

# No News Is Good News: The Relationship between Media Attention and Strike Duration

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Media attention has been overlooked as a potential determinant of strike duration. This study analyzed the impact of media attention on strike duration using a sample of the 90 largest U.S. strikes that occurred from 1980 to 1991. Results indicated that a strong positive relationship exists between prestrike media attention and strike duration, even while controlling for strike size, organizational fame, the occurrence of a federal intervention, the involvement of a famous union, history of conflict, and broad industry categories. A possible social psychological explanation—bargaining parties behave rigidly in response to increases in public attention—is discussed.

DURING COLLECTIVE-BARGAINING PROCEDURES, bargaining parties sometimes agree to enact a gag order that prohibits all communication with the media until a settlement has been reached. The cause of this aversion to media attention has drawn conjecture from many industrial relations scholars. Snow (1981) suggested that if statements made in the press do not corroborate with statements made at the bargaining table, or if one party begins casting aspersions at the other publicly, then negotiations may “break down,” thus prolonging a settlement. This explanation as well as others (e.g., Slichter et al., 1960; Coulson, 1980; McClure, 1991) are reasonable, yet no research has attempted to verify whether a negative relationship between media attention and the collective-bargaining process even exists. Is media attention truly detrimental to the success of a collective-bargaining procedure?

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The popular media has, in large part, shaped public perception of labor activity in the United States (Schmidt, 1993; Walsh, 1988). Stories about labor events such as wage negotiations, squabbles between union administrators, and political endorsements from powerful unions are found commonly in newspapers, magazines, and television broadcasts (Erickson and Mitchell, 1996). In particular, the occurrence of a strike, which offers the sensational and dramatic appeal of a direct confrontation between labor and management, generates an extraordinary amount of media coverage (Coulson, 1980). Because of this media fascination, labor strikes provide an ideal setting in which to study the effects of media attention on the collective-bargaining process.

The primary goal of the collective-bargaining process during a strike is to reach an amicable agreement as quickly as possible (Katz and Kochan, 1992). Appropriately, then, much research on strikes has focused on identifying the determinants of strike duration. Several important factors have emerged in research on strike duration, but media attention is not among them. This empirical study will test whether or not a positive relationship exists between media attention and strike duration. Such a discovery would be important for two reasons. First, if a positive relationship exists between media attention and strike duration, then media attention should be recognized as a potentially critical environmental variable in models of strike duration. Second, if media attention increases the duration of strikes, then journalistic institutions should not be regarded as impartial observers but rather as influential players involved indirectly in the resolution of labor disputes.

## Background

*Determinants of strike duration.* Past research on strike duration has focused on myriad variables, including the nature and degree of disagreement, firm and labor characteristics, and environmental factors [for a more comprehensive review of strike duration theories and determinants, see Kennan (1986)]. Regarding the degree of disagreement between bargaining parties, Ondrich and Schnell (1993) have examined how differences in the number of points of disagreement and the magnitude of a disagreement at the start of a strike can accurately predict strike duration. These researchers found that disputes with more points of disagreement lasted longer. Likewise, disputes with a greater discrepancy between the bargaining positions of both parties at the start of a strike lasted longer.

Firm and labor characteristics also have received attention in past studies of strike duration. One variable often included in strike duration models is

the size of the strike (e.g., Tracy, 1986). Empirical studies of the influence of strike size on strike duration have sometimes been inconclusive (e.g., Kennan, 1986). Recent research by Harrison and Stewart (1993) suggested that strike size did influence strike duration. However, the magnitude and direction of the effect depended on the nature of the bargaining issue. After taking into consideration all types of bargaining issues, these researchers found that larger firms, in general, tended to have shorter strikes. In addition to strike size, other features of the firm, such as its level of diversification and profitability (Rose, 1994), have been identified as important variables in models of strike duration.

Past research on environmental determinants of strike duration has focused on many factors, including economic indicators, legal methods of strike resolution, and public-policy issues but not media attention (Kochan, 1980). While the influence of the public media has been overlooked in the literature on strike duration, it has not gone unnoticed in other areas of industrial relations research. Recently, Erickson and Mitchell (1996) analyzed the patterns of media coverage on strikes and nonstrike wage settlements to determine whether the amount of media attention surrounding strikes, or labor disagreements in general, waned between 1982 and 1991. They found strong evidence to support this hypothesis, although contrary to popular opinion, they surmised that the decline was more likely due to a decreased incidence of strikes during that period than a general lack of interest.

*The media's fascination with strikes.* Why does the media pay more attention to strikes than to other labor events? There are several possible explanations. First, the amount of media attention surrounding a strike is a function of the drama and human interest inherent in the event (Erickson and Mitchell, 1996). Second, the proliferation of strikes could serve as an indicator of the poor economic conditions of a geographic area, which may be of interest to local residents and businesses (Tracy, 1986). Third, McConnell (1989) suggested that unions may use strikes to discover the true profitability of their employers. Such information about firm profitability also could be valuable for others outside the union, including potential investors.

Recent studies suggest that the media coverage of unions and strikes is unfairly biased (Schmidt, 1993; Walsh, 1988). Looking at the period from 1946 to 1985, Schmidt (1993) examined how the media coverage of unions and their strike activities affected public opinion. She found that, during this time, the media coverage of unions became more concentrated on strikes and less on other activities. She also found some evidence that

the media exaggerated the frequency of strikes. This exaggeration appeared to have a negative influence on the public's perception of labor disputes and, in particular, on union involvement in these disputes. Schmidt noted that "as this type of coverage increasingly dominates the information available about labor unions [and strikes] and as the number of traditional union sympathizers decreases in society, the media's ability to influence or sway opinions about labor unions and strikes increases" (1993:162).

It seems, as Schmidt (1993) concluded, that the media coverage of strikes may adversely affect the public's perception of and attitude toward unions and strikes. However, the influence of media attention surrounding strikes may not be limited to the general public. Media coverage also may affect the attitudes and behaviors of the parties involved in the strike. Perhaps the influence of media attention ultimately may even alter the course of the collective-bargaining process.

*How media attention might influence strike duration.* Past research and theory in social psychology can help us understand how media coverage might affect the attitudes and behaviors of bargaining parties. Social psychology researchers have found strong evidence that when an individual expresses an attitude publicly, such an act will increase his or her commitment to the stated attitude and decrease his or her willingness to change it (Deutsch and Gerard, 1955; Jellison and Mills, 1969; Salancik, 1977; Pallak et al., 1980; Cialdini, 1984; Tetlock, 1985). This "commitment and consistency bias" (Cialdini, 1984) is so robust that it is easily manipulated by those studying attitude change in laboratory experiments (Kiesler, 1971). For example, in order to increase a subject's sense of commitment to an attitude, researchers may simply ask the subject to repeat it aloud in front of an audience (e.g., Aronson and Mills, 1959). Following such an act, the subject "internalizes" his or her stated belief or preference and becomes more resistant to changing it in the future (Jellison and Mills, 1969; Kelman, 1958).<sup>1</sup>

Extensive social psychology research has successfully verified the effect of public attention on the attitudes and behaviors of isolated individuals

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<sup>1</sup> Jellison and Mills (1969) first demonstrated this effect in a laboratory experiment in which they asked college students to write essays about their political beliefs and read them aloud. In the control condition, subjects read their essays in front of only the experimenter. In the treatment condition, subjects read their essays into a tape recorder, which they were told would be played in front of a large audience of their peers. The researchers compared pretest and posttest measures of attitude strength and commitment and discovered that students who read their essays into the tape recorder were significantly more committed to their attitudes and more resistant to changing them than the students who read their essays in front of the experimenter.

(e.g., Cialdini, 1984). Unfortunately, little attention has been given to the behavior of people in dyads or groups of people who stand opposed. In theory, one would expect that the effect of public attention on the behavior of parties engaged in a confrontation is similar to its effect on isolated individuals. Although responsibility for one's actions or statements in a group setting may be diluted through the process of deindividuation (e.g., Diener, 1980), people in a negotiation probably would not experience deindividuation effects because each party's statements or actions about the disagreement represent his or her own separate interests. Thus parties involved in a confrontation or negotiation would be as susceptible to the rigidifying effects of public attention as isolated individuals.

It seems plausible that the effects of increased public attention would apply to the context of collective-bargaining procedures. During such procedures, bargaining parties often make strong statements in the press about their bargaining positions. For example, the following is a statement made by the bargaining representative for Northwest Airlines during their most recent strike:

There's only one issue as far as we're concerned [the Northwest representative said]. It's money. The pilots want more than we can afford. In order for us to get together, they're simply going to have to lower their salary demands (Hunter, 1998).

Bargaining positions are somewhat similar to attitudes in that both represent a preference for a particular object, outcome, or course of action. This evokes an interesting question: Would an increase in public attention affect bargaining positions in the same manner that it affects attitudes? In other words, would an increase in the amount of public attention surrounding a collective-bargaining procedure increase the bargaining parties' commitment to their respective negotiating positions and decrease their willingness to make concessions, thereby extending the dispute?

To answer this question, we must consider the causal mechanisms underlying the rigidifying effect of public attention. As a motivational explanation, Jellison and Mills (1969) proposed that people have a desire to be certain the side they have publicly chosen is the correct one. In order to remain convinced of the soundness of his or her position, an individual will seek out more evidence that supports the position, otherwise known as a "confirmation bias" (Kahneman et al., 1982; Bazerman, 1990). In addition, he or she will try to avoid vacillating from the initial position because this may be construed by others as a sign of weakness (Jellison and Mills, 1969). This motivation to appear unwavering is often evident

in the public statements of bargaining parties, as shown in this excerpt from a newspaper article about the 1997 UPS strike:

Negotiations had come to a standstill yesterday as the Teamsters union, which represents 185,000 UPS employees, or two-thirds of the company's domestic staff, rejected a proposal Wednesday night that UPS officials had called "their last, best, and final offer. . . . When they are ready to address our best and final offer and are willing to frame their response to what we have put on the table, we're willing to negotiate [said UPS's representative] (Garnier, 1997).

People feel greater personal responsibility and accountability for their actions and statements when they are under public scrutiny (Tetlock, 1985; Sutton and Galunic, 1996). An increase in the level of public attention can pose a threat because those held accountable will likely be blamed if negative outcomes are realized (Tetlock et al., 1989). According to threat-rigidity theory, individuals and groups tend to behave rigidly in response to threatening situations (Staw et al., 1988). Therefore, as a decision receives more attention in the media, it is less likely that the person or group held responsible for making the decision will change their mind in the future (Salancik, 1977; Sutton and Galunic, 1996). Along the same vein, an increase in media attention surrounding a collective-bargaining procedure will enhance a bargaining party's sense of accountability for his or her actions and statements. Faced with this potentially threatening situation, the bargaining party will behave rigidly by offering fewer concessions.

All the social psychology research just reviewed points to one underlying effect: An increase in public attention will reduce the likelihood of an individual or a group compromising a stated position. Applying this theory to the context of labor strikes, it follows that the duration of a strike will be positively related to the amount of public attention received prior to the start of the strike. This effect would occur because each bargaining party's commitment to his or her original position strengthens as the media attention prior to the start of the strike intensifies. Summarizing the preceding discussion leads to this study's central hypothesis:

*Hypothesis:* Strike duration will increase as prestrike media attention increases.

### Model Specification

Empirical research on strike duration is limited by the lack of a uniform analytical model. Past studies have differed widely in the selection of variables that are considered critical determinants of strike duration.

Variables were included in this model if they were shown or believed to have an influence on both strike duration and media attention. This criterion was used to build a model that explained a significant percentage of strike duration while controlling for alternative hypotheses.<sup>2</sup>

In their 1996 study, Erickson and Mitchell identified several variables that might influence both the amount of news coverage that a strike received and its duration: (1) the size of the strike, (2) the occurrence of a federal intervention, (3) the involvement of a famous union, and (4) the industry in which the strike occurred. Each of these variables was included in the model along with an additional control variable that measured prior conflict. All model variables and their hypothesized relationships are reported in Table 1.

Past research has shown that strike size is negatively related to strike duration (Harrison and Stewart, 1993; Tracy, 1986). However, this effect may vary depending on how the size variable is operationalized. Rather than using the number of workers involved in the strike as a proxy, some scholars (e.g., Tracy, 1986) have used financial statistics, such as net sales, and obtained a stronger and more consistent effect. Conversely, the relationship between size and media attention is less ambiguous: The larger the size of the strike, whether it be measured by the number of workers involved or the net sales of the firm, the more media attention it will likely receive.

The occurrence of a federal intervention during a strike has a straightforward relationship with both media attention and strike duration. Federal interventions typically will shorten the strike, and the potential of such an incident occurring often will generate additional media attention. For example, the intervention by the federal government during the 1997 American Airlines strike shortened the strike to less than a full hour, and in the days preceding the strike, reports of a potential intervention flooded newspapers and television broadcasts (Zellner, 1997). This example is somewhat extreme, since it is more common for the federal government to facilitate a resolution rather than force strikers to return to work. Regardless, the expected direction of the effect is the same. Federal involvement

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<sup>2</sup> Several factors that lead to an increase in strike duration may increase media attention prior to a strike. Failing to include these variables in the model may lead to a spurious effect of media attention on strike duration. Currently, little research exists that systematically identifies such variables, and it is possible that such a variable has been omitted. To determine whether this was the case, I polled a small sample of labor journalists from major U.S. media institutions about the factors of prestrike media attention. Although these qualitative data are imperfect, it appears that the control variables that I have included in this model are generally considered to be the most critical determinants of prestrike media attention.

TABLE 1  
DEFINITION OF VARIABLES, UNITS, AND HYPOTHESIZED RELATIONSHIPS

Variable	Units	Hypothesized Relationship
Dependent variable		
Strike duration	Log of the number of days until a strike is resolved.	
Control variables		
Strike size	Log of the number of workers involved in the strike.	-
Organizational fame	Log of the number of articles published over a 1-week period 1 year prior to the start of the strike.	None
Federal intervention	1 = federal intervention; 0 = other.	-
Famous union	1 = Steelworkers, Teamsters, Autoworkers; 0 = other.	+
Strike frequency	Log of the number of strikes held by an organization or group of organizations during the prior decade.	+
Construction industry	1 = construction; 0 = other.	None
Manufacturing industry	1 = manufacturing; 0 = other.	None
Public administration industry	1 = public administration; 0 = other.	-
Transportation and public utilities industry	1 = transportation and public utilities; 0 = other.	None
Other industries	0 = construction, manufacturing, public administration, transportation and public utilities; 1 = other.	None
Independent variable		
Number of prestrike articles	Log of the number of articles published during the week prior to the strike.	+

likely will shorten the duration of a strike and increase the amount of media attention that a strike receives.

Having a famous union participate in a strike also may affect its duration. The involvement of prominent unions often prolongs talks because these unions are more likely and able to use the media as a platform to state their grievances and bargaining demands. Such gaming activity often can lead to a breakdown in negotiations (Slichter et al., 1960). The participation of a famous union in a strike is also likely to have a positive effect on the amount of prestrike media coverage generated. Unions with names that are instantly recognized by the public will receive more coverage than unions without such well-known names (Erickson and Mitchell, 1996).

Another variable that merits consideration in modeling strike duration is the industry in which the strike took place. Certain industries that are recognized as "key" industries affecting wage standards may receive special attention from the media (Erickson and Mitchell, 1996). In addition, cross-industry variation in the propensity to strike may exist, and this also could engender heightened media coverage (Tracy, 1986). Finally, certain industries, such as transportation and public utilities, may receive greater coverage because they are of more relevance to consumers. Of the limited industry categories included in this model, the public

administration industry is the only one that has been documented in prior research as having a strong relationship with strike duration. Strikes have tended to be shorter in the public sector than in the private sector (Partridge, 1992). A listing of all strikes in this study's sample and the industry in which each strike occurred is reported in Table 2.

Card (1988) has shown that if a strike occurs in one negotiation, it raises the likelihood of a strike occurring in a subsequent negotiation. Therefore, information about the number of strikes held at an organization in the recent past could increase the level of media attention that

TABLE 2  
STRIKES OCCURRING IN EACH INDUSTRY CATEGORY  
BETWEEN 1980 AND 1991<sup>a</sup>

Construction	Manufacturing	Public Administration	Transportation and Public Utilities	Other Industries <sup>b</sup>
Mid-America Bargaining	Chrysler (2)	Philadelphia Muni.	AT&T (2)	League of Hospitals (3)
Ohio Contractors	General Motors (2)	State of Minnesota	Nynex (2)	Kaiser Permanente
Illinois Builders	Deere, Inc. (2)	Air Traffic Controllers	Pacific Telesis	Health Employers Inc.
Association of General Contractors	Weyerhaeuser	Metro. Transit Authority	Bell Atlantic	Motion Picture Industry
Association of Coal Contractors	Caterpillar Tractor	Board of Education-IL (5)	Mountain States Bell	Hotel Association
Construction-CA (5)	Petroleum Refining Co.	Board of Education-WA (3)	Ameritech	Nevada Resort Hotels
Construction-CO	Aluminum Can Co.	Board of Education-CA (3)	Eastern Airlines	Allied Employers
Construction-MI	National Can Co.	Board of Education-PN (2)	Pan American	Food Employers Council
Construction-PA	Boeing	Board of Education-MI (2)	Railroad Industry (2)	Four Supermarket Chains
Construction-MN	USX Co.	Board of Education-OK	Burlington Northern (2)	Bituminous Coal (2)
Construction-NC	Pacific Coast Shipbuilders		Santa Fe Railroad	Copper Industry
Construction-DC	Chinese Garment Manufacturing		Southern Pacific Railroad	Realty Advisory Board
Construction-TN			Consolidated Edison-NY	Greyhound Lines
Construction-NY				Automobile Transporters
Plumbing Employers Co.				Shipping Association
				Retail Grocery Stores-CA

NOTE:  $N = 90$ . Numbers in parentheses represent the number of strikes that occurred during the 12-year sample period.

<sup>a</sup>Industries categorized according to Standard Industrial Classification numbering system.

<sup>b</sup>Includes agriculture, mining, retail, wholesale, finance, real estate, and services industries.

surrounds a strike prior to its start. In addition, the number of recent strikes may serve as a proxy for the level of conflict that exists between labor and management. A high incidence of conflict between bargaining parties often can lead to heightened feelings of frustration and a diminished level of trust, which may delay a settlement (Snow, 1981). Further, a recurrent pattern of conflict could indicate that the issues being negotiated are complex and require more time to resolve.

The focus of this study is on the final explanatory variable—media attention. One possible operationalization of media attention could be the total number of articles published about a strike. However, the intent of this study is to determine whether media attention can predict strike duration. Therefore, a more suitable measure would be limited to the number of articles published prior to the start of the strike. Use of this measure also will help to avoid the biased effect of an endogenous relationship between media attention and strike duration. In other words, the possibility of reverse causality (i.e., strike duration causes media attention) is restricted in this model.

Several explanatory variables that may influence strike duration were not included in this model because either they did not apply to this sample or the necessary data were not accessible. Examples of the former include the profitability and diversification of a firm and the degree of disagreement. This sample included several strikes that occurred at more than one firm. Thus the sample lacked consistent measures of firm profitability and diversification across strikes, and so these variables were not included in the model. Consistent measures of the degree of disagreement also were lacking because the nature of the bargaining issue varied throughout the sample.

## Data

Strike data were extracted from the *Analysis of Work Stoppages and Current Wage Developments*, which are publications of the Bureau of Labor Statistics (BLS).<sup>3</sup> The data used in these analyses cover every U.S. strike that occurred between 1980 and 1991 and involved at least 10,000 workers<sup>4</sup> ( $n = 90$ ). Information about the strikes retrieved from the BLS publications included strike duration, strike size (number of workers), the

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<sup>3</sup>I am indebted to Christopher Erickson and Daniel Mitchell for providing me with these data.

<sup>4</sup>Bulletins from the Bureau of Labor Statistics only cover those strikes which involve more than 10,000 workers.

industry in which the strike occurred, what union, if any, was involved, and whether there was a federal intervention.

The dependent variable is the duration of the strike, measured in days ( $x = 37.78$  days, S.D. = 55.42). All the strikes in this study have begun and ended, and so there are no censoring or truncation problems to consider. However, there are a few significant outliers in the measures of both strike duration and media attention. Subsequent analyses were conducted with and without these outliers to determine their relative impact on the results. As a further precaution against misleading outlier effects, the logarithmic values of the dependent variable and all continuous independent variables were used in the analyses. Each of these variables is reported in its logarithmic form in the tables.

Strike size was measured as the total number of workers involved in a strike (in thousands,  $x = 38.72$ , S.D. = 7.98).<sup>5</sup> A dummy variable was included in the model to account for whether a federal intervention occurred during the strike (1 = federal intervention, 0 = no intervention). The variable indicates executive or judicial federal intervention (i.e., through the creation of Taft-Hartley and Railway Labor Acts emergency boards or through actions under wage controls and guidelines). Federal interventions occurred in less than 6 percent of the strikes in this sample. A dummy variable also was included in the model to control for the involvement of a famous union. If the Teamsters, the Steelworkers, or the Autoworkers participated in the strike, then the dummy variable was assigned a value of 1, and if not, it was assigned a value of 0. A similar classification of union fame was made in Erickson and Mitchell's (1996) study. Seventeen percent of the strikes in this sample involved one of these three famous unions.

Industries were categorized according to the one-digit SIC classifications (Standard, 1987). This broad categorization was used because the sample lacked a sufficient number of degrees of freedom to adopt a more specific industry categorization. A large majority of the strikes that occurred fell within four major industry categories ( $n = 76$ , out of a possible 90): construction, manufacturing, public administration, and transportation and public utilities. Each of these four industries was represented by a dummy variable, with the deleted group being all other industry categories. Finally, an additional variable was created to approximate strike frequency. This variable was operationalized as the number of strikes that occurred during the decade prior to the focal strike ( $x = 1.48$ , S.D. = 2.70).

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<sup>5</sup> All mean and standard deviation values in parentheses are reported in arithmetic form.

Public attention was assessed by searching through the NEWS/ALLNEWS directory of the NEXIS mass media database for articles that covered the strikes in this sample. NEXIS is a full-text online source for business information, current affairs, legal information, medical information, and news. It provides access to over 70 million articles appearing in newspapers, journals, newsletters, magazines, broadcast transcripts, reference works, and other documents. However, the availability of documents written prior to 1979 is severely limited. Therefore, this analysis was restricted to those strikes occurring after 1979.

Three separate measures of media attention were gathered from the NEXIS searches. First, all articles published about a strike were collected, using a keyword search that contained the name of the company (e.g., EXXON) as it was listed by BLS and the word *strike* ( $x = 101.64$ , S.D. = 129.80). Multiple variations of company names also were used to extract the total number of available articles (e.g., GM and General Motors). Some strikes were held by more than one specific organization, so the name of the occupation was used instead (e.g., *teacher* or *carpenter*), along with the strike location and the word *strike*. All articles recovered were read to ensure their relevance, and only those articles which mentioned the potential strike were tabulated. The search included all articles that were written from 1 month before the start of the strike until 1 month after the strike was resolved. This measure was collected to ensure that each strike included in the model was covered by at least one article. Searches for seven strikes yielded no articles ( $n < 10$  percent). A dummy variable representing these seven observations was included in the model for all subsequent analyses. No significant differences in results were obtained, and this variable was eventually dropped.

Second, as an estimate of the level of media attention existing prior to the start of the strike, the number of relevant articles that were written during the week preceding the strike was recorded ( $x = 10.46$ , S.D. = 15.48). Searches for a small number of strikes generated no relevant articles written during the week preceding the strike ( $n = 6$ ). A value of 1 was added to each of these observations before calculating the logarithmic value of this variable. Third, the number of articles that were written over a 1-week period 1 year prior to the start of the strike was recorded ( $x = 31.18$ , S.D. = 56.11). This variable was an unbiased estimate of the fame of each organization. Organizations that affect consumers directly, such as airlines, receive considerable media attention on a regular basis. This special status also may influence the amount of media attention that they receive before strikes.

The size of the LEXIS-NEXIS database grew considerably between the years 1980 and 1991. New articles from publication sources that had existing contracts with LEXIS-NEXIS were added to the database as they were published. In addition, articles from newly contracted publication sources were added each year. This latter form of growth is of concern because it could bias the measures of media attention. To control for this possibility, the total number of documents that were accessible from the database each year from 1980 through 1991 was collected.<sup>6</sup> Using this measure of database size, the annual growth in the database was calculated by subtracting the total number of articles in year  $t - 1$  from the total in year  $t$ . Then a ratio measure of annual growth for each year was created, assigning the year with the largest growth a value of 1. Subsequently, each measure of public attention was adjusted by dividing all values within a particular year by the appropriate growth statistic before calculating the logarithmic value of the variable.

Previous studies of media attention surrounding labor disputes have used the *New York Times* as an exclusive source of articles (Erickson and Mitchell, 1996; Schmidt, 1993). This measure is potentially biased because the *New York Times* is more likely to cover articles that directly affect the New York region. In addition, the *New York Times* represents only one form of media attention—newspapers. Finally, an article about a strike written in the *New York Times* may be the only article, or it may be one of a hundred articles written on that particular day in major newspapers around the country. It would not be possible to distinguish between disparate levels of media attention unless the media attention data were drawn from a large number of media sources. The manner in which this study utilizes the entire NEXIS database including the *New York Times* and many other media institutions provides a more valid measure of media attention.

## Results

Means, standard deviations, and correlations for all study variables are reported in Table 3. OLS regressions were used to test the hypotheses.<sup>7</sup> The results from these regressions are reported in Table 4. The primary hypothesis, which predicted that the level of media attention prior to the

<sup>6</sup> These data were provided to me by the public relations staff at LEXIS-NEXIS's national headquarters. There were no data available for the years 1980, 1981, and 1987. I extrapolated figures for these years from the rest of the known data.

<sup>7</sup> The results from this log-linear model are robust to other functional forms (e.g., Cox regression model).

TABLE 3  
MEANS, STANDARD DEVIATIONS, AND CORRELATIONS AMONG STUDY VARIABLES

Variables	X	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. Strike size	3.24	0.81	—											
2. Organizational fame	4.18	1.94	0.13	—										
3. Federal intervention	0.06		0.18	-0.11	—									
4. Famous union	0.17		-0.12	0.07	-0.11	—								
5. Strike frequency	0.57	0.76	0.06	0.23*	-0.10	0.12	—							
6. Construction industry	0.19		-0.14	-0.05	-0.13	-0.02	0.04	—						
7. Manufacturing industry	0.17		-0.10	0.13	0.02	0.60**	-0.01	-0.24	—					
8. Public administration industry	0.24		-0.12	0.18	-0.13	-0.24*	0.17	-0.28*	-0.24*	—				
9. Transportation and public utilities industry	0.23		0.10	-0.17	0.57**	-0.06	-0.06	-0.18	-0.16	-0.18	—			
10. Other industries	0.17		-0.02	-0.15	-0.12	-0.14	-0.02	-0.25*	-0.22	-0.25	-0.16	—		
11. Number of prestrike articles	3.50	1.87	0.04	0.58*	-0.15	0.00	0.16	-0.18	0.02	0.16	-0.15	0.22*	—	
12. Strike duration	2.85	1.38	0.07	0.22*	-0.25*	0.20	-0.09	-0.03	0.20	-0.11	-0.26*	0.09	0.41**	—

NOTE:  $N = 90$ .

\* $p \leq 0.05$ .

\*\* $p \leq 0.01$ .

TABLE 4  
HIERARCHICAL REGRESSIONS OF LOG OF STRIKE DURATION<sup>a</sup>

Variable <sup>b</sup>	Model 1	Model 2	Model 3	Model 4
Control variables				
Strike size	0.06 (0.34)	-0.06 (-0.32)	0.06 (0.34)	0.13 (0.69)
Organization fame	-0.05 (-0.56)	-0.07 (-0.83)	-0.04 (-0.47)	-0.05 (-0.62)
Federal intervention	-0.12 (-0.21)	-0.10 (-0.16)	-0.09 (-0.15)	-0.83 (-1.18)
Famous union	0.47 (1.02)	0.29 (0.62)	0.48 (1.03)	0.42 (0.93)
Strike frequency	-0.26 (-1.40)	-0.22 (-1.22)	-0.25 (-1.31)	-0.23 (-1.29)
Construction industry <sup>c</sup>	-0.12 (-0.31)	0.14 (0.32)	-0.12 (-0.28)	-0.11 (-0.28)
Manufacturing industry	0.06 (0.13)	-0.14 (-0.27)	0.06 (0.01)	0.19 (0.37)
Public administration industry	-0.63 (-1.55)	-0.38 (-0.87)	-0.65 (-1.57)	-0.60 (-1.51)
Transportation and public utilities industry	-0.87 (-1.58)	-1.23* (-2.06)	-0.92 (-1.63)	-0.85 (-1.51)
Interstate strike		0.71 (1.55)		
Carter administration <sup>d</sup>			-0.11 (-0.23)	
Reagan administration			0.12 (0.36)	
Main variable				
Number of prestrike articles	0.36** (4.28)	0.36** (4.36)	0.36** (4.11)	0.32** (3.84)
R <sup>2</sup>	0.32	0.34	0.32	0.33
Adjusted R <sup>2</sup>	0.23	0.24	0.21	0.25
Overall F ratio:	3.66**	3.60**	3.02**	3.79**
d.f.	10, 79	11, 78	12, 77	10, 76

NOTE: *t* Statistics for all coefficients are reported in parentheses.

*N* = 90 for models 1, 2, and 3. *N* = 87 for model 4 (sample drops three observations with largest studentized residuals).

\**p* ≤ 0.05. \*\**p* ≤ 0.01.

<sup>a</sup>All entries represent unstandardized coefficients. Multiply the coefficients by a value of -1 to convert them into estimates found in an exponential hazard rate model.

<sup>b</sup>All continuous independent variables are reported in logarithmic form.

<sup>c</sup>Reference industry category is all other industries.

<sup>d</sup>Reference presidential category is the Bush administration.

start of a strike is positively related to strike duration, is supported. Table 4 (model 1) shows, as predicted, that a significant positive relationship exists between prestrike media attention and strike duration ( $\beta = 0.36$ ,  $p < 0.001$ ). This reported elasticity can be interpreted using the following example: If media attention during the week prior to the strike increased by 50 percent, then strike duration increased by approximately 18 percent.

The lack of significance among other explanatory variables is not surprising considering the small sample size. Although the majority of explanatory variables failed to obtain significance, the directions of several hypothesized relationships were supported. As expected, more famous unions had longer strikes ( $\beta = 0.47$ ), strikes in the public administration industry were shorter ( $\beta = -0.63$ ), and federal interventions were negatively related to strike duration ( $\beta = -0.12$ ). However, counter to their hypothesized relationships, strike frequency had a negative effect on strike duration ( $\beta = -0.26$ ), and strike size had a positive effect on strike duration ( $\beta = 0.06$ ). Regarding the negative coefficient for the strike frequency variable, it is possible that bargaining parties with a recurrent pattern of conflict develop norms that reduce the amount of time necessary to conduct negotiations and shorten the length of the strike. Three factors may limit the effect of strike size in this data set. First, size effects may be constrained because the sample only includes strikes that involve 10,000 workers or more. Second, various types of bargaining issues were discussed in these strikes, and as mentioned earlier, Harrison and Stewart (1993) have suggested that there may be different effects of size depending on the nature of the bargaining issue. Third, the effect of strike size may be manifested through an alternative operationalization, such as the size of the geographic area affected by the strike.

The size of the geographic area affected by a strike has been identified as an important variable in some models of strike duration (e.g., Card and Olson, 1995; Schnell and Gramm, 1994), although the direction of its effect is somewhat unclear. Intuitively, strikes that span several states tend to involve more workers than strikes confined to a single state, and therefore, they may be expected to have shorter durations (Harrison and Stewart, 1993). However, Slichter et al. (1960) and others have argued that as the geographic area affected by a strike increases, so does the number of local representatives of labor involved. The time required to communicate among these representatives may prolong a settlement. As for its effect on media attention, it makes sense that as the size of the geographic area affected by a strike increases, the level of media coverage surrounding a strike increases as well. To control for this alternative explanation, a dummy variable was created to account for whether the strike took place within one state (0 = one state) or if it spanned across more than one state (1 = interstate;  $n = 38$ ). The dummy variable was then entered in a separate regression (model 2), and the results from this regression are also shown in Table 4. The coefficient for this dummy variable was positive, but it was not significant ( $\beta = 0.71$ ).

A set of dummy variables also was created to account for differences in strike activity occurring during separate presidential administrations (model 3). This variable has been noted in past research as a potentially influential factor of both strike duration and media attention (e.g., Schmidt, 1993). The set of dummy variables failed to yield any significant differences between presidential administrations ( $\beta_{\text{Carter}} = -0.11$ ,  $\beta_{\text{Reagan}} = 0.12$ ). This weak result was somewhat expected because the differences between presidential administrations tend to emerge between Republicans and Democrats and not individual leaders (Schmidt, 1993). The period under investigation in this study (1980–1991) was dominated by two Republican presidents, Reagan and Bush, with Carter holding office for only 1 year. Republican control during this period may account for the lack of effect.

In order to detect potential outliers, studentized residuals were calculated for the arithmetic values of all observations. None of the studentized residuals were found to be significant.<sup>8</sup> To further test for whether the model was plagued by the presence of outliers, the three observations with the largest studentized residuals were removed from the sample, and a new regression was run (model 4). The coefficient for the prestrike article variable remained highly significant ( $\beta = 0.37$ ,  $p < 0.001$ ). Apparently, the extreme observations in this sample are not responsible for the results.

Plots of the squared residuals were analyzed to determine whether the model suffered from nonconstant variance of the error term. The apparent lack of patterning indicated no heteroskedasticity problems existed. The Goldfeld-Quandt statistic was calculated to test further for heteroskedasticity. The results of this test also indicated a constant variance of the error term (Goldfeld-Quandt statistic = 1.06).<sup>9</sup>

## Discussion

This study builds on previous analyses of strike duration by introducing media attention as a new and important environmental factor. Results from this study support the hypothesis that media attention influences strike duration. Although these results do not provide conclusive evidence that an increase in media attention causes an increase in strike duration, the results clearly suggest that media attention can be used as an accurate

<sup>8</sup>The studentized residual is a normalized prediction error evaluated with a  $t$  statistic ( $\alpha = 0.05$ ).

<sup>9</sup>The Goldfeld-Quandt test involves ranking the OLS residual values in descending order according to their respective  $x$  values. The sample is divided in half, and the variance is calculated for each half. If the value of  $S^2/(n - 1)$  for one-half is greater than four times that of the other half, a heteroskedasticity problem exists. I conducted the analysis with this sample, and a value close to 1 was obtained.

predictor of strike duration. Verifying what process underlies this relationship warrants further research.

These results are not generalizable to all types of work stoppages. The sample used in this study included only strikes of more than 10,000 workers. It is possible that bargaining parties involved in smaller strikes may not react similarly to increases in media attention. In addition, these results apply only to bargaining procedures that culminated in a strike and not those which were resolved, which includes well over 90 percent of all bargaining procedures (Labour Gazette, 1974). To understand more about how media attention influences bargaining procedures in general, a future empirical analysis should examine how increased media attention during a collective-bargaining procedure affects the incidence of strikes. According to the theoretical framework outlined in this article, greater public attention not only should increase strike duration but also should increase the likelihood of a strike occurring at all.

The application of a social psychological theory to a macro-organizational phenomenon, which traditionally has been studied almost exclusively by industrial relations researchers, is an important theoretical step (Godard, 1992). In the future, researchers should consider the possible extensions of individual-level theory more often in developing organizational-level theory and consider adopting an interdisciplinary perspective when studying organizational phenomena (Kaufman et al., 1989; Staw et al., 1988). Perhaps the encouraging results obtained in this study will spark other theoretically synergistic approaches to examining the behavior of both individuals and organizations.

*Empirical issues.* There are two critical issues that should be addressed in future research. First, the original sample used in these analyses is limited to only 90 strikes. This sample needs to be expanded by including either strikes that involved fewer workers or strikes that occurred before 1980. If the latter criterion is used, an alternative measure of media attention must be derived because the NEXIS database, at the present time, has few articles written prior to 1979. Besides improving the statistical strength of the model and the variables therein, including additional strikes would improve model specification by incorporating other potentially important variables. In particular, a larger sample would permit more intense scrutiny of specific industries by allowing for the use of a four-digit SIC coding system. For example, it would be interesting to study the effects of media attention on airline strikes, rather than simply controlling for the entire transportation and public utilities industry.

Second, more detailed information about the bargaining issue must be gathered to ensure that the media attention variable is not a proxy for either the magnitude of the disagreement or the number of points of disagreement at the start of the strike. Perhaps in each of these strikes the media had a clear understanding of the discrepancy that existed between the bargaining parties. Since larger, more multifaceted strike disagreements have been shown to lead to longer strikes (Ondrich and Schnell, 1993), the media may have anticipated longer strikes and responded with more articles. Unfortunately, information about the degree of disagreement was not available for this study. However, in the future, these data may be gathered by conducting a content analysis of the articles that were recovered from the NEXIS database.

*Alternative theoretical explanations.* A social psychological theoretical framework was offered to explain the relationship between media attention and strike duration. The adapted theory posited that as the level of public attention increased, bargaining parties would increase their commitment to their original bargaining positions and become less willing to make concessions. The model constructed in this study did not test this social psychological explanation explicitly. Rather, the goal of the model was to test the influence of media exposure on strike duration. In the future, the validity of this social psychological explanation should be tested against alternative explanations.

One alternative explanation involves the level of trust shared by bargaining parties. Snow (1981) argued that an increase in media exposure would lead to a decrease in trust between bargaining parties because sharing information with the media might be considered a breach of confidentiality. If bargaining positions that are meant to be concealed for strategic purposes are instead revealed in the public media, this could damage the trust held between the bargaining parties and prolong the negotiation process. Often, bargaining parties conduct private conversations with third-party bargaining agents in order to reach a settlement. Confidentiality in this situation is especially critical. If a bargaining agent is aware that one party who is asking for a 12 percent salary raise will accept 6 percent, provided that the other side will do something about health insurance coverage, then it would be unwise for the bargaining agent to release such information to the public (Snow, 1981). Rather, it is in the best interest of the parties involved that the bargaining agent be able to guide both parties toward settlement of the dispute.

Social facilitation research may provide another alternative explanation. Past research has shown that when others observe an individual's behavior, it impairs his or her performance of difficult, complex, or novel tasks (Zajonc, 1965; Bond and Titus, 1983). This may explain the positive effect of media attention on strike duration. Collective bargaining certainly qualifies as a difficult task. The bargaining parties may be distracted by the attention of the public media while they are trying to conduct negotiations. Such a distraction may impair their ability to participate in the collective-bargaining process.

Much research on the effect of public attention assumes that the recipients are passive, but this is not necessarily the case in collective-bargaining procedures. Indeed, bargaining parties may actively solicit media attention for two reasons. First, public posturing in the media can demonstrate precommitment and thereby improve a party's low power base (Bacharach and Lawler, 1981; Schelling, 1960). For example, if a union publicly states that it will not accept a wage less than  $W_u$  and management makes no counter public announcement, then the union's precommitment to wage  $W_u$  will raise its level of bargaining power. Second, bargaining parties may solicit attention from the media to acquire public sympathy. Especially in longer strikes, unions can retain bargaining power as long as other workers and customers do not cross picket lines, while employers benefit from the opposite result. However, such active attempts to solicit media attention do not contradict the public attention hypothesis outlined in this study. Whether bargaining parties invite media attention or not, the theory holds that they will become less willing to compromise their stated positions.

## Conclusion

In conclusion, this study produced an interesting finding—that prestrike media attention appears to be a potential determinant strike duration. For those strikes used in this data set, the media attention surrounding a strike prior to its start date was significantly and positively related to its subsequent duration. As an indication of its robustness, this result held even when controlling for measures of organizational fame, union fame, strike frequency, broad industry categories, and the presence of a federal intervention. This finding should give legislators, union leaders, and managers pause when considering the role that media institutions play in labor relations in the United States. If the attention of the public media prolongs the resolution of labor strikes, as it appears, then media institutions indirectly affect the duration of collective-bargaining

procedures. Taking this potential influence into consideration, organizers of collective-bargaining procedures may be acting with prescience when they decide to enact gag orders.

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