



Can we ignore our own knowledge?

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Introduction

- Facilitated communication has been claimed to allow individuals with communication difficulties (e.g., cerebral palsy) to converse with others by having a facilitator assist them with typing answers.



Figure 1. Facilitated communication

- However, research indicates that facilitators may use their own knowledge when guiding the client's arm and hand movements (e.g., Hirshoren & Gregory, 1995; Klewe, 1993; Mostert, 2010; Wheeler, Jacobson, Paglieri, & Schwartz, 1993.) For example, when a facilitator and client were separately posed different questions, it was the facilitator's question that was answered.
- Such findings have led researchers to investigate how and why facilitated communicators would use their own knowledge when guiding the client's responses.
- One possibility is that we engage in behaviors but may not perceive them as being consciously willed — this may account for the actions of facilitated communicators (Wegner, Fuller, & Sparrow, 2003). The facilitator may have no control over using his or her own knowledge and could be unaware of having done so.
- Wegner *et al.*, (2003) used a clever method to test this possibility.
 - Students were asked a series of yes/no questions and instructed to answer them randomly. This mimics the demands made of facilitated communicators (i.e., to respond without being influenced by one's own knowledge).
 - Wegner *et al.* examined performance on 20 very easy and 8 very difficult questions in a within-subjects design.
 - For the easy questions, the rate of correct responses was significantly greater than the fifty percent level expected if the responses were random, and significantly greater than the score for the difficult questions as well.
 - This shows that participants were unable to ignore their knowledge of the correct answers.
- Our study is a replication Wegner *et al.*'s (2003) study, but with important modifications aimed at improving internal validity:
 - we verified that the participants understood the instructions to answer randomly
 - we verified the level of difficulty of our easy and difficult questions
 - we used a between-groups design to compare the difference between the easy and difficult questions
- We predicted the same pattern of results as reported by Wegner *et al.* (2003):
 - participants would answer **easy** questions correctly at a rate significantly higher than chance
 - participants would answer **difficult** questions at a rate consistent with chance (i.e., 50% correct).

Methods

- We collected pilot data from 50 undergraduates who attempted to correctly answer 80 yes/no questions. 20 **easy** questions were selected that were answered correctly by over 95% of the sample. 20 **difficult** questions were selected based on the responses not differing significantly from 50%-correct.

Sample easy questions:

- Is London the capital of China?
- Is 10 greater than 100?

Sample difficult questions:

- Is the pisiform bone found in your foot?
- Does the Beaufort scale measure the strength of rip tides?

- For the main study, data were collected from a separate sample of 70 male and female undergraduates.
- The students were told that they would be answering trivia questions. Neither the difficulty of the questions nor facilitated communication was mentioned.
- They were randomly assigned to receive either easy or difficult questions, and were run in two separate groups.
- They were instructed to answer the questions randomly, and then they were asked to write in their own words what they had been instructed to do.
 - Nine students, who showed that they misunderstood the instruction to answer randomly, were eliminated.
- For each group, the questions were read aloud and shown on a screen with a 10-second interval between questions.

Results

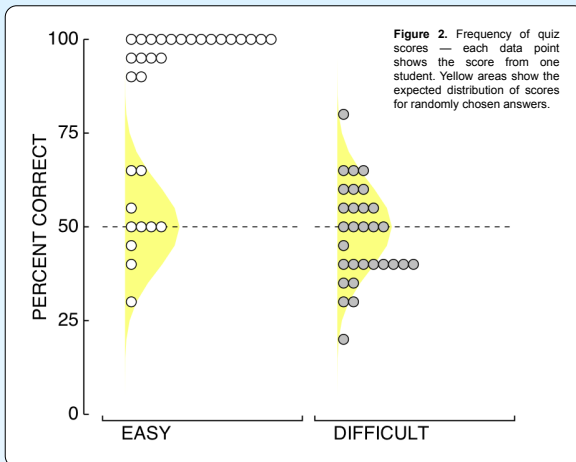


Figure 2. Frequency of quiz scores — each data point shows the score from one student. Yellow areas show the expected distribution of scores for randomly chosen answers.

- The mean number of correct answers for the easy questions (82.5%) was significantly higher than the chance level of 50%, and significantly higher than the mean score for the difficult questions (46.8%, $ps < .001$).
- The students in the **difficult** group answered the questions at rates consistent with random responding.
 - Most students are unlikely to know the answers to the difficult questions and thus they would have no knowledge that could interfere with answering randomly.
- The vast majority of students in the **easy** group answered nearly all the questions correctly. Did they understand the instructions to answer randomly?
 - Yes. The students showed this by writing down the instructions in their own words. For example:
 - "Randomly pick yes or no for 20 questions, not making a pattern."
 - "Answer 20 yes/no questions randomly."
 - "Answer 20 questions in a random manner so that we generate a random sequence."
 - Students who had not understood these instructions were eliminated

Conclusions

- As predicted, participants could not help but use their knowledge for the easy questions, despite being instructed to answer randomly.
- These results replicate those reported by Wegner *et al.*, (2003) despite substantial modifications to the procedures that improved the internal validity of the study.
- The bimodal distribution for the easy questions suggests different strategies were used to perform this task.
 - Can some people ignore their knowledge, while others cannot?
 - Could we train people to use strategies that will help them ignore their own knowledge?
- Facilitated communication offered much hope to individuals with communication difficulties and their families. However, our findings add to the mounting evidence that, in many cases, the responses conveyed during facilitated communication are coming, likely unconsciously, from the facilitator rather than the client.
- Alternative approaches to help these individuals communicate will have to be identified.

References

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