

# New Research From Psychological Science

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Read about the latest research published in *Psychological Science*:

## [The Common Time Course of Memory Processes Revealed](#)

*John R. Anderson, Jelmer P. Borst, Jon M. Fincham, Avniel Singh Ghuman, Caitlin Tenison, and Qiong Zhang*

What happens in the short period of time during which someone retrieves a well-known fact? Anderson and colleagues used magnetoencephalography (MEG), a neuroimaging technique that allows the mapping of brain activity on a millisecond-by-millisecond basis, to identify the stages of generating answers from memory, their duration, and their brain location. In two experiments, while participants were in a MEG device, they were asked either to recognize previously learned word-pairs or to answer arithmetic problems by recalling previously solved problems. By using hidden semi-Markov chain models and multivariate pattern analysis, the authors identified similar “bumps” of activity in both tasks. These bumps took place in similar brain regions and had similar duration during the course of the memory processes in both experiments, despite the fact that one involved the processing of words and the other involved the processing of numbers. Moreover, the bumps showed a separation between the retrieval stage that identified relevant information in memory and the decision stage that determined the response. These results support a two-stage model of memory recognition and recall.

## [In Defense of the Commons: Young Children Negatively Evaluate and Sanction Free Riders](#)

*Fan Yang, You-Jung Choi, Antonia Misch, Xin Yang, and Yarrow Dunham*



Contributing to the common good at some personal cost is at the heart of human society, but *free riders* can benefit from others’ contributions without paying costs themselves. In several studies, Yang and colleagues explored the development of the tendencies to track and sanction free riders by testing 4- to 5-year-olds and 6- to 10-year-olds. In several studies, the authors presented children with scenarios in which a group could get large rewards if all members contributed or small rewards if only some members contributed. They then indicated each member’s contribution and asked children to judge each group member. Across six studies, results indicated that children as young as 4 years old negatively evaluated the free riders. When given a chance to punish the free riders, children would do it, and they would also not choose to collaborate or reward free riders. The intentionality of *free riding* only mattered for older children who did not evaluate an unintentional free rider as harshly as an intentional one. These results indicate a strong and early-emerging tendency to negatively evaluate and punish free riders.

## [Reexamining the Link Between Economic Downturns and Racial Antipathy: Evidence That Prejudice Against Blacks Rises During Recessions](#)

*Emily C. Bianchi, Erika V. Hall, and Sarah Lee*



It has been suggested that economic downturns might heighten animosity and violence toward people dissimilar to oneself, intensifying racial discord. To test this suggestion, Bianchi and colleagues analyzed the answers of White respondents participating in the American National Survey, from 1964 to 2012, regarding perceptions towards Blacks. The authors compared the respondents' perceptions of Black people across the years in relation to the economic conditions of each year, as measured by the unemployment rate of the entire population. In years of higher unemployment, White respondents reported feeling less warmly toward Black people, regardless of the employment status or education level of the respondents. This pattern of results was also obtained in another study that used implicit measures of racism. Furthermore, Bianchi and colleagues also found that in bad economic years, Black musicians were less likely to have a recording enter the *Billboard* top 10 American hits, and Black politicians were less likely to be elected to the U.S. House of Representatives. These results suggest an association between bad economic conditions and negative attitudes and greater discrimination toward Black individuals.