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Sampling Associations with (Un)related Suggestions

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Abstract

Brainstorming suggests that generating ideas in groups can direct one's thoughts into areas that might be difficult to reach or consider, resulting in better performance than individuals working separately. However, while intuitively appealing, studies have repeatedly found no evidence for such synergy. Here, we reinvestigate group synergy in a task with simulated agents. We use state-of-the-art language embeddings to generate close or far-off semantic associates to people's ideas. This design allows us to adopt a sampling for inference perspective, where individuals produce sample ideas from a generative process (Sanborn & Chater, 2016). We hypothesize that suggestions can allow participants to create samples from previously not considered concepts, and additionally, knowledge about the diversity of solutions can spur more broad idea generation. Our work helps inform broader questions about when and why groups can expect to produce better performance than individuals.