

The magic of movies not tied to using latest technology according to new research

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Credit: Institute for Operations Research and the Management Sciences

In the nearly 60 years between the 1939 release of Hollywood's first animated movie, *Snow White and the Seven Dwarves* and modern hits like *Toy Story*, *Shrek* and more, advances in animation technology have revolutionized not only animation techniques, but moviemaking as a whole. However, a new study in the *INFORMS* journal *Organization Science* found that employing the latest technology doesn't always ensure creative success for a film.

In his study, "Drawing *Snow White* and Animating *Buzz Lightyear*:"

Technological Toolkits Characteristics and Creativity in Cross-Disciplinary Teams," Pier Vittorio Mannucci of the London Business School looked at 218 animated movies produced in the U.S. and released in theaters between 1978 and 2012.

Of these 218 films, he focused on the core production team, consisting primarily of the producer, director, writer, editor, cinematographer, production designer, composer and art director. He then identified the [technological tools](#) that each core team member knew how to use, as well as their level of expertise with each one. He also took into account the primary animation tool utilized for in each movie, for example, cel animation, computer animation, motion capture, and clay or puppet animation.

To gauge the level of creativity achieved by a movie's team, Mannucci recruited two expert critics with extensive experience in movie review, particularly within the animation industry. Working anonymously and independently, the critics provided a rating for each of the 218 [movies](#) on a scale between 1-5. The higher the score, the more creative the film was considered to be.

The study found that the most creatively successful teams were often the ones whose members possessed a wider variety of technological tools, even if their experience level was only moderate, or their technological toolkits were commonly represented in other movie production teams.

Production teams whose members' experience was limited to the primary animation tool, even if they were considered experts in the technology, produced less creative films.

"[However,] teams that utilized a new technology as their primary animation tool only found creative success when it was combined with more commonly or widely used tools," said Mannucci. "An example of

this was the team that created Toy Story, who achieved great success by pairing computer graphics, which at the time was a new [tool](#) for animators, with more traditional cel animation."

More information: Pier Vittorio Mannucci. Drawing Snow White and Animating Buzz Lightyear: Technological Toolkit Characteristics and Creativity in Cross-Disciplinary Teams, *Organization Science* (2017). [DOI: 10.1287/orsc.2017.1141](https://doi.org/10.1287/orsc.2017.1141)

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