Natália Lisandra Santos Fernandes

William James Center for Research

Adaptive memory: The mnemonic value of contamination

Humans likely evolved an adaptive disease avoidance system, the Behavioral Immune System, to mitigate the fitness costs posed by pathogens. We investigated the cognitive aspect of this system, specifically if human memory preferentially retains potentially contaminated items. In a series of studies, participants were shown pictures of objects described to have been touched by sick or healthy people. Half of the objects were accompanied with a short description of a symptom of sickness or with a face containing signals of infectious diseases (contamination condition); the other half of the objects were presented with a description of a physical characteristic or with a healthy-looking face (non-contamination condition). During the encoding phase participants had to decide if the object had interacted with a sick or a healthy person. Then, after a short distractor task, participants were given a surprise free recall task for the objects. Objects "touched" by sick people were better remembered than those "touched" by healthy people. When the faces were described as being of actresses using make-up to represent the disease-connoting cues, the effect was no longer obtained. These results reinforce the idea of an adaptive memory functioning as it promotes the retention of potential life-threatening elements.