The Ebbinghaus illusion requires consciousness of the inducers



Goal

Methods

- In the Ebbinghaus illusion, perceived size of a **target** stimulus can be affected by the size of surrounding **inducing** stimuli.
- Two target stimuli presented each trial.
- Reference target always had small or small inducers.



Which target is bigger?



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Results

- consciousness of the inducing stimuli.

- An objective test of awareness revealed that in 3 out of 5 subjects, the suppression patterns eliminated the ability to distinguish the position of large vs. small inducers.
- The 2 subjects who did show some ability to distinguish between the inducers did not perform differently from other subjects in experiment 1.

Conclusions

- with, conscious perception.



Experiment 1: The Ebbinghaus illusion did not occur without

Experiment 2: Failure of the illusion was not due to dichoptic presentation of the stimuli: The illusion occurred when targets and inducers were presented dichoptically without suppression. Experiment 3: Failure of the illusion was not due to an isolated effect of the suppression patterns: the illusion occurred when targets, inducers, and suppressors were presented binocularly.



• The Ebbinghaus illusion may depend on, or share underlying processes

• An alternative explanation is that continuous flash suppression, in addition to its effect on consciousness, prevents visual information about the inducers from contributing to the Ebbinghaus effect.