A study was conducted to examine the model of public relations practiced and level of research utilization in service versus manufacturing organizations. The study was a secondary analysis of a survey of the International Association of Business Communicators conducted in August 1987. Questionnaires were mailed to 760 people from the 1987 membership directory of the International Association of Business Communicators (IABC). Of the 760 persons in the valid sample, 211 returned useable questionnaires, a 27.8% response rate. Respondents were asked to categorize their organization according to a 12-item typology. Of the total sample, about 18% of the organizations were classified as service and 17% were classified as manufacturing. Findings indicated that service organizations use both scientific research and content-based mixed research to scan the environment and evaluate public relations programs. Service and manufacturing organizations do not differ significantly in their use of informal research. Future studies should consider differences in the information and non-information subsectors of the service sector as they relate to program research. (Two tables of data are included and 18 references are attached.)
Public Relations Behavior as a Function of Organizational Type: A Comparison of Manufacturing versus Service Organizations

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This paper examines the model of public relations practiced and level of research utilization in service vs. manufacturing organizations. This study is a secondary analysis of a survey of International Association of Business Communicators conducted in August 1987. Theory suggests that manufacturing and service organizations differ in their sensitivity to their environments. Following a grounded theoretic approach to analysis, relationships between organizational type, program research and public relations models were posited and tested. The relationships suggested are rooted in theories of organizational types.

Theoretical Perspectives

Manufacturing vs. Service Organizations. The late 1980's will be remembered as the years when the decline of manufacturing seemed to be a foregone conclusion and service industries made their mark. Employment figures support this shift in the economy. According to Berger (1986), of the 11 million jobs created since the 1981-82 recession, nearly 80 percent were in services. The number of workers employed by the service sector is expected to continue rising through 1995. Seventy percent of private sector workers are employed by service businesses. According to the Labor Department, 9 out of 10 new jobs created between 1986 and 1995 will be in services (Berger, 1986). Most experts believe that these figures are conservative since many service jobs are still included in the numbers for manufacturing.

Identifying those businesses that qualify as "services" and those that qualify as "manufacturing" is difficult. According to Quinn and Gagnon (1986), "Services are actually all those economic activities in which the primary output is neither a product nor a construction. Value is added to this output by means
that cannot be inventoried -- means like convenience, security, comfort and flexibility -- and the output is consumed when produced" (p. 95).

Cohen and Zysman (1987) report that services share certain characteristics including nontangibility and nonstoreageability. Because services are used up at the time they are delivered, inventories can not be built up. In other words, services are often inseperable from what they deliver (Machlup, 1962). There is also some evidence to suggest that the sales of services are less cyclical than those of manufacturing.

Nontangibility, nonstoreageability, and the non-cyclical nature of the service sector are all factors making these businesses more sensitive to their environments. Each of these factors requires an organization to constantly monitor its environment and incorporate public relations models using two-way communication.

Service Subsectors. According to Naisbitt (1982), the service sector consists of information and non-information sub-sectors. He argues that the majority of service workers today are employed in the information subsector, engaged in the creation, processing, and distribution of information. Naisbitt believes the non-information service sector has accounted for a steady proportion of employment at 11 to 12 percent. "The real increase has been in information occupations. In 1950, only about 17 percent of us worked in information jobs. Now more than 60 percent of Americans work with information" (p. 14). Birch has stated that of the 19 million new jobs created in the United States during the 1970s, only five percent were in manufacturing and only 11 percent in the goods-producing sector. According to Birch, "We are working ourselves out of the manufacturing business and into the thinking business" (Naisbitt, 1982, p. 14).

It should be recognized that the manufacturing and service sectors are complementary, not competing, components of the U.S. economy. Choate and Linger (1986) believe that we have set up a false dichotomy by pitting
manufacturing against services. They argue that manufacturing is still a major source of jobs, with the current number exceeding the number available in 1965. In 1985, manufacturing employed more than 19 million workers, nearly 1.4 million higher than in 1965. The employment drop in the auto, steel, and textile industries was offset by job growth in scientific and medical instruments, printing and publishing, and plastics.

Choate and Linger (1986) and Berger (1986) believe that both the manufacturing and service sectors must be healthy in order for our economy to thrive. According to Berger (1986), "Many of the highest-flying service industries depend on manufacturing for a major share of their business. Follow the wires of any major manufacturing company, and you will find them hooked up to a network of service companies ranging from financial factors to ad agencies. General Motors Corporation's largest single supplier is not a steelmaker or tire manufacturer but Blue Cross/Blue Shield" (p. 79). The Coalition of Service Industries estimates that manufacturers derive as much as 30 to 60 percent of their revenues from service activities.

Cohen and Zysman (1987) refer to the relationship between services and manufacturing as a "direct linkage." They believe "a substantial core of service employment is tightly tied to manufacturing. It is a complement and not, as the dominant view would have it, a substitute or succession for manufacturing. Lose manufacturing and you will lose -- not develop -- those high-wage services" (p. 3).

Thus, services are not a poor cousin to manufacturing or "responses to marginal demands that people satisfy only after they meet their product needs" (Quinn and Gagnon, p. 95). The rise of services reflects a diversifying economy charging to meet today's changing lifestyles.

Manufacturing and service businesses can be classified into existing organizational types, such as the Hage-Hull and Burns and Stalker typologies. Using these typologies, public relations behavior can be linked to service and manufacturing organizations.
Traditional Organizational Typologies

A number of studies have examined the relationship between organizational structure, environment, and public relations. Hage and Hull (1981) devised a typology based on the combinations of two variables, scale and complexity. This typology has been widely used in public relations research (E. Pollack, 1984; Fabiszak, 1985; McMillan, 1984; R. Pollack, 1986; Schneider, 1985).

"Scale is related to both an organization's size and to the size of demand for its products and services...the more repetitive the demand for products and services the more repetitive the organization's technology must be to produce products and services to meet the demand" (Grunig & Grunig, 1986, p. 22). Small scale refers to small organizations with relatively small demand for their products and services. Large scale refers to large organizations with relatively large demand for their products and services. Complexity refers to an organization's diversity of specialists and their sum total of knowledge, education and professionalism (Hage, 1980). Organizations with many occupations and individuals with high levels of education and technical skills and training are complex. Organizations with few occupations and individuals with little education and training and few skills tend to be low in complexity.

Burns and Stalker (1961) identified two types of organizations, mechanical and organic. Mechanical organizations tend to have highly centralized decision making and vertical communication. In mechanical organizations, rules and procedures determine the types and frequency of communications. Organic organizations tend to have decentralized decision making and stress communication as advice-giving and lateral communications.

Using Burns and Stalker's four organizational types, Hage and Hull suggested four types of organizations possessing different technologies and structures and occupying different environmental niches. They are: mechanical organizations with low environmental complexity and large scale; organic organizations with
high environmental complexity and small scale; traditional organizations with low environmental complexity and small scale; and mixed mechanical/organic organizations with high environmental complexity and large scale.

Arguably, manufacturing organizations possess characteristics of mechanical organizations with large scale and low complexity. That is, the technology used by manufacturing organizations is often repetitive and requires few specialists. Service organizations, on the other hand, possess characteristics of organic organizations with small scale and high complexity. The technology used by service organizations is not repetitive and requires specialists with diverse skills.

Organizational Structure and Public Relations

Assuming an open systems theory framework, Grunig (1984) suggested that organizational type would be related to his four models of public relations: press agentry, public information, two-way asymmetric and two-way symmetric. These models are based on the principle that public relations behavior varies along two independent dimensions -- one-way vs. two-way, and asymmetric vs. symmetric.

The press agentry model describes public relations behavior that is promotional, one-way and not always truthful. The public information model describes public relations behavior that disseminates truthful information from the source to the receiver.

The objective of the two-way asymmetric model of public relations is to change the public's behavior via persuasion. This model uses research to discover what the public wants to hear and then bases public relations efforts on those findings. The objective of the two-way symmetric model is to achieve mutual understanding through adaptation. Grunig described the communication model for each of these types of public relations in the following manner:
"Communication in the press agentry and public information models can be depicted in a simple 'source' to 'receiver' model. A feedback loop is added to this communication model for the two-way asymmetric model. The two-way symmetric communication model, however, contains two 'groups' rather than a 'source' and a 'receiver.' Communication in that model takes place as a transaction, and neither participant can be isolated as the source and the other as the receiver" (p. 8)

Grunig (1984) hypothesized that the traditional organization would practice press agentry, the mechanical organization would practice public information, the organic organization would practice two-way symmetrical, and the mixed organization would practice a combination of two-way symmetrical and two-way asymmetrical public relations.

However, when tested, the organizational types identified by the Hage-Hull typology yielded weak correlations with public relations behavior (Grunig & Grunig, 1986). An in-depth study of 48 organizations by Schneider (1985) found that the organizational types correlated modestly with the public relations models.

We posit that service organizations will use public relations models employing two-way communication as their environments tend to be unstable. Manufacturing organizations, on the other hand, will use public relations models employing one-way communication as their environments tend to be more stable.

Research and Public Relations

The same open systems model used by Grunig also suggests that the use of program research in public relations differs by organizational type. Further, program research is not a single entity but consists of a number of components.
Dozier (1988) identified three empirically derived program research approaches that combine evaluation and scanning: scientific research, content-based mixed research, and the informal oral research approaches. The scientific research approach consists of scientific scanning methods and scientific impact evaluation methods. Scientific scanning consists of formal studies, surveys, subscription to public opinion surveys, public relations audits, demographic data, and outside specialists to gather information on publics and the organization’s environment. Scientific impact evaluation uses scientific cross-sectional studies, focus group studies, public opinion surveys, and quantitative studies of complaints by phone and letter to measure public relations program impact.

Content-based mixed research consists of some scientific research techniques, but these activities are concerned with examining the content of media and mediated (phone and letters) feedback from publics. Scientific content-based activities are mixed with seat-of-the-pants evaluation techniques such as attending meetings, conferences, and monitoring placements through close media contacts.

Informal oral research consists of scanning activities that involve either face-to-face or phone communication between practitioners and publics. No program evaluation, even seat-of-the-pants evaluation, is involved in this approach.

We believe that service organizations are more likely to use all three approaches to program research than manufacturing organizations. In being responsive to their environments, service organizations must use research to gather information about their environments. Manufacturing organizations must be environmentally sensitive, but their environments tend to be more stable making scanning and evaluation less important.

Theory suggests that service organizations will use public relations models employing two-way communication and will use research to evaluate those
communications and scan the environment. Manufacturing organizations will use public relations models employing one-way communication and will be less likely to use program research.

Methods

Survey and Response Rate. A systematic sample of 800 was drawn from the 1987 membership directory of the International Association of Business Communicators (IABC). Questionnaires were mailed in the summer, 1987. Two mailings to nonparticipants followed at two month intervals. Of the original 800 respondents, 40 were removed from the sample because of death, retirement, resignation, or because they were not engaged in public relations work. Of the 760 elements in the valid sample, 211 returned useable questionnaires, a 27.8 percent response rate. This rate is below the 50 percent response rate considered adequate in mailed surveys (Babbie, 1987, p. 221). This low rate is likely due to the extreme length of the questionnaire. This limitation of the final sample should be kept in mind when interpreting research findings. The final sample is representative of the population of IABC members willing to fill out lengthy questionnaires.

Measurement. Respondents were asked to categorize their organization according to a 12 item typology. Organizations were classified as "manufacturing" if the respondent indicated the organization manufactured "consumer capital goods" or "industrial" goods. Organizations were classified as "service" if the respondent indicated the organization was a public relations firm, advertising agency, or consumer finance firm.

Of the total sample, about 18 percent of organizations were classified as service, whereas 17 percent were classified as manufacturing. This restricted analysis of the research question to only 68 cases, a small sample size able to detect large effect size only (Cohen, 1988). However, this small sample size was deemed appropriate, given the exploratory nature of the research question.
Using fractionation scales, Grunig’s four models of public relations behavior were measured using four indicators per model (Grunig & Grunig, 1986). Respondents were asked: “What public did the public relations unit concentrate its greatest attention and resources on during the last 12 months in your organization?” Respondents were then asked to indicate their public relations behavior regarding that key public.

Factor analysis was used to analyze 18 measures of environmental scanning and program evaluation research. A three-way typology of program research was extracted (Dozier, 1989). The scientific research approach consists of eight measures. Content-based mixed research approach consists of six measures, whereas the informal oral research approach consists of four measures.

Analysis

Analysis of variance was used to test differences in mean scores of the four models of public relations behavior between service and manufacturing organizations. The 90 percent decision rule (alpha=.10) was used to reduce the probability of Type 2 error common to small sample sizes (N<100). The results of the statistical tests for the four models of public relations behavior are displayed in Table 1. As this table illustrates, the posited relationships between organizational types and public relations models were disconfirmed. The largest difference in means was posted between organization types and two-way asymmetrical public relations behavior, in the direction posited. However, the relationship was statistically insignificant.

Table 1 about here
The relationship between organizational types and approaches to public relations research are displayed in Table 2. As indicated, significant differences in mean utilization scores were posted for scientific research. Service organizations are more frequent users of scientific research than manufacturing organizations. The difference in the use of content-based mixed research was also statistically significant. Service organizations more frequently use content-based mixed research than manufacturing organizations. However, the difference in the use of informaloral research was not significant for service and manufacturing organizations.

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Table 2 about here

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Implications for Further Research

While the results outlined above are provocative, the limitations of this study must be kept in mind. First, the response rate to the original questionnaire was less than established standards for mail surveys. Second, the number of organizations included in the service-manufacturing typology totaled less than 70. Third, the service-manufacturing typology itself was insensitive to distinctions between information and non-information subsectors in the service sector.

Despite these limitations, findings indicate that service organizations use both scientific research and content-based mixed research to scan the environment and evaluate public relations programs. On the other hand, service and manufacturing organizations do not differ significantly in their use of informal, "seat-of-the-pants" research. Future studies should consider differences in the information and non-information subsectors of the service sector as they relate to program research.
Regarding the models of public relations behavior and organization types, it may be that public relations behavior is situationally determined. That is, service organizations may be predisposed to use two-way communication models to keep in contact with publics. However, this predisposition can be preempted by internal and external situations dictating the use of another model. Another explanation of the disconfirmed relationships is found in the power-control perspective of organizational structure (Robbins, 1987). Service organizations would optimize their responsiveness to unstable environments using two-way communication models. However, the power relationships in the dominant coalition and the historical role of public relations in the organization preclude optimization. Rather public relations behavior is a political compromise that satisfies the divergent interests of the dominant coalition and "satisfices" organizational response to the environment.
REFERENCES


Machlup, F. Uses, values and benefits of knowledge. *Knowledge and Knowledge Production*, 202-224.


TABLE 1
Analysis of Variance of Public Relations
Behavior Broken down by Organizational Type

<table>
<thead>
<tr>
<th>Mean Behavior Score</th>
<th>Industrial</th>
<th>Service</th>
<th>F</th>
<th>D.F.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press Aghentry</td>
<td>87.9</td>
<td>82.6</td>
<td>.07</td>
<td>1.53</td>
<td>.79</td>
</tr>
<tr>
<td>Public Information</td>
<td>45.7</td>
<td>50.6</td>
<td>.29</td>
<td>1.53</td>
<td>.59</td>
</tr>
<tr>
<td>2-Way Asymmetric</td>
<td>81.5</td>
<td>91.7</td>
<td>.31</td>
<td>1.53</td>
<td>.58</td>
</tr>
<tr>
<td>2-Way Symmetric</td>
<td>92.6</td>
<td>90.9</td>
<td>.01</td>
<td>1.53</td>
<td>.93</td>
</tr>
<tr>
<td></td>
<td>Mean Research Use</td>
<td>Indust.</td>
<td>Service</td>
<td>F</td>
<td>D.F.</td>
</tr>
<tr>
<td>--------------------------</td>
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</tr>
<tr>
<td>Scientific Research</td>
<td>2.61</td>
<td>3.25</td>
<td>3.46</td>
<td>1.65</td>
<td>.05</td>
</tr>
<tr>
<td>Mixed Research</td>
<td>3.57</td>
<td>4.16</td>
<td>3.62</td>
<td>1.65</td>
<td>.06</td>
</tr>
<tr>
<td>Informal Oral Research</td>
<td>4.52</td>
<td>4.38</td>
<td>.19</td>
<td>1.65</td>
<td>.66</td>
</tr>
</tbody>
</table>