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MEDIA COVERAGE OF THE BROWNING PREDICTION

Whose Fault Was It? An Analysis of Newspaper Coverage of Iben Browning's New Madrid Fault Earthquake Prediction

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A study of three newspapers that primarily serve the New Madrid Fault area shows that the press and public officials probably share the blame for public panic surrounding the 1990 Iben Browning earthquake prediction. The press failed to report soon enough scientists' views that refuted Browning's prediction, and some public officials used mass media to promote earthquake awareness even though the tactics fed public misperceptions about the likelihood of Browning's prediction coming to pass.

On December 12, 1989, about two months after a powerful earthquake struck San Francisco, the Missouri Governor's Conference on Agriculture met in Osage Beach, Mo., a town in the southwest Missouri Ozarks. One of the speakers at the meeting was Iben Browning, described as a New Mexico climatologist. Browning claimed to have predicted the San Francisco earthquake, and also "projected" at the Missouri meeting that the New Madrid Fault area, which runs from just south of St. Louis to about Marked Tree, Ark., about 30 miles northwest of Memphis, was a prime area for an earthquake in early December 1990.

In the next 12 months Browning's name would become a household word for many people in parts of Missouri, Kentucky, Illinois, Tennessee and Arkansas. His prediction led to many public meetings, to disaster preparedness drills, to school closings, to self-evacuation by some residents in the area, to a plethora of rumors and to national media coverage as the earthquake prediction date neared. In hindsight, one news story said Browning's prediction provided an economic boost to the town of New Madrid and helped "put the town on the map" (*Jonesboro Sun* 1991). It seems sure that the prediction gave the insurance industry such a boost. Some companies reported a 50 percent increase in demand for earthquake insurance (*Post-Dispatch* 1990g). But economics was not a concern for many people, nor for the news media, as the story and the year unfolded.

Literature Review

The historical view of the development of risk shows that society has not become more hazardous during recent years; in fact, the level of risk has remained constant. Nonetheless, people are still worried and still show signs of anxiety (Lytkens 1987). Uncertainty and feelings of powerlessness put people in particularly difficult situations, and the nature of fear has changed to increased fear of the future (Blomkvist 1987).

The possibility of an earthquake is real for people living near the New Madrid Fault. The fault has been identified as having the potential to produce a large earthquake, and scientists say one of the most powerful earthquakes ever to occur in the United States struck the New Madrid area in 1811 and was followed by a series of powerful aftershocks that lasted for months.

The average person's experience of risk is rather closely related to the amount and type of mass media coverage of accidents and disasters although such accidents and disasters are rarely experienced directly by most people. Their notions about the possibility of disaster must be based on indirect, frequently media generated, information (Blomkvist and Sjoberg 1987). Wilkins and Patterson (1987) say media covering disasters or potential disasters should give readers information they need to function effectively; give the information without causing harm; and make every attempt to provide accurate, complete, balanced and relevant information because people will feel out of control when confronted with a disaster if they are not adequately prepared.

Nigg (1982) wrote that there are four stages of information exchange and information seeking pertaining to disasters and she said that in the final stage several questions might be asked, such as: Was a prediction actually issued? How large is the disaster expected to be? Do other scientists believe the prediction? Will I be safe if I live in a brick building? These are questions that citizens might legitimately ask mass media to answer. Lack of answers and accurate information could cause what Rose (1982) calls a "pseudo disaster," which are "episodes in which people imagine, without firm factual basis, that emergency conditions prevail." Pseudo disasters are the result of ambiguity or the lack of reliable, factual information. They might be caused, Rose says, by "the influence of persons who are the episodal equivalent of the charismatic leader; they are ... persons who are believable even about unbelievable matters." Scientists, or those termed as scientists by mass media, could be believed by many in society because those people's statements are perceived as being "scientifically based," and if the individuals are used as sources by mass media, they might seem more

credible and believable unless their statements are challenged by other scientists.

Sociologist R. Gordon Shepherd found that the press seems to rely primarily on a few "science celebrities" for information, rather than on specialists (Shepherd 1981). Some scientists are better at communicating with the public and reporters. They become more visible and are frequently quoted, even in areas beyond their scientific expertise.

Iben Browning's academic training and his listed expertise do not include climatology or geology, but some commentators said his predictions might have had a positive impact of encouraging people to prepare for an earthquake. On the other hand, predictions of disasters might immunize the public against acceptance of danger warnings (Rose 1982). What, then, could have been Browning's media role? A good news story for the journalist often is a catastrophe for someone else (Wilkins and Patterson 1987). Browning made good copy. His prediction found fertile ground in some underlying fears about the hazard of earthquakes in the New Madrid area, and his prediction elevated the hazard into a risk. This paper will assess what role media played in the process, and will assess the blame that can be attributed to the media for the creation of the pseudo disaster.

Research Questions

RQ1—What sources were cited most frequently in stories concerning the predicted quake?

RQ2—What major concerns were addressed in stories concerning the predicted quake?

RQ3—Was Browning perceived as a credible source in stories and headlines concerning the predicted quake?

RQ4—Were most stories provided by wire services or locally produced?

RQ5—Were most stories given front page play?

RQ6—Did newspapers editorialize or provide local columns concerning the predicted quake?

RQ7—How was Iben Browning described in the stories?

Methods

To address the research questions, a content analysis was conducted of three major newspapers circulated in the area predicted to be affected: the

St. Louis Post-Dispatch, the *Memphis Commercial Appeal*, and the *Arkansas Gazette* (Little Rock).

All items, including stories, photos, cartoons, letters to the editor, columns, etc., concerning the New Madrid earthquake prediction were analyzed during a period between June 1 and December 3, 1990, the date of the predicted earthquake. Items were categorized as to type, column inches in length, headline size, page and section.

Stories also were analyzed and categorized to determine major concerns, such as health and safety, roads and transportation, etc. Sources for quotes and paraphrases were analyzed and categorized by type.

Data were gathered as to whether Browning was quoted in headlines and stories, whether he was portrayed as credible, whether statistics and probability were used and explained in stories, if other major quakes were mentioned in stories and if specific dates and the strength of the predicted quake were consistent during the study period.

Browning was considered credible if the source agreed that there was a likelihood of an earthquake in early December or agreed with Browning's theory of what causes earthquakes. If the source disagreed with the likelihood or with Browning's theory, the item was considered that Browning was not credible. If either Browning's theory or the likelihood of the predicted earthquake were mentioned by neither disagreement nor agreement, the item was coded as no judgment. Analyses were generally by frequency count and correlation.

Findings

Three hundred forty-three items appeared in the three sample newspapers. Eighty-eight (25.7%) in the *Post-Dispatch*, 109 (31.8%) in the *Commercial Appeal*, and 146 (42.6%) in the *Arkansas Gazette* (see Table 1). The greater number in the *Arkansas Gazette*, although published in a city outside the area affected by the New Madrid Fault, can be attributed to a lively newspaper war in Little Rock.

Table 1. Number of Stories by Newspaper

<i>Arkansas Gazette</i>	146
<i>Memphis Commercial Appeal</i>	109
<i>St. Louis Post-Dispatch</i>	88
	N = 343

As the prediction date neared the number of items about earthquakes increased (see Table 2).

Research question 1:

Some 696 sources were cited in the stories, an average of just over two sources per story (see Table 3). Civic organizations or associations were most often cited, with various levels of government next. More than two-thirds of the stories had at least two sources mentioned and roughly 30% had four or more sources. This was an important finding because officials used Browning's prediction to increase awareness of earthquake

Table 2. Number of Stories by Month, June 1-December 3, 1990

June	2
July	25
August	18
September	22
October	90
November	118
December	68
	N=343

Table 3. Sources Cited by Frequency

	No.	Pct.
Police/fire	26	4
Education	63	9
Military	13	2
Medical	25	4
City Govt.	63	9
County Govt.	58	8
State Govt.	88	13
Federal Govt.	37	5
Browning	21	3
Associations/Other	302	43
		N=696

preparedness, even though the prediction was based on what some considered poor science.

Research question 2:

The major concerns expressed in the stories were reactions to an earthquake (84) or instructions on how to prepare for an earthquake (82), followed by the credibility of Browning, general damages, and health and safety concerns (see Table 4).

Research question 3:

Browning, when mentioned in stories and headlines, was perceived as not credible more often than he was perceived as credible. He was credible in 20 stories and not credible in 69 stories. He was credible in 14 headlines and not credible in 28. The remainder were no judgment.

Research question 4:

Two hundred fifty-six of the stories in the three newspapers were locally written. Fewer than 50 were from wire services. An analysis of smaller dailies would probably produce different findings because such papers have smaller staffs and rely more on wire services.

Table 4. Major Concerns Cited in Stories

	No.	Pct.
Reaction to earthquake	84	16
How to prepare for quake	82	16
Browning's credibility	65	13
General damages	64	12
Health/Safety	55	11
Economic concerns	40	8
Earthquake drills	36	7
School closings	27	5
Soil conditions	19	4
Roads/transportation	19	4
Communications	13	2
Police/fire	11	2
		N=515

Research question 5:

One hundred fifteen of the stories appeared on the front pages of the newspapers and 268, or 80 percent of all the stories written, appeared either on the front page or on a section front.

Also, Sunday was the most frequent day that stories were published with 88 of the stories published that day. Sunday editions have higher circulation and are more likely to be read for a variety of reasons. The earthquake stories got very good play.

Research question 6:

Only 20 opinion pieces were carried, with only five being editorials. Four of the five appeared very late in the study period and most disagreed with Browning's theory. The press might have shirked its responsibility to explain complex situations through the opinion function.

Research question 7:

Browning had specialties in optical engineering, brain physiology, information theory and satellite instrumentation. He received a doctor of philosophy degree in physiology, genetics, and bacteriology. He was most often described in the press as a climatologist. He was also described as a self-proclaimed climatologist, an expert, a scientist and business consultant, a retired consultant, and a biophysicist.

Conclusions

The fault for the pseudo disaster and misinformation that came as a result of the Browning earthquake prediction lies partially, but not entirely, with the press. Some state earthquake preparedness officials, who would likely be seen as credible sources by readers, gave credence to Browning's prediction, using it to gain awareness for earthquake preparedness in the region. Scientists failed to comment early in the time period about Browning's predictions, even though many apparently had misgivings about his prediction. If they had commented, public reaction might have differed and the press might have regarded the story as being of much less news value. The actions of public officials who fed the public panic must be placed near the top of the blame list. The press shares blame because it should have been more aggressive in seeking out scientists who disagreed with Browning's theory, and the press should have been more careful in use of words in headlines and in graphics, some of which could legitimately be classified

as "scare" tactics. The press also could have used better judgment in some instances when reporting rumors and should have checked facts before rushing into print with stories that were easily verifiable.

The three newspapers all gave prominent play to the earthquake story, particularly as it developed toward the December prediction date and increasingly became a national news story. The study shows that readers, rather than getting information to help them accurately gauge risk, often received information that might be confusing, conflicting or alarming.

A major problem in news reports was the "official" sources used during most of the study period either agreed with Browning's prediction or did not disagree. Sources at first were limited to a few prominent individuals, including Browning, his wife and his daughter. As the prediction date neared and scientists began criticizing Browning, he ceased to be a direct source for stories, although he was mentioned so frequently and had been quoted so often in the past, that he still was a prominent part of most stories.

Two state earthquake preparedness officials and the director of a center for earthquake research supported Browning's prediction either outright or by saying that they did not care how people were made aware of the New Madrid threat, as long as they became more aware. Such official sources probably lent legitimacy to Browning. Most of the stories that used sources challenging Browning's prediction came late in the study period when readers might have had Browning's credibility firmly established or the stories contained contradictory and confusing information.

The three newspapers did not use many stories with scientists challenging Browning until the scientists began holding state, regional and national meetings that the press covered. The content analysis could not show if reporters had attempted to interview scientists prior to the meetings, or if the scientists had refused requests for interviews. There is some evidence of the latter. At a May 1991 conference concerning the New Madrid prediction, some scientists in attendance said they did not think it was their place to challenge the predictions in the press. It could be, however, that it took "official" meetings to trigger press coverage, an example of a reactive press, a much-discussed concept. There is the possibility that scientists seeking to get their ideas into the press met with little luck.

Browning's credibility with readers was likely reinforced by the actions of local officials. For example, in Illinois, state highway engineers launched a study about the safety of a bridge to determine if it would collapse during an earthquake (*Post-Dispatch* 1990f). Some fire departments "earthquake proofed" stations, and St. Louis announced it was updating planning and training for a possible December quake, including moving 10 pumpers to

outdoor areas (*Post-Dispatch* 1990b; *Post-Dispatch* 1990a). Such actions certainly must have seemed tied to the prediction and could have heightened fears.

The perception by citizens of lack of control on the part of public officials, and the enhancement of Browning's credibility might also have been aided by earthquake awareness meetings such as one in early September in Missouri that drew 2,000 people, with 500 more turned away for lack of room. People in attendance were told they probably would have to fend for themselves from three to five days following a quake, and videos of the aftermath of a California earthquake were shown. These messages seem likely to have led those in attendance and those who read the story to believe that there would be little local or state government could do following an earthquake.

The meeting was attended by State Rep. William McKenna and by David Stewart, strong supporter of Browning and director of the Center for Earthquake Studies at Southeast Missouri State University (*Post-Dispatch* 1991d). Stewart's support for Browning later proved costly. He stepped down as center director, saying he was afraid that criticism of him would damage the work of the research center. Stewart's credibility was questioned in a copyrighted story in the *St. Louis Post-Dispatch* in which reporter William Allen wrote that Stewart believed in psychic phenomena, although Stewart did not term Browning a psychic. The article also said Stewart was "outside the mainstream of scientific thought" (*Post-Dispatch* 1990c).

Even when officials expressed skepticism about Browning's prediction, their actions might have belied their words. School officials said they didn't place much credence in the prediction, but nonetheless closed schools (*Post-Dispatch* 1990d). Also, National Guard units scheduled earthquake preparedness drills, and emergency resource centers were established to be used in case of earthquakes, with one local official saying the meeting to discuss the establishment of the centers was "probably one of the most important meetings we've had or will ever have." (*Jonesboro Sun* 1990, p.1; *Post-Dispatch* 1990e).

Thus, several factors might have made Browning appear a credible source. First, other scientists who challenged Browning did not show up in news stories until late in the time period. Second, even in the stories where Browning's prediction was challenged, quotes often appeared from very visible public officials who seemingly supported his theory, or the actions of government officials or groups seemed to support the prediction.

The press contributed to making Browning credible, maybe not so much by what it did but by what it did not do. The press did not report disagreement with Browning as much as it reported agreement. Perhaps the press was not aggressive in attempting to interview scientists who disagreed with Browning. The press also waited until late in the study period to debunk false claims that Browning had predicted the Loma Prieta earthquake and other earthquakes. Perhaps scientists who disagreed should share the blame because they did not make their opinions widely known. The press reported school closings, special emergency drills and other such actions because they are news and they affect their communities. The press, however, should have gone beyond events and officialdom and explored the legitimacy of the motivating assumptions.

It seems that the majority of the blame for promoting the legitimacy of Browning's "prediction" might be placed at the feet of the public officials, who in some instances used the earthquake scare in an attempt to increase public awareness. The blame assessment is because the press, as the "surrogate eyes and ears of the public," cannot ignore actions of public officials, and thus easily can be used by officials. The officials, including emergency preparedness officials, justified their actions by saying emergency preparations would still be in place after the December 3 prediction date. Research literature on pseudo disasters shows that once a pseudo disaster has passed people may not take the probability of future potential disasters seriously. Later research, however, appears to contradict this notion.

Donald Dossey, director of the Phobia Institute of West Los Angeles and the Stress Management Centers of Southern California, said predicting a specific date for an earthquake is "a good way to install phobia in the community." Other officials said they observed an atmosphere close to panic at preparedness meetings, and still others worried that once the prediction date passed the public would have a false sense of security.

A major fault on the part of the press is that it did no opinion writing on the credibility of the prediction until late—only days before the predicted date. Editorials and columns can play a major role in explaining conflicting and complex situations (Stonecipher 1979). The press also must be faulted for the variety of descriptors used in reference to Browning, who was called among other things a climatologist and an expert.

Those who do not share the blame are members of the public who no doubt were anxious and confused, mainly because of the actions of public officials, and secondly because of the performance of the press.

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