

Researcher, Extension Attitudes Toward Media and Various Publics

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FACULTY COLLEAGUES provide college communicators a favorable climate for their reporting and media work. Of course, some are skeptical of the media and may not fully understand our role as communicators. But generally, our research, teaching and extension colleagues regard working with media as important and believe that both they and we should expand efforts in the area.

That's the conclusion we reached in a survey of University of Minnesota faculty attitudes. To get comparable data we used many questions posed by William Tedrick¹ to researchers at Texas A and M in 1971. We, however, broadened the scope of Tedrick's studies and sent questionnaires to all researchers, administrators, and extension specialists in our Institute of Agriculture, Forestry and Home Economics. Over 71 percent (316) of 442 responded.

This article reviews some of the conclusions. Research and Paper Series No. 7 "Attitudes of University of Minnesota Researchers and Extension Workers Toward Reporting Through Various Media," Department of Information and Agricultural Journalism, University of Minnesota, gives more complete details.

Other than the Tedrick effort there have been few recent studies of attitudes of faculty toward the media. There is, however, research involving other scientists. Two examples follow.

Kriegbaum² reported that by the mid-sixties the attitudes of scientists, engineers, and physicians toward popular reporting was a "yes but" reaction. He reported that science reporters were becoming better accepted, but that critics were still maintaining that:

1. Media made poor selections of material chosen for publication.
2. Journalistic operating procedures tended to maximize inaccuracies and distortions.
3. There was inadequate or faulty training of mass media reporters.
4. There was a tendency to magnify small contributions, not long-term contributions.

¹Tedrick, William E. "A Mass Media Profile of Agricultural Scientists at Texas A and M University." Paper at International Communications Association, Atlanta, Georgia. April 19-22, 1972.

²Kriegbaum, Hillier. *Science and the Mass Media*. Chapter 10. "Views From Labs." New York University Press. New York. 1967

Dubas and Martel³ in 1973-74 made an extensive study of science communications in Canada. They studied audience reactions and attitudes of science writers. Science writers ranked University scientists and engineers as both the most essential and most reliable of 19 sources of information. University reports and publications ranked second and government reports and publications fifth in perceived reliability.

Science writers also reported many external barriers in reporting science including:

1. Reluctance of scientists to communicate their research to the public.
2. Translating jargon of scientists into language of readers.
3. Traditional distrust of the media by the scientific community.

William Stephenson⁴ for several years, 1972-75, conducted special science news symposia under a National Science Foundation grant to the University of Missouri-Columbia. These symposia brought together news executives, science writers, legislators, government officials, and scientists from central U.S. There were no reports of research on attitudes of scientists as such, but many expressed concern with certain aspects of reporting.

RESULTS

Minnesota faculty members generally feel they should make their research and/or knowledge available to various audiences and should work with media. Attitudes vary between research and extension faculty and vary toward different publics.

Faculty Regard Media as Important

As expected, researchers placed principal emphasis on reporting through technical or scientific journals and extension staff through specialized publications (e.g. state farm papers, specialized magazines) and the mass media. All groups recognized the importance of mass media, however.

To summarize faculty views we created a *media importance index* (Table 1). The index could vary from 0 for not important to 3 for extremely important. The entire faculty rated both scientific journals and specialized magazines as very important and mass media as slightly to very important.

Scientists (2.726 index) and science administrators (2.833) gave scientific journals a high rating; extension specialists (1.291) placed them lower.

³Dubas, Orest and Lisa Martel. *Media Impact-Vol. 2 Science, Mass Media, and the Public. A Research Study on Science Communications*. Ministry of State. Science and Technology. Ottawa, Canada. 1975

⁴Stephenson, William. "Lake Ozark Symposia on Science News-Vol. 1: The Symposia (1972-75)." School of Journalism, University of Missouri-Columbia. Columbia, Missouri. 1975

Specialized media had an intermediate ranking. Research administrators (2.376), extension specialists (2.165), and extension administrators (2.120) ranked them as very important, but researchers (1.744) rated them as slightly to very important.

Mass media ranked at the bottom in importance for the faculty as a group, but extension specialists (2.175) and extension administrators (2.48) rated mass media as very to extremely important in their programs.

Table 1. MEDIA IMPORTANCE INDEX*—Importance assigned to different media for reporting research and knowledge by faculty, University of Minnesota, Institute of Agriculture, Forestry, and Home Economics, 1975.

Medium†	All	Media Importance Index			
		Researchers	Research administrators	Extension specialists	Extension administrators
Scientific journal	2.158	2.726	2.833	1.291	1.360
Specialized media	2.004	1.744	2.376	2.165	2.120
Mass media	1.586	1.032	1.667	2.175	2.480

*Media importance index is the mean for all valid observations with values assigned as follows: 0, not important; 1, slightly important; 2, very important; and 3, extremely important.

† X^2 and p values were as follows: (all 9df) mass media: $X^2=122.63$, $p<.001$; specialized media: $X^2=30.77$, $p<.001$; and technical journals: $X^2=175.49$, $p<.001$.

In addition to the index, we computed percentages on how each group ranked media. A few of these are reported here to give further insight on attitudes.

1. Only 22% of the Minnesota researchers placed very or extreme importance on reporting through mass media compared to 59% at Texas A & M.⁵ At the other extreme, 100% of the extension administrators said that the mass media are either very or extremely important in getting out information.

2. All four groups regarded reporting through specialized media as very or extremely important, with the lowest percentage, 62, attributed to researchers. When we subdivided these groups, however, we found that only 58% of the communicators regarded specialized media as very or extremely important. This could be explained by the fact that communications staff includes many audio- and visual-oriented faculty who may regard print media as less important.

⁵Tedrick. op. cit. p. 7.

3. Nearly all researchers (94.9%) and all research administrators (100%) ranked reporting through scientific journals as very or extremely important. Comparable figures for specialists were 38% and for extension administrators, 28%.

Faculty, Administrators Say Spending More Time on Media Work Important

Researchers estimate that they spend 1.83% of their time reporting through mass media; 3.38% through specialized media; and 8.66% through scientific journals. There are no studies on how this compares with other faculty. However, Tedrick's study⁶ indicates Texas A & M Agricultural researchers devote a slightly larger percentage of their time to mass media reporting, 2.67%.

Research administrators felt that researchers could spend more time on media activities, especially with specialized magazines.

Extension specialists spent over 10% of their time utilizing mass media. In addition, they spent considerable time in preparing publications and visuals. Extension administrators felt that specialists should spend more effort on both these activities.

All groups — researchers, research administrators, extension specialists, and extension administrators — agreed that the faculty were spending too little, not too much time, in providing various publics with information through the various media.

Faculty Support Evaluation on Basis of Media Efforts

University faculty long have been evaluated on the basis of their teaching, research, extension, service, and publishing (formal publications) activities. The research staff is about evenly divided on the question of whether evaluation on publishing activities should extend to effectiveness with mass media and specialized publications. Seventy-five percent of the extension specialists, on the other hand, felt that part of their evaluation should be on this basis.

Administrators generally felt that effectiveness with the media should be a part of the evaluation of the faculty generally, but not necessarily every member.

Faculty Regard Colleagues, Farmers As Prime Audience

The faculty ranked the importance of reporting to and informing various publics in this order: (1) fellow scientists or specialists in their own fields; (2) farmers-ranchers; (3) educators who could use the research and knowledge in their own efforts; (4) legislators; (5) agri-industry or agri-business leaders; (6) University administrators; and (7) the general public. All four

⁶Tedrick. op. cit. p. 8.

groups regarded all of the audiences studied as "essential." The differences were in degree.

Ranking did vary between the four groups. For example, research and extension administrators and extension specialists place much more importance on reaching legislators than did researchers.

To summarize how faculty view the importance of various audiences in their research reporting or extension teaching activities, we used the "essential audience index" created by Tedrick⁷ (Table 2).

Table 2. ESSENTIAL AUDIENCE INDEX*—Importance, and ranking, assigned to various audiences as potential receivers of information about University research and knowledge by faculty, University of Minnesota Institute of Agriculture, Forestry, and Home Economics, 1975.†

Audience	All Minnesota	Essential Index				
		Researchers Minn.	Texas	Research administrators	Extension specialists	Extension administrators
Fellow scientists or specialists in own field	2.36(1)	2.55(1)	2.43(2)	2.77(1)	1.96(5)	2.42(2)
Farmers-Ranchers (Homemakers)	2.25(2)	2.05(3)	2.33(3)	2.23(5)	2.47(1)	2.40(3-4)
Extension specialists, other educators who use work	2.19(3)	2.27(2)	2.53(1)	2.61(2)	2.04(4)	1.88(6)
Legislators	2.18(4)	1.98(5)	1.93(6)	2.29(3)	2.25(3)	2.80(1)
Agri-Business—industry leaders	2.17(5)	2.01(4)	2.30(4)	2.26(4)	2.33(2)	2.20(5)
University administrators	1.93(6)	1.84(6)	2.26(5)	2.07(6)	1.91(6)	2.40(3-4)
General public	1.31(7)	1.09(8)	1.15(8)	1.39(7)	1.46(7)	1.79(7)
Fellow scientists, specialists—other fields	1.19(8)	1.15(7)	1.24(7)	1.16(8)	1.26(8)	N.A.

*Essential index is the mean for all valid observations with values assigned as follows: 0, not essential; 1, essential; 2, very essential; and 3, extremely essential.

† X^2 (all 9df) and p values were as follows: fellow scientists, $X^2=45.99$, $p<.01$; extension specialists, teachers, $X^2=23.82$, $p<.01$; farmer-rancher (for researchers), farmer-rancher, homemaker (extension) $X^2=26.84$, $p<.01$; legislators, $X^2=34.69$, $p<.01$; agri-industry business leaders, $X^2=17.41$, $p<.05$; fellow scientists, or extension workers, other fields, $X^2=8.09$, $p=.23$; and general public, $X^2=23.01$, $p<.01$.

Both Minnesota and Texas researchers ranked keeping the general public informed low. Texas researchers regard keeping extension specialists and others who use their research results as their first priority with an index of 2.53 compared to Minnesota's 2.27. Keeping fellow scientists informed ranked high in both states.

⁷Tedrick. op. cit. p. 14.

Minnesota extension staff generally place greater emphasis than researchers on keeping farmers, ranchers and homemakers informed, ranking this group as its number one audience. Legislators also ranked high in the eyes of extension staff, as an audience. The general public ranked low with this group also.

Generally speaking, administrators place much greater emphasis on keeping legislators informed than do either specialists or researchers.

Faculty Rank Mass Media Reporting Differently

Media are frequently criticized about how effectively they report material affecting agricultural research and education. Our respondents evaluated the credibility and effectiveness of the reporting of various media.

Technical and scientific journals ranked high followed by specialized publications. Both ranked between "credible" and "very credible" in their activities. The mass media ranked lower with radio having the highest ranking among mass media. Extension specialists tended to give "higher marks" to mass media than researchers. Extension staff do have much more extensive relationships with the media.

To summarize how faculty regarded the credibility of the reporting of research and knowledge by various media, we created a *media reporting credibility index* (Table 3). A 3 rating would be "very credible" and a 1 rating not credible.

All groups ranked technical journals as most credible (2.64 index), specialized magazines as next (2.18), and radio as third (1.75). Somewhat behind were newspapers and TV (both with 1.60).

Radio—Radio has somewhat higher credibility index than the other media especially among researchers. The difference is small, however, and cannot be regarded as significant.

In percentage terms 51% of the researchers regarded radio as very credible or credible, and 42% as not credible (8% said they didn't know). Among research administrators, 52% ranked radio as credible and 48% as not credible. Only 21% of the extension specialists and 4% of the extension administrators gave radio a "not credible" rating.

Television—Television did not fare as well as radio in credibility with over 50% of the researchers and research administrators either regarding it as not credible or not knowing. Again, as with radio, extension specialists gave TV a much higher rank.

Newspapers—Here, too, extension faculty ranked newspapers much higher than researchers. For example, 53% of the scientists, 58% of the research administrators, 29% of the extension specialists, and 21% of the extension administrators regarded newspapers as not credible. Extension specialists ranked newspapers higher with 62% of the specialists and 75% of the administrators classifying newspapers as credible or very credible.

Table 3. MEDIA REPORTING CREDIBILITY INDEX*—Level of credibility and effectiveness assigned to different media channels for reporting research and knowledge by faculty, University of Minnesota Institute of Agriculture, Forestry and Home Economics, 1975.

Medium†	Credibility Index and Rank for:				
	All	Researchers	Research administrators	Extension specialists	Extension administrators
Technical journals	2.64(1)	2.71(1)	2.74(1)	2.58(1)	2.33(1)
Specialized magazines	2.18(2)	2.10(2)	2.31(2)	2.23(2)	2.26(2)
Radio	1.75(3)	1.42(3)	1.52(3)	1.91(3)	2.09(3)
Nonagricultural‡ magazines	1.66(4)	1.59(4)	1.67(4)	1.72(6)	1.73(6)
Newspapers	1.60(5-6)	1.46(6)	1.42(5-6)	1.76(4)	1.91(5)
TV	1.60(5-6)	1.47(5)	1.42(5-6)	1.73(5)	1.95(4)

*Media reporting credibility index is the mean for all valid observations with values assigned as follows: 3, very credible, 2, credible; 1, not credible. "Don't know" answers are not included in the index but are considered in X^2 tests.

† X^2 and p values are as follows (all 9 df): technical journals, $X^2=33.81$, $p<.01$; specialized magazines, $X^2=11.59$, $p=.24$; radio, $X^2=31.73$, $p<.01$; newspapers, $X^2=27.16$, $p<.01$; television, $X^2=27.14$, $p<.01$; and nonagricultural magazines, $X^2=5.72$, $p=.77$

‡The scores in this category influenced by the fact that 91 of 272 observations were "don't know." No conclusions can be reached on this item. Note small X^2 and high p .

Specialized Publications—In this category, 85% of the researchers, 94% of the research administrators, 85% of the extension specialists, and 79% of the extension administrators gave credible or very credible ratings. Most of the remainder answered that they did not know.

Technical and Scientific Journals—Here the acceptance of credibility among all groups was nearly 100%. The credibility of the journals probably rested on the fact that the journals have stringent requirements and are prepared and edited largely by researchers themselves.

To help develop a better understanding of the feelings, attitudes and wishes of faculty in connection with reporting, we used another adaptation of Tedrick's questionnaire. Statements were made, and the respondents reacted (Table 4).

Reporting Regarded as Joint Responsibility

Respondents reacted to the statement, "Scientists (or extension specialists) should not devote their time to reporting, professional communicators should." All apparently felt that they have responsibilities in the area of reporting. Scientists were the most inclined to ask professional communicators to assume this role, with nearly half agreeing with the

statement. Over three fourths of all extension staff felt they should spend time in the activity, reflecting extension's emphasis on utilizing media as a teaching method.

Comments indicated that many felt they did not have the time, ability, or contacts to handle the communications. Faculty also felt there needs to be close cooperation and exchange of ideas with the communicators who might process their information.

Table 4. Reactions of faculty to various questions of reporting, colleague relationships, media, public image, University of Minnesota, Institute of Agriculture, Forestry, and Home Economics, 1975.

	Researchers			Research administrators			Extension specialists			Extension administrators		
	Agree	Disagree	Don't know	Agree	Disagree	Don't Know	Agree	Disagree	Don't Know	Agree	Disagree	Don't Know
	Percent			Percent			Percent			Percent		
Scientist or specialist should not devote time to reporting; professional communicator should	46.4	49.3	4.3	38.7	58.1	3.2	16.5	78.6	4.9	12.0	76.0	12.0
Scientists or specialists in news are held in high esteem	20.7	53.3	25.9	35.5	38.7	25.8	46.5	25.3	28.3	36.0	36.0	28.0
Research is so complex and technical there is little public interest in it	21.7	72.5	5.8	16.1	83.9	0	19.2	73.1	7.7	29.2	62.5	8.3
Personal interviews with media are most effective way of getting out information	55.6	23.0	21.5	48.4	25.8	25.8	52.4	26.2	21.4	56.0	24.0	20.0
More emphasis should be put on reporting through mass media	55.2	11.9	32.8	90.0	6.7	3.3	62.5	9.6	27.9	76.0	4.0	20.0
Mass media are the most important source of image of Institute	78.6	9.3	12.1	80.6	12.9	6.5	43.7	44.7	11.7	32.0	36.0	32.0
Image of agriculture is less favorable than 10-15 years ago.	20.0	59.3	20.7	19.4	77.4	3.2	14.6	55.3	30.1	12.0	56.0	32.0

Other respondents pointed out that they have the obligation to learn to communicate effectively. One researcher said that a "person not understood in communicating may not have much to communicate."

Others felt that professional communicators may not have the depth or

understanding of subject matter necessary to communicate research material. Some feared misinterpretation, mistakes, or emphasis of wrong points.

Many of the respondents saw the reporting responsibility as a joint one between communicators and researchers or extension specialists. They felt that personal interview with the media or University communications specialists is one of the most effective ways of releasing research information to the media.

Most groups are concerned with their image among various publics. Researchers tend to feel that the mass media are their most important source of the image. Extension staff disagree, apparently feeling that direct contacts are more important.

Being in "News" Doesn't Bring Esteem

Being featured or having research results reported in the mass media does not bring esteem to researchers in the eyes of their colleagues. In fact, it may be to their detriment. Extension specialists, however, have higher regard than researchers for colleagues who appear in or on the mass media. Administrators are more likely to hold faculty "in the news" in higher esteem than their colleagues do.

Research Not Too Complex to Report

A majority felt that research and research results are not so complex that they cannot or should not be reported to the general public. They feel the public would be interested if the research can be reported in a meaningful way. For example, respondents commented that "most if not all research can be reported in an interesting and informative way" and "John Q. Public is paying taxes to support the research. He needs to know."

Others, however, said "the average worker could care less about molecules and organelles and jive like that. What he cares about is immediate; research often is not of immediate importance," or "the bits are so small, they probably have little meaning or value to the general public."

IMPLICATIONS AND RECOMMENDATIONS

In considering implications and recommendations, several points should be noted.

First, ag colleges, extension services, and experiment stations are unique among University units because special emphasis and support is given to research and extension teaching efforts. This support probably is reflected in the attitudes and actions of faculty.

Second, staff members in these units are more attuned than most of their University colleagues to working closely with outside publics and with the media in reaching these publics.

Third, the recommendations are based not only on this study but also on previous observations and experiences of the author and his colleagues.

With these in mind, following are the recommendations:

1. Communications staffs should capitalize on the favorable climate and willingness of faculty to report through and work with media more broadly. To do this, they must be positive and deliberate to encourage greater reporting; must consult frequently and thoroughly check material with cooperating faculty; and must more thoroughly familiarize themselves with both the subject matter and educational objectives of the areas in which they work.

2. Communications staffs should take lead in dispelling some of the distrust of certain media and of colleagues whose activities or research draw media attention. Founded or unfounded, the distrust and attitude does exist. Communicators can foster greater interaction between the media and faculty to help both groups understand the functions and responsibilities of each.

3. Administrators and other leaders should emphasize the importance of communicating with various audiences. For example, administrators need to emphasize the important role that legislators and other leaders play in University affairs and clearly explain what interaction could or should take place.

4. Administrators should recognize the importance of faculties working with scientific and technical journals, specialized publications, and the mass media. In evaluation of faculty and other staff, this should not be given comparable weight to research, teaching, and extension effectiveness, but it should be recognized as a valuable adjunct to these functions. For many, but not for all faculty, it should be considered a factor in evaluation. If this is to be a factor, it should be thoroughly stated and discussed by all concerned.

5. Administrators and faculty should encourage the concept of "sharing" research results and specialized knowledge not only with colleagues but also with a variety of publics. Publishing in journals or university series is important. However, there are many other methods that should be recognized so that faculty could find more satisfaction and reward in extending their outreach. Included are speeches, seminars, visual presentations, shared instructional units, mass media or specialized publication reports, to mention only a few.

6. Faculty and administrators should recognize the importance of image and continue positive steps to portray extension, research, and collegiate training on the basis of their wide contributions. All should recognize, however, image is built on accomplishment, personal contacts, and a variety of other factors as well as mass media attention.

7. Staff should be encouraged to continue study of how to improve the flow of information from the campus to the various publics.