Researchers develop method for video promo clips via facial expression tracking

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Credit: CC0 Public Domain

Ever-expanding viewing options make it increasingly harder for a movie

or television series to stand out in a saturated market. With trailers alone not drawing enough attention, marketers increasingly depend on shorter video snippets—video clips—to promote content across a variety of digital channels, including ones without sound.

But that hyper-short video format presents a challenge—tackled by researchers from the University of Maryland, Netflix, Harvard Business School and Santa Clara University. They have developed a method to effectively compress the plot of a feature-length film in just a few, sometimes, silent seconds. It's described via Video Content Marketing: The Making of Clips, published in the July 2018 issue of the *Journal of Marketing*.

"It's not enough to simply lift the first few scenes of the trailer," says co-author and marketing professor Michel Wedel, at Maryland's Robert H. Smith School of Business. But that's what many content creators have been doing.

Wedel and his co-authors—Xuan Liu (Netflix), Savannah Wei Shi (Santa Clara University) and Thales Teixeira (Harvard)—conducted extensive field experiments, using a web-based facial-expression tracking system to study the emotional responses of volunteers in real time while they watched comedy movie trailers. The researchers used the data to predict how likely those viewers—and countless others—were to see the film.

The findings not only helped researchers detail what key elements are contained within the most effective trailers, they also helped the authors calibrate a highly effective model for slicing trailers into short but compelling video clips, of just 10, 20 or 30 seconds. The method, they say, improves upon the current hands-on approach to making clips, and can be automated.

It is the first known research to develop a model for editing trailers to produce short promotional clips, Wedel says.

The research focuses on trailers for comedy films as an illustration. Comedy has been Hollywood's leading genre in the past two decades, with a market share of more than 20 percent and an average gross revenue of about $20 million per film.

While not all moments in the trailer or clip are expected to have a huge impact, the start, peak, end and trajectory of audio and emotions matters. The researchers say their integrated model can be used to produce optimal short movie clips for use in emails, messages, social media, and in the apps, landing pages and user interfaces of content providers.

By studying the timing and intensity of the emotion, the researchers say, marketers can create clips that have the potential to be even more effective than the original trailers, with some clips aimed at platforms that support sound (such as those on IMDB.com) and other aimed for those that don't (such as Facebook).

The research finds that audiences generally don't like comedy trailers to contain too many scenes or to be too fast-paced. The same held true in shorter clips, the researchers found. A clip with a larger number of scenes resulted in a lower level of happiness, and consequently, a lower number of people who expressed a desire to see the film.

The sequence of scenes also had an impact. When the key scene (typically the longest scene) is placed toward the end of the comedic trailer or clip, happiness levels and watching intention both increased.

Happy, happier, happiest is the best order for scenes in a comedy movie clip, the researchers say, finding that a positive trend in happiness results

in higher watching intentions and larger success at the box office.

Movies are very big business, and movie marketing is a big part of it. Global cinema ad spending was roughly $2.7 billion in 2015 and is expected to top $3.3 billion in 2020. Roughly half of a major Hollywood studio movie budget is spent on production, and the other half on marketing.

Film trailers are inherently different from other types of commercials. They are more like a sample of the product than a testimonial to its better qualities. Audiences go to a movie for the emotions they expect to experience there—fear during a horror film, sadness during a drama, happiness during a comedy. And that's what a trailer delivers, a sample of the emotional content of a movie.

In the study, volunteers were asked to view a webpage that contained comedy movie trailers, in a familiar environment, at home or at work, for example. Facial expressions were recorded remotely, and at the end of the experiment, they were asked which movies they would watch. In all, 100 trailers for 50 movies were used in the study, with the content of each trailer analyzed for scene cuts.

The researchers measured the "intensities of happiness" of each participant on a second-by-second basis via analysis of the participants' facial expressions, gauging the emotions intensity at the start, (or first scene), the trend (calculated fit to each emotion curve), the peak (average happiness of the scene with the highest average emotion level), and the end (the total emotional intensity at the final scene.) They also noted the "PeakIndex," the exact location of the peak emotion scene in the trailer.

Together, the data enabled researchers to edit down a longer trailer into a seconds-long clip that they say could be almost as persuasive, and

sometimes more, for the average viewer.

Provided by University of Maryland

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