Reproduction of the Asch experiment without using confederates

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Asch (1956) showed that a minority of one tended to conform to a unanimous majority even when the majority seemed to have made a wrong choice in a simple visual discrimination task. In the Asch experiments, the majority comprised confederates and only the minority participants were naïve.

Mori (2003) invented an innovative presentation method, the MORI Technique, by means of which an experimenter can present two different movies simultaneously to two groups of viewers without their noticing the duality. Mori & Uchida (2006) further developed it into a more easily used format requiring only one video projector instead of two. They named it the “fMORI Technique,” because it utilizes a “fraction” of the light beam of LCD projector. (See Figure 1.)

In this paper, the Asch experiment was replicated using the fMORI Technique instead of using confederates.

Methods

Participants: Four same-sex groups of four, one male group and three female, participated. The grouping was done by the experimenters from the participant pool. Their answering order was randomly assigned at the beginning of the session.

Stimuli: The nine stimulus sets used in Asch (1956) were reproduced in approximately the same size when projected on the screen using digital picture editing software (Adobe Photoshop). The top parts of the Standard lines were drawn in either green or magenta so that two groups of participants could see them differently to form a majority and a minority utilizing the fMORI Technique. (See Figure 2.)

Apparatus: Stimuli were presented on PowerPoint slides with a personal computer (Apple iBook) and projected by an LCD projector (EPSON ELP-730) onto a rear screen.

Rear screen: A rear screen was made from an office partition 183cm in height and 146cm in width by changing the window glass pane from a patterned one to plain ground glass (80cm x 142cm).

Layout of the apparatus: The rear screen was set about 2m away from the projector. Four chairs were placed in line side by side about 2m apart on the other side of the screen.

Polarizing sunglasses: Participants were told to wear a pair of polarizing sunglasses to protect their eyes from glare. The sunglasses were the same ones as were used in Mori & Uchida (2006). Three pairs were used to form the majority and one pair was used for the minority. The sunglasses were put on the chairs before the participants entered the laboratory. The minority participants’ sunglasses were placed on the third chair.

Results

No participants noticed the duality. The Asch experiment was successfully reproduced without using confederates.

Since the experiment has been just started, having been conducted with only four groups, it is not possible to conduct any statistical analysis. However, it has been found that one female participant in the minority showed conformity responses, and another female responded in the direction of the majority. Asch (1956) reported that the percentage of conformity was about 30% in his experiments. Therefore, it can be concluded that the present experiment reproduced successfully the Asch results themselves.

References


(MORI Kazuo, ARAI Miho)