

‘Artificial’ memory and identity’: Scientists create memories ‘indistinguishable’ from natural ones—in mice

Experience and memory are inexorably linked, or at least they seemed to be before a recent [report](#) on the formation of completely artificial memories. Using laboratory animals, investigators reverse engineered a specific natural memory by mapped the brain circuits underlying its formation. They then “trained” another animal by stimulating brain cells in the pattern of the natural memory. Doing so created an artificial memory that was retained and recalled in a manner indistinguishable from a natural one.

Memories are essential to the sense of identity that emerges from the narrative of personal experience. This study is remarkable because it demonstrates that by manipulating specific circuits in the brain, memories can be separated from that narrative and formed in the complete absence of real experience.

...

The research provides some fundamental understanding of how memories are formed in the brain and is part of a burgeoning science of memory manipulation that includes the transfer, prosthetic enhancement and erasure of memory. These efforts could have a tremendous impact on a wide range of individuals, from those struggling with memory impairments to those enduring traumatic memories, and they also have broad social and ethical implications.

Read full, original post: [A Successful Artificial Memory Has Been Created](#)