

Popular songs can cue specific memories, psychology research shows

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Whether the soundtrack of your youth was doo-wop or disco, new wave or Nirvana, psychology research at Kansas State University shows that even just thinking about a particular song can evoke vivid memories of the past.

"We thought that actually hearing the song would bring back the most vivid memories," said Richard Harris, professor of psychology at K-State. "But in our study there wasn't a lot of difference in memory between those who heard the song and those who didn't. What we determined was happening is that you already know the song and you're hearing it in your mind."

Harris and Elizabeth Cady, a 2006 K-State doctoral graduate in psychology, recently published a study of music as a memory cue in the journal *Psychology of Music*. J. Bret Knappenberger, a 2004 K-State bachelor's graduate in psychology, also was co-author.

Harris said the study fit his other research on the intersection of media and memory. In another project, Harris explored why people like to quote movies. He said the project with Cady was one of the first times his research delved into the medium of music.

"Most people have this idea that music can be a powerful memory cue," Harris said. "You hear a song on the radio and it brings up memories of senior prom or graduation. That's why oldies stations are so popular -- not because the music is good but because it reminds us of specific times in our lives."

The researchers wanted to understand whether memories were cued by actually hearing the song or by thinking about it in other ways. They tested 124 subjects between the ages of 18-20 in spring 2003. A pilot study had the subjects list songs from five stages of life: early childhood, grade school, middle school, high school and college.

In the second part of the study, the subjects were given a short list of the songs that were chosen with the most frequency in the pilot study. The subjects were asked to pick one song from each category that had a strong memory attached to it, write about the memory and rate how vivid it was.

Harris said that he and Cady were surprised at how many participants reported strong memories associated with the same song. For the grade-school era, 26 percent of participants had strong memories associated with Vanilla Ice's song "Ice Ice Baby." For middle school, 36 percent reported strong memories associated with Coolio's "Gangsta's Paradise."

A control group was given only the names of the songs, while test groups either heard short clips of the songs, read the lyrics or saw art from the album or a photo of the artist. Harris said the vividness of memories didn't vary much from one group to another, leading the researchers to determine that the subjects were "hearing" the song by being reminded of it in one way or another.

"Music is a very emotional stimulus," he said. "It's autobiographical in that we remember events from a long time ago with strong emotion. These pop songs were played many times, so there's a lot of repeat presentation."

Although many of the songs, like "Gangsta's Paradise," for instance, place the memories at a particular point in time, Harris said some of the responses reflected music that is popular during a certain stage of life -- the "Happy Birthday" song in childhood, for instance. Even though "Eye of the Tiger" was released in 1982, before the subjects were born, 24 percent reported that it provoked a strong memory of high school sporting events.

Harris said that music can be a powerful memory cue because it's multimodal. That is, it combines words and instrumentation, for which we generally

use different sides of our brains.

"Music is a rich stimulus," Harris said. "If we can't remember the words, we remember the music. I can remember advertising jingles from my childhood, but I don't remember the slogans without the music. Music may be something that our brains are primed to understand and enjoy in the same way we're primed to understand language, although language is much more fundamental."

Source: Kansas State University

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