

Initial research into 'Proust Phenomenon' reveals link between memories and smells

January 30 2012, by Bob Yirka



Image: Wikipedia.

(Medical Xpress) -- Most everyone has had the occasion of breathing in an odor and suddenly finding themselves lost in the reverie of a memory from long ago; the smell of fresh baked bread perhaps bringing back mornings at Grandma's house or a certain perfume that always brings back a certain time in high school. Such odor/memory links are known as the "Proust Phenomenon" in honor of Marcel Proust, the French writer who romanticized the memories evoked by the smell of a madeleine biscuit after soaking in tea, in his novel, *À la recherche du temps perdu*. Oddly enough, no one has until now, done much of any research into this phenomenon. Now researchers from Utrecht University in The Netherlands have found that, as they describe in their paper published in *Cognition & Emotion*, when some people are exposed

to a memorable event, memories of it are more vivid when there is an associated odor.

To test the theory that memories brought to mind by odors are more vivid than are memories associated with other sensory triggers, the team of Marcel van den Hout, Monique Smeets and Marieke Toffolo subjected 70 female volunteers to a short video of unpleasant, yet memorable events, such as car crashes or news of genocide in Rwanda. While the volunteers were watching the video, cassis was sprayed into the room to provide a unique [odor](#) and colorful lights were displayed on a wall, all while soft music played in the background. The team then followed up with the volunteers a week later, exposing them in turn to the cassis odor, the lights and the music as they asked questions about the video they had seen a week earlier. The researchers found that when smelling the cassis odor or seeing the same colorful lights they'd noticed when watching the videos, the volunteers described their memories of the things they'd witnessed on the videos as much more vivid. They also found that exposure to the music however, was comparable to not having any of the stimuli offered at all as they answered the questions.

The team says that while this simple experiment appears to support a linkage between the vividness of memories and odors or lights, it's not really a proof of the Proust Phenomenon; to do that would require a much more comprehensive test where volunteers were tested to the extent that researchers could learn of certain stimuli that could lead to the evocation of memories, than offering up those stimuli to test them against one another, rather than simply testing the vividness of memories about a particular event. Thus it's more likely these findings will serve as jumping off point for further research.

More information: Proust revisited: Odours as triggers of aversive memories, *Cognition & Emotion*, Volume 26, Issue 1, 2012.

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Abstract

According to the Proust phenomenon, olfactory memory triggers are more evocative than other-modality triggers resulting in more emotional and detailed memories. An experimental paradigm was used to investigate this in aversive memories, similar to those experienced by patients with posttraumatic stress disorder. Seventy healthy participants watched an aversive film, while simultaneously being exposed to olfactory, auditory and visual triggers, which were matched on intensity, valence, arousal and salience. During a second session one week later, participants were randomly exposed to one of the three triggers, and asked to think back about the film and to rate the resulting memory. Results revealed that odour-evoked memories of aversive events were more detailed, unpleasant and arousing than memories evoked by auditory, but not visual, triggers.

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