How the Deepwater Horizon Oil Spill Damaged the Environment, the Travel Industry, and Corporate Reputations

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Abstract
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Keywords
environment, oil industry, BP oil spill, tourism, corporate responsibility

Disciplines
Business Law, Public Responsibility, and Ethics | Environmental Studies | Tourism and Travel

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How the Deepwater Horizon Oil Spill Damaged the Environment, the Travel Industry, and Corporate Reputations

by Alex Susskind, Mark Bonn, and Benjamin Lawrence

When the Deepwater Horizon oil well operated by BP exploded and burned in 2010, it became the worst marine oil spill in U.S. history. The spill dumped over four million gallons of oil into the Gulf of Mexico and onto its coastal estuaries and beaches, including the white sand beaches of Florida’s panhandle. A survey of 540 respondents in the year following the oil spill determined that a substantial percentage of travelers deferred plans to travel to Florida generally and to northwest Florida particularly. Only 10 percent of the respondents to this survey had plans for a Florida trip in the wake of the spill. Given that more than two-thirds of the respondents had visited Florida in the years prior to the spill, despite the economic turmoil of the Great Recession, it seems clear that the spill itself caused cancellation of many travel plans. Survey participants who had strong environmental leanings were far less likely to plan a trip to Florida in the wake of the spill, and those who had a higher perception of personal or environmental risk from the spill were likewise less inclined to make a visit. Overall, the survey respondents had a relatively low opinion of BP and its remediation efforts. However, participants whose main information channels were television networks or cable had somewhat more favorable view of the company than those who used the internet or such other channels as newspapers or word of mouth. One conclusion from that finding is that companies who are promoting their corporate responsibility need to select their communication channels thoughtfully.
ABOUT THE AUTHORS

Alex Susskind, Ph.D., is an associate professor at the School of Hotel Administration and a member of the graduate field of communication at Cornell University. He earned his PhD in communication from Michigan State University (with cognates in organizational communication and organizational behavior), where he also earned his MBA with a concentration in personnel and human relations. Susskind’s research is based primarily in organizational communication and organizational behavior. He is currently researching: (1) the influence of customer-service provider interaction as it relates to organizational effectiveness and efficiency from the perspective of guests, employees and managers, and (2) the influence of communication relationships upon individuals’ work-related attitudes and perceptions surrounding organizational events and processes such as teamwork and downsizing.

Mark Bonn, Ph.D., is the Robert H. Dedman Professor of Services Management at the Dedman School of Hospitality, Florida State University, where he has also served as director of distance learning. A graduate of Furman University, he has also taught at the University of South Carolina and Appalachian State University. He is an author, reviewer, and member of the editorial review board of numerous academic journals, including the International Journal of Hospitality Management, the Cornell Hospitality Quarterly, and the Journal of Hospitality and Tourism Research. A frequent presenter at major conferences, his recent publications have examined such topics as workplace and customer incivility, wine purchasing and marketing in conjunction with destination image, and retail tourism. He has conducted research on the economic value of baseball spring training to specific Florida locations and Florida’s economy generally, and led a tourism planning effort for the beach region of northwest Florida.

Benjamin Lawrence, Ph.D., is an assistant professor of food and beverage management at the Cornell School of Hotel Administration (SHA). A graduate of SHA, Lawrence earned a PhD in management (marketing) from the Questrom School of Management at Boston University and an MBA from the Mays Business School at Texas A&M University. His primary research interest involves channels of distribution with a focus on relationships within the context of franchising. He also studies consumers’ food and beverage consumption experiences and purchasing behavior. His work has been published or is forthcoming in the Cornell Hospitality Quarterly, International Journal of Research in Marketing, Journal of Advertising, Journal of Marketing Channels, Journal of Operations Management, Journal of Retailing, Journal of Small Business Management, and Service Science. He has been honored with SHA’s Teacher of the Year Award for freshman core in 2013 and 2015.
In July 2015, BP Oil Corporation agreed to pay a fine of $18.7 billion for its role in the 2010 oil spill in the Gulf of Mexico, caused by the rupture of BP’s Deepwater Horizon well. These funds are earmarked for continued recovery of the coast of the five states affected by the spill, Texas, Louisiana, Mississippi, Alabama, and Florida.¹ The spill caused substantial damage to the Gulf Coast’s environmental quality, to the coast’s tourist volume, and to BP’s corporate reputation. Since that time, BP has sought to repair both the coast and its reputation, while encouraging tourists to return to the beaches and bayous that were covered with oil. In this report, we examine these respondents’ view of BP’s corporate reputation and the outcomes for travel to the white sand beaches of Florida’s panhandle.

As time has passed since the spill, there have been numerous findings showing considerable damage to the environment, in particular on wildlife and fisheries. The effects on the economy, particularly on the hospitality and tourism industries and on the Gulf Region’s image as a tourism destination, have not been empirically verified, as the short- and long-term consequences have yet to fully surface. Following the spill, BP sponsored a series of commercials on television and other media in 2011, stating that tourism was back on track and the cleanup had been successful. However, as we discuss here, tourists were not entirely ready to embrace that assessment (and Gulf residents also were not as sanguine). Conflicting information still persists five years after regarding the impact of the oil spill, consumers’ reactions to BP and how the firm managed the cleanup, travel to the Gulf region, and the condition of the environment.

BP’s reputation suffered another blow in September 2014 when a Federal District Court ruled that BP was grossly negligent in how they managed the disaster. This finding led to the July 2015 settlement. Even now, five years after the oil spill, consumers remain concerned regarding the impact of the spill and still question the effectiveness of BP’s efforts to quickly and completely resolve the problems caused by the spill.

With this study project we had two goals. First we wanted to describe and quantify consumers’ reactions to the oil spill and how the spill and the related communication surrounding it influenced their perceptions and attitudes about the Gulf as a tourism destination. Second, we use the test case of BP as a gauge of how consumers view corporate reputation over time, given BP’s role in the cleanup and the media coverage surrounding the spill. This study will add to our understanding of how consumers react to manmade disasters and how their opinions relate to planned travel activity. To this point, a few studies have begun to quantify the financial impact of the oil spill on the Gulf region, and some have highlighted the importance of sound crisis-management efforts to mitigate long-term damage. However, we find few studies that have specifically examined consumers’ attitudes and reactions to the oil spill itself and the ensuing corporate public relations effort. To address this gap in the research, we examined how consumers reacted to and processed information surrounding the oil spill. This inquiry is in line with research examining other disasters, such as tsunamis and hurricanes, and other health and safety issues, such as the recent bed bug epidemic in U.S. hotels.

The following descriptive, consumer-based analyses apply the communication theories of persuasion and source credibility to determine (1) what sources of information, if any, are related to consumers’ opinions, and (2) whether the source of the information and the messages consumers received and processed are connected to their perceptions of risk, past travel behavior, and plans to return to the Gulf coast. In the next section we will introduce the elements of crisis management that relate to consumers’ processing of disasters such as the BP oil spill. We start with a description of the communication-based elements of channel credibility and corporate credibility as they relate to media messaging and channels. We then introduce the concept of risk perception and how these elements are connected to consumer decision making following an environmental disturbance such as the oil spill.

Source Credibility

Researchers in the areas of marketing and communication have examined the connection of source credibility to consumer attitudes and behavior. Source credibility is the extent to which a receiver views a source or media channel as trustworthy and...
expert in their messaging.11 It describes consumer behavior in both purchase decisions for goods and services and in interpersonal communication relating to how information is presented to and processed by individuals.12

While source credibility addresses important issues relating to the intersection of consumer behavior and interpersonal communication,13 we are interested here is corporate credibility, which is an extension of source credibility. This is defined as the extent to which company-based communication is viewed as clear, focused, and believable.14 This concept was substantially developed by Hon and Grunig, who examined the relationship between the organization, its message, and the receivers of the message.15

Corporate credibility has been shown to be a positive influence on consumer reactions to advertising messages and on product performance.16 Companies want their customers to trust them and react favorably to corporate communications, and they also want to use their credibility as a point of differentiation from their competition. These two ideas are in line with Hon and Grunig’s definition of corporate credibility, showing that credibility emerges from the confluence of an organization and its constituents.17

**Media Influence**

Messages and information come through many communication channels, each of which is perceived to have varying levels of value and credibility to consumers. When consumers receive information through a particular channel, they assign value to this channel and the subsequent messages from this channel.18 In a crisis situation, such as the Gulf oil spill, messages are often framed and delivered around the risk associated with the crisis—including factors such as consequence, uncertainty, action, reassurance, new evidence, and conflict.19 How the media cover a particular issue will influence how consumers evaluate the event. In this study, we consider five types of media channels: the major broadcast television networks (NBC, ABC, CBS), cable TV (CNN, Fox News, MSNBC, CNBC), newspapers, the web or internet, and other sources, such as radio, magazines, and word of mouth from friends, family and colleagues.

**Media research questions.** To examine how reporting in the media is related to corporate credibility, we propose two research questions. To address these questions, we use analysis of communications during the Gulf oil spill to examine how consumers view information they receive about a crisis via various media channels, how they judge the reliability of the information, and how the media channel is connected to the message sender’s corporate credibility. We also investigate the results of these communications in terms of respondents’ Florida travel plans.

**Research Question 1:** Are consumer evaluations of BP’s corporate credibility related to the communication medium?

**Research Question 2:** Is there a connection between consumers’ trust in the communication medium they use for information gathering and their belief that the medium is an unbiased source of information?

**Views of the Environment and Risk**

To consider people’s reactions to the oil spill, we start with their perceptions of the environment and of risk resulting from an accident of this type. Consumers’ attitudes toward sustainability as it relates to the hospitality and tourism industry have been receiving increasing attention over the past several years.20 In that regard, researchers are focusing on past and future visitors’ responses to the environment and elements of sustainability practices adopted by hospitality businesses,21 the ethical backdrop regarding business-based decisions to embrace sustainable practices.

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13 Ibid.


17 Hon and Grunig, op.cit.


19 Liu and Pennington-Gray, op.cit.


practices, and how environmental sustainability is connected to the consumption behaviors of visitors. These studies have mostly examined travelers’ consumption behavior in response to a firm’s sustainability initiatives.

With a catastrophic event like the oil spill, businesses and communities needed to assure would-be travelers that their proposed hospitality and tourism destinations would be safe to visit and not be degraded. This post-disaster period is important, as it requires lowering perceptions of risk for consumers and restoring their intentions to resume their travel behavior.

In response to the news of a disaster, consumers will naturally evaluate how they believe the process has been managed and assign responsibility (or blame) to parties who provoked the catastrophic event and to those engaged in the remediation processes. This judgment will be colored by consumers’ opinion toward the environment itself, but consumers also will consider corporate credibility as they form opinions regarding the intent and honesty of the firms involved in the disaster and cleanup.

With regard to risk perceptions, numerous studies have determined that people tend to overestimate the likelihood and outcome of major risks (while failing to consider the probability of small risks). As one example of this risk-avoidance behavior, Sunstein and Zeckhauser found that the fearsome nature of major environmental catastrophes causes people to misperceive and miscalculate such risks. Accurate or not, corporate communications must take into account people’s risk perceptions.

Together with the consideration of media channel reliability, this line of research seems to apply to consumers’ reaction to the BP oil spill. In regard to that disaster, we identify several risk perceptions regarding travel to the Gulf region that could affect consumers’ intention to travel to the affected coastal areas. First, we identify overall environmental quality as the extent to which consumers believe that the quality of the environment was acceptable after the spill and cleanup. Next, we define environmental safety as the extent to which consumers believe that the environment was safe for swimming, water sports, beach activity, and other coastal-related activities. Last, we identify safety of consuming Gulf seafood as the extent to which consumers believe that it was safe to eat seafood harvested from the Gulf of Mexico following the spill.

Effects of environmental risks. With these three risk perceptions in mind, we are interested in determining how consumers’ perceptions of these oil spill–specific risks and outcomes are connected to their personal beliefs about environmental preservation, their future intent to travel to Florida, and BP’s corporate credibility. In so doing we propose the following research questions to examine how consumers’ personal views of the environment and risk perceptions are connected to consumption behavior following a catastrophic event:

*Research Questions 3-7:* In the time following the BP oil spill, are consumers’ attitudes toward the environment related to their...

- travel intentions to Florida and northwest Florida (RQ3)?
- willingness to recommend Florida and northwest Florida as a travel destination (RQ4)?
- risk perceptions, measured as perceptions of environmental quality, environmental safety, and safety of consuming seafood from the Florida coast of the Gulf of Mexico (RQ5)?
- perceptions of BP’s corporate credibility (RQ6)? and
- intent to visit Florida in the two years following the spill (RQ7)?

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24 Crotts and Mazanec, op.cit.; Liu and Pennington-Gray, op.cit.; Paraskevov et al., op.cit.; Paraskevov and Afifi, op.cit.; Ritchie et al., op.cit.


26 Paraskevov et al., op.cit.


29 Singh et al., op.cit.

30 Given the findings of Ritchie et al. and Crotts and Mazanec, we are looking at consumers’ perceptions of the Gulf region (northwest Florida) and Florida as a whole because the Florida tourism market includes many tourism destinations that were not directly affected by the oil spill.
Research Question 8: Are consumers’ risk perceptions (again, measured as perceptions of environmental quality, environmental safety, and safety of consuming Gulf seafood) related to their intent to visit Florida in the two years following the spill?

Survey Participants
We obtained participation in this study from 540 travelers and tourists, who were surveyed regarding their attitudes and perceptions about the BP oil spill, how they believe it affected the environment, and their potential travel plans to Florida. We began data collection three weeks following the successful capping of the oil leak and continued to collect data through November 2011. The respondents were self-selected, as follows: 107 completed the survey after receiving an email invitation from a travel magazine to which they subscribed, and the other 433 participants completed the survey following an invitation they received during a meal at a casual dining restaurant. The respondents lived in 31 of the United States (see Exhibit 1), constituting a strong national sample of travelers and tourists. Average age of the participants was 38.39 (SD = 10.46), ranging from 22 to 72, with women making up 65 percent of the respondents.31

Survey Items
To gauge the participants’ travel behavior, we asked them whether they had traveled to Florida in the two years before the oil spill (2009–2010). Over two-thirds of the participants (68.5%) answered yes to this question. Looking at the subsequent two years (2011–2012), we found that a mere 10 percent of the respondents (n = 54) planned to visit in those two years, while roughly 70 percent (n = 377) had no plans to visit, and the remaining 20 percent (n = 109) were undecided.

To gauge respondents’ attitudes toward a visit to Florida or willingness to recommend a visit, we asked participants seven single-item questions regarding the effect of BP oil spill on their perceptions of travel to Florida, environmental quality, environmental safety, and safety of consuming seafood from the Gulf of Mexico. These Likert-type questions used a scale of 1(= no

31 One-way ANOVA found no significant differences in the responses for the female and male participants. With regard to age, we found just one significant relationship, namely, that the correlation between age and “unbiased media” was significant, showing older respondents held a slightly stronger, and younger respondents held a slightly weaker, belief in their media source (r = .10, p = .042). Additionally, we conducted a one-way ANOVA to which ensured that the two samples were congruent, as no significant differences emerged by sample with the dependent variables. While it’s true that the magazine sample comprised 19-percent more women than the restaurant sample (75 percent versus 63 percent), we see this difference as immaterial, because both distributions fell within the range of 60 to 80 percent shown to be the distribution of women who make the primary decisions for both family or personal travel. Based on these analyses, we conclude the sample is well-composed and a sound representation of the intended consumer base under study. See: Marybeth Bond. 2011. “Woman Travel Statistics—80% of All Travel Decisions Made by Women.” http://gutsytraveller.com/women-travel-statistics/; and Alissa Ponchione. 2012. Woman Travelers Influence Trends. www.hotelnewsnow.com/Articles.aspx/8352/Women-travelers-influence-trends.

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Exhibit 1 Composition of sample by respondents’ residence

<table>
<thead>
<tr>
<th>State</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>6</td>
</tr>
<tr>
<td>Arizona</td>
<td>5</td>
</tr>
<tr>
<td>California</td>
<td>8</td>
</tr>
<tr>
<td>Colorado</td>
<td>7</td>
</tr>
<tr>
<td>Connecticut</td>
<td>11</td>
</tr>
<tr>
<td>Florida</td>
<td>27</td>
</tr>
<tr>
<td>Georgia</td>
<td>6</td>
</tr>
<tr>
<td>Iowa</td>
<td>13</td>
</tr>
<tr>
<td>Illinois</td>
<td>17</td>
</tr>
<tr>
<td>Indiana</td>
<td>23</td>
</tr>
<tr>
<td>Kentucky</td>
<td>30</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>8</td>
</tr>
<tr>
<td>Maryland</td>
<td>6</td>
</tr>
<tr>
<td>Maine</td>
<td>5</td>
</tr>
<tr>
<td>Michigan</td>
<td>15</td>
</tr>
<tr>
<td>Minnesota</td>
<td>15</td>
</tr>
<tr>
<td>Montana</td>
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<tr>
<td>Mississippi</td>
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<td>North Carolina</td>
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<tr>
<td>New Jersey</td>
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</tr>
<tr>
<td>New York</td>
<td>45</td>
</tr>
<tr>
<td>Ohio</td>
<td>41</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>5</td>
</tr>
<tr>
<td>Pennsylvania</td>
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<tr>
<td>South Carolina</td>
<td>10</td>
</tr>
<tr>
<td>Tennessee</td>
<td>27</td>
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<td>Texas</td>
<td>37</td>
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<tr>
<td>Utah</td>
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</tr>
<tr>
<td>Virginia</td>
<td>23</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>6</td>
</tr>
<tr>
<td>West Virginia</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>540</td>
</tr>
</tbody>
</table>
Survey questions

Corporate credibility

1. I believe that BP would treat people like me fairly.
2. I believe that if BP makes an important decision, I know they will be concerned about people like me.
3. BP can be relied upon to keep its promises.
4. I believe that BP takes the opinions of people like me into account when making decisions.
5. I feel very confident about BP’s skills.
6. BP has the ability to accomplish what it says it will do.
7. Sound principles seem to guide BP’s behavior.
8. BP would not mislead people like me.
9. I am very willing to let BP make decisions for people like me.

Individual view toward the environment

1. I am a strong believer in the preservation of nature and/or wildlife.
2. I feel I should be personally involved in the preservation of nature and wildlife.
3. All citizens have an obligation to protect and preserve nature and wildlife.
4. I think of myself as an environmentalist.
5. I think more needs to be done to educate the general public about the importance of nature and wildlife.

Risk Perceptions

To what extent has the BP oil spill in the Gulf negatively affected your perceptions of the following:
- Intent to visit Florida
- Intent to visit Northwest Florida
- Perception of environmental quality
- Perception of environmental safety
- Safety to consume Gulf seafood
- Willingness to recommend Florida as a travel destination
- Willingness to recommend Northwest Florida as a travel destination

News Media Channel Preference

Which source of media do you receive the majority of your news from:
- Television Networks (i.e., NBC, ABC, CBS)
- Cable Television (i.e., CNN, Fox News, MSNBC, CNBC)
- Newspapers
- Web or internet
- Other sources

Media Integrity

Regarding the primary news source you indicated above, please indicate your level of agreement with the following two statements:
- I trust my news source.
- My news source presents the news to me in an unbiased fashion (void of political posturing).

Note: The survey items from this scale were only administered to the participants from the restaurant consumer sample. Subsequent analyses using these items are based on a listwise N = 432. Adapted from Singh et al., op.cit.

Last, we asked the participants to report which type of news medium they considered their primary source and, on a five-point Likert-type scale, whether they viewed that medium as both trustworthy and unbiased, with the results reported in Exhibit 3.

Hon and Grunig, op.cit.
Factor analysis. We used a principal components factor analysis with a Varimax rotation to examine the measurement properties of the corporate credibility measure and individual view toward the environment scales. In three iterations, the factor analysis revealed that items in the two scales, as analyzed, explained 78.60 percent of the variance, showing strong measurement quality (see Exhibit 4). The scale reliabilities (Cronbach's $\alpha$) were also high, confirming the sound measurement properties of the survey items as presented. For the nine-item corporate credibility scale the reliability was $\alpha = .95$, and for the five-item individual view toward the environment scale the reliability was $\alpha = .97$.

Analyses

Statistical analysis. To test the research questions, we first examined the descriptive statistics and correlations among the variables (see Exhibit 5, next page). To test research question 1, we conducted one-way analysis of variance with the communication mode as the factor and BP corporate credibility as the dependent variable. To test research question 2, we again conducted one-way analysis of variance with the communication mode as the factor, but this time a belief that their chosen medium is both trustworthy and unbiased were the dependent variables (in two separate equations). For research question 1 and research question 2, Duncan multiple range tests were used to identify the magnitude of the significant factors in the analyses. Research questions 3 through 6 were tested with correlation analyses to identify the strength of the association among the noted variables. To test research question 7, one-way analysis of variance was conducted with the respondents’ intention to visit a tourist destination in Florida in the next two years (yes, no, or undecided) as the factor and respondents’ risk perceptions measured
as environmental quality, environmental safety, and safety to consume Gulf seafood as the dependent variables, in three separate equations. For research questions 7 and 8, Duncan multiple range tests were also used to identify the magnitude of the significant factors in the equations.

Findings:
Communication Source and Corporate Credibility
To begin with, we note that no group’s rating of BP’s credibility exceeded 3.0, showing that the respondents overall believed BP’s corporate credibility was low at the time we collected the data. That said, through the test of research question 1, the one-way ANOVA results revealed significant differences among the means of BP’s corporate credibility across the five communication media types \( (F[4,535] = 6.23, p < .001) \). Results from the Duncan’s multiple range tests indicated that those who reported that they primarily receive their news from cable or television networks viewed BP’s corporate credibility significantly higher \( (M = 2.95 \text{ for cable and } M = 2.60 \text{ for networks}) \) than those who reported that they receive their news through traditional print media or other means \( (M = 2.42 \text{ for print and } M = 2.03 \text{ for word of mouth}; p < .05) \). Those who indicated they receive their news via the internet, however, did not rate BP’s corporate credibility differently from the other two groups, statistically speaking \( (M = 2.49) \).

Communication Source and Media Bias
Newspapers did not fare well with these respondents, demonstrated by ANOVA results on research question 2 \( (F[4,535] = 2.96, p < .001) \). Results from the Duncan’s multiple range tests indicated that those who reported they receive their news from the internet, television networks, or cable networks viewed the news source as significantly more trustworthy \( (M = 3.75 \text{ for the web}, \ M = 3.65 \text{ for TV, and } M = 3.36 \text{ for cable}) \) than those who reported that they receive their news through other means or newspapers \( (M = 3.36 \text{ for word of mouth and } M = 3.12 \text{ for newspapers}; p < .05) \). We note, however, that the range of mean ratings for the five media channels (3.12 to 3.75), shows only a moderate level of trust in any of the respondents’ news sources.

On the other hand, although the respondents viewed the various media as relatively unbiased, they put their greatest faith in “other sources.”\(^{34}\) Asked whether they believed that the channels through which they receive their news were unbiased and not politically motivated, participants rated perceived bias in the news media as moderately significant \( (p < .10; F[4,535] = 2.05, p = .09) \). The means ranged from 3.26, for newspapers, to 4.07, for other sources.

Environmental Concern and Travel Intent
We found a distinct connection between respondents’ concern about the environment and their reaction to the oil spill, with a strong bias to stay away from the affected beaches. Participants who reported a high level of individual concern about the environment also reported that the BP oil spill significantly affected their intent to travel to Florida \( (r = .45, p < .001) \), and specifically to northwest Florida \( (r = .51, p < .001) \). Along the same line, respondents who reported a high level of individual concern about the environment also reported that the BP oil spill significantly affected their willingness to recommend travel to anywhere in Florida \( (r = .54, p < .001) \) and to northwest Florida specifically \( (r = .57, p < .001) \). Additionally, participants who reported a high level of individual concern about the environment indicated that the BP oil spill negatively affected

\[ \begin{array}{|c|c|c|c|c|c|c|c|c|c|}
\hline
\text{Variables} & \text{Mean (SD)} & \text{(1)} & \text{(2)} & \text{(3)} & \text{(4)} & \text{(5)} & \text{(6)} & \text{(7)} & \text{(8)} & \text{(9)} \\
\hline
\text{(1) Individual Environment} & 3.13 (1.21) & 1.00 \\
\text{(2) Intent to Visit FL} & 2.39 (1.13) & 1.00 \\
\text{(3) Intent to Visit NWFL} & 2.62 (1.51) & 1.00 \\
\text{(4) Recommend FL} & 2.40 (1.33) & 1.00 \\
\text{(5) Recommend NWFL} & 2.61 (1.46) & 1.00 \\
\text{(6) Environmental Quality} & 2.20 (1.40) & 1.00 \\
\text{(7) Environmental Safety} & 3.16 (1.41) & 1.00 \\
\text{(8) Safe to Eat Gulf Seafood} & 3.37 (1.59) & 1.00 \\
\text{(9) BP Corporate Credibility} & 2.67 (1.04) & 1.00 \\
\hline
\end{array} \]

Notes: * Correlation is significant at the 0.05 level (2-tailed); **. Correlation is significant at the 0.01 level (2-tailed).

### Exhibit 5
**Correlations and descriptive statistics**
their perception of environmental quality in the Gulf ($r = .74$, $p < .001$), environmental safety in the Gulf ($r = .79$, $p < .001$), and the safety of consuming Gulf seafood ($r = .73$, $p < .001$).

Finally, BP did not fare well with those who had a high level of individual concern about the environment. Those respondents had lower evaluations of BP’s corporate credibility ($r = -.09$, $p < .05$) than other respondents did.

Environmental Concern and Intent to Visit

Turning the question around, the one-way ANOVA results for question 7 revealed significant differences among the yes, no, and undecided groups of respondents, with regard to their intention to plan a visit to Florida during 2011 or 2012 ($F[2,430] = 8.67$, $p < .001$). Results from the Duncan’s multiple range tests indicated that those who said they would be planning a visit reported a significantly lower concern for the environment ($M = 2.52$) compared to those who were undecided about making a visit or who indicated they had a visit planned ($M = 3.00$ for the undecided, and $M = 3.27$ for those with plans). On the other hand, those who are more protective of the environment reported that they were less likely to plan a visit to Florida immediately following the oil spill.

Risk Perceptions and Intent to Visit

Environmental concern was also connected to respondents’ intentions to plan a visit to Florida during 2011–2012 ($F[2,537] = 11.69$, $p < .001$). Results from the Duncan’s multiple range tests indicated that those who reported they would be planning a visit reported a significantly higher concern at the $p < .05$ level regarding environmental quality ($M = 3.38$) compared to those who were undecided about making a visit and those who indicated they had a visit planned ($M = 2.87$ for the undecided, and $M = 2.59$ for those with plans).

Risk perceptions also entered into this decision. The test of the second part of research question 8 revealed significant differences regarding concerns of environmental safety for the yes, no, and undecided respondents ($F[2,537] = 11.73$, $p < .001$). Results from the Duncan’s multiple range tests indicated significant differences between the three groups at the $p < .05$ level. Those who reported they did not have a visit planned reported a significantly higher concern regarding environmental safety ($M = 3.33$), followed by those who were undecided about making a visit ($M = 2.91$), and those who indicated they had a visit planned ($M = 2.46$).

With regard to respondents’ perception of the safety of consuming Gulf seafood after the oil spill, the three groups again had significantly different perceptions, as indicated by one-way analysis of variance ($F[2,537] = 11.54$, $p < .001$). Results from the Duncan’s multiple range tests indicated that those who reported they would be planning a visit reported a significantly lower concern regarding consuming Gulf seafood ($M = 2.48$, $p < .05$) compared to those who were undecided about making a visit ($M = 3.21$) and those who indicated they had no visit planned ($M = 3.54$).

Discussion of the Findings and Study Implications

The case of the Gulf oil spill gives us a window into the interaction of media channels, corporate credibility, and people’s assessments of risk, as well as their attitudes about the spill. The oil spill had been extensively covered at the time we collected these data, and questions had arisen regarding both the impartiality of the media coverage and the sincerity of BP’s actions to mitigate damage and take responsibility for the spill. These issues formed a background for our questions, as we attempted to quantify these connections. Two noteworthy findings emerged.

**Effects on credibility.** First, BP’s corporate credibility, as we measured it here, was generally low, regardless of the medium the respondents identified as their primary news source. However, those who reported that they received their news from either traditional television networks or cable networks gave BP higher credibility marks than those who used newspapers or other channels as their news sources. We didn’t ask respondents why this might be so, but we do note that television and cable network formats offer more frequent and more in depth coverage with multiple perspectives presented at multiple times. More to the point, BP had placed numerous commercials on these television and cable networks in an attempt to bolster their credibility and control the messaging. These actions could have influenced our findings regarding those who relied on TV and cable.

We also point to the responses to research question 2, which showed that consumers who reported the use of the internet, television, or cable as a primary news source rated their chief source to be more trustworthy than those who read the newspaper or received their news from other sources. Thus, we suggest that during a public relations crisis companies should be aware that levels of credibility vary across different media channels, and consumers give different ratings to the communication emerging from their news sources. As a result they have different views of the corporate parties involved.

**Environmental concerns.** Second, our findings also demonstrated that consumers’ attitudes toward the environment affected their reaction to the oil spill. This played out as a reluctance to travel to Florida, particularly the beaches on the Panhandle, and even a noticeable resistance to recommending a trip to Florida.

Our respondents were by no means alone in their avoidance of northwest Florida. Ritchie et al. reported that hotel and vacation rental occupancy rates were depressed in the areas affected by the spill during the time we were collecting these data, despite an overall increase in occupancy rates across Florida as a whole. These findings suggest that when responding to

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35 Harlow et al., op.cit.
36 Ritchie et al., op.cit.
environmental disasters companies and travel- and tourism-based agencies may want to tailor their advertising messages to alleviate consumers’ concerns regarding the environmental risk, especially if they know that their target markets are particularly sensitive to such issues, while also taking into account people’s tendency to overestimate major risks and negative outcomes.

We also found that consumers who reported an individual concern for the environment were specifically concerned with environmental quality, environmental safety, and safety of consuming seafood from the Gulf. These results provide specific evidence regarding why respondents reported they were apprehensive about visiting or recommending Florida as a tourism destination following the oil spill. This is a significant set of findings given that recommendations from consumers via word of mouth (online and offline) are a strong influence on consumer decision making. Our findings reveal that consumers harbored negative perceptions regarding Florida (especially northwest Florida) regarding the current state of environmental quality ($M = 2.20$), safety ($M = 3.16$), and regarding seafood consumption ($M = 3.37$). Time has healed some of the wounds, but these negative sentiments had to be addressed to improve consumer attitudes and opinions about tourism to Florida following the oil spill.

Corporate credibility. Looking at the corporate credibility effects, we found a connection between respondents’ reported environmentalism and their assessment of BP’s corporate credibility. Respondents who reported a higher level of individual concern for the environment viewed BP less favorably (RQ6). Even five years after the spill, BP’s corporate reputation has been on the line regarding how they handled the cleanup and recovery efforts. Additionally, their credibility was called into question regarding how well prepared they were in the first place to proactively address potential problems that could arise from deep water drilling. Overall, BP was not viewed favorably by this set of respondents, and those that reported an individual concern for the environment took a particularly dim view of the company.

To follow up on the findings of the correlation analyses reported from research questions 3 through 6, we examined the participants’ intent to visit Florida in 2011 and 2012 more closely by looking at the relationship between consumers’ general attitudes toward the environment and whether they planned to go to Florida. As seen in the response to research question 7, those who reported a lower concern for the environment were more likely to plan a visit to Florida than those who reported higher levels of concern.

We saw similar outcomes for those who had concerns about the risks from the spill. Respondents who reported specific concerns about environmental safety, environmental quality, and safety of consuming Gulf seafood were less likely to plan a trip to Florida in the years after the spill (RQ5). From this analysis, it is clear that the risk perceptions we identified had a strong negative relationship to consumers’ intentions to travel to Florida.

The spill itself seems to have had a direct effect on respondents’ travel plans. We ran a Pearson Chi-square test to examine whether respondents’ past visits were significantly related to their planned visits in the future. Those who visited in 2009 or 2010 were less likely to visit in 2011 or 2012 (see Exhibits 6 and 7; $X^2 [2] = 33.6, p < .001$). In brief, we can see that intention to return to Florida is low among the respondents. In that connection, we believe an additional detailed segmentation study is needed to provide a deeper understanding of elements that influenced the respondents’ planned travel to Florida. Our findings, which use primary data, support the secondary data analyses conducted by Ritchie et al.

Conclusion

This group of respondents contained a substantial proportion of people who had traveled to Florida in 2009 or 2010, as over two-thirds of those we surveyed reported a trip to Florida in the years before the spill. We must point out that these pre-spill trips were taken during the so-called Great Recession, one of the most challenging economic situations since the Great Depres-


38 Paraskevas et al., op.cit.

39 Resnick-Ault et al., op.cit.; and Reuters, op.cit.

40 Ritchie et al., op.cit.
Therefore, we can eliminate the economy as a reason for the reactions measured here (particularly the reduction in travel), and instead point to the impact of the oil spill as the reason for the small percentage of respondents planning to return to Florida. We also could see that many consumers remained upset about the environment, BP, and its post-oil spill behavior for years after the spill, and these attitudes and perceptions are strongly connected to concerns about traveling to Florida.

In the time immediately following the spill, our study showed that consumers had concerns over its effect, and it appears that they avoided Florida as a consequence. Sufficient time has passed that it would be valuable to examine consumers’ perceptions again. Although the spill occurred five years ago, it clearly has not been forgotten. BP continues to promote travel to the Gulf States and has made a concerted effort to improve its corporate credibility through advertising, despite the problems identified with how the firm behaved throughout the entire cleanup and remediation process. Future research could address the success of such actions and determine whether consumers remain concerned about travel and tourism in the Gulf region and Florida and also about BP’s management of the cleanup and recovery.

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42 Crotts and Manazec, *op.cit.* and Ritchie et al., *op.cit.*
43 Resnick-Ault, *et al., op.cit.*
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