

Your Turn: Charting the Course for the Future of Cognitive-AI Benchmarking (CAB)

Thanks for participating in our workshop! Once you settle into your group, we suggest kicking things off with a quick round of introductions, then nominating a "scribe" to take notes from the group discussion in this worksheet. Scribes: please make a copy of this worksheet (File>Make a Copy) first and share it with the other members of your group!

Question	Answer
<p>TARGET PHENOMENON. What cognitive phenomenon is ripest for Cognitive-AI Benchmarking in your area of interest?</p> <p>To help brainstorm:</p> <ul style="list-style-type: none">• <i>What's a capacity humans possess that you believe current AI approaches either fall short at or are not human-like?</i>• <i>To what degree do points of current theoretical disagreement in your area coincide with divergence between AI systems?</i>	
<p>TASK DESIGN. How could you elicit the relevant behaviors from people & AI models? Specifically, what would the inputs/stimuli look like? And what specific outputs/responses would you measure?</p> <p>To help brainstorm:</p> <ul style="list-style-type: none">• <i>If you are a cognitive scientist or psychologist, can you adapt any experimental design that has previously been run in your lab?</i>• <i>If you do AI research, can you adapt any benchmark you have worked on or built?</i>• <i>What are the axes of variation for selecting stimuli that properly cover your domain of interest and can lead to development in cog-sci and AI?</i>• <i>How can you align human and AI model outputs as much as possible?</i>	
<p>EVALUATION METRICS. How is good performance defined on this task? How would you assess human-model behavioral consistency?</p>	

<p>MODEL SUITE. Which models would be most critical to evaluate on this task? And why?</p> <p>To help brainstorm:</p> <ul style="list-style-type: none">• <i>Do you need particular architectures/model properties to do the task well (ie. memory, structured object-centric inputs)</i>• <i>What are the axes of variation for selecting models that properly cover your domain of interest and can lead to development in cog-sci and AI?</i>	
<p>PRACTICAL CHALLENGES. What are the main bottlenecks for getting such a CAB project off the ground? How might you overcome them?</p> <p>To help brainstorm:</p> <ul style="list-style-type: none">• <i>Do the relevant human behavioral datasets already exist? If not, are there special considerations for collecting the human data you want to collect? (i.e., getting data from infants is difficult)</i>• <i>How easily can existing AI models be adapted for your task?</i>	