

Video quality less important when you're enjoying what you're watching

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Research from Rice University's Department of Psychology finds that if you like what you're watching, you're less likely to notice the difference in video quality of the TV show, Internet video or mobile movie clip.

The findings come from the recently released study "The Effect of Content Desirability on Subjective Video Quality Ratings" authored by Philip Kortum, Rice professor-in-the-practice and faculty fellow. The study appears in the journal *Human Factors*.

"Research has been done asking if people can detect video quality differences," Kortum said. "What we were looking at was how video quality affects viewers in a real way."

Using four studies, Kortum, along with co-author Marc Sullivan of AT&T Labs, showed 100 study participants 180 movie clips encoded at nine different levels, from 550 kilobits per second up to DVD quality. Participants viewed the two-minute clips and then were asked about the video quality of the clips and desirability of the movie content.

Kortum found a strong correlation between the desirability of movie content and subjective ratings of video quality.

"At first we were really surprised by the data," Kortum said. "We were seeing that low- quality movies were being rated higher in quality than some of the high-quality videos. But after we started analyzing the data, we determined what was driving this was the actual desirability of the

content.

"If you're at home watching and enjoying a movie, we found that you're probably not going to notice or even concern yourself with how many pixels the video is or if the data is being compressed," Kortum said.

"This strong relationship holds across a wide range of encoding levels and movie content when that content is viewed under longer and more naturalistic viewing conditions."

The findings run counter to the popular belief that Americans are striving for and must have the best video quality at their fingertips all the time.

The importance of the research could be far-reaching in the way cable companies, online video and news providers shave megabits of compression to save on the ever-growing need for bandwidth.

"With these new delivery platforms comes the concern about how to adequately address the trade-off between the bandwidth of the delivery channel and the resulting video quality," Kortum said. "This trade-off is a concern not only for PCs and mobile devices but for mainstream content providers in the television arena as they move to deliver high-quality [content](#) over limited broadband delivery channels."

Provided by Rice University

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