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Feeling of Knowing and Retrieval Failure: Tip-of-the-Tongue State is Not the Only Option

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Abstract

We investigated whether individuals are able to differentiate being in a tip-of-the-tongue state from the metacognitive experience of knowing information, but being unable to recall it. Results indicate that being unable to recall known information is separate from, and more common than, experiencing a tip-of-the-tongue state.

Background

Although past research has found a dissociation between tip-of-the-tongue (TOT) states and feeling of knowing (FOK)¹, much previous research on the tip-of-the-tongue phenomenon presents participants with three response options: KNOW (participant knows the answer), DO NOT KNOW (participant does not know the answer), and TOT (participant is in a tip-of-the-tongue state)². The purpose of our study was to determine whether participants could differentiate the metacognitive experience of a TOT state from the general feeling of knowing information, but being unable to recall it.

References

- 1 Yaniv, I., & Meyer, D. E. (1987). Activation and metacognition of inaccessible stored information: Potential bases for incubation effects in problem solving. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 13(2), 187-205.
- 2 Bacon, E., Schwartz, B. L., Paire-Ficout, L., & Izaute, M. (2007). Dissociation between the cognitive process and the phenomenological experience of TOT: Effect of the anxiolytic drug lorazepam on TOT states. *Consciousness and Cognition*, 16, 360-373.

Method

Participants:

23 Butler University undergraduate students.

Procedure:

Participants were given two “clues” and then asked to indicate how well they knew the answer (i.e., make a feeling-of-knowing judgment) within five seconds. They were then given four options from which to choose the correct answer. Each participant completed 200 of these trials.

Sample Clues:

Lead singer - Rolling Stones



Feeling of Knowing (FOK) Rating

Know:	“I know the answer. I could tell you what it is right now and I am certain I could accurately select if from four choices.”
Tip-of-the-Tongue State (TOT):	“I am on the verge of remembering the answer, but I can’t quite think of it and I am certain that I could accurately select it from four choices.”
Know, but Cannot Recall (KCR):	“I feel like I know the answer, but I can’t think of it right now; I am fairly confident that I could accurately select it from four choices.”
Do Not Know (DK):	“I do not know the answer and I never did; I am not confident that I could accurately select it from four choices.”

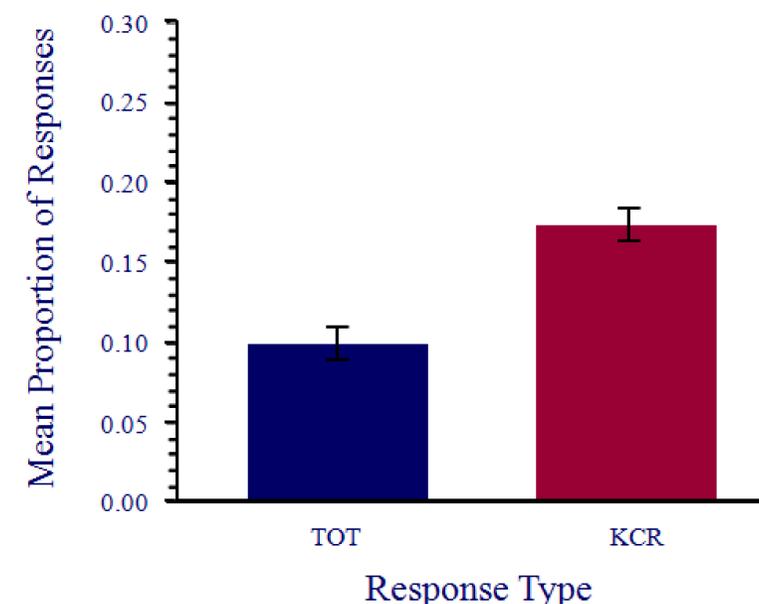
Sample Answer Choices:

- | | |
|-----------------|----------------|
| a. Steven Tyler | c. Kurt Cobain |
| b. Jim Morrison | d. Mick Jagger |

Results

We predicted that individuals would be able to differentiate between being in a tip-of-the-tongue state and knowing, but being unable to recall, information. That is, we expected individuals to report a higher proportion of KCR than TOT responses.

The results show that individuals reported a higher proportion of KCR responses ($M_{KCR} = .17$) than TOT responses ($M_{TOT} = .10$), $t(22) = 3.97$, $p < .001$.



Conclusions

- Participants did indeed report a higher proportion of “know, but cannot recall” (KCR) responses than of “tip-of-the-tongue” (TOT) responses, indicating that the metacognitive experience of a TOT state is phenomenologically distinct from a KCR situation.
- This finding has implications for how researchers investigate metamemory and the underlying assumptions that inform additional research on the ability to monitor one’s ability to retrieve information.