When Mixed Information Is a Blessing: the Effects of Critical Disagreement on a Film’S Evaluation and Subsequent Box Office Performance

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Extant research suggests that how consumers react to reviewer disagreement (e.g., three reviewers rate the same film as three stars, two stars, and one star respectively) depends upon their prior expectations of the product. We test this proposition, first in a laboratory setting, where participants endowed with higher (or neutral) expectations evaluate a film after they are given directional review information. We find that participants with higher expectations prefer reviewer disagreement to agreement, but participants with neutral expectations do not show any differential preference. Second, we analyze the opening week box office revenues of a random sample of 500 films released between December 1997 and March 2001 and find that the effect of critical disagreement on box office revenues is moderated by the advertising and production budget of the film (the latter treated as a surrogate for expectations). Consistent with our laboratory study, increasing critical disagreement helps the higher budget films, but has no effect on lower budget films.

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EXTENDED ABSTRACT

Extant research suggests that how consumers react to critical disagreement depends upon what they expect from the product under review (West and Broniarczyk, 1998). For example, suppose Consumer A expects a newly released film to be of three-star quality, and Consumer B expects the film to be of two-star quality. Further, imagine that, in one case, the reviewers disagree about the quality of the film (the film gets ratings of three stars, two stars, and one star), and, in the other case, the reviewers agree (all three reviewers give the film two stars). West and Broniarczyk (1998) invoke Prospect Theory (Kahneman and Tversky, 1979) to show that Consumer A should favor critical disagreement to critical agreement, whereas Consumer B should prefer critical agreement to critical disagreement. Extending this argument, we propose that, if stars, production budgets (that often translate into lavish sets, exciting locations, state of the art special effects), and studio advertising heighten consumer expectations of films, then critical disagreement should help such films fare better at the box office than critical agreement.

We test our proposition in three ways. First, we asked twenty-nine undergraduate business students to identify the factors that they generally use to form their expectations of new films. We collected 131 responses, or an average of 4.5 items per participant, and found that the three main sources of consumer expectations are stars (including directors; cited by 26% of our participants), budget (including money spent on advertising in the different media as well as in the production of the film; 22%) and the film's genre (including the story; 18%).

Second, we designed experimental scenarios where we endowed participants with higher or neutral expectations for a newly released film. Thus, participants in the higher (neutral) expectations conditions read that the film is a big-budget (low-budget) film, belongs to the genre that they like (neither like nor dislike) and has their favorite stars (new stars) in lead roles. Subsequently, some participants read that three reviewers had rated the film as excellent, average, and poor (reviewer disagreement), while others read that three reviewers had each rated the film as average (reviewer agreement). One hundred and seven business students were randomly assigned to the four conditions of the 2 (reviewer agreement, reviewer disagreement) by 2 (higher expectations, neutral expectations) between subjects design.

We measured the participants' judgment of the film after exposure to the reviewer information, and subjected those judgments to an ANOVA with expectations (higher, neutral) and critical disagreement (agreement, disagreement) as manipulated predictors. The main effect of expectations was significant, and showed that participants who expect more judge the film more positively than participants with neutral expectations. The main effect, however, was qualified by reviewer disagreement. Consistent with the Prospect Theory prediction, participants holding higher expectations prefer critical disagreement to agreement, whereas neutral participants react equally to critical disagreement and critical agreement.

Third, we collected opening weekend box office earnings for a random sample of 500 films released between December 1997 and March 2001. The data came from two sources: Baseline Services in California and Variety magazine. To assess critical disagreement, we created a measure similar to the Herfindahl index (HI) in economics, defined as the sum of the squares of the market shares of each individual firm. For each film, we calculated the proportion of positive (POSRATIO), mixed (MIXRATIO), and negative (NEGRATIO) reviews received by each film and then computed a DISAGREE index measure by subtracting the HI equivalent from 1. In line with our laboratory study, we used three variables to serve as proxy for consumer expectations, star power, production budget, and advertising spending. For each film we created a variable STAR by identifying all cast members who had won or been nominated a Best Actor or Best Actress or Best Director Award (Oscar) in prior years (prior to the release of the current film). We assigned a score of 1 for each of the actor/actress/director who had previously been nominated for an award, and doubled that number if the person in question actually won the award. Similarly, for each film, we computed a COST variable by summing the production budget numbers from Baseline Services, and the money spent on advertising, from various issues of Leading National Advertisers (1998-2001).

Our dependent variable is the first week box office revenue. We focus on opening weekend box office numbers given past research which suggests that the ability of critics to influence box office earnings is strongest in the opening week, and then declines as other factors including stepped up studio promotions and word of mouth take over. The results of four regressions show that, as far as critical reviews are concerned, the variables POSRATIO and NEGRATIO are significant predictors of box office revenues, and replicates prior research. However, over and above the effects of positive and negative reviews, we find that critical disagreement has a significant effect on box office earnings, but its effect is qualified by the film's production and advertising budget (DISAGREE by COST interaction). To explicate the interaction, we separate the films into lower and higher disagreement categories based upon a median split of the DISAGREE scores. Similarly, we split the films into lower and higher cost categories using a median split of the COST variable. Consistent with the laboratory study, we find that for films with higher production and advertising budgets, an increase in critical disagreement helps box office revenues. However, for films with lower production and advertising budgets, there is no effect of critical disagreement.

Taken together, our results support the Prospect Theory contention that consumers are risk seeking in losses. They do not show support, however, for the corresponding risk aversion in gains. We speculate that, in the laboratory setting, participants endowed with neutral expectations could at best hope for an average film, and therefore may not have envisioned the situation as a gain. Similarly, when we analyse actual box office revenues, since the films with lower production and advertising budgets make so little money on the average (around $3.5 million in our sample), it may be difficult to disentangle any effects of review

direction.

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