

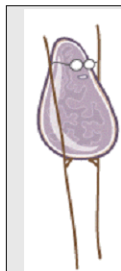
# THE GENETICS OF LEARNING AND MEMORY

## False Memories

How do witnesses get away with not telling the truth? While this is sometimes a question of ethics, it can also be simply a question of false memory – like the false memory you may have just experienced.

The **Rate Your Memory** quiz you just took is based on the research of two scientists, Henry Roediger and Kathleen McDermott, who were interested in understanding how memories get confused. Their research has shown that while subjects remember less than half of the correct words on the list, they *claim* to remember the false target words for more than half of the lists!

Why do people get so confused? Based on their research, Roediger and McDermott have come up with two explanations for the false memories.

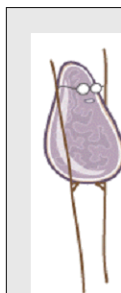


Evidence and explanation are different things. Scientists construct explanations based upon what is known in order to understand or account for new evidence. Can you think of any other explanations for this evidence?

One explanation is that seeing so many words associated with “sleep” may activate the “sleep” category in your memory. When you are asked to recall the words, you recall the whole “sleep” category in your memory, not just the words on the list.

Another explanation is that when you see the words, some of them trigger an association with

the word “sleep”. When you are asked to recall the words, it is difficult to remember if the word “sleep” was actually on the list, or whether it was just associated with the words on the list.



All of our knowledge is based upon existing ideas. Because of this, what we already know influences what we learn.

Either way, remembering “sleep” shows that our memory is accurate in remembering the *meaning* of the list, but maybe not the precise words. It also shows us that our existing knowledge is a powerful force in making new memories – sometimes helping us remember, and sometimes fooling us into making false memories.

So, if you think a witness is not telling the truth, you should ask yourself: is it a lie or a case of false memory...

## References

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