

summer movies

The Moviegoer

What social scientists and economists can tell us about our cinematic preferences.

By Michael Agger

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The more you go to the movies, the more you realize you know nothing about how they work. Two summers ago, I was in a theater on the Upper West Side that was packed with teenagers. Pretzel bits and nachos in hand, we awaited one of the preview screenings of *Lara Croft Tomb Raider: The Cradle of Life*. Granted, it was a raucous crowd, but I was still surprised when the first bounce of Angelina Jolie's breasts met with a rousing ovation. A kid in front of me shouted, "They're the best part of the movie!" and gave his friend a high-five. "Oh," I thought, "I guess this will be a hit."

My discovery that teenage boys admire Angelina Jolie's knockers is a bit like discovering that New Mexico is part of the United States. Yet if you asked a Paramount executive how much Jolie's presence meant to that movie's bottom line, he or she couldn't tell you. According to a recent academic paper, the effectiveness of "star power" is one of many "puzzles" that haunt the movie business, an industry where executives "rely heavily on tradition, conventional wisdom, and simple rules of thumb." Despite extensive market research dating back to the '20s, Hollywood is the King Lear of the entertainment world: It has always but slenderly known itself.

To be fair, the early Hollywood moguls probably had little use for surveys: Most of them started out by running their own theaters and knew firsthand what audiences wanted. More Clara Bow! More electrified elephants! But now, with the box office in a prolonged slump, the Brian Grazers of the world might want to ask their assistants to read up on movie science. The paper cited above was written by three professors, Jehoshua Eliashberg (Wharton), Anita Elberse (Harvard Business School), and Mark A.A.M. Leenders (University of Amsterdam), and bears the ungainly title, "[The Motion Picture Industry: Critical Issues in Practice, Current Research & New Research Directions](#)." It's a meta-paper that surveys the current scholarly research and points out the questions, such as the economic value of Angelina Jolie's physique, that require further serious study.

For the lay reader, the first impression of movie science is that it takes a lot of research to prove a little common sense. One study mentioned in the meta-paper puts forth an elimination rule: If you go to the theater with a bunch of friends and one of you has already seen one of the movies that's playing, chances are that all of you will see something else instead. Elsewhere, though, the paper's dense social-science prose can be unpacked to reveal sharp insights and (maybe) a faint sense of humor. Here's how the authors summarize the process by which expensive bombs like *The Adventures of Pluto Nash* come into the world: "[W]hen costs are sunk progressively and information on a project's quality is revealed gradually, rational decision makers can carry projects to completion that realize enormous ex post losses." Rational decision-making led to a \$100 million film with Eddie Murphy running a nightclub on the moon in the year 2087. That's funny.

Although the meta-paper doesn't state this explicitly, the Holy Grail of movie science is an algorithm that would predict, within a reasonable margin of error, the box office of a movie before it opens: Tom Cruise + Katie Holmes + romantic comedy = \$340 million. To that end, a lot of research has focused on audience behavior: The earliest cited study, from 1929, is a Swiss researcher asking schoolchildren, "Why do you like going to the cinema?" The meta-paper breaks these studies down into those that take a "psychological approach" and an "economic approach," but none has really come close to figuring out why we favor the movies we do. In a [1999 paper](#) mentioned, the economists Arthur De Vany and W. David Walls looked at 2,000 movies and essentially threw up their hands, observing, "Anything can happen."

Even so, like medieval masons working on a cathedral, the social scientists and economists who study movies are slowly assembling useful bits of knowledge. Sequels with numbers in their title (*Daredevil 2*) may have a worse reception than sequels with new names (*Daredevil: Taking It to the Street*). It's advantageous for actors to be typecast early in their careers. Dividing your studio into specialty units—"upscale action," "urban fare," and "thriller"—generally pays off, as your staff will gain genre expertise. The meta-paper's larger projections are not exactly news, but they are depressing: "Studios Will Increasingly Pursue 'Hit Franchises' Based on Established Intellectual Properties in an Effort to Reduce Risks." The cost of greenlighting a film has become so high that we should expect more safe bets: sequels, prequels, and Harry Potter adaptations. The studios will also continue to concentrate on big-budget productions, since one success can make for a profitable year. The blockbuster era is here to stay.

Or is it? As Hollywood becomes increasingly dependent on the blockbuster, it's also becoming more insecure about how to create an audience beyond the opening weekend. The studios want to extend the good feelings about a movie over a longer time span—ideally, until the DVD comes out and the cash comes in. The most proven way to create a positive aura around a movie is through word-of-mouth. Because the Internet preserves and encourages word-of-mouth, studying the Web has become a frontier of movie science.

The meta-paper mentions the work of a professor of Information Systems at the University of Maryland Business School, [Chrysanthos Dellarocas](#), who studies the movie reviews and ratings posted on [Yahoo!](#) and the [Internet Movie Database](#). When he first looked at these reviews, he says, "I asked myself, 'Are they good for anything? Or are these people a bunch of recluses who have nothing in common with the rest of the population?'" His research showed that online reviews are a reasonable approximation of what people are saying about a movie offline. Dellarocas and his colleagues modified an influential product-diffusion equation called the Bass equation. Next, they plugged in the online movie ratings and other variables and predicted, fairly accurately, the eventual box-office gross of the movie. They discovered that reviews posted on the first weekend of a movie's opening are typically very positive and less predictive of future revenue: "Those are the people in the stormtrooper outfits." The second weekend was better. Isolating the reviews by women brought the most accurate results. (Dellarocas doesn't know why this is the case, although he speculates that at the time he gathered his data, the online population of women was better educated and more perceptive than the online population of men.)

As the fur increasingly begins to fly online, marketers are standing by to mine the data. The Word of Mouth Marketing Association, incorporated in 2004, will get together for a conference next month in Chicago, and Dellarocas has co-written a new paper showing that online reviewers tend to write up movies that they think are extremely awful or extremely good. (Oddly, they also love to review [really obscure, really bad movies](#).) Dellarocas also imagines a future where a Hollywood executive could monitor, in real time, a numerical analysis of the word-of-mouth of a movie on its opening weekend and adjust the marketing accordingly. If the movie were playing poorly among men, for example, they might create new television ads that showcase the action scenes. Or, if the movie were tanking, they could pull the ads altogether. Before you reach in despair for your copy of *1984*, consider the bright side of this scenario: If we post enough reviews, we may just get the movies we want. Start typing.

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