Remembered Target Detail Influences Confidence more than Recognition Accuracy

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Abstract

Descriptive cues may be recognized as old, yet confidence is thought to be based on recognition of remembered details (even if related to the less). Utilizing a 2 x 2 x 2 factorial design, we presented at test pairs similar to the target (A), similar to a previously studied picture (A+), or dissimilar (B). We assessed whether perceptions of vividness (but not the detial of recognition, or familiarity) influenced confidence. Confident and vividness judgments for recognized target pictures were obtained in a 100 words associate (A+T), mean age (C), and also responded to whether the image was remembered (i.e., was self-focusing consciousness included) to investigate how recognition or remembering the picture influenced confidence. For A+T test pairs, vividness judgments showed accuracy was lower when the recognized picture was also remembered, raising a issue for previously reported vividness accuracy dissociations. When individual trials were studied, larger vividness correlated with confidence (r = 0.25). Confidence whether accurate or not was higher after remembering the target than if it was recognized. Not recognizing the item was the common reason for declines in the absence of memory for the target. Our data suggest the method detail as vividness influences confidence more than accuracy does.

Table 1

<table>
<thead>
<tr>
<th>Number (%) of trials by remember and recognition accuracy</th>
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<tbody>
<tr>
<td>Remember</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>no</td>
</tr>
<tr>
<td>yes</td>
</tr>
<tr>
<td>Total</td>
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<td>2194</td>
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</table>

Confidence: interaction of remembering and recognition accuracy?

Figure 1

When the picture selected as old is not remembered, there is no significant change in confidence by recognition accuracy (p > .16). Vividness showed a similar pattern (p > .05).

Do Accuracy depend on Confidence and Remembering? (CAC analysis)

Figure 2

Overall, accuracy improved only with high confidence > 70%, whether or not the recognition stimulus was remembered. Error bars = 95% C.I.

CAC Analysis: Does test pair condition affect the confidence-accuracy relationship?

Figure 3

Accuracy improved only at high levels of confidence. For A+T (paired learning), remembering was important for correct recognition. For A+T test pairs (if picture similar, but not identical to a picture shown during study), illustrated for component accuracy, was higher if the recognized picture was not remembered. A+T pairs, remembering was important for high-confidence accuracy recognition. Error bars = 95% C.I.

Moderation Analysis: Remembering, not recognition accuracy, moderates the effect of vividness on confidence

Figure 4

Confidence and vividness were very strongly correlated both on the image is not remembered (r = 0.75) and high when the image is remembered (r = 0.75).

Does Accuracy depend on Confidence and Remembering? (CAC analysis)

Figure 5

Remember, Yes or No?

Figure 6

Yes or No?

Figure 7

Participants received detailed instruction on what was meant by a remember + yes response and were asked to answer remember + no if none of the stimuli depicted The lowest percentage of responses were based on a feeling of just knowing the picture was old.

Mediation Analysis: Vividness largely mediates the effect of remembering on confidence

Figure 8

Conclusions

- Confidence is higher when the target is remembered due to the quality of memory for target detail, i.e., vividness. Correlation between vividness and confidence is very large.
- The effect of remembering on confidence is largely indirect, 77% mediated through vividness.
- Recognition accuracy has less effect on confidence than remembering, and no significant effect if the target is not remembered.
- Confident recognition does not always mean that recognition is accurate.
- False remembering of similar lures causes an accuracy-confidence dissociation.