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This study investigates the determinants of success of an experiential good: Broadway shows. The authors focus on the sources and types of information used in the selection of an artistic event and discuss the impact of critics' reviews on the length of a show's run and attendance. In addition, the authors empirically determine the influence of other variables, such as previews, newspaper advertising, ticket prices, show type, talent characteristics, and timing of opening. The results indicate that New York newspaper theater critics have a significant impact on the success of Broadway shows. It is also found that the newspaper critics have a differential impact, with the critic from the *New York Times* yielding nearly twice as much influence as critics from the *Daily News* or the *New York Post*. Theater critics, it appears, are not only predictors but influencers as well. Among the various show types, musicals appear to fare better than other categories of shows. Previews have a significant impact on the attendance, but not on the longevity, of Broadway shows. Advertising also has a significant impact on both longevity and attendance. However, the characteristics of the key talent do not have a consistently significant influence on show success. In addition, ticket prices do not have a significant relationship with either longevity or attendance. The results indicate that there is an overwhelming impact of information sources, particularly the influence of critics' reviews, on the success of Broadway shows. The authors discuss the implications of these results for the theater industry.

Exploring the Determinants of Broadway Show Success

> "... the stage is 'The Mirror of Nature,' and the actors are 'The Abstract, and brief Chronicles of the Time:'—and pray what can a man of sense study better?" (*The Critic* 1779, in Sheridan 1962)

Revenue from the U.S. theater industry totaled approximately $1.1 billion in the 1994–95 season. Broadway attendance was nine million in the same period, a 12% increase over the previous year (*New York Times* 1995). Although the theater industry is big business, involving risk for both the producer and the consumer,[1] few studies in marketing have investigated the consumption of theatrical performances. The theater is an *experiential good*, that is, one people choose and use solely to experience and enjoy (Holbrook and Hirschman 1982). Although the bulk of consumer research has focused on the consumption of utilitarian products, recently academicians have studied the selection and use of experiential goods such as leisure, entertainment, and the arts (Cooper-Martin 1992; Eliashberg and Sawhney 1994; Holbrook and Hirschman 1982; Holbrook and Schindler 1989, 1994). The majority of the studies of hedonic consumption examines the relationship between attendance at an artistic event (e.g., film, operatic performance) and factors such as individual consumer char-

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[1]Of the 594 Broadway shows produced between 1980 and 1995, 14% of them closed within the first week of opening and approximately 24% lasted fewer than 20 performances. Broadway shows also are characterized by high production costs and audience size limitations. These high failure rates and expenses and small audiences contribute to the risks to producers. The primary risk to consumers is financial, with an average price of $45 for a Broadway show ticket (*New York Times* 1995).

acteristics, event features, and information sources. An understanding of the sources and types of information used in these consumptive situations is important because people spend a large portion of their lives in pursuit of pleasure (Holbrook and Hirschman 1982; Robinson 1977).

A potentially powerful source of information about theatrical productions is a critic's review. Bennett (1990) provides an interesting example of a critic's influence by analyzing the reception of a Harold Pinter play, *The Birthday Party*. When it premiered in London in May 1958, the production received a less-than-glowing review from the drama critic of the influential *Times*. The review read: "Mr. Pinter's effects are neither comic nor terrifying: they are never more than puzzling, and after a little while we tend to give up the puzzle in despair ..." (*The [London] Times* 1958, p. 3; reported in Bennett 1990, p. 43). The show survived for only a few performances. When this same play was revived six years later, it received an enthusiastic review in the same publication: "*The Birthday Party* is the Ur-text of modern British drama: if John Osborne fired new authors into writing, Pinter showed them how to write" (*The [London] Times* 1964, p. 18; as reported in Bennett 1990, p. 43). This time, the show had a long run and was heralded as a huge success. Although conventional wisdom indicates that the critics' reviews played crucial roles in determining the longevity of this particular show and theatrical performances in general, no empirical evidence exists to substantiate this contention. The objectives of this research are twofold—to further our understanding of the types of information used to evaluate experiential goods and to investigate other determinants of Broadway show success. To achieve these goals, we examine the impact of information sources (i.e., critics' reviews, previews, and newspaper advertising) and intrinsic show characteristics (i.e., ticket prices, show type, timing of the opening, and quality of key talent) on the tenure and box office success of theatrical productions.

CONCEPTUAL BACKGROUND

All goods and services are consumed, but for a product purchased for leisure and enjoyment, such as a theatrical production, the consumption experience is an end in itself. A Broadway show is essentially a luxury or discretionary product. It is an indulgence that provides fun and creates fantasies and enjoyment. In addition, every show is unique. Although consumers may prefer specific types of shows or particular playwrights, and these preferences might remain stable over time, every show has a distinctive combination of theme, playwright, cast, and presentation. Similar to attending a film, the consumer does not buy a generic product (Austin 1981). The consumer watches a show and enters into a "purchase agreement" with little knowledge of the particular product; the form may be familiar, but the content is not.

This lack of internal knowledge of the particular product contributes to the greater perceived risks associated with attending a new show than with purchasing a utilitarian product. In addition, consumers allocate both money and time to the consumption experience for shows. The use of multiple resources is indicative of the perception of greater risk than other forms of consumption in which only money is exchanged. A search for additional information is a strategy used to reduce risk (Rook and Hoch 1985). We suggest that the nature of the product and the risks associated with attending a Broadway show help determine the sources and types of information consumers use in evaluating and selecting shows.

Prior audience research has focused on four broad areas: (1) the influence of information sources (experiential and nonexperiential) on consumers' decision making (e.g., Austin 1981; Boor 1990; Burzynski and Bayer 1977; Cooper-Martin 1992; Litman 1983; Mahajan, Muller, and Kerin 1984; Semenik and Young 1979); (2) the impact of intrinsic characteristics on the evaluation and attendance of events (e.g., Holak, Havlena, and Kennedy 1986; Skrzypczak 1970; Sochay 1994; Weinberg and Schachmut 1978); (3) the role of individual consumer characteristics and motivations in the consumption of a form of experiential good such as the movies or art (e.g., Palmgreen et al. 1988); and (4) the influence of demographic, socioeconomic, and psychographic characteristics on behavior (e.g., Andreasen and Belk 1980; Belk and Andreasen 1979; Belk, Semenik, and Andreasen 1980).

A majority of the research (presented in Table 1) has involved examining the impact of information sources and objective characteristics on evaluation and selection in the context of movies. Although both are forms of experiential consumption, the extent of monetary risk involved in the choice of a theatrical show is much higher (i.e., the ticket price of a show on Broadway is $40 to $50 versus $6 to $7 for a movie). In addition, film producers typically adopt mass-marketing tools to promote a new production. Communication channels to promote films are better organized and have a wider reach. Marketer-produced previews, trailers, and advertisements help generate word of mouth and create excitement for films (Austin 1989). Promotional devices such as free trials traditionally have not been used for theatrical productions (Bennett 1990). Therefore, an interesting research issue is the relative impact of information sources and objective characteristics on success in the theater industry.

CONCEPTUAL MODEL AND DATA

Using a review of the literature as a basis, we offer a conceptual framework of the key factors that influence the success of a theatrical production. We propose that show success is determined by (1) information sources (critics' reviews, previews, and advertising) and (2) objective characteristics (ticket prices, show type, talent characteristics, and timing of opening). A discussion of a rationale and proposed directions of these influences on the success of Broadway shows follows. The conceptual model, with potential operationalizations of these factors and success, is depicted graphically in Figure 1.

Data

All shows opening on Broadway during the 1980–81 and 1981–82 seasons originally were selected for analyses.[2] To address the generalizability of the results to more recent pro-

[2]We had planned to use all shows produced during the ten-year period between 1980 and 1989. However, compiling reviews and persuading judges to evaluate these 1254 reviews (418 shows × 3 reviews) became daunting tasks. Moreover, no significant differences were found in show characteristics in terms of types of shows produced ($\chi^2 = 7.39$; df = 5; ns) and the average number of performances ($F_{1,405} = 1.422$, ns) between the seasons analyzed and the other eight seasons for which performance data were collected. Therefore, initially only a census of shows from the 1980–82 seasons was examined in this study. However, at the suggestion of the *JMR* reviewers, a random sample of 40 shows produced during the 1991–94 seasons also were included in the analyses.

Table 1
SELECTED STUDIES IN AUDIENCE RESEARCH

		Information Sources				*Objective Features*				
Author	*Context*	*Review/ rating*	*Pre- view*	*Adver- tise- ments*	*Word of mouth*	*Ticket price*	*Genre/ content*	*Timing*	*Talent*	*Key Findings*
Skrzypczak (1970)	Symphony							√	√	Quality of musicians was significant predictor of attendance.
Simonet (1977)	Movies								√	Director/producer characteristics were significant predictors of attendance.
Weinberg and Schachmut (1978)	Chamber music, dance, and jazz						√	√	√	Timing and performance type were significant predictors of attendance.
Semenik and Young (1979)	Opera			√	√					Word of mouth and advertisements negatively correlated with subscription.
Austin (1981)	Movies	√	√	√	√	√	√	√	√	Word of mouth and content most important factors for movie attendance.
Currim, Weinberg, and Wittink (1981)	Performing arts; theater, music, and dance					√			√	Renown of performers, driving time, and seating priority important in choosing subscription series to performing arts events.
Kindem (1982)	Movies								√	Star characteristics accounted for 23% of explained variance in film revenues.
Litman (1983)	Movies	√					√	√	√	Production budget, reviews, genre, timing, and award nominations were significant predictors of attendance.
Austin (1984)	Movies				√		√	√	√	Plot and genre were significant predictors of attendance of art films.
Faber and O'Guinn (1984)	Movies	√	√	√	√					Previews were a more influential information source than critics' reviews.
Mahajan, Muller, and Kerin (1984)	Movies	√		√	√					Word of mouth was a significant predictor of attendance.
Hirschman and Pieros (1985)	Movies, Broadway plays	√								Critic's reviews had no correlation with Broadway box office but had a negative correlation with movie box office.
Holak, Havlena, and Kennedy (1986)	Opera					√	√	√	√	Timing and popularity were good predictors of attendance.
Dodds and Holbrook (1988)	Movies								√	Oscar nominations and awards contributed to revenues.
Linton and Petrovich (1988)	Movies						√		√	Characters, acting, and storyline were crucial attributes for attendance.
Litman and Kohl (1989)	Movies	√					√	√	√	Critics' ratings and summer release were key predictors of success.
Wyatt and Badger (1990)	Movies	√								Direction of critics' reviews had impact on film interest and evaluation.
Cooper-Martin (1992)	Movies	√	√							Critics play no significant role in choice, but previews are a significant information source.

Table 1
CONTINUED

		Information Sources				Objective Features				
Author	*Context*	*Review/ rating*	*Pre- view*	*Adver- tise- ments*	*Word of mouth*	*Ticket price*	*Genre/ content*	*Timing*	*Talent*	*Key Findings*
Levene (1992)	Movies	√	√	√	√					Word of mouth, trailers, and advertisements were important information sources for art films.
Wallace, Siegerman, and Holbrook (1993)	Movies	√						√	√	Stars explained one-third of variance in movie rental incomes.
Eliashberg and Shugan (1997)	Movies	√			√		√			Critics are predictors rather than influencers; reviews varied across critics.
Sochay (1994)	Movies	√				√	√	√	√	Genre, MPAA ratings, timing, and awards were significant predictors of attendance.

ductions on Broadway, a random sample of 40 shows produced during the 1991–94 seasons were added to the original sample. Seasonal productions (e.g., Radio City Music Hall's *Christmas Spectacular*) are excluded because they are not reviewed by critics and have a contractually fixed number of performances. There are 142 shows in the final sample.

Show Success

The dependent variable of interest is the success of a show, and as with most goods, there are multiple ways to measure success. The best indicator of success is the total or mean profit per performance generated. However, expense data (preproduction and daily operating costs) for theatrical performances are not publicly available. Attendance and box office receipts determine the profitability of a show and, therefore, are appropriate measures of success for this study. Total attendance (CUMATT) and total box office receipts were computed for a maximum of 26 weeks of data from various issues of *Variety*.[3] These two measures are highly correlated ($\rho = .888$).[4]

Show Longevity

High production costs, combined with the limited seating capacity of a theater, suggest that the commercial success of a show depends on the length of the run. Some shows might take more than a single season to reach profitability (Loney 1990). In addition to recovering expenses, a long-running production can reap potential windfalls from foreign productions, on-the-road performances, and the sale of the script to Hollywood for movie production and/or a television series. Therefore, the length of time the show runs (PERF) could be a precursor of a show's success. Performance data on the sample were obtained from *Best Plays* (Guersney 1980–1995). A review of the data revealed that 18% of the shows closed within the first week, and 29% lasted fewer than 20 performances. Only 11% of the shows had more than 500 performances.

Information Sources

Critics' reviews. To minimize risk and assist in preselection evaluation, the consumer of a hedonic experience must rely on information available from external sources. This information can be either experiential or objective. Experiential information sources convey the "feel" of the product; that is, they reflect the consumption experience and include critical reviews (Cooper-Martin 1992; Faber and O'Guinn 1984). Reviews facilitate vicarious learning, providing a substitute for direct experience and internal information. Prior research (Cooper-Martin 1992; Faber and O'Guinn 1984) suggests that consumers rely more heavily on experiential, subjective types of information than on objective information in the selection of experiential goods. In addition to conveying a sense of the consumption experience, critics' reviews provide interesting and potentially useful objective information about the talent (cast), plot, and genre of the show. Reviews might be viewed as new product announcements, conveying information about the recent endeavors of actors, directors, and studios (Eliashberg and Shugan 1997).

In addition to providing both experiential and objective information, critics are credible and, therefore, persuasive. This credibility results from the critic's experience with the particular art form and lack of propagandistic intent. Critics have prescreened, evaluated, and synthesized the required information in an unbiased fashion. They perform a legitimizing function by identifying shows that are "acceptable." Through their evaluations (both positive and negative), critics serve as gatekeepers and help reduce the risk to potential consumers by identifying shows that are of high quality (Austin 1989). Access to the mass media spreads the critics' views instantaneously throughout the social system, with a potential for far-reaching and powerful impact of their ver-

[3]Because 81% of the shows in the sample lasted fewer than 26 weeks, this time frame appears reasonable.

[4]Because ticket price is one of our independent variables, using box office receipts (attendance × ticket price) as a dependent variable could be confounding. Because of this concern and the high correlation between box office receipts and attendance, we chose to use attendance as the dependent variable.

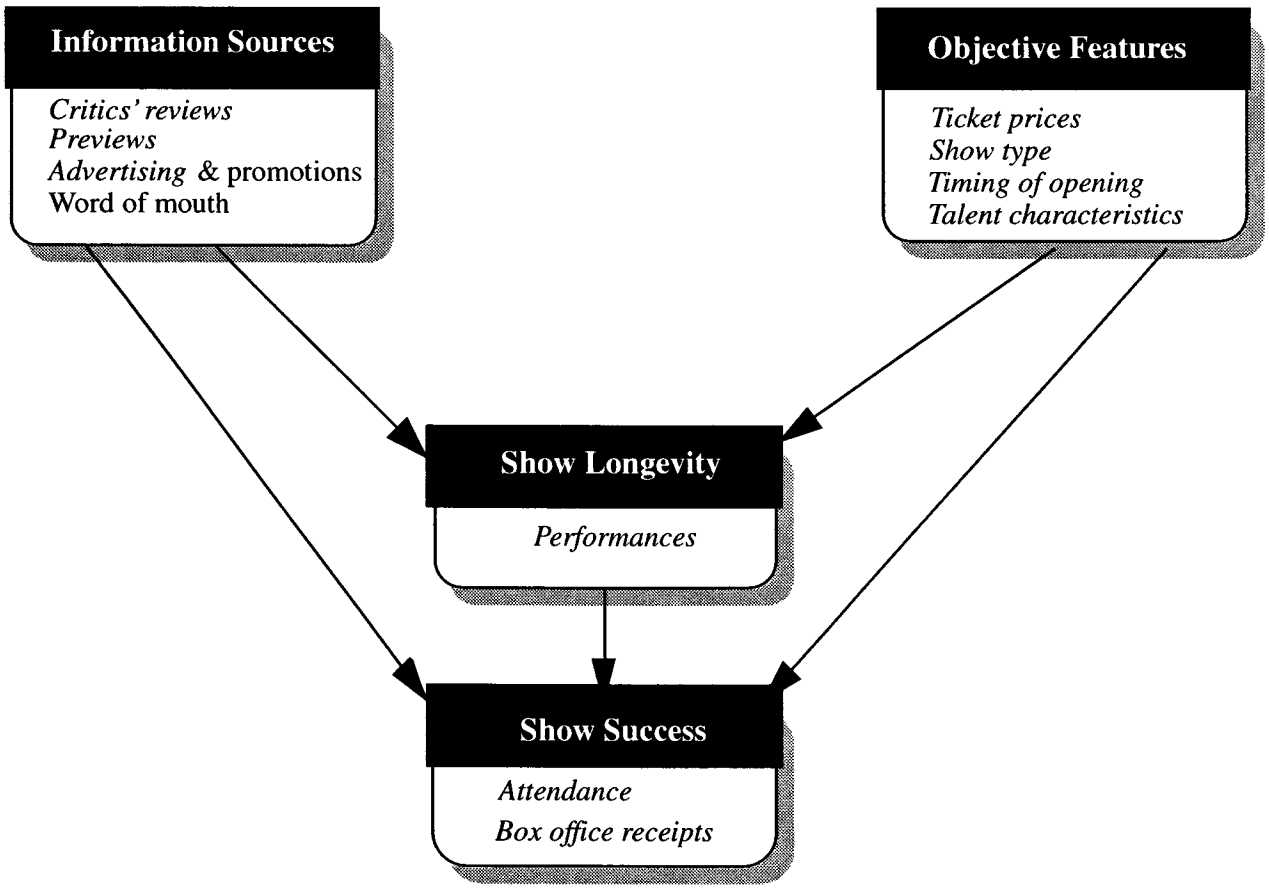
dicts. As producer Manny Azenberg states, "It is humiliating to walk around New York when a reviewer has told a million people you are no good" (Loney 1990, p. 113).[5]

Research in the context of movies is equivocal regarding critics' influence. Cooper-Martin (1992), Faber and O'Guinn (1984), and Levene (1992) report that reviews do not have a significant impact on the choice of movies. Hirschman and Pieros (1985) find that critics' reviews are correlated negatively with movie box office receipts but find no significant correlation with theater box office receipts. Wallace, Siegerman, and Holbrook (1993) find a curvilinear relationship between critics' ratings and movie rental income. However, the results of Eliashberg and Shugan's (1997), Litman's (1983), Litman and Kohl's (1989), and Wyatt and Badger's (1990) studies suggest that critics' reviews are significant predictors of both movie attendance and box office receipts. In a comprehensive study of the effects of movie critics on motion picture box office receipts, Eliashberg and Shugan (1997) conclude that critics can be viewed more as predictors than influencers of movie success. In addition, they find that some critics were better predictors of success than others. It is anticipated that critics' reviews will have a significant, positive relationship with the success of Broadway shows because of the nature of the product and type of information they convey.

Critics' reviews were obtained from the *NY Theater Reviews,* which publishes reviews from many sources, including *Time, Newsweek, The Wall Street Journal, Ladies' Home Journal, New York Times, New York Post,* and *Daily News.* Of these publications, only the *New York Times, New York Post,* and *Daily News* reviewed all the Broadway shows in the data set. These three New York daily newspapers have a collective daily circulation of approximately three million (*Editor and Publisher International Yearbook* 1980, 1994). In addition, the reviews of these newspaper critics are those that often are cited in print advertisements and billboards

[5]Exceptions to the awesome influence of the *New York Times* critic often are celebrated, as is evidenced by a recent quote from Alfred Uhry, upon his Tony nomination for his Broadway play *The Last Night of Ballyhoo.* He said, "It's nice to know that not getting a good review in the *New York Times* is not as awful as it once was" (*Atlanta Journal-Constitution* 1997).

Figure 1
A CONCEPTUAL MODEL OF SUCCESS DETERMINANTS OF BROADWAY SHOWS



Variables in italics are used in this study.

promoting Broadway shows. Therefore, we have chosen the reviews from these three New York newspapers.[6]

Because theater reviews typically do not contain numerical ratings to indicate either preference or quality, judges were used to quantify the evaluations. Two judges (graduate students interested in the theater) independently read and rated each review on a five-point scale (1 = poor evaluation and 5 = high evaluation). The judges were instructed to read each review and then immediately rate the critic's evaluation. To help avoid an order bias, the reviews were randomized. Both judges rated the reviews in the same order. (The instructions provided to the judges are in the Appendix.)

Interjudge reliability was assessed by the magnitude of interjudge correlations and Cohen's kappa (Cohen 1960).[7] The multijudge, multicritic correlation matrix presented in Table 2 shows that the interjudge correlations for the three critics ranged from .826 to .884, which indicates strong consensus between the judges.[8] Overall, significant agreement between the two judges on the rating of all three critics' reviews also was indicated by significant Cohen's kappas.[9] The correlations between the newspaper critics, according to each judge, suggest that the critics displayed low levels of agreement in their assessments of the shows. The correlations between the critics ranged from .377 to .518, with higher correlations between the critics of the *New York Times* and the *Daily News*.

The evaluations of the critics from both the *New York Times* and the *Daily News* are, on average, more conservative than those from the *New York Post* critic. The evaluations from the *New York Times* and *Daily News* are closer ($\bar{X}_{Times} = 2.584$; $\bar{X}_{News} = 2.579$). T-tests confirmed a lack of significant difference in the mean evaluations of these two critics. Evaluations from the *New York Post* critic are significantly higher ($\bar{X} = 3.282$) than those from the other two

[6]At the recommendation of one of the *JMR* reviewers, we also examined the reviews published in the Sunday edition of the *New York Times*. The critic providing the review was typically Walter Kerr (Frank Rich was the regular *New York Times* theater critic). However, not all the shows considered here were reviewed in the Sunday edition. We could identify only 43 of the original 102 shows produced during the 1980–82 seasons, and only 15 of 40 shows sampled during the 1991–94 seasons were reviewed in the Sunday edition of the *New York Times*. The reviews for these 58 shows were evaluated by two different judges. The correlations between the Sunday critic's ratings and the others ranged from .253 (with the *New York Post*) to .370 (with the *New York Times*). The average rating of the Sunday critic for these 58 shows was 2.614, significantly lower than the average rating of the *New York Post* critic (3.649; $p < .001$) but not significantly different than those of the *New York Times* (2.895; ns) and *Daily News* (2.702; ns) critics. Using this smaller sample, some of the same models were estimated with the average rating for the Sunday critic in addition to the other three critics. In the presence of other critics, the Sunday critic does not have a significant effect on longevity or attendance.

[7]Cohen's kappa tests the extent to which agreement between two judges is due to chance. The test of the null hypothesis is that kappa is 0, or that the agreement between the judges is entirely due to chance. A significant kappa indicates significant agreement between the judges.

[8]Because the judges who evaluated the original sample of reviews could not be used, the critics' reviews of the sample of shows from the 1990s were evaluated by two new judges. The interjudge reliability estimates indicated similar consensus for this smaller sample with significant Cohen's kappa for the three critics and interjudge correlations ranging from .795 to .861.

[9]Based on Landis and Koch's (1977) arbitrary "benchmarks" for kappa to assess the relative strength of agreement, the range of interjudge kappas obtained would be considered fair to moderate. However, this measure of kappa requires perfect agreement in categories between the judges. Cohen (1968) suggests a weighted kappa that provides partial credit for agreement in successive categories. Using the hierarchical weights suggested by Landis and Koch (1977) improved the kappa values (.672 to .851) to a point at which the strength of agreement would be considered substantial to almost perfect.

Table 2
INTERJUDGE AND INTERCRITIC RELIABILITY
MULTIJUDGE, MULTICRITIC CORRELATION MATRIX

	Judge 1			*Judge 2*		
	NYT	*NYP*	*DN*	*NYT*	*NYP*	*DN*
Judge 1						
New York Times (NYT)	1.000					
New York Post (NYP)	.487	1.000				
Daily News (DN)	.518	.477	1.000			
Judge 2						
New York Times (NYT)	.856	.427	.534	1.000		
New York Post (NYP)	.418	.826	.447	.390	1.000	
Daily News (DN)	.468	.393	.884	.508	.377	1.000

Note: All correlations are significant at $p < .01$ level. The underlined correlations are the interjudge, intracritic correlations, which indicates a high degree of interjudge reliability.

		Cohen's Kappa
		Weighted Kappa
NYT		
Judge 1	Judge 2	.672*
NYP		
Judge 1	Judge 2	.676*
DN		
Judge 1	Judge 2	.851*

*$p < .001$.

critics, which indicates more generous reviews, on average. Results for the 1990s sample closely parallel these. The mean evaluations from the *New York Times* and *Daily News* are significantly lower than that from the *New York Post.* The results from these analyses indicate a high degree of consensus between the judges' ratings of the critics' evaluations. Therefore, the two judges' scores for each critic were averaged and used as a measure of each newspaper critic's evaluation.[10]

Previews. The objectives of previews are to generate positive word of mouth and create excitement (Austin 1981). To stimulate early response, opinion leaders are invited to previews to sample performances. Studies in the context of moviegoing suggest that previews are perceived as more useful and credible sources of information than advertisements (Austin 1981; Cooper-Martin 1992; Faber and O'Guinn 1984). For example, the producers of *Raiders of the Lost Ark* and *E.T.* used previews as promotional tools with considerable success (Austin 1981). As with critics, opinion leaders who have seen previews provide potential consumers subjective and experiential information. Broadway previews begin several weeks prior to the actual opening (usually at reduced prices).

We propose that previews contribute to the success of Broadway shows by serving as promotional devices and generating word of mouth. We anticipate that, as the amount of word of mouth or excitement generated prior to a show's opening increases (as evidenced by greater attendance at previews), the chances of the show's success also will increase.[11] Therefore, the number of, the attendance at, and the box office receipts from previews may be related positively to show success.[12] Data on these indicators of previews were collected from various issues of *Variety.* Three variables were highly interrelated; correlations of preview box office receipts with preview attendance and number of previews were .91 and .67, respectively. Preview box office receipts (PRVWREC) were used as a surrogate for word of mouth and as an indicator of the impact of previews on show success. Given the difficulty of capturing word of mouth at the aggregate level, this measure is a reasonable, albeit partial, indicator of word-of-mouth effects.

Advertising. Advertising is an important source of information for consumers of new products. Prior research on movies suggests that advertising helps create awareness and influence choice (Austin 1981; Sochay 1994). Austin's (1981) survey finds that advertising was an important source of information for moviegoers, though it was rated as less important than previews. The results of a survey to determine the role of various information sources in the choice of art films also suggest that advertising and theater trailers are the most important sources of information (Levene 1992). On the basis of this evidence, we expect that advertising plays a significant role in generating awareness and influencing choice of theatrical shows.

Information on advertising expenditures is not available from published sources. Therefore, we use two proxy measures to estimate the relative amount of advertising for each show: (1) the number of print advertisements (ADTOT) appearing in the *Sunday New York Times* and (2) the total amount of space (in square inches) allocated to show advertisements across all the print advertisements (ADSPA). Although we acknowledge that print advertisements alone might not fully capture relative advertising expenditures, in the absence of any other data, we believe that these measures will enable us to calibrate relative advertising spending across shows with some degree of precision. It is likely that a heavy advertiser spends a proportionately greater amount on print advertisements in the *New York Times.* Advertising data were collected for a three-month period prior to the opening date. The number of spots were counted, and the space allocated to the print advertisements was totaled across all advertisements to arrive at the two measures of ad spending. The correlation between these two measures is .833.[13]

The Impact of Objective Features on Show Success

Because of the high level of uncertainty about the quality of or enjoyment a consumer might receive from Broadway productions, we suggest that consumers use both experiential information and nonexperiential, or objective, features to select a show (e.g., genre or show type, reputation of key talent, timing of the opening). The impact of information about objective features included in movie reviews (as opposed to the critics' evaluation of the film) on consumers' interests and evaluations has been demonstrated by Wyatt and Badger (1990). Their results indicate that objective information alone is almost as effective as a glowing review in raising interest in a movie. We examine the role of some of these objective features in the success of Broadway shows.

Ticket prices. In conditions of uncertainty, price frequently is used in forming impressions about product quality; for the same product, a higher priced brand is perceived to be of higher quality than a lower priced brand (Aaker 1991; Rao and Monroe 1989). In addition, Gerstner (1985) finds that the influence of price–quality associations is greater for more expensive product categories. The implication is that consumers tend to use price as a signal of quality when there is substantial financial risk. They also are more likely to rely on a price cue when other information is not available or

[10]It is inappropriate to pool the judges' ratings from the two samples to assess interjudge reliability, because two sets of judges were used. However, after positively assessing interjudge reliability, the rating of each newspaper critic, obtained by averaging the two judges' evaluations, was used in the modeling portion of the analysis.

[11]It is also possible for previews to generate negative word of mouth, which might contribute to show failure. However, if the previews generate negative word of mouth, the shows will not last long or draw large audiences. The measures used here also capture the potentially negative word-of-mouth aspects of previews.

[12]Although we could argue that successful previews will generate positive word of mouth, which in turn will influence the early success of a show, it is unclear if this impact extends beyond the short term. It is more likely that the early success of the show will create its own positive word of mouth, providing a cascading effect that will keep the show running for a long time. In this sense, we could consider previews as playing a catalytic role in the long-term success of a show.

[13]We believe that the measures developed here reasonably reflect advertising for a Broadway show, particularly for shows produced in the 1980s, because it is likely that newspaper advertising was the primary medium used. More recently, Leading National Advertisers (LNA) has been providing advertising spending figures for some of the Broadway shows. We could obtain data on total advertising spending from LNA for only 13 Broadway shows (all from the 1990s) from our sample. For this sample, the correlations are reasonably high between the number of advertisements and ad space measures and the LNA advertising measure at .678 and .668, respectively.

when they have little experience with the product category. Holak, Havlena, and Kennedy (1986) find a positive relationship between ticket pricing and opera subscriber attendance. Currim, Weinberg, and Wittink (1981) find that higher income groups were less sensitive to price when choosing to attend art programs. Because of the uncertainty, risk, and lack of internal information, we propose that theater ticket prices are used as a quality cue for theatrical performances, with higher prices indicating higher quality. Therefore, we expect a positive relationship between ticket price and show success. Ticket price information for all the shows also was obtained from various issues of *Variety* magazine. Average deflated price (to 1980 dollars) was computed on the basis of ticket prices charged for weekday and weekend performances (PRICE).

Show type. Broadway shows generally are classified into six broad categories: musical, foreign, play, revival, revue, and specialty (Guersney 1980–1995). This classification is analogous to movie genres, objective features that have been examined consistently as influences on film preference and choice (Austin 1981; Linton and Petrovich 1988; Litman 1983; Sochay 1994). This research indicates that storyline or genre is the most cited reason for attending a movie (Austin and Gordon 1987). In the theater industry, production expenses vary as a function of show type. For example, musicals are substantially more costly to produce than any other category. Thus, show type might be used by consumers to infer production value. We anticipate that certain show types (such as musicals and plays) will be related positively to show success. Show type was obtained from *Best Plays* (Guersney 1980–1995), which classified each show into one of the six broad categories. Revivals were recoded to identify whether they were plays or musicals.

Talent characteristics. The characteristics and attributes of the creative talent in the show are likely to influence success. A production that contains well-known actors, actresses, directors, composers, or authors is likely to appeal to more consumers and run for longer periods than those that are not associated with recognizable names. Linton and Petrovich (1988) suggest that characteristics of the film's performers are intrinsic cues that might be viewed as indicators of a film's quality. In addition, Austin (1981) indicates actors and actresses are crucial to movie attendance.

A parallel can be drawn between show characteristics as cues or signaling criteria and brand associations in branding and brand equity literature. Because a recognized brand is preferred to an unknown (Aaker 1991), people often buy an existing product or adopt a new product because of familiarity. Show characteristics, such as the names and successes of the leading performers, the author, and the director, could provide name recognition similar to that for branded goods. Although the performers may change over time, the initial quality perceptions associated with these cues might be related positively to the success of a Broadway show.

We identified the lead actor, lead actress, author, and director of each show and examined their characteristics to evaluate the quality of the creative talent for each show. Two variables were used to examine talent characteristics. The total number of shows on Broadway (TOTSH), which captures the total theater experience of the lead talent, was computed by counting all the prior Broadway shows for the lead actor, lead actress, author, and director combined. The total number of awards won (TOTAW), which captures the quality and recognition received by the key talent, was computed by counting the total number of Oscars, Emmys, Grammys, and Tonys given to the key talent prior to the show's opening. Data for total shows were computed from various issues of *Who's Who in the Theater* (1981, 1982) and *Contemporary Theatre, Film and Television* (1990–1995). Total awards data were gathered from the various editions of *Variety Major U.S. Show Business Awards* (Kaplan 1982) and *Contemporary Theatre, Film and Television* (1990–1995). The correlation between these measures was .617.

Timing of opening. Seasonality exists in many areas of the entertainment industry. Because a movie's success or failure is determined in the first few weeks of its release, the timing of that release is crucial (Litman 1983). Most blockbuster movies are released during the summer and around the Easter, Thanksgiving, and Christmas holidays. Research on movies (Krider and Weinberg 1998; Litman 1983; Litman and Kohl 1989; Sochay 1994) and the opera (Holak, Havlena, and Kennedy 1986) indicates that timing is a significant predictor of attendance. We anticipate that the timing of a theatrical opening will affect its success. Timing of the opening was obtained from *Best Plays* (Guersney 1980–1995), which indicates the month and year each show opened.

MODEL

The following two-equation model is a representation of the model in Figure 1 and captures the effects of the factors of interest on the success of a Broadway production. We propose that a show's success, as represented by the total attendance (or box office receipts), is affected by the longevity of the show and that both are affected by information sources and various objective factors. Critics' reviews are incorporated both simultaneously and separately to suggest their collective and independent (and perhaps differential) influence on success. The effects of show type and the month of opening are incorporated as dummy variables. Ticket prices, advertising, preview receipts, and talent characteristics are represented by metric data.

$$(1)\quad Y_i = \alpha_0 + \alpha_1 Z_i + \sum_j \alpha_j^C C_i^j + \alpha_2 P_i + \alpha_3 A_i + \alpha_4 T_i + \alpha_5 S_i + \sum_k \alpha_k^G G_i^k + \sum_m \alpha_m^M M_i^m + \varepsilon_i,$$

and

$$(2)\quad Z_i = \beta_0 + \sum_j \beta_j^C C_i^j + \beta_2 P_i + \beta_3 A_i + \beta_4 T_i + \beta_5 S_i + \sum_k \beta_k^G G_i^k + \sum_m \beta_m^M M_i^m + \upsilon_i,$$

where

Y_i = success of show i (operationalized by CUMATT),
Z_i = the longevity of show i (operationalized by PERF),
C_i^j = the critic j's evaluation of show i measured on a five-point scale (AVGNYT, AVGNYP, AVGDN),
P_i = Preview box office receipts of show i (PRVWREC),

A_i = newspaper advertising space of show i (ADSPA)
T_i = average ticket price of show i (PRICE)
G_i^k = zero-one variables that equal one if show i is of type k (e.g., musical, revue, play),
S_i = the show i's talent characteristic n (actor, actresses, director, and author characteristic) (TOTSH),
M_i^m = zero-one variables that equal one if show i opened in month m (June through May), and
ε_i and υ_i = residual terms.

RESULTS

The two-equation recursive model is estimated using two-stage least squares.[14] Both information source variables and objective features of shows appear to have significant effects on the longevity and success of the show. The model estimates appear in Table 3.[15] The explanatory power of the models, as indicated by adjusted R^2, is .526 for the longevity equation and .652 for the attendance equation.[16] When multiple measures for a construct were available (e.g., advertising, talent characteristics), the model was estimated with each measure separately (because of potential multicollinearity). These models yielded comparable results. An alternative model, with box office receipts as the indicator of success rather than of attendance, also was estimated with similar results but with one exception: As we suggested, anticipated ticket price was related significantly to box office receipts.

As we anticipated, longevity has a positive, significant relationship with show success. A model in which only longevity affected success also was estimated. This effect was positive and significant, with an R^2 of .620, which indicated only marginal incremental effects of other variables on success in the presence of longevity.

Examination of the effects of the newspaper critics' reviews on longevity and success reveals a differential impact of New York newspaper critics. In the model in which all three critics' reviews were included, the evaluations of the *New York Times* and the *New York Post* critics had a significant, positive effect on longevity of a Broadway show. However, only the *New York Times* critic had a significant, positive effect on success. These results suggest that, after the *New York Times* critic's evaluation is taken into account, the marginal effect of the other critics' reviews becomes insignificant. The results from the models in which each critic was entered separately also indicates that the *New York Times* critic's effect is nearly twice that of the critics from either the *New York Post* or *Daily News*. The coefficients suggest that a unit increase in the evaluation of the *New York Times* critic could yield an increase of 76 performances for a production, compared with an increase of 46 performances for the *Daily News* critic and 49 more performances for the *New York Post* critic. A similar pattern of results were obtained for the success equation. A unit increase in the evaluation of the *New York Times* critic could yield an increase in attendance of approximately 10,540 for a production. Similar changes in the evaluations of the *New York Post* and the *Daily News* critics will produce attendance increases of 7180 and 4980, respectively.

Examining the models for the effects of other variables on longevity reveals that musicals typically run longer than any other type of production. Ticket prices have no significant effect on the longevity or attendance of the show. In addition, shows that open during July or December appear to fare poorly compared with those that open in other months. Shows that open in March seem to fare the best. No significant differences were found among performance lengths for preview receipts. In addition, talent characteristics have no significant effects on longevity. Neither previous successes (i.e., participation in Broadway productions) nor perceived quality (i.e., the number of awards won by the key participants) provide significant explanatory power.

A few interesting results emerged in the success equation. Previews have a significant, positive relationship with attendance. One of the talent characteristics (the total number of Broadway shows in which the lead actor, actress, author, and/or director had participated) has a significant, positive effect on success. Show type and timing do not appear to play a direct significant role in determining attendance.

Several block models were estimated to examine the marginal impact of critics relative to the other variables in the model. In these models, blocks of variables are entered individually and sequentially to assess their individual and incremental contributions. The results indicate that critics' reviews account for approximately 25% of the total variance explained. This accounts for approximately 47% of the explained variance of the shows' longevity (Equation 1). The block of information source variables (critics' reviews, previews, and advertising) accounts for 37% of the variance, whereas the objective features (ticket prices, talent, show type, and timing of the show opening) explain 14% of the variance.

DISCUSSION

Our objective was to investigate the types of information that affect the longevity and success of an experiential good, namely, a Broadway show. The longevity of the show was

[14]Before pooling the data for the two time periods, through tests of the hypotheses (variations of the traditional Chow test discussed in Greene 1993, pp. 211–14; Maddala 1977, pp. 458–60) we determined that no structural change occurred due to the addition of observations ($F_{39,72} = 1.416$, ns for Equation 1; $F_{39,92} = 1.366$, ns for Equation 2). These tests involve estimating the model with the original data and then with the new set of observations and comparing the residual sum of squares. These tests are broad, in the sense that they test if there are significant differences in the entire parameter vector due to the addition of observations and do not test if a single parameter or subset of parameters are different. Therefore, we proceeded to test for individual parameter differences between the two samples using dummy variable interaction terms. None of these was significant in the performance equation of the model. In the attendance equation, only the interaction coefficient associated with preview receipts was significant. These analyses suggest that, in general, the two samples are homogeneous, and therefore, pooling is not a concern. Moreover, Wallace (1972, p. 690) has argued for pooling even in the presence of some heterogeneity, because pooled estimators "have smaller variances and one might be willing to make a trade-off, accepting some bias in order to reduce variances."

[15]In Equation 1, show type and timing dummy variables were introduced in separate blocks to avoid identification problems. None of these dummy variables was significant in this equation. For the other equation, only the significant dummy variables for show type and timing are presented.

[16]A two-equation structural equation model also was estimated. The ratings of both judges were used as two indicators for each of the newspaper's critics' reviews. In addition, advertising and talent characteristics were conceptualized as latent constructs with multiple indicators, along with the other single indicator variables used in the regression models. The model indicated a good fit ($\chi^2 = 220.746$; df = 177; $p = .014$; adjusted goodness-of-fit index = .842; comparative fit index = .968; nonnormed fit index = .962), and the explanatory power of the model for the two equations was comparable with those obtained using two-stage least squares. The results in terms of direction and significance were similar to those obtained in the regression models.

Table 3
MEANS AND STANDARD DEVIATION OF VARIABLES AND TWO-STAGE LEAST SQUARES ESTIMATES OF THE MODEL

		Longevity (PERF) [0s]	*Success (CUMATT) [000s]*
Mean (SD)	*Longevity*		
12.479 (20.096)	PERF	—	1.898***
	Success		
51.191 (73.286)	CUMATT	—	—
	Critics		
2.588 (1.235)	AVGNYT	5.653***	8.665**
3.224 (1.334)	AVGNYP	2.349**	5.481^{ns}
2.592 (1.345)	AVGDN	1.691^{ns}	1.461^{ns}
	Previews		
2.028 (3.208)	PRVWREC [$ 00,000s]	.976^{ns}	40.291**
	Advertising		
39.692 (61.612)	ADSPA	.098***	0.159**
	Price		
31.077 (11.886)	PRICE	.235^{ns}	−.339^{ns}
	Talent		
8.581 (10.776)	TOTSH	.179^{ns}	1.517***
	Show Type†		
.213 (.411)	Musical	11.330**	
.029 (.170)	Revue	15.463*	
	Timing†		
.110 (.314)	March	10.214*	
.015 (.121)	July	−19.978*	
.088 (.285)	December	−11.711**	
	Intercept	−28.251	−33.719
	R^2	.607	.672
	Adjusted R^2	.526	.652

*Significant at $p < .10$ level.
**Significant at $p < .05$ level.
***Significant at $p < .01$ level.
†Only significant dummy variables reported.
ns = not significant.

measured by the number of performances, and attendance was used as the indicator of success. The influence of experiential information (critics' reviews and previews) and advertising on consumers' selection of shows and the resultant effects on the length of the show's run and box office receipts were discussed and analyzed. In addition, the impact of objective information, such as ticket prices, show type, talent characteristics, and timing of the opening, on the success of a theatrical production were determined empirically.

Of the variables investigated, it appears that the different information sources are more important determinants of Broadway show success than the objective feature information. We suggest that, because of the experiential nature of the consumption experience, show selection is influenced heavily by the vicarious experiences and evaluations provided by critics. Although the power of critics and their evaluations often is acknowledged by theater industry experts (*New York* 1995), this is the first study that provides empirical support for this contention. Perhaps consumers rely more on theater critics than on movie critics because of the higher risk associated with attending a Broadway show.

An interesting finding is the differential impact of newspaper critics. Of the three sets of reviews examined, the theater critic for the *New York Times* had the strongest effect on the success of a show. This critic was almost twice as influential as those for the *New York Post* and *Daily News*. Perhaps this influence is why the *New York Times* critics often are referred to as the "Butchers of Broadway" (Loney 1990, p. 113). The differential effect of the *New York Times* evaluations could stem from two discrepancies: (1) in review content and (2) in market composition. Although on average, the judges' ratings for the *New York Times* reviews did not differ significantly from those for the *Daily News*, the *New York Times* reviews appear to be consistently longer, more detailed, and more balanced than those in the *Daily News*. Perhaps the *New York Times* reviews more closely reflect the consumptive experience and provide more information about objective features, thus giving consumers more points on which to base judgments than the other reviews. Another reason could be that the demographic profile of the *New York Times* readership closely resembles that of a typical Broadway show attendee. The profile of a reader of the *New York Times* is more upscale than those for the other two newspapers. Data on the audience profile obtained from the three New York newspapers in 1996 suggest that the *New York Times* reader is more affluent (62% of its daily readers and 72% of its Sunday edition readers have household income greater than $50,000, with median household income of

$65,884) and more educated (63% have a college degree or more) than the reader of the *New York Post* (50% have household income greater than $50,000, with a median household income of $50,422, and 26.6% have a college degree or more). In addition, the circulation of the *New York Times* is substantially higher than those of the other two newspapers (the *New York Times* daily circulation of 1,141,000 was almost three times as much as the *New York Post's* circulation of 394,000, in 1994). This could have contributed to the differential impact of the respective critics. Also, the *New York Times* is the only newspaper among the three that has an entertainment section that prominently displays and covers Broadway. The *New York Post* reviews were more positive than those from the other two newspapers, and it is possible that these evaluations were discounted.[17]

Eliashberg and Shugan (1997) find that critics are better predictors than influencers of movie box office success. However, theater critics may be influencers as well as predictors of Broadway show longevity. The role of critics as influencers can be inferred by examining the shows that received very low or negative ratings from the critics and lasted a short time. Of the forty-two shows that received a rating of 1.5 or less from the *New York Times* critic, seven (17%) of them closed after the first performance. This means that of the ten shows in the sample that closed after the first performance, 70% had a rating of 1.5 or less from the *New York Times* critic and only one of the remaining three shows had a rating as high as 2.5. An argument can be made that, for shows that lasted only one performance, show failure must be primarily due to poor reviews. It is difficult to imagine a scenario in which word-of-mouth effects from Broadway audiences could create this type of instant impact. Of the nine shows that received a rating of less than 1.5 from all three critics, three closed after the first performance, seven lasted less than a week, and only one show went beyond the second week. The failure of shows to last beyond one or two weeks after strong negative reviews by critics, before the word of mouth and promotion could take effect, provides some indication of the role of critics as influencers.

The role of critics as predictors of Broadway show success is supported by the results of the model. Examining the critics' reviews of long-running shows provides some indication of critics' ability at picking winners. Sixteen shows that had run for more than 500 performances had high ratings from all three critics, with few exceptions. On average, the 29 shows that received a rating of 4 or higher from the *New York Times* critic ran for more than 500 performances. Although the previous discussion provides some indication of the role of critics as both predictors and influencers, we believe that the issue of whether the theater critics are better predictors or influencers might not be resolved fully in this study. Further research in a field setting should attempt to identify which of these explanations is an accurate depiction of the role of critics in the theater industry.

Because musicals have always been popular and are among the longest running shows on Broadway, the finding that musicals last longer than other categories of shows is intuitively appealing. Willis (1981) suggests that one of the principal reasons for the decline in theater attendance is the shortage of musicals. In addition, because the average production cost of a musical (approximately $10 million) is four to five times that of a play, there is probably careful selection of the musicals that are produced. When open, producers might be disposed to let musicals run for longer periods to recover these costs.[18] Although no figures are available on the promotional expenditures for Broadway shows, industry experts suggest that musicals are more aggressively promoted than other types of productions (*Worth* 1995). This combination of popular appeal, production selectivity, and heavy promotion could contribute to the increased success of musicals.

The findings indicate that a March opening has a significant, positive effect on the longevity of the show. To verify that this effect and that of show type are not artifacts of the time period studied, we examined data on Broadway shows

[17]We developed models to explore further the effects of the non-*New York Times* critics' reviews when they differ from those of the *New York Times* critic. After standardizing each of the newspaper's ratings (ZNYT, ZNYP, ZDN), we constructed new variables that reflect the deviation of ratings of the *New York Post* and the *Daily News* critic from those of the *New York Times* critic. The following model (using PERF as the dependent variable), suggested by Maddala (1977, p. 136), is used to check for possible asymmetric effects of positive and negative deviations:

Let

$PERF^-_i = \alpha_1 + \beta_1(ztp_i^-) + \ldots + u_1$ for shows for which the deviations (ZNYT – ZNYP) are negative and

$PERF^+_i = \alpha_2 + \beta_2\,(ztp_i^+) + \ldots + u_2$ for shows for which the deviations (ZNYT – ZNYP) are positive,

where

(ztp_i^-) = standardized negative deviations (ZNYT < ZNYP) for show i, and

(ztp_i^+) = standardized positive deviations (ZNYT > ZNYP) for show i.

These equations can be written together as

$$(3)\quad \begin{pmatrix} PERF_i^- \\ PERF_i^+ \end{pmatrix} = \alpha_1\begin{pmatrix}1\\1\end{pmatrix} + (\alpha_2 - \alpha_1)\begin{pmatrix}0\\1\end{pmatrix} + \beta_1\begin{pmatrix} ztp_i^- \\ ztp_i^+ \end{pmatrix} + (\beta_2 - \beta_1)\begin{pmatrix} 0 \\ ztp_i^+ \end{pmatrix} + \ldots + \begin{pmatrix} u_1 \\ u_2 \end{pmatrix},$$

or as

$$(4)\quad PERF_i = \alpha_1 + (\alpha_2 - \alpha_1)D1 + \beta_1\,(ztp) + (\beta_2 - \beta_1)D2 + \ldots + u,$$

where

D1 = 0 for all shows for which the deviations (ZNYT – ZNYP) are negative
= 1 for all shows for which the deviations (ZNYT – ZNYP) are positive, and

D2 = 0 for all shows for which the deviations (ZNYT – ZNYP) are negative
$= (ztp_i^+)$.

The coefficients associated with D1 and D2 measure the differences in the intercepts and slopes, respectively.

The results of the estimated models indicate that these coefficients were not significant. The coefficients associated with D1 and D2 were 6.453 (t = .773; ns) and 10.737 (t = .860; ns) for deviations between the *New York Times* and the *New York Post* and 8.326 (t = .543; ns) and –2.972 (t = –.312; ns) for deviations between the *New York Times* and the *Daily News*. A closer descriptive examination of the effect of negative and positive differences between the *New York Times* critic and the other two critics indicates that, in general, the shows last for fewer performances when the other newspaper critics differ negatively (i.e., *New York Times* critic's evaluation is less positive than those of the other critics) than when the difference is positive. However, these differences in the average number of performances were not significant because of high variance.

[18]However, the early closure of musicals (as measured by the number of shows that close before the end of the first week) is comparable with the observed rates for other types of shows (with the exception of revivals, which have a lower rate).

that opened during the 1980–95 period. A regression with timing and show type as predictor variables revealed that show type was still a significant predictor ($p < .01$) of show longevity, whereas timing of the opening was not significant. Although these results lend credibility to the show type finding, they suggest that additional research is needed to determine the relationship between the timing of a Broadway opening and success.

Characteristics of the lead actor, lead actress, author, and director separately and in combination did not emerge as significant for longevity but had significant, positive effects on attendance. Mixed results have been obtained in research on movies. Austin (1981) and Linton and Petrovich (1988) find that on- and off-screen personnel had significant influences on movie success. In these studies, survey respondents were asked to rank the factors influencing the decision to attend a particular movie. However, consistent with our findings, Litman's (1983) regression results indicate that the presence of the "top 10 box office stars" does not significantly influence movie success. The lack of consistently significant results in the current study could be because relevant characteristics of key talent are captured in the critics' reviews. If the reviews reflect evaluations of the stars' performances, the author's writing, and the director's creativity, then the marginal contribution of these persons' previous distinctions in predicting show success would be low. An alternative explanation for the lack of significance of talent characteristics could be that lead stage performers often leave during the run of the show and are replaced by lesser-known talent. Frequent theater-goers are probably cognizant of this practice and therefore might not rely heavily on the identity of the performers in making selection decisions.

The impact of preview receipts on attendance is positive and significant but has no effect on longevity. The number of performances, indicative of the survival or longevity of the show, initially might depend on successful previews. As the show takes hold, this impact might become less pronounced. However, attendance better reflects changes in the popularity of the show over the entire run. This might lead to a stronger relationship between preview receipts and attendance. An examination of the data reveals that, though preview receipts are correlated positively with both measures of success, the correlation is weaker with longevity (.21, $p < .01$) than with attendance (.31, $p < .01$) and box office receipts (.39, $p < .01$).

SUMMARY

This study investigates potential determinants of the success of Broadway shows. In the packaged-goods setting, opinion leaders such as experts, friends, and *Consumer Reports* magazine are credible sources of information. These information sources are familiar with the product category, do not have a vested interest in the success of a particular brand, and therefore are persuasive. Critics are opinion leaders in the choice process for artistic goods, and they help determine the success or failure of these offerings. In spite of the aggregate nature of the analysis, insights have been gained about the importance of this information source. In addition to providing experiential information, critics provide objective information about the artistic event. This study provides a theoretical basis and empirical evidence for the impact of newspaper critics on Broadway shows' success. Its contributions lie in expanding our knowledge of the role of critics as gatekeepers or social influencers in the experiential consumption area and providing empirical evidence as to their importance.

The model could be extended to increase our understanding of the success determinants of other cultural events. An awareness of the important role of critics in the diffusion of artistic offerings, and the ability to identify key critics who serve as gatekeepers, is meaningful. This knowledge should encourage managers and producers to develop alternative avenues for consumers to obtain objective and trustworthy information on experiential goods, such as samplers on videotape or CD-ROM. The advances in the Internet provide ample opportunity for consumers to gain access to expert intermediaries or peers (through chat rooms) who provide guidance and advice on important consumption decisions. In the introductory phase of a new Broadway show, this medium could provide a channel for subjective information and access to word-of-mouth communications. Indeed, access to additional sources of experiential information could reduce the power that is possessed by some individual critics.

Limitations and Future Directions

Lack of publicly available data on advertising and other promotion expenses precluded the incorporation of these variables in this study. These expenditures have a significant impact on product performance in packaged goods and should affect the consumption of experiential goods such as theater going. It could be argued that a model that omits promotion expenditures exaggerates the influence of critics on success. In this study, we used the extent of advertising in the newspapers as a surrogate measure for advertising, but we fear that it does not capture fully the essence of advertising and promotion. Leading National Advertisers (LNA) recently started documenting advertising expenditures in this industry. Although the newspaper advertising measures we used are correlated with the LNA advertising measure for the 13 shows on which we were able to obtain data, access to the LNA data should make it possible for researchers to investigate the relative impact of advertising and promotion and critics' reviews.

The critics' reviews were rated by judges on a single-item scale. Research in movies uses similar overall evaluation scales that movie critics provide (such as thumbs up or down and one to four star ratings). It would be better to have the judges evaluate the review on several dimensions, for example, the actor or actress's performance, script, set design, or music, and then relate them to success of the show. This surely would add to our understanding of the underlying dimensions that potential consumers use to evaluate Broadway show.

Because all three critics' reviews were from newspapers, it is possible that the analyses emphasize the influence of newspapers rather than the power of critics. In the two-year period under review, the individual newspaper critic was synonymous with the newspaper. During this time, with few exceptions, the *New York Times* critic was Frank Rich (87 of the 104 shows were reviewed by him); Clive Barnes (95 of the 104 shows) was the critic for the *New York Post*; and the *Daily News* Broadway reviewer was Douglas Watt (97 of the 104 shows). The addition of observations in the 1990s

did not change this much, except in the case of the *Daily News*, for which all 40 shows in the 1990s were reviewed by Howard Kissel. Frank Rich reviewed 22 of the 40 shows for the *New York Times* and Clive Barnes reviewed 37 of the 40 shows for the *New York Post*. Dummy variable regressions were used to check for differences between the main and secondary critics of each newspaper. These results suggest that the main critic of each newspaper yields a significantly greater influence compared with the secondary critics used by the same newspaper (at least in the case of Frank Rich and Clive Barnes).[19] Caution should be exercised, however, because of the small number of shows reviewed by secondary critics. Even with this analysis, it is not possible to separate the effects of the individual critic and the newspaper completely for the period under study. Additional research should attempt to investigate the differential influence of the messenger (the critic) and the medium (the newspaper) on the show's success.

We attempted to examine the impact of competition by computing the concentration ratio during the week of each show opening. This ratio was computed on the basis of the attendance share of the top four shows (mean = .243; standard deviation = .021; range .200–.310) at the time of a show's opening. This static measure of competition, however, did not have a significant effect on longevity or attendance. Further research should concentrate on isolating the impact of the dynamics of competition on the success or failure of Broadway shows using longitudinal data.

Broadway shows introduced during a two-year period and a sample of shows produced during the 1990s were analyzed. Although it appears that these years are representative of the industry, and therefore the findings can be generalized, caution should be exercised. Additional research should attempt to cover a longer time frame. A reasonable option would be to gather information on a sample of shows from a larger time period, perhaps during the past ten years. This would facilitate obtaining an understanding of potential longitudinal dynamic effects.

[19]Several models were estimated to separate the effects of the critic from the effects of the newspaper. Separate models for each newspaper were estimated. The average critic rating was multiplied by a dummy variable (for example, coded 1 if it was reviewed by Frank Rich, 0 otherwise). The significance of this coefficient will indicate the existence of a difference between the main critic of the newspaper and the other critics reviewing for the same newspaper. The results for the newspaper models of longevity indicate a significant, positive coefficient associated with Frank Rich of the *New York Times* (4.263; $p < .001$) and Clive Barnes of the *New York Post* (3.751; $p < .001$) and no significant coefficient associated with Douglas Watt of the *Daily News* (1.528; ns). Recall that the total effects of each newspaper critic, mentioned previously, were 76 for the *New York Times*, 49 for the *New York Post*, and 46 for the *Daily News*. We can use the current estimates to break down approximately the total effects due to the critic and the newspaper, as follows:

Total Effect		*Critic Effect*		*Newspaper Effect (or other critics' effect)*
New York Times	76	Frank Rich	43 (56.6%)	33 (43.4%)
New York Post	49	Clive Barnes	38 (77.6%)	11 (22.4%)
Daily News	46	Douglas Watt	15 (32.6%)	31 (67.4%)

This breakdown was performed to illustrate how the effects of the critic can be separated from those of the newspaper. To truly disentangle these effects we need to have the occurrence of these critics reviewing for more than one newspaper. Although it was not possible here, it would be interesting to see if the critic's influence follows when he or she switches to another newspaper.

APPENDIX
INSTRUCTIONS TO THE JUDGES

The following are theater critics' reviews of Broadway shows. We would like you to read each of the reviews and determine if the critics were positive, neutral, or negative about these shows. We would like you to use the following scale to categorize their opinions:

1. If the review was strongly negative. The critic thought that the show was poor, acting was bad, etc.
2. If the show has some redeeming qualities but still not considered good. The redeeming qualities could be an actor/actress's performance despite the bad script, low production quality, poor set design, etc.
3. If the critic's comments were lukewarm. He/she provides neither a strong endorsement nor a strong criticism of the show.
4. If the show is viewed as positive, but has some flaws in either acting, script, direction, songs, etc., which makes it less than a sure winner.
5. If the show is given a strong endorsement. Phrases like "outstanding," "best show of the season," "flawless," etc.

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