

## Study suggests virgin male mice prefer watching violence to watching sex

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Credit: martha sexton/public domain

(Phys.org)—A trio of researchers working in Japan has found via experiments they conducted, that male virgin mice prefer to watch



videos of other mice fighting with one another, than videos of mice having sex. In their paper published in the journal *Animal Cognition*, Shigeru Watanabe with Keio University, Kazutaka Shinozuka with the RIKEN Brain Science Institute and Takefumi Kikusui with Azabu University, all in Japan, report on behavioral experiments they conducted with house mice and what they believe their findings suggest about mouse behavior.

To better understand why humans behave the way they do, scientists sometimes study the behavior of other animals—in this case, the researchers set up experiments with common house <u>mice</u> to learn more about what drives them to make behavioral decisions.

The researchers conducted two main types of experiments. In the first, test mice were shown a loop of video on an iPhone that randomly depicted mice sniffing, fighting or having sex with one another. Those mice were then transferred to a cage that had side pockets that mice could enter and stay for as long as they liked—the attraction was video playing on an iPod. Two such trials were conducted, one where mice could watch either sniffing or sex, the other where they could watch either fighting or sex. The team found that on average, the mice spent 41 percent of their time watching sex compared to 34 percent sniffing in the first exercise and 40 percent of their time watching fighting versus 35 percent watching sex in the second—this indicates, the team claims, that the mice prefer to watch fighting most, then sex, then sniffing. Subsequent trials involved showing different clips of the same types of activities and offering rewards to the mice when they learned to recognize the difference between behaviors, to prove that they were responding to specific activities and not just the images in one video.

In the second series of exercises, the researchers once again allowed the mice to choose the same type of videos, but this time the mice got an injection of morphine as they entered their miniature theater. Not



surprisingly, the <u>researchers</u> found that the mice tended to come back to *that* theater no matter what was playing.

**More information:** Shigeru Watanabe et al. Preference for and discrimination of videos of conspecific social behavior in mice, *Animal Cognition* (2016). DOI: 10.1007/s10071-016-0953-x

## **Abstract**

We showed mice videos of three conspecific social behaviors, namely sniffing, copulation, and fighting, in pairwise combinations using iPods and evaluated preference as determined by time spent in front of each iPod. Mice preferred the copulation video to the sniffing video, the fighting video to the sniffing video, and the fighting video to the copulation video. In Experiment 1a, we used a single video clip for each social behavior but used multiple video clips for each social behavior in Experiment 2a. Next, we trained mice to discriminate between the fighting and copulation videos using a conditioned-place-preference-like task in which one video was associated with injection of morphine and the other was not. For half of the subjects, the fighting video was associated with morphine injection, and for the other half, the copulation video was associated with morphine injection. After conditioning, the mice stayed longer in the compartment with the morphine-associated video. When tested with still images obtained from the videos, mice stayed longer in the compartment with still images from the video associated with morphine injection (Experiment 1b). When we trained mice with multiple exemplars, the subjects showed generalization of preference for new video clips never shown during conditioning (Experiment 2b). These results demonstrate that mice had a preference among videos of particular behavior patterns and that they could discriminate these videos as visual category. Although relationship between real social behaviors and their videos is still open question, the preference tests suggest that the mice perceived the videos as meaningful stimuli.



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