

TRACK 23 TRANSCRIPT

Sociology



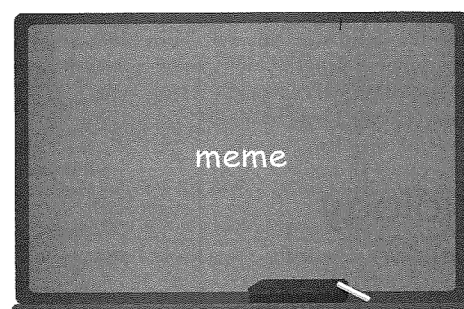
Narrator

Listen to part of a lecture in a sociology class.

Professor

Have you ever heard the one about alligators living in New York sewers? The story goes like this: a family went on vacation in Florida, and bought a couple of baby alligators as presents for their children, then returned from vacation to New York, bringing the alligators home with them as pets. But the alligators would escape and find their way into the New York sewer system where they started reproducing, grew to huge sizes and now strike fear into sewer workers. Have you heard this story? Well, it isn't true and it never happened, but despite that, the story's been around since the 1930s.

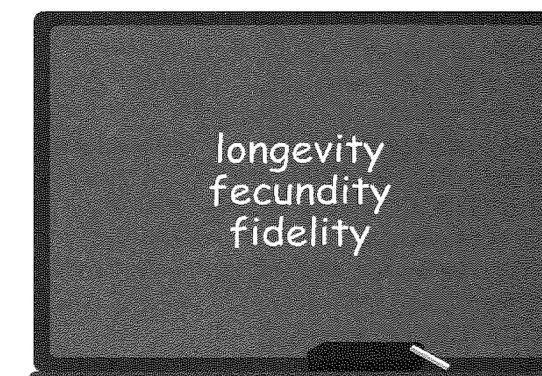
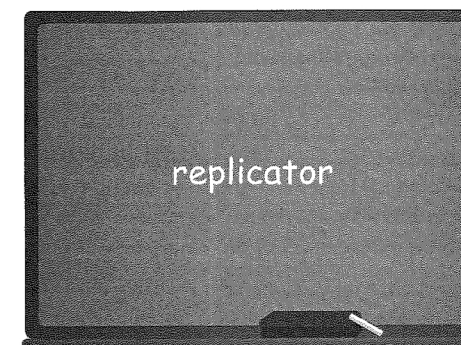
Or how about the song "Twinkle, twinkle, little star"? You know "Twinkle, twinkle, little star, how I wonder what you are . . ." Well, we've all heard this song. Where am I going with this? Well, both the song and the story are examples of memes, and that's what we'll talk about, the theory of memes.



A meme is defined as a piece of information copied from person to person. By this definition, most of what you know . . . ideas, skills, stories, songs . . . are memes. All the words you know, all the scientific theories you've learned, the rules your parents taught you to observe . . . all are memes that have been passed on from person to person.

So what? . . . you may say. Passing on ideas from one person to another is nothing new . . . Well, the whole point of defining this familiar process as transmission of memes is so that we can explore its analogy with the transmission of *genes*.

As you know, all living organisms pass on biological information through the genes. What's a gene? A gene is a piece of biological information that gets copied, or replicated, and the copy, or replica, is passed on to the new generation. So genes are defined as replicators . . .



Genes are replicators that pass on information about properties and characteristics of organisms. By analogy, *memes* also get replicated and in the process pass on cultural information from person to person, generation to generation. So memes are also replicators. To be a successful replicator, there are three key characteristics: longevity, fecundity, and fidelity. Let's take a closer look . . .

First, longevity. A replicator must exist long enough to be able to get copied and transfer its information. Clearly, the longer a replicator survives, the better its chances of getting its message copied and passed on. So longevity is a key characteristic of a replicator. If you take the alligator story, it can exist for a long time in individual memory—let's say my memory. I can tell you the story now, or ten years from now. The same with the "Twinkle, twinkle" song. So these memes have longevity, because they're memorable, for one reason or another.

Next, fecundity. Fecundity is the ability to reproduce in large numbers. For example, the common housefly reproduces by laying several thousand eggs. So each fly gene gets copied thousands of times. Memes? Well, they can be reproduced in large numbers as well. How many times have you sung the "Twinkle, twinkle" song to someone? Each time you replicated the song—and maybe passed it along to someone who didn't know it yet, a small child maybe.

And finally, fidelity. Fidelity means accuracy of the copying process. We know fidelity is an essential principle of genetic transmission. If a copy of a gene is a bit different from the original, that's called a *genetic* mutation, and mutations are usually bad news. An organism often cannot survive with a mutated gene—and so a gene usually cannot be passed on unless it's an exact copy. For *memes*, however, fidelity is not always so important. For example, if you tell someone the alligator story I told you today, it probably won't be word for word exactly as I said it. Still, it will be basically the same story, and the person who hears the story will be able to pass it along. Other memes are replicated with higher fidelity, though—like the "Twinkle, twinkle" song? It had the exact same words twenty years ago as it does now. Well, that's because we see songs as something that has to be performed accurately each time. If you change a word, the others will usually bring you in line. They'll say, "That's not how you sing it," right?

So, you can see how looking at pieces of cultural information as replicators, as memes, and analyzing them in terms of longevity, fecundity, and fidelity, we can gain some insight about how they spread, persist, or change.