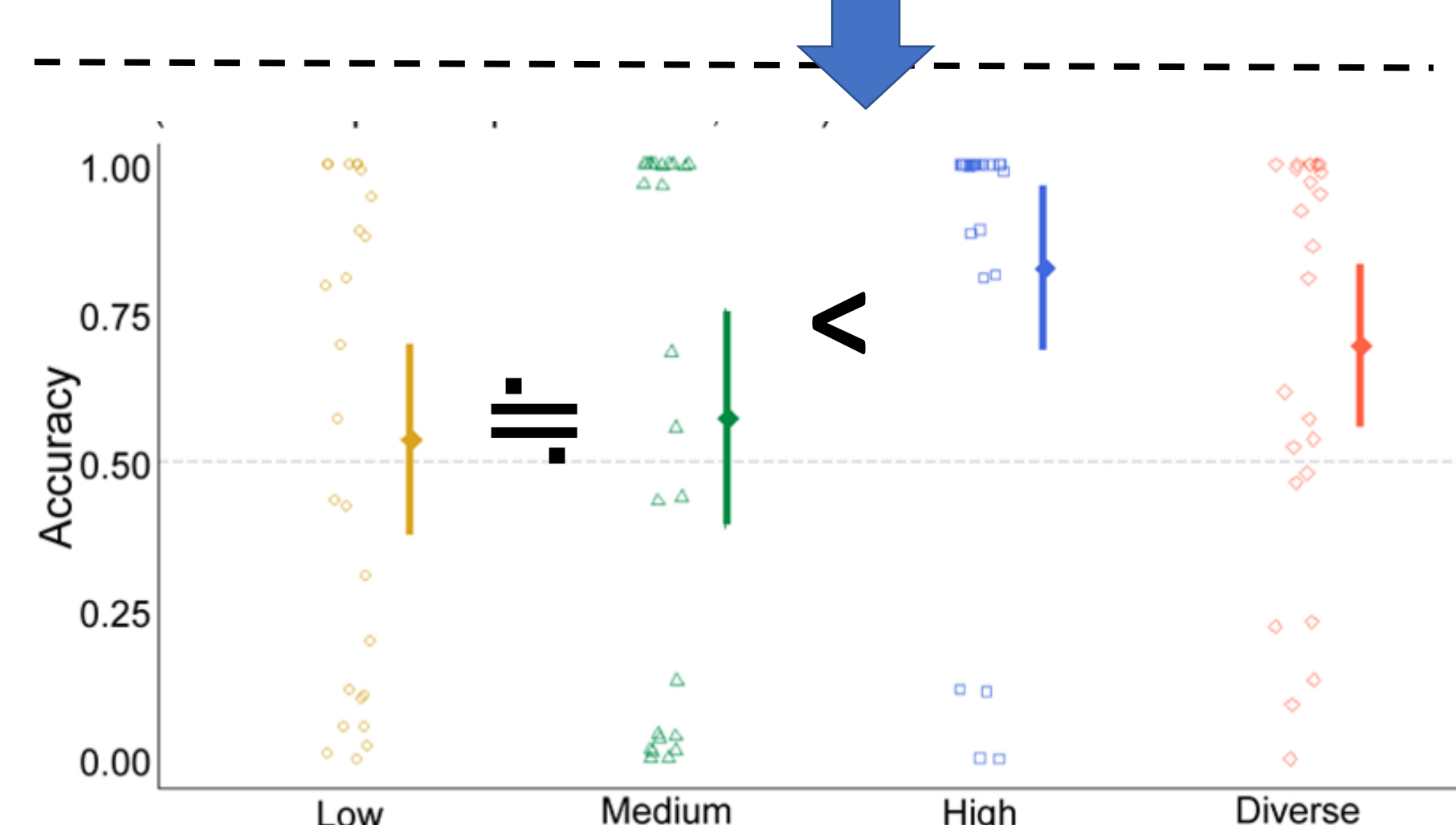
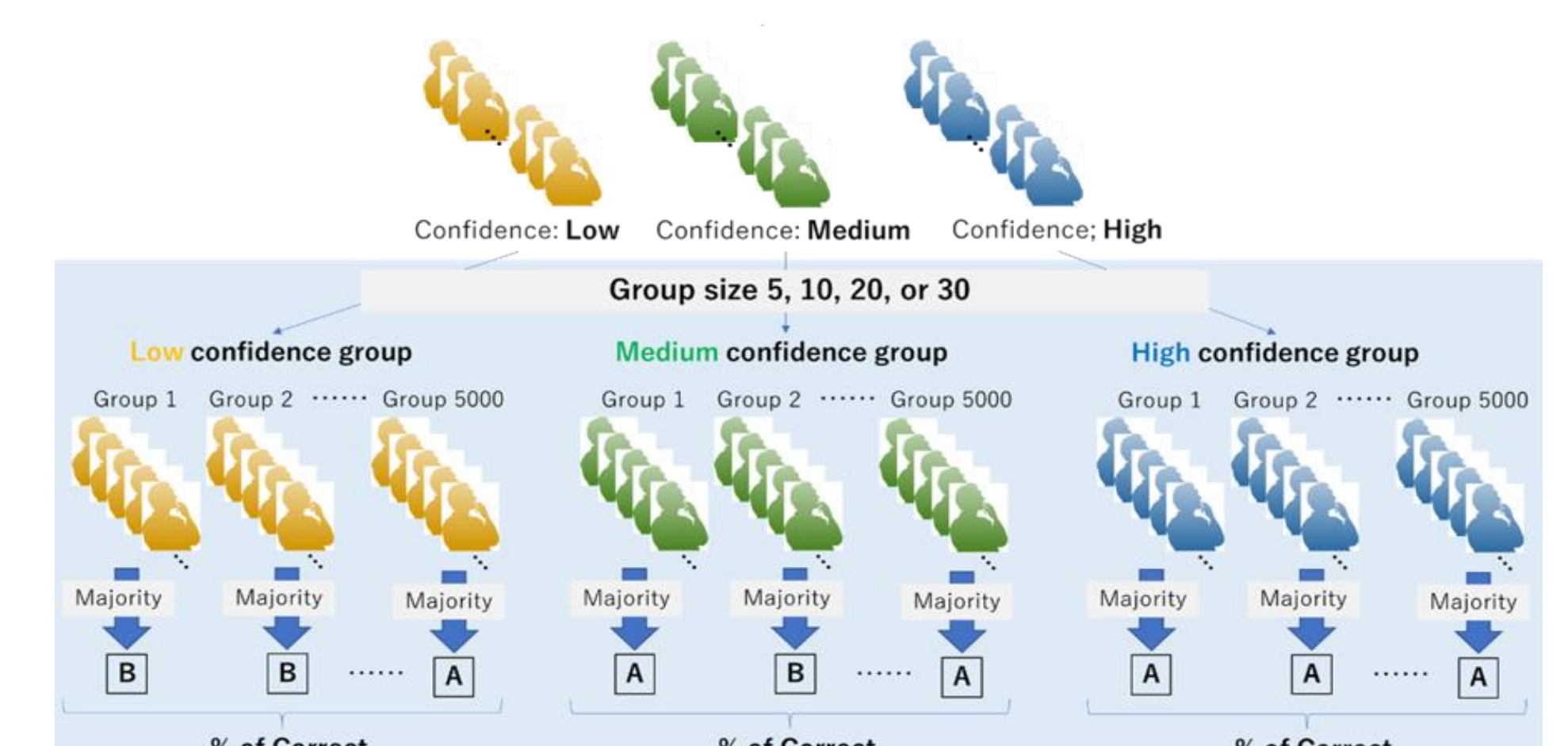


Computer simulations (hypothetical group judgments)

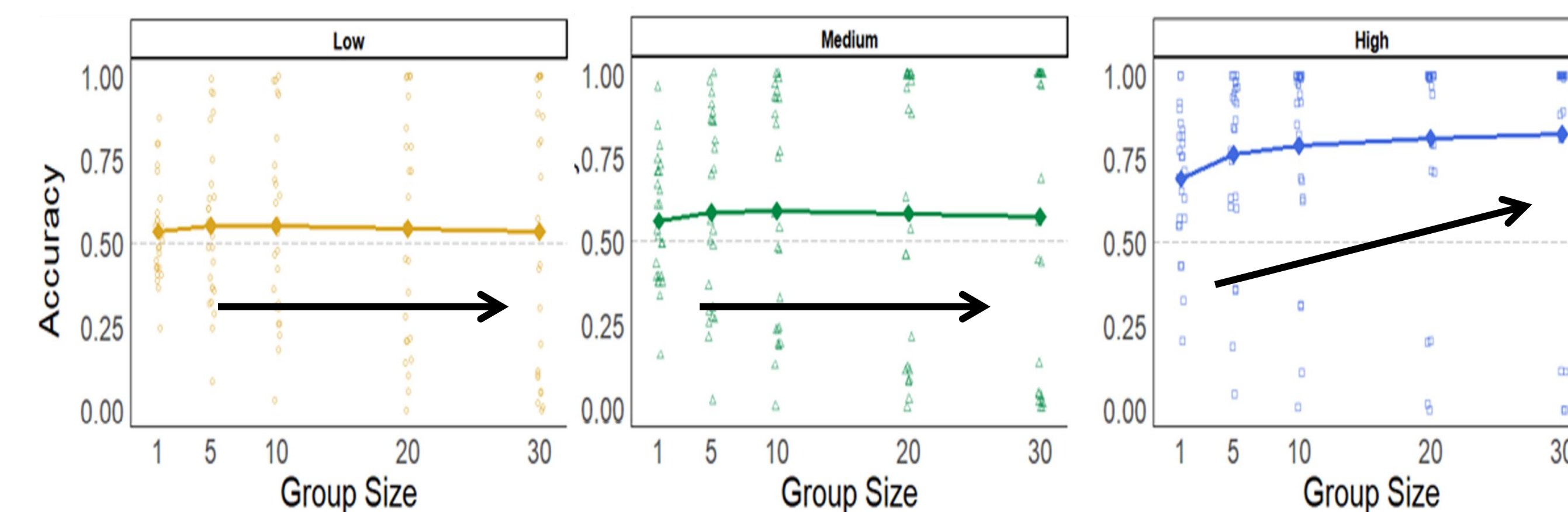
③-1 Diverse confidence (fixed group size)



③-2 Similar confidence (different group size)



Results



Medium-conf did not so improve group accuracy.

Medium-conf were unlikely to achieve "wisdom of crowds"