

I Know Who You Are ! Social influence on sensitivity to subtle factors, using magic and mentalism tricks.

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BACKGROUND

According to the **Social Determinability theory** ^{1,2}, the more we think someone else is able to judge us in a situation, the more sensitive we become to different influences present in this situation.

The magicians' **technique of forcing**, which consists in subtly influencing a spectator's choice, delivers a fine way to explore this theory.

This research examines how making participants believe the experimenter has information on their personality impacts the

success rate of two forcing :

The first study used a **visual riffle force** ^{3,4}, which consists in influencing the spectator to choose a card by showing it slightly longer than the others while flipping through a deck.

The second study involved a psychological forcing called « **mental force** » ^{5,6}, in which the experimenter asked spectators to let a card come to their mind, and influenced their choice with the help of subtle gestures.

Hypotheses :

- (1) We hypothesized that the participants who thought they answered a survey predictive of their personality before the trick would choose the target card more often than when the trick was performed alone.
- (2) The same hypothesis was made for the effect of a specific sentence pronounced by the experimenter before the trick, making participants believe she had skills to evaluate and judge their personality.

01 METHODS

Participants

480 participants (240 for each study, 204 men and 276 women).

Material

2 ways were used to operationalize social determinability:

- A **survey**, presented either as a valid personality test, or a simple way to gather statistics for a researcher.

-The **sentence** «*this relies on my skills to evaluate your personality and predict which kind of choice you might make*» pronounced by the experimenter before the forcing.

Procedure

Each participant randomly assigned to a condition .

The experimenter then either performed the visual riffle force (Study 1), or the mental force (Study 2), which both influenced the participants to choose the **3 of Diamonds**.

Dependent Variable - Choice of the target card (3 of Diamonds):

Yes Vs No

1st Independent Variable - Survey:

- « Personality Test »
- « Survey for Statistics »
- None

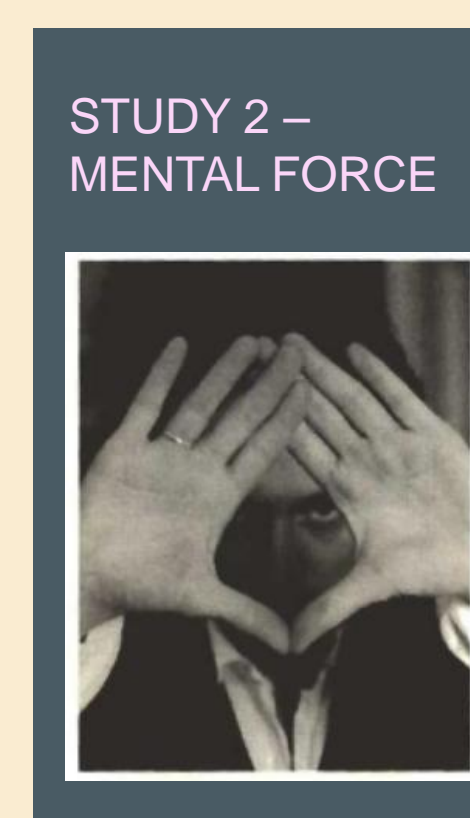
2nd Independent Variable - Sentence:

Pronounced Vs Not

VARIABLES

CONDITIONS

- (1) Control
- (2) Survey « Personality Test »
- (3) Survey « Statistics »
- (4) Sentence
- (5) Survey « Personality Test » + Sentence
- (6) Survey « Statistics » + Sentence



03 DISCUSSION

None of our hypotheses has been validated. Several possible reasons :

→ Perception of the survey : it is possible that the participants didn't perceive the survey as a valid personality test, thus creating no social determinability.

→ Student status : the experimenter presented herself as a social sciences student (and not an experimented researcher or psychologist), and this may have limited the possible effect of the social determinability.

Additional exploratory analysis showed unexpected effects :

→ Men chose the target value significantly less often in Study 1. There's a common belief among magicians that opposite sex spectators are more easily influenced. However, the vast majority of magicians are men, and it would then be a possibility that they simply noticed that women in general are more sensitive to these influences.

→ In study 1, many of the scores 2 were the 8 of Diamonds, which was the last card of the riffle. It is then possible that the survey made the participants more sensitive to a recency effect created by the position of the card, rather than the salience effect of the 3 of Diamonds created by its duration.

In study 2, it seems that the survey made the participants more sensitive only to the gestures forcing the number 3.

05 CONCLUSION

For centuries, magicians have developed diverse techniques that allow them to subtly influence spectators, and the present study sought to exploit two of these techniques in order to provide an original approach of social determinability theory.

Our results provide an insight into the complexity of the effects of social context and beliefs on the impact of subtle influences.

02 RESULTS

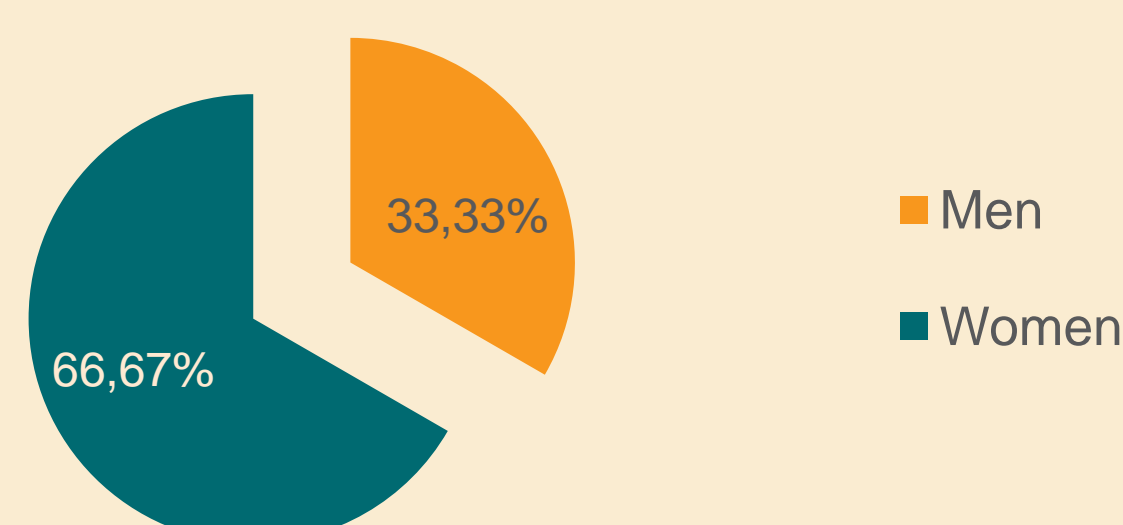
❖ Concerning our hypotheses, logistics regressions showed **no significant result** for either study.

❖ However, some more exploratory regressions showed **unexpected effects** :

Study 2 :

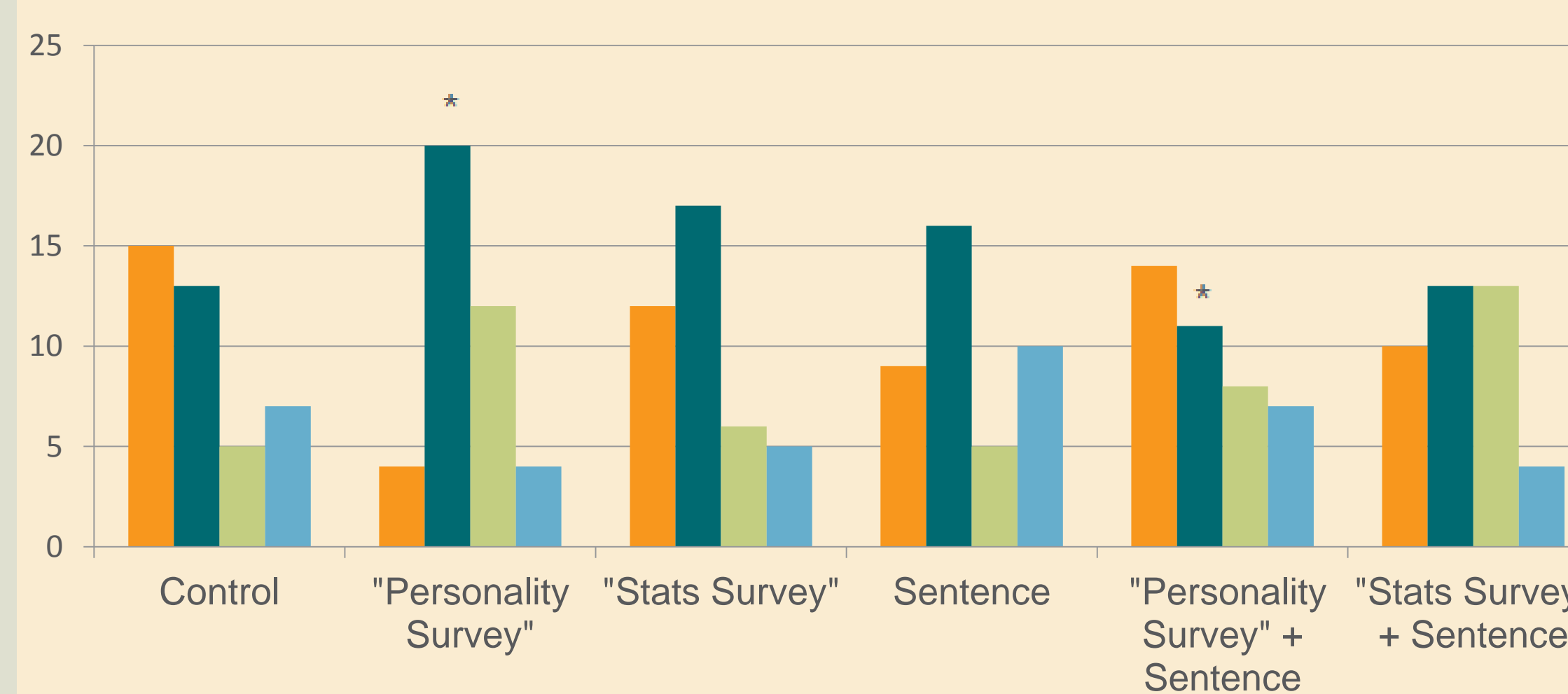
Effect of the participants' sex on the chosen value of the card ($p=0.041$, $OR=0.560$). Men chose the target value (a 3) significantly less often than women did.

Sex of the participants who chose a 3 (Study 2)



Interaction of the sentence with the survey presented as a personality test on the chosen value of the card ($p=0.05$, $OR=0.269$). When the experimenter pronounced the sentence after the participants filled the survey, this led to a decrease in the probabilities that they chose a 3 (the target value of the card).

Number of participants for each score by condition - Study 2



SCORES

We created scores from 0 to 3 for each card, depending on its characteristics.

Score of 0 : black card, of any other value than 3.



Score of 1 : black 3, or heart (target value or target color)



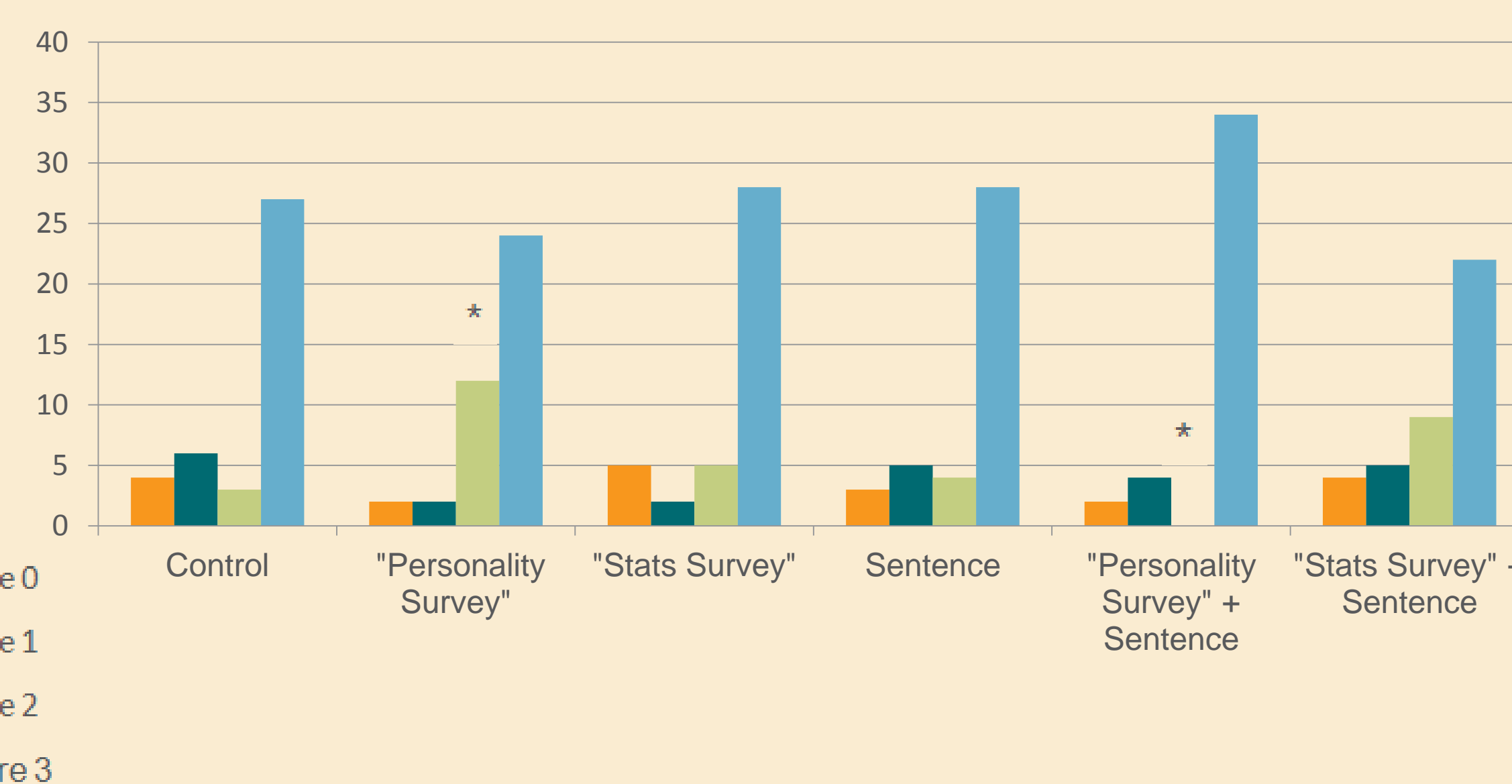
Score of 2 : diamonds, or 3 of heart (target color and target suite, or target value and target color)



Score of 3 : 3 of diamonds (target value, color, and suite).



Number of participants for each score by condition - Study 1



Study 1

The « personality survey » increased the probabilities that the participants chose a card with a **score of 2** rather than a score of 1 ($p=0.017$, $OR=12.001$), and decreased those of having a score of 3 rather than a score of 2 ($p=0.033$, $OR=0.222$).

Moreover, for the condition « personality survey » + sentence, no participant chose a card with a score of 2 .

Study 2

The « personality survey » increased the chances of having a **score of 1** rather than a score of 0 ($p=0.009$, $OR= 5.772$). The interaction of the sentence x the « personality survey » decreased these same chances ($p=0.004$, $OR=0.077$).

References

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