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Public Relations Review 29 (2003) 43–62

Public
Relations
Review

Perceptions of public relations web sites by computer industry journalists

David Hachigian^a, Kirk Hallahan^{b,*}

^a *Hewlett-Packard Corporation, Fort Collins, CO 80525, USA*

^b *Colorado State University, Fort Collins, CO 80523-1785, USA*

Received 2 June 2002; received in revised form 12 September 2002; accepted 7 October 2002

Abstract

A survey of computer industry journalists ($n = 101$) explored usage and perceptions of public relations web sites as a newsgathering tool within the theoretical framework of journalistic conventions and routines, information subsidies and market-driven journalism. Regression analysis was used to identify the best predictors of web use for four key seminal questions. Depending on the specific questions, critical predictors of web use were the information value of the content, source credibility and reputation, perceptions about cost- and time-savings, and self-reported total hours of use. Implications for the future of sponsored web sites are discussed.

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1. Introduction

Public relations practitioners have widely adopted web technology to communicate with key constituents, including journalists.¹ Public relations professionals can use the web to reach audiences anywhere in the world, 24 h a day, 7 days a week.² At the same time, reporters and editors are less limited when accessing sources by restrictions imposed by geographic space and time delays in the delivery of information. News production cycles also have been reduced from hours to minutes.³

The relationship between public relations practitioners and journalists undergoes continuous change, but the adoption of the web technology has accelerated the change process.⁴ As a result,

* Corresponding author. Tel.: +1-970-491-3963; fax: +1-970-491-2908.

E-mail address: kirk.hallahan@colostate.edu (K. Hallahan).

practitioners would benefit from a better understanding of how journalists use and perceive the role of the web in their work. This investigation was designed to gain insights on what factors influence journalists' use of the web as a newsgathering tool.

1.1. Previous research on web use by journalists

Growing numbers of journalists use the World Wide Web as a reporting tool. Journalists cite as among the most appealing reasons the scope and depth of information, as well as the speed at which information can be retrieved. One researcher argues that the web has vastly improved the efficiency and effectiveness of reporting. Journalists can quickly find newsmakers, conduct background research about businesses and individuals, identify new story ideas, and locate public and private information stored in digital form.⁵

Middleberg and Ross have conducted the most extensive research on journalists and the web. In their annual media study, based on 400 responses from a sample of 4,000 editors and reporters (but representing only a 10% response rate), 91% of editors at daily newspapers and magazines said they or their staff use online services for article research. When reporting on a breaking story after hours, journalists first attempt to contact the source, but then turn to company web sites for information.⁶ A similar study found that journalists in the high-tech arena use the web more than 5 h a week to conduct research.⁷

Evidence suggests journalists have become suspect of "cyberspace content" because of a lack of editorial review and rigor. As the web has become a boundless receptacle for information, journalists face a tradeoff between information quantity and quality.⁸ Indeed, the credibility of information on the Internet has emerged as a significant issue. When journalists were asked to rank the various types of online sources from "not credible" to "highly credible," only trade association sites were rated "credible" more frequently than they were rated "not credible." Interestingly, the types of sites included those sponsored by nonprofit/public interest groups and activists in addition to for-profit corporations.⁹ This is problematic because credibility is one of the most important attributes of sources in public relations.¹⁰

In large measure, the web is still an under-utilized channel to deliver information. Potentially, the web allows public relations firms and their clients to shift from merely delivering "content" to journalists to using technology to lure journalists. However, this greater opportunity will put pressure on the resources of PR firms and departments if they are to take maximum advantage of this new tool.¹¹ As one prominent editor says, "The web ought to be the first place reporters look for information. PR people need to work with clients on making web sites more useful . . . There's plenty that can be done."¹² Ironically, one critic suggests PR professionals must do a better job to work with clients to develop web sites. Among common criticisms lodged against PR web sites is the omission of product details and basic press contact information.¹³

1.2. Theoretical foundations

Three separate threads of theory about the relationship between journalists and sources provided the foundation for this study.

1.2.1. *Web sites as routine newsgathering sources*

Research on the sociology of news work focuses on newsgathering as a process in which newswriters deal with the uncertainties of their work through routinization, or the development and reliance upon regular sources of dependable information. Christopher says, “News is a social construction rooted in journalistic routines and practices.”¹⁴

Gans found news organizations to be unique among corporate entities because the information from which they produce their product is obtained without charge. This attracts reporters to sources that need publicity but not money. Since reporters typically have only a short period of time to gather information, they must “attempt to obtain the most suitable news from the fewest number of sources quickly and easily, and with the least strain on the organization’s budget.”¹⁵ Gans observed, “journalists actively pursue only a small number of regular sources who have been available and suitable in the past, and are passive toward [seeking] other possible news sources.”¹⁶

Developing relationships with news sources is essential to the news media and is an interactive, two-way process.¹⁷ Journalists must find dependable, trustworthy sources from among all possible suppliers of news. Meanwhile sources, including public relations practitioners, try to cultivate relationships that will improve their chances of placing client material, thus enhancing their access to audiences.

Web sites probably have done more to routinize the process of newsgathering than any other technology since the invention of the telephone. Reporters can access text and graphics from sources around the world on a 24-h-a-day, 7-days-a-week basis. Journalists don’t need to leave their offices to check for updated information on web sites. In tandem with e-mail and newsgroups, web sites enable journalists to follow new developments instantaneously, provided that information is posted by news sources promptly. As a result, more and more news decisions are being made heuristically, based on mere accessibility and availability on the web. Importantly, journalists who rely upon the web must possess high levels of computer literacy and strong analytical skills.¹⁸

1.2.2. *Web sites as information subsidies*

Researchers suggest that public relations practitioners contribute to the routinization of news work by providing information subsidies, wherein sources package news for journalists and thus underwrite the cost of researching, collecting and writing newsworthy material.¹⁹ Fishman contends that government agencies, corporate bureaucracies, and community organizations thus sustain the costs of news production. This “invisible subsidy” is the foundation for today’s news organization.²⁰

Gandy characterized the exchange of information as a subsidy when “the source of that information causes it to be made available at something less than the cost a user would face in the absence of the subsidy.” Gandy argues that in order to reduce the cost of their work and to increase efficiency, journalists, government agencies and others routinely go to sources that provide subsidies.²¹ This can often include greater dependence upon or substitution of sources of information that require less effort to locate.²²

In the subsidization process, newswriters (and their employers) benefit from cost- and time-savings that permit the production of an economic and marketable product. The benefit

for the news source, of course, is to gain visibility and credence for a particular idea. Information subsidization is a part of the process of agenda-building by advocates. To the degree that such efforts influence public awareness of particular topics, and to the possible exclusion of others, media agenda-setting occurs.²³

As much as one-half of the content in the American news system is generated in some way with the assistance of public relations sources.²⁴ The advent of web sites as newsgathering sources will undoubtedly accelerate this trend, leading to further institutionalization of newsgathering routines and to the subsidization of the newsgathering process. Desktop computers have become electronic publicity vending machines that enable editors and reporters to download text and graphics, edit material with a minimum of effort, and then electronically transfer files to their own content production system with minimum effort. Organizations with the resources and resolve to provide news organizations with timely information in a usable format thus can enjoy advantages that other organizations or causes cannot exploit.

1.2.3. Market-driven journalism

The implications of routinization and information subsidies are readily apparent in light of the increasing economic pressures on media industries. These pressures have caused owners and journalists to focus on more cost-efficient methods of newsgathering.

McManus claims that two sets of values coexist in modern news organizations, rooted in journalism and business. Journalistic values are predicated on the notions of the public's need to know and place a premium on the allocation of unlimited resources of time and money for news discovery, selection, and reporting. Business values, by contrast, view news as a commodity to be produced with optimal efficiency.

McManus argues that the logic that drives news production routines is inevitably economic. He suggests that news organizations compete and engage in exchanges in four markets. These involve investors, advertisers, consumers, and sources.²⁵ Thus, the goals of news organizations are "to offer the least expensive mix of content that protects the interests of sponsors and investors while garnering the largest audience advertisers will pay to reach."²⁶

Critics charge that owners and managers have allowed business concerns to control editorial content by weakening journalistic values and reducing standards. Although economic and other concerns of owners have always been present, pressures on newswriters in the past were often subtle.²⁷ However, Underwood suggests that media executives today often institute tough newsroom management systems "in order to bring along newswriters reluctant to buy into the philosophy of market-oriented journalism."²⁸

The advent of the World Wide Web offers obvious opportunities to help news organizations lower their costs of operations, despite the fact that the web is also the source of competition, by providing audiences with direct access to a larger array of news information. Flat-fee subscriptions for access to the Internet have virtually eliminated the incremental costs associated with researching particular stories. This might be a particular advantage for news organizations with smaller staffs or larger news holes.²⁹ If media organizations, in fact, strive to increase profits and reduce reporting costs, it is valuable to determine how journalists use the World Wide Web for newsgathering to save time and effort.

2. Investigation

2.1. Research questions

Drawing upon the somewhat limited research to date about journalists' use of the web and the conceptual framework outlined above, this study sought to develop a better understanding of how public relations-sponsored web sites have become a part of journalists' newsgathering routines. The study also sought to identify characteristics of sponsored web sites that make them attractive, thus increasing journalists' use of web sites as information subsidies. Finally, the study sought to examine the degree to which journalists were cognizant of the potential economic benefits of web sites in their work.

If web sites have become an integral part of newsgathering routines, the adoption of web sites might be evidenced in a variety of ways. Besides hours of web usage by journalists, routines can be measured in terms of the levels of perceived personal reliance upon web sites. The higher the level of reliance, the more web sites might be considered to have become a conventional part of the complex process of newsgathering. Thus it would be valuable to also understand if particular situations or conditions, such as being on deadline, influence reliance upon web sites. These assumptions led to the study's first two research questions:

R1 To what degree do journalists rely upon web sites as a source of information as part of their newsgathering routines?

R2 What situational factors related to the journalists' work explain web usage?

If web sites are viewed as valuable information subsidies, a second major area of investigation centered on journalists' perceptions of the content and sponsors of web sites. Simply put, information subsidies are more likely to be used when the content is perceived as being valuable or providing useful, timely and informative information. Yet a long tradition of communication research also suggests that source characteristics influence message assessments.³⁰ This study also sought to consider how perceptions about the source, including credibility, type, reputation, and reliability, might influence journalists' use of web sites. This led to two additional research questions:

R3 To what extent is web site content important to journalists?

R4 How do perceptions about web site sponsors influence journalists?

To investigate the notion that web sites provide economic advantages in a market-driven environment, this study also examined perceptions about the potential economic benefits derived by journalists and their employers through the use of web sites in newsgathering. Assuming that journalists have become increasingly aware of the need for efficiency in the newsgathering process, as suggested by market-driven journalism theory, the researchers wanted to know:

R5 Do journalists perceive web sites as providing economic advantages in day-to-day newsgathering?

Finally, it was assumed that adoption of web technology was not necessarily uniform among journalists, but rather is moderated by individual characteristics of the journalists themselves. As a beginning point for understanding the influence of individual differences, this study focused on key demographic variables, including age, gender, education, job title and size of the operation where journalists worked. Thus, the study sought to answer the question:

R6 How do demographic characteristics of journalists influence web usage and reliance, views about content and sources, and perceptions about economic advantages of web sites?

2.2. Method

To investigate these questions, a mail survey was conducted among computer industry journalists in the United States. Computer industry journalists were selected because they were considered to be among the savviest users of web sites. The use of a narrow category of journalists also enhanced the homogeneity of respondents, thus reducing potential sources of extraneous variance and contributing to the reliability and internal validity of the findings.

Bacon's Magazine Directory 2000, a leading public relations industry resource for media information, provided the sampling frame. A total of 400 publications were identified in Bacon's section on computer industry publications representing a combination of consumer, business-to-business, and technical titles. All eight subgroups were included. Publications thus covered: (a) computer technology/data management, (b) general interest, (c) software/operating systems, (d) Internet, (e) industry applications, (f) related interests, (g) computer/video games, and (h) marketing/retailing/reselling.³¹

Because publications vary considerably in size, and because reporters tend to change jobs and are sometimes not listed in Bacon's by name, a sampling scheme was adopted where the highest-ranking editorial worker for a publication was chosen. Thus, the sample included editors/publishers, managing editors, senior/technical editors, reporters, or editorial assistants—chosen in that order. In compiling the list, duplicate names from chain publishers were eliminated. In such cases, where possible, a second name from the same editorial office was substituted. Because of the nature of editorial work, it was deemed important to address surveys to individuals by name, although some questionnaires might have been opened and/or completed by other staff members.

Surveys were mailed in Spring 2000, and followed the survey procedure recommended by Dillman.³² The initial mailing included a questionnaire and postage-paid return envelope, as well as a cover lettering soliciting participation and explaining that the focus was on sponsored web sites that journalists might use to gather information from sources. A follow-up reminder postcard was mailed 2 weeks later to journalists who had not returned the instrument. Finally, a third letter and duplicate questionnaire were mailed to all nonrespondents. The result of this diligence was receipt of 101 usable surveys, representing a 25% response rate.

The four-page instrument included 73 closed-ended questions designed to operationalize the concepts outlined above. For most of the questions, respondents were asked to react to a series of statements using a 7-point scale to which they could answer on a continuum from strongly agree or strongly disagree. Separately, a battery of semantic differential items examined journalists' perceptions about web content in general. Key demographic data were collected at the end of the survey, including hours of use of the web (on and off the job), age, education, circulation size, previous training on using the web, and job title. The format of the instrument and wording of items were pre-tested and modified using a sample of local business journalists and advanced newswriting students.

Clusters of questions were used to measure key constructs, and were later subjected to factor and reliability analysis. Nine of these multiple-item measures were deemed sufficiently reliable

(generally Cronbach's $\alpha > 0.70$) to use as scales for analysis purposes (described in tables). The majority of the items that didn't fall into usable indices involved characteristics of web sites that influenced usage. Findings were deemed statistically significant at $p \leq .05$.

2.3. *Characteristics of respondents*

The demographics of respondents were remarkably well distributed. The mean and median age was 41 years old, editors/publishers represented 39.6% of respondents, while 32.7% were managing editors, 10.9% were senior/technical editors, and 15.8% were reporters or editorial assistants. Importantly, the respondents were active journalists: When asked how frequently they researched and reported stories, 34.7% reported very frequently, 23.8% somewhat frequently, and 18.8% frequently. Only 20% said infrequently or never. In general, as job responsibilities increased, the frequency of writing and researching articles also increased ($r = .36$, $p \leq .000$). A one-way analysis of variance suggested that the pattern was not completely linear. Instead, managing editors at larger publications devote slightly less time to researching and writing than either editors, senior/technical editors or reporters.

More than one-half of the journalists held bachelor's degrees (52%), while an exceptionally large proportion (39%) had completed some post-graduate courses or held an advanced degree. Only about 9% had not completed college. The high proportion of respondents with advanced education reflects the fact that many technical publications seek editorial workers with specialized knowledge in the field. Gender was closely divided (54% male; 46% female). Monthly publications represented the most common frequency of distribution (66.3% of respondents). The mean circulation of publications where respondents worked was 103,785; the largest circulation reported was two million copies per issue.

3. Findings

3.1. *Journalists' use and reliance on web sites*

R1 focused on the degree to which journalists relied upon web sites in their routine newsgathering activities. Journalists reported they spent a mean average of 3.39 h a day on the Internet at work, while they spent 1.37 h a day on the Internet outside of work. On face, these figures suggest that the journalists surveyed are heavy web site users, but it is difficult to separate the hours spent on web sites versus e-mail.

Table 1 reports the results of the battery of statements to which journalists responded pertaining to their reliance or dependence on web sites. Perhaps the most telling finding relates to the overall moderate level of the responses; none of the mean scores exceeded 5 on a 7-point scale. This suggests that journalists' consider themselves to be only moderately reliant upon web sites as sources. Two of the items formed a reliable index of personal reliance on web sites ($M = 4.40$) and included the statements, "I depend upon the web as an information source more than other sources" ($M = 4.44$) and "I use web sites as an information source more than other sources" ($M = 4.34$). The highest agreement score was for the item "I use web sites to find information that is not accessible through other sources" ($M = 4.93$). At the same time,

Table 1

Journalists' reliance on the World Wide Web (7 = strongly agree/positive valence, 1 = strongly disagree/negative valence)

	Mean	SD	Range
(a) Personal reliance (Cronbach's $\alpha = 0.92$)	4.40	1.71	1–7
I depend upon the web as an information source more than other sources	4.44	1.71	1–7
I use web sites as an information source more than other sources	4.34	1.70	1–7
Other items:			
I use web sites to find information that is not accessible through other sources	4.93	1.47	1–7
The computer industry uses web sites media relations campaigns more than other industries	4.89	1.14	1–7
Journalists who cover the computer industry use web sites more while conducting research than other journalists	4.80	1.40	1–7
Corporate web sites provide needed information for journalists about the computer industry	4.78	1.52	1–7
Public relations practitioners direct journalists to company web sites as a source for follow-up information	4.76	1.39	1–7
Web sites are perceived by journalists as being more useful than they really are	4.03	1.46	1–7
Corporate web sites are developed without determining a target audience	4.02	1.60	1–7
Web sites are visited by journalists more frequently for information than are other sources	4.00	1.41	1–7
Information obtained from corporate web sites replaces information normally obtained from other sources	3.93	1.57	1–7
Web sites are better sources of information for journalists than other sources	3.65	1.44	1–7
Web sites are more relevant as a source of information than other sources	3.21	1.45	1–7

respondents tended to disagree with the statements that “Information obtained from corporate web sites replaces information normally obtained from other sources” ($M = 3.93$) or that “Web sites are better sources of information for journalists than other sources” ($M = 3.65$).

These findings were corroborated when respondents were asked to rank five potential sources of information. Table 2 shows that web sites ranked fourth as the preferred communication channel to receive information. The traditional channels of telephone and face-to-face interviews with sources ranked at the top, followed by news releases. Web sites were a preferred source only when compared to press conferences.

R2 suggested that situational factors tend to moderate web usage. Table 3 summarizes the means for a series of statements that addressed possible situational factors that were identified.

Table 2

Preferred communication channels for journalists for gathering news (1 = first choice, 5 = last choice)

	Mean ranking	SD
1. Phone	2.20	1.17
2. Face-to-face	2.84	1.97
3. Press release	3.12	1.46
4. World Wide Web	3.20	1.27
5. Press conference	4.36	1.77

1. Phone = communicate with information source via telephone; 2. face to face = communicate with information source through face-to-face communications; 3. press release = gather information from press releases; 4. World Wide Web = gather information from World Wide Web sites; 5. press conference = report information from official press conferences.

Table 3

How journalists view their usage of the World Wide Web (7 = strongly agree/positive valence, 1 = strongly disagree/negative valence)

	<i>M</i>	<i>SD</i>	Range
I am confident in my ability to use the web as an information gathering source	6.35	0.87	1–7
Journalists would use web sites as a reporting tool more often if information was regularly updated	5.60	1.12	1–7
Corporate web sites are most useful to me when trying to find information about new product releases	5.31	1.35	1–7
Corporate web sites are not sufficiently updated	4.93	1.49	1–7
Corporate web sites are used more frequently when on deadline	4.63	1.62	1–7
Corporate web sites are often the first source I use to research a story	4.62	1.81	1–7
Corporate web sites are used only as a follow-up source of information during research	3.63	1.55	1–7
Corporate web sites are used as an information source only as a last resort	2.44	1.52	1–7

None of these clustered into a reliable index, but are insightful nonetheless. Overall, journalists at computer publications are confident about using the web and are not intimidated ($M = 6.35$). They somewhat strongly agree with the idea that the web sites would be more valuable if the information were updated more frequently ($M = 5.60$) and indicated some potential problems with web sites not being sufficiently updated ($M = 4.93$). The journalists agreed strongly with the statement that corporate web sites are most valuable when seeking new product information ($M = 5.60$). They only moderately agreed with the notion that web sites are useful only when on deadline ($M = 4.63$). Journalists tended to disagree with the statement that they use web sites as a follow-up source of information ($M = 3.63$). Importantly, they also strongly disagreed with the statement that they use web sites as a source of last resort ($M = 2.44$). Together these suggest that web sites are viewed as a potentially valuable but not necessarily preferred source in various phases of the newsgathering process.

3.2. Journalists' perceptions of web site content quality and sources

R3 examined the notion that content is a major determinant of web site use by journalists. In general, this idea was supported. Table 4 reports findings of 10 semantic items used to ascertain attitudes toward web site content quality. These items neatly clustered into two reliable indices related to the information value of content and the ease of content use. The randomly reversed semantic differential items in the questionnaire were recoded for consistency so that 7 = positively valenced and 1 = negatively valenced.

Respondents generally agreed that web sites provide needed information and are valuable, as represented in the six-item scale index for information value (Table 4a: $M = 4.89$). Journalists saw web content as fairly relevant ($M = 5.28$), useful ($M = 5.21$) and valuable ($M = 5.14$), but indicated somewhat less favorable views pertaining to web sites providing needed information ($M = 4.84$) and being informative ($M = 4.80$). Significantly, journalists were ambivalent when asked whether web content is of high quality versus low quality ($M = 4.05$).

Three items clustered into a scale to measure ease of content use (Table 4b: $M = 4.34$). Respondents generally found web sites "easy to use" ($M = 4.82$), but clearly gave web sites

Table 4

Journalists' attitudes toward content on the World Wide Web (7 = strongly agree/positive valence, 1 = strongly disagree/negative valence)

	<i>M</i>	<i>SD</i>	Range
(a) Information value (Cronbach's $\alpha = 0.87$)	4.89	0.82	2.67–6.83
Relevant versus not relevant	5.28	1.06	1–7
Useful versus not useful	5.21	1.04	1–7
Valuable versus worthless	5.14	1.06	1–7
Provides needed information versus does not provide needed information	4.84	1.18	1–7
Informative versus not informative	4.80	0.99	1–7
High quality content versus low quality content	4.05	0.90	1–7
(b) Ease of content use (Cronbach's $\alpha = 0.75$)	4.34	0.91	2–6.67
Easy to use versus hard to use	4.82	1.35	1–7
Easy to navigate versus not easy to navigate	4.20	1.05	1–7
Well designed versus poorly designed	4.00	0.87	1–7

lower marks in terms of ease of navigation ($M = 4.20$) and design quality ($M = 4.00$). This result is consistent with concerns about web usability.³³ Although information is perceived as relevant, the data suggest, that journalists are not terribly satisfied and faced difficulties accessing sponsored web sites.

R4 examined journalists' perceptions of web sites sources. Table 5 presents the results of 15 questions that pertain to journalists' views about sources. These congregated into four clusters. Overall, the data suggest that journalists approach web sites skeptically, based on perceptions about sponsors.

Table 5a focuses on the three questions pertaining to the credibility of sources. Overall, the data suggested that journalists have mixed attitudes toward sources ($M = 4.20$). The mean score hovered just above the midpoint. The underlying items that comprise the scale suggest that journalists question web sites' accuracy ($M = 4.35$), believability ($M = 4.13$) and trustworthiness ($M = 4.12$). Some distrust of corporate (vs. noncorporate) web sites is evident in Table 5b.

These questions were based upon, and their findings are generally consistent with, earlier research that suggested government and trade association web sites are viewed by journalists as more credible than corporate sites.³⁴ Although the data suggest some bias in favor of noncorporate web sites, the variances are considerable, suggesting a lack of consensus.

As suggested in Table 5c, reputation of the source appears to have little importance in assessing a particular web site ($M = 4.23$). Overall, journalists appear to believe it makes little difference whether the source is well-known ($M = 4.33$), has a good industry reputation ($M = 4.18$), or whether it is frequently in the news ($M = 4.09$). However, secondary analysis (see Section 4), suggests reputation might be a good predictor of use. When asked, journalists appeared to be much more concerned about reliability (rather than reputation) in their assessments of web sites (see Table 5d). The mean score for the three-item reliability index was $M = 5.18$. Journalists said they were more likely to use a web site if they had found the information credible previously ($M = 5.74$), if they had found a source to be reliable ($M = 4.90$) or had used the site previously (also $M = 4.90$).

Table 5

Journalists' attitudes toward sources on the World Wide Web (7 = strongly agree/positive valence, 1 = strongly disagree/negative valence)

	<i>M</i>	<i>SD</i>	Range
(a) Trustworthiness of source (Cronbach's $\alpha = 0.91$)	4.20	1.14	1.33–6.67
Corporate web sites provide accurate information that can be used in reporting	4.35	1.29	1–7
Corporate web sites are believable sources of information	4.13	1.22	1–7
Corporate web sites are a trustworthy source of information	4.12	1.17	1–7
(b) Type of source (Cronbach's $\alpha = 0.77$)	4.68	1.29	1–7
Information provided by computer industry trade association web sites is more valuable to me than corporate web sites	4.78	1.54	1–7
Information provided by expert web site sources (i.e., ProfNet, Newswire, etc.) is more valuable to me than corporate web sites	4.77	1.43	1–7
Trade association and government web sites are more credible information sources than company web sites	4.60	1.44	1–7
As a journalist, I rely the most on noncorporate web sites	4.58	1.66	1–7
Information provided by government web sites is more valuable to me than corporate web sites	4.51	1.37	1–7
(c) Source reputation (Cronbach's $\alpha = 0.76$)	4.23	1.15	1–6.33
I go to a particular corporate web site because the company is well-known and established in the computer industry	4.33	1.41	1–7
I go to a particular corporate web site because of the company's reputation in the computer industry	4.18	1.37	1–7
I go to a particular corporate web site because the company is frequently in the news	4.09	1.42	1–7
(d) Source reliability/experience (Cronbach's $\alpha = 0.72$)	5.18	0.97	2.33–7
I am more likely to use a corporate web site as a source when I know the information is credible	5.74	1.12	1–7
I return to a particular corporate web site for information because I know the source is reliable	4.90	1.36	1–7
I go to a particular corporate web site because I've used it before	4.90	1.08	1–7

3.3. Journalists' perceptions of economic benefits of web sites

R5 asked whether journalists recognize that the web might provide economic benefits for themselves and for their organizations. To investigate this issue, journalists were presented with a series of questions pertaining to economic benefits and practices within their organizations (Table 6).

Overall, journalists in the study strongly agreed about the time-savings that web sites bring to the newsgathering process. The mean for the three-item time-savings index reported in Table 6a was among the highest means found in the study ($M = 5.53$). Journalists perceive web sites as quick (vs. slow, based on a semantic differential scale, $M = 5.67$), and agreed strongly with statements that web sites saved time for them ($M = 5.58$) and for other journalists covering the industry ($M = 5.34$). Journalists also recognized potential cost-savings in a semantic differential item that asked whether web sites saved (vs. cost) money ($M = 5.13$). However, respondents were considerably less likely to agree that cost-savings alone drive journalists to the web for story research ($M = 4.47$). Together, these three items constituted a cost-savings index with a mean score of 4.81 (Table 6b).

Table 6

Journalists' views on economic advantages of using the World Wide Web (7 = strongly agree/positive valence, 1 = strongly disagree/negative valence)

	<i>M</i>	<i>SD</i>	Range
(a) Time-savings (Cronbach's $\alpha = 0.78$)	5.53	0.98	2–7
Quick versus slow	5.67	1.20	1–7
Computer industry web sites save me time when gathering information	5.58	1.21	1–7
Journalists save time when using web sites as a source of information for reporting about the computer industry	5.34	1.15	1–7
(b) Cost-savings (Cronbach's $\alpha = 0.66$)	4.81	1.20	2–7
Saves money versus costs money	5.13	1.20	1–7
Cost-savings drive journalists to the web for story research	4.47	1.53	1–7
Other items			
The World Wide Web is easy to use	5.58	1.18	1–7
Finding information about the computer industry would be more difficult without corporate web sites	5.62	1.19	1–7
Press releases posted on web sites provide information	5.14	1.29	1–7
Corporate web sites are a substitute for other channels of communication with a source, such as phone calls/interviews	3.58	1.89	1–7

Table 7 presents the results of six questions that measured journalists' reactions to a number of economics-related questions. Journalists felt they had to learn how to use the Internet as part of their job ($M = 5.74$), that the equipment they used is technologically update-to-date ($M = 5.64$), and that they are encouraged by their managers to use the Internet to gather information ($M = 5.62$). Overall, participants agreed that journalists don't receive much training on use of the web ($M = 4.92$). Journalists concurred with the statement that their company didn't provide formal training on web use ($M = 2.71$), but training was not perceived as a prerequisite for effective use ($M = 4.70$). In fact, when asked, only 15% of respondents reported that they had taken any kind of formal web training. True to market-driven journalism theory, the findings suggest publishers have made investments in computers, but not training, to enhance worker efficiency.

Table 7

Journalists' views about using the web on the job (7 = strongly agree/positive valence, 1 = strongly disagree/negative valence)

	<i>M</i>	<i>SD</i>	Range
Journalists are forced to learn how to use the Internet as a result of their job duties	5.74	1.16	1–7
The equipment (hardware and software) that I use at work is technologically up-to-date and makes using the web easy	5.64	1.43	1–7
My manager encourages me to use the Internet as a method of gathering information	5.62	1.48	1–7
Journalists do not receive training on using the Internet	4.92	1.56	1–7
Journalists rely on web sites as a source for information when they have prior computer training	4.70	1.21	1–7
My company provides journalists training on using the web	2.71	1.87	1–7

3.4. *Effects of demographic variables*

R6 was intended to understand how individual characteristics of journalists might influence their use and dependence upon web sites. Among all the demographic variables incorporated in the study, age clearly was the most important. Age was negatively related to hours of Internet use. Although age is only marginally significant in terms of total Internet use on and off the job ($r = .28, p \leq .06$), age is strongly and negatively correlated to use of the Internet at work ($r = .28, p \leq .005$). While it might be surmised that the younger generation of journalists are greater overall adopters of the Internet, age is not significantly correlated with off-the-job use of the Internet ($r = -.12, p \leq .12$), although the direction is consistent. This would suggest that younger journalists are either in positions where they have more time to devote to work on the web, or they simply prefer it.

Alternatively, it might be argued that older journalists are simply less familiar, comfortable or proficient at new forms of newsgathering and use web sites less. Support for his argument can be found in the negative relationship between age and confidence in using the web ($r = .24, p \leq .014$): Younger journalists said they feel more confident in the ability to use the web. However, younger journalists might also be more open to using different kinds of sources and information gathering tools. For example, younger journalists were more likely than only older journalists to rely upon source reputation as a heuristic in choosing web sites ($r = .24, p \leq .02$) and were more favorable toward using corporate (vs. noncorporate) web sites ($r = .29, p \leq .03$). Importantly, however, age didn't even approach significance levels when journalists were asked about their reliance upon the web ($r = .01, p \leq .94$).

No significant differences were detected based on gender. The only variable that even approached levels of statistical significance involved source reliability. Females were slightly more favorable toward sources based on past success (females: $M = 5.36, SD = 0.92$; males: $M = 5.02, SD = 0.99$; $F(1, 97) = 3.04, p \leq .084$). However, this gender effect was further diluted when analysis of covariance was employed to analyze the effects of other variables. Then, time-savings and value of information content were both significant explanatory variables for reliability.

The impact of education level on views toward the web were confounded by the fact that so few of the respondents had less than a college education. When those who had completed at least some graduate work, or who had held a graduate degree, were compared to those who merely had a bachelor's degree, no significant differences emerged. A one-way analysis of variance initially suggested that individuals with only a bachelor's degree were more likely to rely upon source reputation as a heuristic in using a web site ($M = 4.30, SD = 1.05$; Bachelor's only: $M = 4.50, SD = 1.10$; at least some graduate work: $M = 4.05, SD = 0.94, F(1, 87) = 4.09, p \leq .04$). However, when analysis of covariance was used to control for the effects of age (the better-educated journalists were also older), the effects of education level were eliminated.

Finally, some explanation for web use was provided by examining circulation size of the publication where journalists work. On an adjusted basis, the findings suggested that the larger publication, the more likely journalists are to use the web on the job ($r = .34, p \leq .01$). However a further examination of the data suggested that the inclusion of three outlying observations with three very large circulations might have skewed these results. When the circulation figures were adjusted by eliminating the outliers, the correlations became nonsignificant

Table 8

Key measures of overall assessment of web sites as news sources (7 = strongly agree/positive valence, 1 = strongly disagree/negative valence)

	<i>M</i>	<i>SD</i>	Range
Web sites as first source for stories			
Corporate web sites are often the first source I use to research a story	4.62	1.81	1–7
Web sites as better sources for stories			
Web sites are better sources of information for journalists than other sources	3.65	1.44	1–7
Frequency of use by journalists			
Overall, how would you rate web sites as a source of information for journalists			
Use frequently vs. Do not use frequently	5.83	1.07	1–7
Personal reliance on web sites (2-item index)			
I depend upon the web as an information source more than other sources	4.44	1.71	1–7
I use web sites as an information source more than other sources	4.34	1.70	1–7

($r = .20$, $p \leq .06$). Nonetheless, hours of on-the-job web use might be somewhat higher the larger the publications. Perhaps this is because of the availability of greater resources or greater time available to conduct story research. Significantly, workers at larger publications did not feel that they were any more reliant upon the web than those at smaller publications ($r = .06$, $p \leq .548$).

4. Overall assessments of web sites as news sources

4.1. Key measures

Four key questions were identified as seminal measures of journalists' overall assessments of how web sites are used in reporting. These were intended to probe different dimensions of journalists' reliance upon web sites, and focused on (a) the degree to which respondents used web sites as their first tool to obtain information when reporting on stories and (b) the degree to which they were personally reliant upon web sites. Participants also were asked to assess (c) the degree to which they thought other journalists used web sites frequently as sources, and (d) the degree to which they thought the web was a better source of information than other reporting tools.

The first three measures were operationalized using single-question items in the survey; the last measure was based on an index of the two highly correlated items personal reliance items reported previously (see Table 1). Table 8 reports the descriptive statistics for these four key questions.^a

^a Although the four items are highly inter-correlated, with Pearson r coefficients that ranged $r = .31$ to $r = .54$ (all significant at $p \leq .02$), the purpose of focusing on these statements was to examine different dimensions of web assessments. Thus, it was not intended to develop a single index measure of attitudes toward the web. Factor analysis discerned only one factor using (Eigenvalue = 2.25, Varimax rotation accounting for 56.4% of variance), but reliability analysis of the four items resulted in marginally robust Cronbach's $\alpha = 0.72$. An analysis for potential confounds was then conducted using correlations.

Prior to proceeding, the results for these items were analyzed and found to be free of demographic confounds, except in three instances. The total number of hours of Internet use on the job was positively correlated with respondents' personal dependence on the web as a news source ($r = .20, p \leq .04$), and their assessment of web sites as better sources of information than other sources ($r = .29, p \leq .003$). In turn, total hours of Internet use (the sum of on-the-job and off-the-job use) was positively correlated with respondents' assessment of web sites as better than other information tools for tapping information ($r = .30, p \leq .002$). Finally, age was negatively correlated with respondents' assessments of web sites as being the better sources of information than other sources ($r = -.20, p \leq .047$). This suggests older journalists are less likely to perceive the web as a better tool of information gathering.

4.2. Regression analyses

Each measure was subjected to multiple regression analysis. In each case, the potential confounds—total hours of use, hours used on the job, hours of Internet use off the job, and age—were entered as the first block in the regression model. Then, the key scale measures discerned from the survey questions were used as possible explanatory variables and were entered as a second block in the analysis, also using the stepwise procedure. The scale measures thus entered included: perceptions of cost-savings, time-savings, information value of the content, ease of content use, trustworthiness of the source, type of source, reputation of the source, and reliability of the source. In reporting the findings in [Table 9](#), nonsignificant results for each of the four regression models are omitted.

4.2.1. *Web sites as the first tool or source journalists go to for information*

The regression results for this item (see [Table 9a](#)) suggested that only two variables significantly explained the pattern of scores for this measure. Preference for web sites as the first place to obtain information was positively related to perceptions that the web is a time-savings tool. However, credibility of the source also predicted the choice of a particular web site as a first source. Together, the two items explained about 24% of the variance in the model. This would suggest that although journalists see the web as a quick source of information, their dependence on web sites as the first place they would go for information is contingent upon the web site's credibility.

4.2.2. *Personal reliance on web sites*

A somewhat different pattern of results emerged for journalists' self-reports about the degree to which they were personally reliant upon the web as an information gathering tool ([Table 9b](#)). The best predictors of a journalist's personal reliance upon the web were a combination of perceptions about the information value of the content to be found, the cost-savings to be enjoyed, and source reputation. Together, they explained about 37% of the variance. Importantly, reputation is a separate construct from credibility, which was the source variable that best predicted web sites as a first tool used in newsgathering. Reputation, as defined here, encompasses the source organization being well-known, well regarded, and frequently in the news. By contrast, credibility was composed of perceptions about source accuracy, believability, and trustworthiness. It also should be noted that total use of hours at work was significant when first entered

Table 9
Multiple regression analysis of four key web site measures

	<i>B</i>	SE <i>B</i>	Beta	<i>T</i>	<i>p</i>
(a) Personal use of web sites as first source for stories ($r = .49, r^2 = .24, df = 2, 91, F = 14.66, p = .000$)					
Time-savings	0.67	0.18	0.37	3.68	0.001
Trustworthiness of source	0.31	0.16	0.19	1.96	0.053
Constant	-0.40	0.95	-	-0.42	0.676
(b) Personal reliance on web sites for newsgathering ($r = .60, r^2 = .37, df = 4, 89, F = 13.08, p = .000$)					
Hours of use at work	0.13	0.08	0.13	1.57	0.118 ^a
Information value of content	0.48	0.17	0.23	2.67	0.009
Cost-savings	0.29	0.13	0.20	2.26	0.026
Source reputation	0.14	0.36	3.95	0.002	
Constant	-2.15	1.04	-	-2.07	0.414
(c) Perceived frequency of use of web sites by other journalists ($r = .67, r^2 = .45, df = 3, 90, F = 25.09, p = .000$)					
Information value of content	0.42	0.13	0.33	3.42	0.001
Time-savings	0.36	0.10	0.34	3.51	0.001
Source reputation	0.18	0.08	0.19	2.40	0.018
Constant	0.91	0.57	-	1.59	0.115
(d) Evaluation of web sites as better sources for stories ($r = .57, r^2 = .33, df = 3, 90, F = 14.85, p = .000$)					
Total web use (on and off job)	0.39	0.12	0.29	3.18	0.001
Trustworthiness of source	0.47	0.11	0.36	4.26	0.000
Source reputation	0.31	0.11	0.25	2.58	0.005
Constant	-0.63	0.66	-	-0.96	0.340

Stepwise regression procedure used, limit set at $p = .05$. Variables entered in first block for each regression model: total hours of Internet use, hours used on the job, hours used off the job, and age. Variables entered in second block, based on indices computed from data (see tables): cost-savings, time-savings, source trustworthiness, source reputation/reliability, source type, information value of content, ease of content use.

^a Effect of variable was significant when entered in first block but became nonsignificant with entry of other variables in second block. Other nonsignificant results omitted.

into the model, but became nonsignificant ($p \leq .118$) when the other variables were entered, suggesting the other variables were better predictors.

4.2.3. Perceptions of frequency of use among journalists

Results somewhat similar to those for personal reliance upon web sites were detected when respondents were asked how extensively their colleagues use web sites (Table 9c). The information value of the content and the reputation of the source were again significant predictors. However, perceptions about time-savings (not cost-savings) were positively related. This finding was parallel to the results regarding the use of the web as their first source of information, but not the personal reliance question. The practical meaning and importance of this difference is unclear. Nonetheless, the results suggest that the notion of efficiency in newsgathering probably applies in both cases. Together, these three variables accounted for 45% of the variance.

4.2.4. *Perceptions of web sites as better than other tools of newsgathering*

Finally, when asked the moment-of-truth question about how web sites compared with other sources of information, regression analysis found three variables were positively related to preferences for web sites: total use, content value of the information, and source reputation (source was well-known, well regarded, frequently in the news). As [Table 9d](#) suggests, these accounted for one-third of the variance in the model. This finding suggests that more extensive use of the Internet might lead to higher assessments of web sites as information sources. In other words, familiarity breeds acceptance. However, the newsworthiness of a web site is judged by the same standards that can be used to explain other news sources: the content value of the information and the probability that a journalist will find a newsworthy story.

5. Discussion and implications

This study advanced understanding of how public relations practitioners might take better advantage of web sites by focusing on journalists' perceptions and assessments of this important new communications technology. It has also demonstrated that the concepts of conventions and routines, information subsidies and market-driven journalism are relevant to understanding the role of web sites in a media relations context. Although this study's external validity is limited by the narrow category of computer industry journalists who participated in the study, the present investigation provided a theoretical framework that aligns the examination of technology with other theory and research pertaining to source–media relations.

Similarly, this study provided a methodological base upon which perceptions and assessments of web sites might be examined among other categories of journalists. Future research needs to validate these findings and to extend this approach to other journalists—particularly those whose interests are less technical and less related to product information, which might have skewed certain of the findings here. In addition, public relations researchers need to consider other aspects of how journalists use public relations web sites. Among specific questions that need to be explored are: the use of e-mail in tandem with web sites, opinions about online newsrooms, the question of selective access to electronically embargoed materials, and actual practices related to the downloading of text, graphics, audio and video as specific types of information subsidies.

Web sites have irreversibly taken a place in the media relations mix used by public relations practitioners. However, this study suggests that web sites have a long way to go before being fully accepted with confidence by journalists as newsgathering tools. The findings suggest that journalists in this study were interested in using web sites, but are only moderately reliant upon them today. These journalists still rely primarily on telephone and face-to-face interviews, as well as news releases, as the primary tools to gather news. In terms of a preferred method of newsgathering, web sites only surpass the news conference—a method of newsgathering loathed by many journalists. The journalists appear to rely upon web sites for somewhat routine information, such as product announcements, and identify currency of information as a key concern. Importantly, web site use does not appear to be limited to any particular phase of newsgathering.

The data suggest content quality is a critical issue. Information quality includes the value of site's content as well as its usability. Indeed, usability concerns appear to plague sponsored sites. Journalists clearly were not enthusiastic about the navigation and design of web sites they use. Practitioners concerned about optimizing the use of sites for news purposes need to be particularly attuned to this issue.³⁵ Similarly, the data send a strong message about the importance of the site sponsor. Both reputation as a source of usable information and credibility of the source as a supplier of accurate, reliable and trustworthy information play critical factors. Merely being online probably is not sufficient to garner press respect or web site usage. Publicists and media relations specialists must continue to build confidence in their organizations and their web sites as sources of information.

The pressures on journalists to gather and report news on an increasingly timely and efficient manner underscores the potential of web sites in news production. The journalists in this study clearly were cognizant of the time- and cost-savings benefits associated with web sites. Thus, if practitioners can capitalize on ways to keep current with journalists interests, provide updates, and deliver readily usable material, the use of the web as a news delivery channel can be expected to grow.

The demographic findings of this study suggest that older journalists today are less reliant upon and somewhat more skeptical about web sites than their younger counterparts. It is interesting to speculate whether this is an historical artifact rooted in the fact that web sites have only been used in newsrooms since the mid-1990s. It is conceivable that this difference will become negligible as today's younger cohort of journalists (many of whom began their careers using the web) becomes older. The chances of this occurring will be enhanced as web site sponsors become more proficient and their performance improves—as measured in better content quality, reliability, and usability of web sites in the future. On the other hand, older journalists might always be more skeptical about content and sources based on their greater experience, discerning knowledge of topics, and cynicism. At least for now, web sites have particular appeal to younger journalists.

Perhaps this study's greatest contribution was identifying four distinct ways that web usage by journalists might be measured. The fact that the results obtained varied slightly by question suggests the importance of critically understanding which aspect of journalists' usage of the web is most important. Further theorizing and investigation of this question are required.

Two of the questions focused on the journalists' personal use of the web, versus the more abstract ideas of the frequency with which other journalists use the web and overall assessments of the web versus other channels. The data suggest a tentative explanation of the processes at work that goes like this: At least in the case of computer industry reporters and editors, journalists initially use web sites as their first source because the web is quick, but information must be credible (accurate, believable and trustworthy). The more journalists use the web, as measured in hours of total usage, the more reliant journalists might become on the technology. However, other important factors come into play, such as the information value of the content, and perceived cost- and time-savings.

Some bias might favor web sites of organizations that are well-known, enjoy prominence in their field, and frequently are in the news. These same criteria extend to how journalists might perceive their colleagues use the web. In the end, journalists' assessments of the web as being better than another source is predicated on total use, combined with the traditional journalistic

ethos of information value and source reputation. This suggests that at least the journalists in this study were quite discerning in their use of the web. Indeed all public relations news sites are equal. Public relations practitioners must recognize this fact if they are to be successful in using sponsored web sites as media relations tools in the future.

David Hachigian is a learning products engineer at Hewlett-Packard. He completed this study as his master's thesis at Colorado State under the supervision of the Associate Professor Kirk Hallahan in the Department of Journalism and Technical Communication. This study was a top-three research paper at the PRSA Educators Academy national conference in October 2001 in Atlanta, GA.

References

- [1] J.K. Springston, Public relations and the new technology, in: R.L. Health (Ed.), *Handbook of Public Relations*, Sage Publications, Thousand Oaks, CA, 2001, pp. 603–614; S.L. Esrock, G.B. Leichty, Social responsibility and corporate web pages, *Public Relations Review* 24 (Fall 1998), pp. 305–320; The wild, wild web, *Public Relations Tactics*, March 1996, pp. 1, 7–8, 10, 12–15, 18–22.
- [2] Lord Chadlington, *Globalization, The Internet and the Future of Public Relations*. Speech presented at 1999 Vernon C. Schran Distinguished Lecture in Public Relations, Ball State University, Muncie, IN, 1999.
- [3] *I Team Web Report: A Survey of High-Technology Reporters' Use of the Web*, Tsantes & Associates, Inc., Palo Alto, CA, 1999.
- [4] J.M. Barrett, *Factors that Influence Preferred Choice of New Technologies. Perspectives from Journalists and Public Relations Practitioners*. Paper presented to PRSA Educators Academy Research Conference, Miami, FL, March 2000.
- [5] B. Garrison, *Journalists' Perspectives on Online Information-Gathering Problems*. Paper presented to AEJMC Southeast Colloquium, Lexington, KY, March 1999.
- [6] S. Ross, D. Middleberg, *Media in Cyberspace Study—2000*. Seventh Annual National Survey. Middleberg+Associates, New York, 2000.
- [7] *I Team Report*, op. cit.
- [8] B. Garrison, *Journalists' Perceptions on Online Information-Gathering Problems*, op. cit.; L. Roka, Navigating in a web of deceit, *The Quill* 88 (2) (March 2000), pp. 19–20.
- [9] K. Kawamoto, Making sense of the new online environment in the context of traditional mass media study, in: D.L. Borden, K. Harvey (Eds.), *The Electronic Grapevine*, Lawrence Erlbaum Associates, Inc., Mahwah, NJ, 1998, pp. 34–52.
- [10] L. Childers (aka Hon), Credibility at the NCR [Nuclear Regulatory Commission], *Public Relations Research Annual* 1 (1989) 97–114.
- [11] *I Team Report*, op. cit.
- [12] Dan Gillmore, computer and high-tech editor at the San Jose Mercury News, cited in: M.K. Flynn, Internet boom to revamp way PR pros deal with reporters, *O'Dwyer's Public Relations Services Report* 11:3 (March 1996), pp. 1, 22.
- [13] *I Team Report*, op. cit.
- [14] C.I. Christopher, Technology and journalism in the electronic newsroom, in: D.L. Borden, K. Harvey (Eds.), *The Electronic Grapevine*, op. cit., p. 137.
- [15] H.J. Gans, *Deciding What's News*, Pantheon Books, New York, 1979, p. 18.
- [16] H.J. Gans, *Deciding What's News*, op. cit., p. 116.
- [17] D. McQuail, *Mass Communication Theory: An Introduction*, Sage Publications, Thousand Oaks, CA, 1994.

- [18] B. Garrison, Online information use in newsrooms. Paper presented to the University of Luton Creativity and Consumption Conference, Luton, UK, March 1999.
- [19] J. Van Slyke Turk, Information subsidies and media content: A study of public relations' influence on the news, *Journalism Monographs 100*, Association for Education in Journalism and Mass Communication, Columbia, SC, 1986.
- [20] M. Fishman, *Manufacturing the News*. University of Texas Press, Austin, TX, 1980.
- [21] O.H. Gandy, Jr. *Beyond Agenda-Setting: Information Subsidies and Public Policy*, Norwood, NJ, 1982.
- [22] M. Fishman, *Manufacturing the News*, op. cit.
- [23] M.E. McCombs, D.L. Shaw, The agenda-setting function of mass media, *Public Opinion Quarterly* 36 (1972), pp. 176–187.
- [24] G.T. Cameron, L.M. Sallot, P.A. Curtin, Public relations and the production of news: a critical review and theoretical framework, *Communication Yearbook* 20 (1997), pp. 111–155.
- [25] J.H. McManus, *Market-Driven Journalism: Let the Citizen Beware*, Sage Publications, Thousand Oaks, CA, 1994, p. 86.
- [26] J.H. McManus, *ibid.*, p. 85.
- [27] W. Breed, Social control in the newsroom. A functional analysis, *Social Forces* 33 (1955), pp. 326–355.
- [28] D. Underwood, *When the MBAs Rule the Newsroom*, Columbia University Press, New York, 1993, p. 27.
- [29] P.A. Curtin, Re-evaluating public relations information subsidies, *Journal of Public Relations Research* 11 (1999), pp. 52–90.
- [30] L. Childers (aka Hon), *Credibility at the NRC*, op. cit.
- [31] *Bacon's Magazine Directory*, Bacon's Publishing Co., Chicago, IL, 2000. Because of the difficulty of differentiating between different categories of publications, no effort was made to categorize publications by type, such as consumer versus trade magazine.
- [32] D.A. Dillman, Mail and other self-administered surveys in the 21st century: the beginning of a new era, *Gallup Research Journal* 6 (1999), pp. 18–29.
- [33] K. Hallahan, Improving public relations web sites through usability research, *Public Relations Review* 27 (2001), pp. 223–240.
- [34] S. Ross, D. Middleberg, *Media in Cyberspace 2000*, op. cit.
- [35] K. Hallahan, Improving public relations web sites through usability research, op. cit.