DOCUMENT RESUME

ED 218 620 CS 206 954

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TITLE Public Information Personnel and Scientists.
PUB DATE Jul 82
NOTE 22p.; Paper presented at the Annual Meeting of the Association for Education in Journalism (65th, Athens, OH, July 25-28; 1982).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Attitude Measures; *Information Sources; Journalism; Mass Media; *Media Research; *News Reporting; *Public Relations; *Scientific Attitudes; *Scientists

ABSTRACT

A study examined the attitudes of scientists toward public information personnel and media coverage. Of 456 subjects (half social and behavioral scientists and half biological scientists) chosen randomly from the "American Men and Women of Science" reference books, 287 responded to the seven-page, two-part questionnaire. Part one contained 34 attitude statements, and part two elicited information about the extent to which the scientists worked with public information personnel and about their academic and professional backgrounds. The results indicated that large numbers of scientists work at institutions that have public information offices and that their attitudes toward public information personnel are generally positive. Also, the scientists thought it was important to communicate research results to nonscientists and to learn how to do so effectively. On the negative side, scientists did not use public information personnel often, and sometimes perceived them as a hindrance. Public information personnel might overcome some of these problems by developing formal programs to help scientists to improve their communication skills, by convincing researchers of the importance of working with journalists, by developing formal mechanisms whereby scientists are sought out for story ideas, and by convincing others in the institution not to interfere with scientists' freedom to discuss their research results. (JL)

Public Information Personnel and Scientists

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Paper presented to the Public Relations Division, Association for Education in Journalism Annual Convention, Athens, Ohio, July 1982

Public Information Personnel and Scientists

A successful public information officer is trustworthy, loyal, helpful, friendly, courteous, kind, obedient, cheerful, thrifty, brave, clean and reverent--everything, in short, that a good Boy Scout should be. And more.

"Mediator" is frequently added to the list. Mediation may be the most difficult task of all for a public information officer whose "clients" are scientists, for he or she must mediate between groups (journalists and scientists) that not only have different goals and concerns but that also tend to speak in different languages.

On one side of the public information officer is the scientist, who is intent upon uncovering new knowledge and who typically couches findings in a language that speaks only to other scientists in the same specialty area.

On the other side is the journalist, who must try to move knowledge into the public domain and who must translate scientific language into ordinary English.

Willingly or not, many public information officers find themselves in the role of mediator because many in the information triangle presume that is the public information officer's proper function.

Science journalists certainly make that assumption. Cristine Russell, national science reporter for The Washington Post, said that "public information people serve as intermediaries" between scientists and the press.[1]

Even public information personnel make that assumption. As one noted in a recent article: "Some researchers are doing exciting things, but don't know how to communicate them through the mass media. Others fear media attention. You [public information personnel] must help them overcome these obstacles."[2]

Mediation is one of the roles that has been both conceptually and empirically identified by researchers interested in the behaviors of public relations practitioners. One of the five roles delineated by Broom and Smith in their classification of public relations practitioner behavior was the "communication process facilitator." Public relations practitioners in this role, the authors said, operate as "go-betweens" or information mediators.[3]

Dozier, using factor analysis to empirically identify Broom and Smith's five roles, found something he called the "journalist-in-residence," a role in which the public relations practitioner saw his or her task as maintaining media contacts, placing press releases and serving as a liaison between media and individuals within the organization.[4]

But do public information officers indeed play an effective mediating role? Few researchers have examined in detail the relationship between public information personnel, journalists and scientists, and the findings of those who have are equivocal.

Tichenor, Olien, Harrison and Donohue--who studied the accuracy of mass media science stories--found that 52% of a sample of scientists said their organizations had specific policies concerning reporting research to the public and that either a public information officer or a higher administrator (or both) handled all such reports.

The authors also found that scientists who perceived the existence of such strict organizational policies were more likely to report that resulting journalistic stories were accurate than were scientists who did not perceive their institutions to have such policies. In this study, then, at least half of the respondents perceived some mediation taking place, and it seemed to have a positive effect: the perception of more accurate stories.[5]

But two studies reported less positive findings.

In one, Bassett, Davison and Hopson found that although a group of sociologists from six universities said that researchers have an obligation to keep the public informed, they didn't view the public information offices at their universities as being integral to the process. "University news bureaus were not very salient for the sociologists we interviewed. . . ," they said. "Instead, images of the communication chain usually involved direct relations between sociologists and the mass media, or representatives thereof."[6] Furthermore, they said:

> When respondents were asked specifically to describe their relations to their news bureaus, the model response was mildly positive; a very few were rather strongly positive or somewhat negative. The sociologists nearly always liked the information personnel as individuals, when they were acquainted with them at all, but were less sure whether they liked what the local news bureau was doing.[7]

In a study of scientists employed by two Ohio universities, Dunwoody and Scott found that for 61% of the sample, public information or news bureau personnel had initiated stories about the scientists' work. And the average percentage of stories per scientist initiated in this manner was 55%.

The authors speculated that if public information persons did indeed serve as "buffers" between scientists and journalists, they might protect scientists from the "unknowns" of dealing with the media. If this were the case, they hypothesized, then the more a scientist worked with the public information office, the more positively he or she should feel about mass media coverage of science. However, they found no relationship whatsoever

between reliance on public information personnel and attitudes toward media science coverage.[8]

In an attempt to help flesh out this rather meager data base pertaining to relationships between scientists and public information persons, this study examines the following research questions:

(1) Do scientists think it is as important for the public to know of scientific research results as it is for other scientists to know of research results?

(2) Do scientists think it is important for researchers to have the skills to communicate effectively with nonscientists, and to what extent do they think scientists should be free to communicate with nonscientists?

(3) Do scientists perceive the mediation services offered by public information personnel as hindering or helping them in dealing with journalists?

(4) How much interaction is there between public information personnel and scientists?

(5) Do scientists feel free to initiate stories with media about their research, and do they do so?

Method

Samples of social and behavioral scientists and physical and biological scientists were randomly drawn from the American Men and Women of Science reference books.[9] The samples were drawn from these volumes because scientists listed have reached a certain prominence and are likely to have had at least some contact with public information officers and with journalists.[10]

Twenty social-behavioral scientists and 20 physical-biological scientists were selected for the pilot test. Thirty of the 40 scientists responded, for a return rate of 75%. None identified problems with the questionnaire, and no problems with the sampling procedure were encountered. Pilot test results were combined during data analysis with results from the larger survey.

A total of 456 names was drawn during both the pilot study and the larger survey; 227 were social-behavioral scientists and 229 were physical-biological scientists. A total of 287 responded, for a return rate of 63%.[11]

Seven-page, two-part questionnaires were mailed with cover letters and return envelopes to the scientists; one follow-up--which included the questionnaire, cover letter and return envelope--was mailed.

Scientists responded in Part 1 of the questionnaire to 34 attitude statements, each of which summarized a potential barrier to the communication of science news to the public. A modified Likert scale followed each item. Respondents were asked to indicate whether they "strongly disagreed," "disagreed," "agreed" or "strongly agreed" with the items, or were "undecided," "neutral" or had "no opinion" about the statements.

The eight items relevant to this study are reported in Table 1.[12]

In Part 2, respondents supplied information about the extent to which they work with and through public information officers and about their academic and professional backgrounds.

Results

One item on the questionnaire tested the first research question--Do scientists think it is as important for the public to know of scientific

research results as it is for other scientists to know of research results? The item (number 1 in Table 1) is: "Scientists are just as responsible for making their research findings available to the public as they are for making their results available to their colleagues."

Results are somewhat ambiguous in that 52% of the scientists agreed with the statement, while 48% disagreed. This means the difference between the two percentages is small enough to be accounted for by sampling error. In effect, given the nature of the results, one must conclude that respondents neither agreed nor disagreed with the statement.

The second research question is: Do scientists think it is important for researchers to have the skills to communicate effectively with non-scientists, and to what extent do they think scientists should be free to communicate with nonscientists?

The item used to test the first part of the question is: "It is important for scientists to learn how to discuss their research in terms that are clear to nonscientists" (Item 2, Table 1). The item used to test the second part of the question is: "Scientists should be free to decide how and when to deal with the popular media without interference or pressure from the institutions for which they work" (Item 3, Table 1).

Scientists obviously think it is important for researchers to learn how to communicate with nonscientists, as 97% agreed with Item 2, and only 3% disagreed. Scientists also agreed strongly that researchers should be free to deal with the popular media; 71% agreed with Item 3, while 29% disagreed.

Research question three is: Do scientists perceive the mediation services offered by public information personnel as hindering or helping them

in dealing with journalists? Responses to Items 4, 5, 6, 7 and 8 in Table 1 provide some answers.

Scientists in this sample provided a qualified vote of confidence for public information staffs. Although 66% of the respondents agreed that "public information personnel sometimes hinder scientists who want to be completely open about their research efforts" (Item 4), 72% indicated they think that "public information staffs generally make it easier for scientists to deal with journalists" (Item 6). The two items may not be precisely contradictory, since they could be interpreted as indicating that public information staffs generally are helpful, although under certain circumstances they are a hindrance.

The positive evaluation of public information personnel is affirmed in Item 7, with only 15% of the sample agreeing that "it would be a good idea for public and private institutions to dismantle their public information staffs and to allow scientists to deal directly with journalists."

Recognition of specific functions performed by public information personnel can be found in two items.

Three-fourths of the sample agreed that "public information staffs sometimes shield scientists from journalists when the scientists do not want to talk to media representatives" (Item 5). Although such a function would be viewed as a negative one by journalists, scientists may very well think such protection is an important mediating function of public information offices.

And 93% of the sample agreed that "most scientific training does not adequately teach those who go through it to communicate with media representatives" (Item 8). This may indicate that scientists recognize the need for

a "skilled" buffer between them and the media, or that existing buffers (public information personnel) are unsatisfactory and that they themselves must learn to communicate more effectively with journalists.

Data relating to the fourth research question--How much interaction is there between public information personnel and scientists?--are reported in Table 2. Results indicate that scientists do interact to some extent with public information personnel, but that most stories published in the media are not a result of such interactions.

Responses to two items indicate that scientists have the opportunity, and in fact do attempt, to communicate with the popular media through public information offices.

Responses show that 92% of the scientists surveyed work at institutions having public information offices (Item 1), and that 60% of the scientists surveyed sometimes have research results disseminated through public information offices (Item 2).

On the other hand, the data suggest that scientists do not often initiate contact with public information officers (Item 3). Only 37% of the respondents said they suggest story ideas to a public information officer, while 63% said they do not suggest ideas, as shown in Table 2.

And responses to Item 4 indicate that few respondents view the public dissemination office as the preferred locus of contact with the media. Eleven percent said they prefer to ask the public information staff to disseminate the news, while 81% prefer to deal with journalists in direct personal interviews and 9% prefer to issue news releases.

Respondents were asked to recall the genesis of any actual contacts they had with journalists in the previous year. As Items 5, 6 and 7 indicate,

the scientists perceived the public information office to have played a relatively minor role in initiating the contacts, while they perceived the journalists themselves to have figured heavily as initiators.

While 72% of the sample indicated that none of their contacts with journalists had been initiated via public information personnel (Item 5), 87% noted that from 25% to 100% of their journalistic contacts were initiated by the journalists themselves (Item 7). And 63% of the respondents indicated that journalists initiated 91% or more of the encounters they had during the past year. Scientists played the most minor role as initiators; only 12% of the respondents said they had initiated any journalistic encounters at all (Item 6).

Research question five is: Do scientists feel free to initiate stories with the media about their research, and do they do so?

Item 9 in Table 2 indicates that respondents indeed feel free to initiate stories about their research. But Item 8 indicates that only 16% have ever done so. And, as noted earlier, only 12% of the sample acknowledged that they had initiated journalistic contacts within the past year (Item 6).

Conclusions

Some results of this survey of prominent scientists must be construed as good news for public information personnel at institutions where the main business is scientific discovery, while some results must be viewed as bad news.

The good news is that large numbers of scientists work at institutions having public information offices, and they apparently have positive feelings

toward public information personnel. Almost all think it would be bad for institutions to scrap their public information offices, and most agree that public information persons typically make it easier for scientists to deal with journalists.

Furthermore, a large number of social-behavioral and physical-biological scientists think it is important for researchers to communicate their findings to nonscientists. Indeed, roughly half of the scientists surveyed think it is as important for scientists to make research results available to the public as it is to make them available to their fellow scientists (Item 1, Table 1).

In addition, nearly all believe it is important for scientists to learn how to communicate effectively with nonscientists (Item 2, Table 2) and nearly three-fourths think scientists should be free to decide how and when to deal with the media without interference (Item 3, Table 1).

These positive attitudes cannot help but make a public information officer's job far easier.

The bad news is that scientists don't seem to use public information personnel much, and they perceive public information persons to be hindrances in some situations.

Few scientists actually initiate stories with public information officers (Item 3, Table 2); when a public information office is available and they need only call staff writers, most do not do so. Also, 84% of the respondents rarely initiate stories with the media (Item 8, Table 2), although 85% apparently feel free to do so if they so choose (Item 9, Table 2).

In addition, scientists in the sample seem to prefer direct personal contact with journalists to news conferences, news releases and other contacts

through a public information staff (Item 4, Table 2). Scientists seem to think that few of their contacts with journalists are initiated by public information personnel (Item 5, Table 2).

These somewhat contradictory findings are consistent with those of Bassett, et al: Scientists apparently want public information persons around, but they don't seem to view them as integral to the dissemination process.[13]

Furthermore, these results, along with those of Bassett, et al, appear to contradict the assertion of some public information persons that they control what the news media print about their institutions--that journalists rarely have a story in mind, but instead rely on public information personnel to generate an idea and/or supply a source. This finding implies a much more active role for the journalist than some have assumed.

However, one might well question the accuracy of scientists' perceptions of the public information officer's role. Ironically, some scientists may not view public information persons as integral to the process because the public information officers are doing their jobs too well.

While a public information officer must mediate between the scientist and the journalist, that does not mean the public information officer should attempt to control what a scientist says. The public information officer should facilitate communication between the journalist and the scientist.

A public information officer tries to direct an inquiring journalist to the "best" scientist-source. If the job is done well, a scientist may never know about the role of the public information officer in facilitating communication.

A scientist may be even less aware of a public information officer's role when the latter has merely suggested a story idea and a specific scientist-source to a journalist who had no real story idea in mind at the time he or she contacted the public information officer.

A potential problem for public information personnel is evident in results showing that scientists feel rather strongly that researchers should be free to communicate with the public as they see fit, and not as the institutions for which they work--or the institution's public information officers--see fit (Item 3, Table 1).

Problems may arise when public information personnel--who are, after all, representatives of the institutions for which they work and not representatives of the individual scientists they serve--must work with persons who are extremely independent and who feel strongly that they should be able to deal with media representatives without interference.

Institutional goals and individual scientists' goals typically coincide. However, institutional goals and individual goals can conflict (e.g., when a scientist wants to release research results right away and the institution wants to delay news dissemination for a time). A public information officer who must diffuse this conflict is in a difficult position indeed.

Another potential problem lies in the fact that some scientists claim that public information staffs occasionally shield researchers from journalists when the scientists don't care to talk (Item 5, Table 1).

Such shielding, of course, adds a layer of bureaucracy that makes it much more difficult for a professional journalist to do his or her job. And the more difficult it is for a journalist to do a job, the less likely

it is that a thoroughly accurate, clear and complete report will result. And the more likely it is that hostility and mistrust will arise among journalist, scientist and public information officer.

While scientists may approve of and support public information personnel who "protect" them from media representatives, public information persons should realize the problems of "protecting" sources from the media.

How can public information persons overcome some of the problems that are evident in the results of this survey? Those involved in the public dissemination of science news might well consider these recommendations:

(1) Public information officers should try to develop at their institutions formal programs aimed at helping scientists improve their communication skills. The need for such programs is obvious, given the findings that: Many scientists think it is important for researchers to disseminate their results to the public (Item 1, Table 1); scientists agree they should know how to communicate with nonscientists (Item 2, Table 1); and scientists contend that scientific training does not adequately train researchers to communicate with nonscientists (Item 8, Table 1).

It is imperative that such programs teach scientists how to get their points across, while at the same time being open, honest, clear and concise with journalists.

Formal training programs would have several advantages. Scientists would know how to work with journalists and the latter would be less likely to become unhappy or hostile about the way a source reacts. Such programs might well bring public information personnel and scientists closer together so that scientists might use public information officers more, as well as feel positively toward them.

And they might well reduce the number of misunderstandings and hurt feelings on the part of scientists who must deal with journalists and public information persons; the more positive the experiences are, the more likely scientists are to cooperate in the future.

(2) Public information personnel should try to convince researchers of the importance of working with journalists, even when the scientists would rather avoid reporters.

Evidence that scientists sometimes prefer to avoid media representatives is found in this research. For example, while scientists prefer to deal with journalists in direct personal interviews (Item 4, Table 2), they almost never initiate stories with the media (Item 8, Table 2), even though almost all of them feel free to do so (Item 6, Table 2). In addition, most scientists think that public information staffs sometimes shield scientists from journalists when the researchers don't want to talk (Item 5, Table 1), indicating, of course, that scientists sometimes actively avoid reporters.

The advantages of having public information officers convince scientists to talk to reporters are obvious.

A journalist who is helped is much more cooperative and understanding than one whose efforts are hindered. Furthermore, scientists who have positive experiences with journalists are more likely to cooperate with media representatives in the future. That has to make the public information officer's job easier.

(3) Public information personnel need to develop formal mechanisms whereby scientists are sought out for story ideas. Results of this study suggest that scientists are reticent about going to public information

persons with ideas (Item 3, Table 2), perhaps because of peer pressure, or reluctance to take on more work or fear of journalists. Whatever the reason, scientists apparently don't seek out public information personnel, so they must seek out the scientists.[14]

(4) Public information officers must try to convince others in an institution that the less interference with a scientist's freedom to discuss his or her research results the better.

It is quite clear that some public information officers have not succeeded well in this task (if they have attempted it). Fully 65% of the scientists indicate that public information staffs sometimes hinder their efforts to be completely open about their research (Item 4, Table 1). Presumably, pressures to stifle the flow of information stem from persons other than professional public information officers.

When one couples the attempt to hinder information flow with the independence of some scientists (Item 3, Table 1), one gets a fairly volatile situation, a situation that is not good for the scientist, the institution or the public information officer. Such a situation virtually guarantees tension within the institution and a bad press.

That is why public information persons must wage a constant struggle against any attempts within their organizations to hinder the free flow of information.

Footnotes

[1]Cristine Russell, "How Does the Science News Network Operate?" Address before the conference "Communicating University Research: The Next Step," sponsored by the Council for the Advancement and Support of Education, Alexandria, VA, March 8, 1982.

[2]Gary R. Peterson, "How to place science stories," CASE Currents 8:9-10 (February 1982), p. 9.

[3]Glen M. Broom and George D. Smith, "Testing the Practitioner's Impact on Clients," Public Relations Review 5:47-59 (Fall 1979).

[4]David M. Dozier, "The Diffusion of Evaluation Methods Among Public Relations Practitioners," presented to the Public Relations Division, Association for Education in Journalism, East Lansing, MI, August 1981.

[5]Phillip J. Tichenor, Clarice N. Olien, Annette Harrison and George Donohue, "Mass Communication Systems and Communication Accuracy in Science News Reporting," Journalism Quarterly 47:673-83 (Winter 1970).

[6]Grace Bassett, W. Phillips Davison and Anna Lee Hopson, "Social Scientists, University News Bureaus, and the Public: Some Factors Affecting the Communication of Social Science Information." Unpublished report prepared for the Russell Sage Foundation, New York, March 1968, pp. 24-25.

[7]Ibid., p. 25.

[8]Sharon Dunwoody and Byron T. Scott, "Scientists as Mass Media Sources," Journalism Quarterly, 59:52-59 (Spring 1982).

[9]This analysis is part of a larger study examining various facets of scientists' activities as sources of mass media information about science.

Sampling procedures are described in more detail in: Sharon Dunwoody and Michael Ryan, "Factors Influencing Scientists as Journalistic Sources," prsented to the "New Trends in Science-Mass Communications Research" session, Mass Communications and Society Division and the Science Writing Educators Group, Association for Education in Journalism annual convention, Athens, Ohio, July 1982.

[10]Samples were drawn from the latest available editions of American Men and Women of Science: Jaques Cattell Press, ed., American Men and Women of Science, Social and Behavioral Sciences, 13th ed. (New York: R.R. Bowker Company, 1978); and Jaques Cattell Press, ed., American Men and Women of Science, Physical and Biological Sciences, 14th ed. (New York: R.R. Bowker Company, 1979).

[11]For the larger survey alone, 416 names were drawn, of which 209 were physical scientists and 207 were social scientists. A total of 253 responded, for a return rate of 61%.

[12]Responses to the other items are available on request.

[13]Bassett, Davison and Hopson, op cit.

[14]Many public information officers do this already. Some offices have formal beats, much as newspapers and other media do, with public information personnel periodically visiting various departments within an institution.

Table 1

Scientists' Attitudes Toward Public Information Staffs, Communication Training and Their Freedom, Obligation to Disseminate Research Results

Item	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean
(1) Scientists are just as responsible for making their research findings available to the public as they are for making their results available to their colleagues.	21%	31%	35%	13%	2.6
(2) It is important for scientists to learn how to discuss their research in terms that are clear to nonscientists.	73%	24%	2%	1%	3.7
(3) Scientists should be free to decide how and when to deal with the popular media without interference or pressure from the institutions for which they work.	38%	33%	22%	7%	3.0
(4) Public information personnel sometimes hinder scientists who want to be completely open about their research efforts.	19%	47%	27%	7%	2.8
(5) Public information staffs sometimes shield scientists from journalists when the scientists do not want to talk to media representatives.	16%	59%	18%	8%	2.8
(6) Public information staffs generally make it easier for scientists to deal with journalists.	15%	57%	19%	9%	2.8
(7) It would be a good idea for public and private institutions to dismantle their public information staffs and to allow scientists to deal directly with journalists.	4%	11%	51%	35%	1.8
(8) Most scientific training does not adequately teach those who go through it to communicate with media representatives.	51%	42%	5%	2%	3.4

Note: A "1" on the original questionnaire indicated "strongly disagree," while a "4" indicated "strongly agree." Consequently, the higher the mean score in the table, the more respondents agreed with a given statement.

Table 2

Scientists' Reports of Interaction Between Themselves, Public Information Personnel

Item	
(1) Scientist's institution has a public information office:	
Yes	92%
No	8%
(2) Scientist sometimes has research results disseminated through public information office:	
Yes	60%
No	41%
(3) Scientist suggests story ideas to public information office:	
Yes	37%
No	63%
(4) Preferred method of dealing with journalists:	
News release	9%
Direct personal interview	81%
News conference	0
Through public information staff	11%
(5) Approximate percentage of contacts with journalists initiated by public information specialists:	
None	72%
10-40%	11%
50-100%	17%
(6) Approximate percentage of contacts with journalists initiated by scientists:	
None	88%
10-100%	12%
(7) Approximate percentage of contacts with journalists initiated by journalists:	
None	13%
25-90%	24%
91-100%	63%

Table 2, continued

Item	
(8) Scientist initiates stories with media about research:	
Yes	16%
No	84%
(9) Scientist feels free to initiate stories:	
Yes	85%
No	15%