The purpose of this study was to explore the relationship between communication and productivity. Specifically, we had two aims: (a) to determine employee perceptions of the impact of eight dimensions of communication satisfaction on productivity, and (b) to understand how the type of organization may moderate the link between communication and productivity. Two businesses, representative of service and manufacturing organizations, were investigated by administering the Communication Satisfaction Questionnaire and interviewing all employees. The results showed that communication was perceived to have an impact on productivity that varied in both kind and magnitude. Moreover, a number of intriguing differences emerged between these two companies. The findings suggest that the link between communication and productivity is more complex than previously assumed.

Employee Perceptions of the Relationship Between Communication and Productivity: A Field Study

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Fifteen years ago Downs and Hazen (1977) introduced the Communication Satisfaction Questionnaire (CSQ) in these pages. Since then, their questionnaire has been used in over 50 organizations, including several corporations in foreign countries (Clampitt & Girard, 1986). Researchers have investigated the reliability and the validity of the measure and, despite some concerns, have found the CSQ basically sound (Crino & White, 1981; Hecht, 1978). Most research has sought to explore the relationship between communication satisfaction and job satisfaction. In fact, that relationship has been shown to be fairly strong (Downs, 1988). But one largely overlooked avenue of study has serious implications for business communicators, namely, the relationship between communication satisfaction and organizational productivity.

The purpose of this study was to investigate this issue. More specifically, this exploratory research project had two research aims: (a) to determine employee perceptions of the relative impact of the eight Downs and Hazen (1977) communication satisfaction dimensions on productivity; and (b) to investigate how the type of organization may moderate perceptions of the link between communication and productivity.

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COMMUNICATION SATISFACTION

The communication satisfaction construct has been used in three distinct contexts; interpersonal, group, and organizational (Hecht, 1978). For example, Hecht (1978) developed an instrument that proved useful in assessing interpersonal relationships and his instrument, the Interpersonal Communication Relationship Inventory (Hecht, 1978) has been modified for use in organizations (Wheeless, Wheeless, & Howard, 1984). However, the CSQ has been one of the most widely used instruments in the organizational context (Greenbaum, Clampitt, & Willihnganz, 1988). For a variety of reasons including usage level and soundness of the development process, the CSQ is arguably the best measure of communication satisfaction in the organizational arena.

Perhaps the most notable theoretic contribution of the CSQ has been the suggestion that communication satisfaction is a multidimensional construct as opposed to a unidimensional one (Downs, Hazen, Quiggens, & Medley, 1973). That is, employees are not merely satisfied or dissatisfied with communication in general, but can express varying degrees of satisfaction about definite categories or types of communication. Indeed, their research using factor analysis techniques hypothesized eight stable dimensions of communication satisfaction:

Communication Climate reflects communication on both the organizational and personal level. On one hand, it includes items such as the extent to which communication in the organization motivates and stimulates workers to meet organizational goals and the extent to which it makes them identify with the organization. On the other, it includes estimates of whether or not people's attitudes toward communicating are healthy in the organization.[1]

Supervisory Communication includes both upward and downward aspects of communicating with superiors. Three of the principal items include the extent to which a superior is open to ideas, the extent to which the supervisor listens and pays attention, and the extent to which guidance is offered in solving job-related problems.

Organizational Integration revolves around the degree to which individuals receive information about the immediate work environment. Items include the degree of satisfaction with information about departmental plans, the requirements of their jobs, and some personnel news.

Media Quality deals with the extent to which meetings are well organized, written directives are short and clear, and the degree to which the amount of communication is about right.

Co-worker Communication concerns the extent to which horizontal and informal communication is accurate and free flowing. This factor also includes satisfaction with the activeness of the grapevine.

Corporate Information deals with broadest kind of information about the organization as a whole. It includes items on notification about changes, information about the organization's financial standing, and information about the overall policies and goals of the organization.

Personal Feedback is concerned with the workers' need to know how they are being judged and how their performance is being appraised.

Subordinate Communication focuses on upward and downward communication with subordinates. Only workers in a supervisory capacity respond to these items, which include subordinate responsiveness to downward communication and the extent to which subordinates initiate upward communication.

While some questions have been raised about the stability of the dimensions, basically the eight factor solution has been confirmed (Pincus, 1986; Crino & White, 1981; Clampitt & Girard, 1987). Other researchers have noted the thoroughness of the process used in constructing the CSQ (Hecht, 1978; Clampitt & Girard, 1986).

The fundamental trends in the existing research indicate that the areas of greatest employee satisfaction are the Supervisory Communication and Subordinate Communication factors, while the area of least satisfaction tends to be the Personal Feedback factor. In general the research has suggested a relationship between job satisfaction and communication satisfaction (Clampitt & Girard, 1986; Lee, 1989; Varona, 1988). Three of the factors—Personal Feedback, Communication Climate, and Supervisory Communication—have been most strongly correlated with job satisfaction measures (Downs, 1977; Downs, Clampitt, & Pfeiffer, 1988). Demographic variables have been, for the most part, of limited utility in explaining communication satisfaction (Nicholson, 1980; Clampitt & Girard, 1986). Yet, with only a few exceptions, the research has been confined to attempts to link the communication satisfaction factors to job satisfaction measures.

Pincus (1986) did use a modified version of the Communication Satisfaction Questionnaire to look at both job satisfaction and job performance. He administered the CSQ to a sample of 327 nurses in a hospital and a job performance questionnaire to each of the subject's supervisors. The results confirmed Pincus's hypotheses that communication satisfaction could be linked to both job satisfaction and productivity but that the link to job satisfaction was stronger.

Although the Pincus study provided an intriguing glimpse into the relationship between communication and productivity, several questions remain unanswered. For instance, how do the employees themselves perceive the relationship? Would the same results emerge from different types of organizations? These issues were addressed in this study.

Link Between Communication and Productivity

Several studies have focused on the general relationship between communication and productivity. Intuitively, such a link makes sense. In fact, Lull, Frank, and Piersol (1955) surveyed presidents of the largest 100 U.S. corporations and found that 96 percent believed in "a definite relationship" between communication and productivity. Tubbs and Hain (1979) reported on eight field studies and concluded that:

> Taken together they provide consistent and strong support for the assumption that management communication behaviors do play a significant part in contributing to or detracting from total organizational effectiveness. (Tubbs & Hain, 1979, p. 7)

For instance, they found in one study that the department with the lowest rates of grievances and absenteeism had the highest scores in communication effectiveness. Gregson's (1987) survey of certified public accountants suggested that employee turnover was linked to communication satisfaction. Other researchers have demonstrated the positive effects of communication training programs on organizational effectiveness (Tubbs & Widgery, 1978; Tavernier, 1980). In short, while there is evidence of a general link between employee productivity and communication, some researchers have sought to explore the linkage in greater depth.

Downs and Hain (1982) identified five basic approaches researchers have used when investigating the link between communication and productivity. First, they point out that one could examine this linkage by comparing various occupations, but no one has published research of this type.

Second, some researchers have examined the impact of organization-wide communication practices on corporate productivity. For instance, in more extensive reviews of this literature, scholars discuss research efforts that have used case study methods, the ICA communication audit, and MacKenzie's (1980) Organizational Audit and Analysis, to demonstrate that communication does have an impact on productivity (Downs & Hain, 1982; Downs, Clampitt, & Pfeiffer, 1988).

Third, a rich tradition of experimental research has examined the impact of group dynamics on productivity. Perhaps the most well-known involved studies of small group networks. For example, subjects in the "wheel" network generally made decisions faster than those in the "star" network (Hawkins, 1980).

Fourth, some researchers have examined the impact of supervisor-subordinate communication on productivity. Kim (1975) demonstrated that higher productivity was associated with more effective feedback about performance. Supervisors are normally responsible for such feedback. Therefore, it is not surprising that several researchers have indicated that the effectiveness of supervisory communication is related to employee productivity (Jenkins, 1977; Jain, 1973).

Fifth, some scholars have examined the more complex notion of how individual roles and skills impact productivity. Lewis, Cummings, and Long (1982) found that through a concept of "groupness/organizationness" they could classify organizations and determine what types of communication roles were most associated with high levels of productivity. In particular, "'task communication' tended to be the primary predictor of productivity in the military sample, while 'person communication' tended to be the primary predictor of productivity in the church sample. Both task and person communication roles were significant predictors of productivity in the small business firm" (p. 1). Clearly a study like this provides a hint of the complexity involved in untangling the relationship between communication and productivity.

Finally, a few researchers have sought greater precision and suggested links between fairly specific communication behaviors and productivity. For example, O'Reilly and Roberts (1977) showed that the way employees coped with information was related to perceptions of performance.

There are several other concerns about the current state of knowledge. First, productivity has been defined in a variety of ways and this makes comparing results across studies difficult. Second, as would be expected, these conceptual differences lead to concerns about measurement. Third, the majority of these studies look at productivity from only one level of the organization. Indeed, what may be seen as productivity from the vantage point of the supervisor may not be seen that way from the perspective of the employee or even the organization. Finally, the studies that have used the CSQ rarely focus on the issue of productivity (Downs, 1991).

Research Questions

One of the objectives of this research project was to address the concerns identified above. Specifically this exploratory project sought to: (a) Determine employee perceptions of the relative impact of the eight basic dimensions of communication satisfaction on employee productivity, and (b) investigate how the organizational type may moderate perceptions of the link between communication and productivity.

METHODS

Two organizations were investigated in this study. Company S, a savings and loan, consisted of 65 employees and was used as a representative of service organizations All the employees were high school graduates but only ten of the employees had college degrees. Most of the employees were female (75 percent) and the organization had two layers of managers. Company M was a chair manufacturer with 110 employees and represented the manufacturing sector. Over 25 percent of the employees had college degrees and generally these employees were more educated than those at Company S. Company M had almost equal numbers of males and females. The organizational structure was similar to the savings and loan with four major divisions but there were three layers of management.

All employees of both companies completed the CSQ in several questionnaire sessions and were interviewed by researchers on an individual basis. Because top management "encouraged" their employees to participate, the researchers were able to canvass the entire population of each company through scheduling several "make up" sessions. The CSQ was modified slightly for this study. A 0-100 scale was used with "0" representing no satisfaction, "50" average satisfaction, and "100" maximum satisfaction.

After pretesting numerous questions, an interview guide was developed. Subjects were asked to rate the impact of the eight communication satisfaction factors on their personal productivity and explain their ratings. A 0-100 scaling device was used ("0" represented no impact, "50" an average impact, and "100" maximum impact) in order to gain greater precision in the responses (Barnett, Hamlin, & Danowski, 1981).

Using a similar scaling device, productivity was measured in three distinct ways. Employees rated their own productivity and their supervisor's productivity. In addition, supervisors rated the productivity

of all their employees. Moreover, the subjects were asked to define productivity.

Two basic forms of data analysis were conducted. First, ANOVA techniques were used to explain employee ratings of the impact of the eight communication satisfaction dimensions. Three separate analyses were run based on self-estimates of productivity, supervisory views of productivity, and subordinate views of supervisory productivity.

Second, content analysis techniques were used on the interview responses. Categories of responses were ascertained for each interview question. The number of categories ranged from three on the subordinate communication factor to fifteen on the Media Quality factor but, for most of the factors, only eight or nine categories were deemed necessary. Reliability was checked by having two researchers code all responses for each interview question. In all cases the level of reliability was .90 or better, according to the Holsti (1969) formula which computes a percentage score based on a comparison of total coding agreements versus the total number of coding decisions.

RESULTS

This section is divided into five subsections First, employee communication satisfaction levels are discussed. Second, employee perceptions of how the CSQ factors impact their productivity are reviewed. Third, we present the findings from the content analysis of employee explanations for their impact ratings. Fourth, we briefly comment on the productivity ratings. Finally, a discussion of the results based on an ANOVA is conducted.

Communication Satisfaction

Figure 1 reports the mean level of satisfaction for each of the CSQ factors. The mean scores could theoretically range from a high of 500 to a low of 0, with 250 being the midpoint. For company S, the Co-worker Communication (M=348.7; SD=67.4) and Subordinate Communication (M=346.7; SD=93.3) factors were ranked the highest. According to t-tests these two factors did not differ significantly from one another but did differ significantly from all the other factors (p<.05). The Personal Feedback (M=263.8; SD=106.6) factor, while above the theoretical midpoint, was ranked last and differed significantly from all the other dimensions (p<.05).
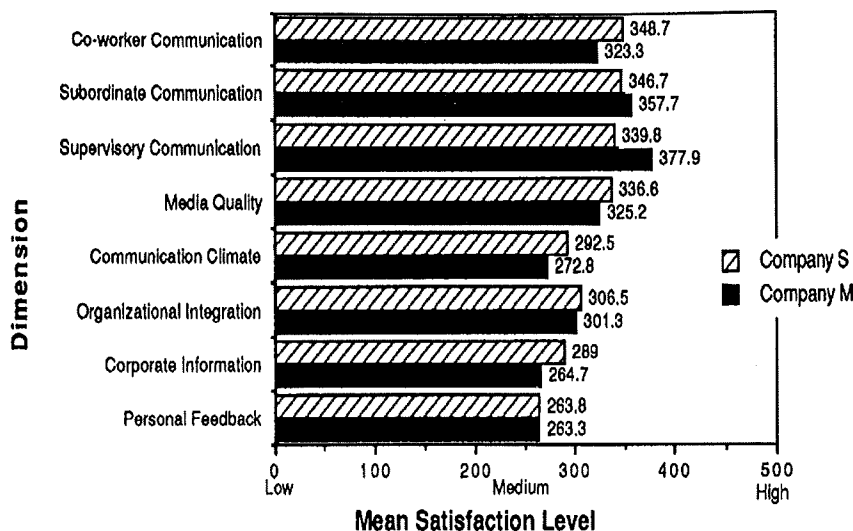
Figure 1. Employee Satisfaction with CSF Factors

For company M the Supervisory Communication factor was ranked as the most satisfying (M=377.9; SD=92.2). Supplementary t-tests found a statistically significant difference between this factor and all the other dimensions (p<.01) except Subordinate Communication (M=357.7; SD=71.2). Personal Feedback (M=263.3; SD=112.3) and Corporate Information (M= 264.7; SD=123.12) were the areas of the least satisfaction and clustered together at the bottom of the rankings.

Impact of CSQ Factors on Productivity

Figure 2 presents the employees' average rating of the impact of each CSQ factor on their personal productivity A 0-100 scale was used with "0" representing no impact, "50" average impact, and "100" maximum impact. Note that each dimension was seen as having an impact on their productivity. Even the lowest mean of 53.6 (SD=30.7) was above the theoretical midpoint.

For company S the Personal Feedback dimension, which was the area of least satisfaction, was perceived as having the greatest impact on personal productivity (M=86.5; SD=12.6). The Communication Climate factor was rated almost as high (M=84.5; SD=15.9). These two factors clustered together and differed significantly from the other dimensions (p<.05).

For company M the Subordinate Communication (M=75.95; SD=22.04) and Personal Feedback (M=74.83; SD=22.74) factors
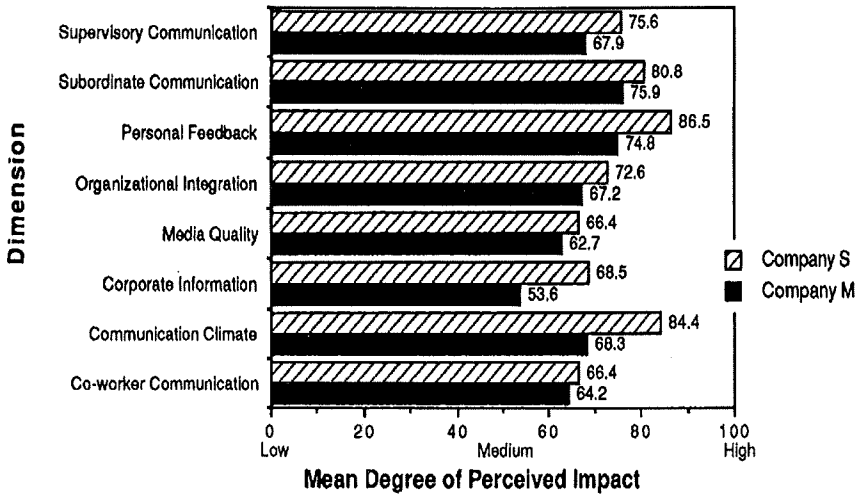
Figure 2. Perceived Impact of Communication on Personal Productivity.

clustered together and were perceived as having the greatest impact on personal productivity. These two dimensions were significantly different from all the other dimensions (p<.05). The Corporate Information (M=53.6; SD=30.7), Media Quality (M=62.69; SD=23.59) and Co-worker Communication (M=64.21; SD 27.25) factors clustered together at the lower end of the scale and differed significantly from the other factors (p<.05).

Content Analysis

Employees were asked to rate and explain the impact of the eight Communication Satisfaction dimensions on their productivity. Content analysis procedures were used to analyze these comments. Space limitations prohibit reviewing all these results. However, four findings were of particular interest and are reviewed below.

First, all respondents were asked to define "productivity." Table 1 presents an analysis of the comments from the Company S employees. The largest percentage (20 percent) of the comments referred to productivity as the amount of work an employee produced, while 19 percent of the responses defined it as "getting the job done." Interestingly, 13 percent of the responses fell in the "customer satisfaction" category.

Table 2 presents a similar analysis of the responses from Company M employees. The highest percentage (24 percent) of the responses referred to the efficient use of time. The quality (14 percent) and quantity (14 percent) of the work were the next most frequent responses. Also note

Table 1
Meaning of Productivity
Company S

Rank	Category	Percentage	n	Representative Comment
1	Quantity	20	15	"How much work gets done."
2	Get Job Done	19	14	"Ability to accomplish assigned responsibilities."
3	Quantity/Quality	16	12	"The quantity and quality of work."
4	Please Customers	13	10	"How good we are with customers."
5	Quality	11	8	"How well you do your job."
6	Best You Can Do	7	5	"Working to the best of your abilities."
7	Goals	5	4	"Accomplishment of predetermined goals."
8	Number of Errors	4	3	"No errors."
9	Timeliness	3	2	"Getting things done on time."
10	Others	2	2	(No example)

Note. Interrater reliability = .91. A total of 7 responses were coded in two categories.

that 12 percent of the responses dealt with achievement of some standard or goal.

Second, Table 3 shows why company S employees gave the Personal Feedback dimension a relatively high impact rating. Apparently, for the greatest number of employees (31 percent), feedback made them feel good about themselves and their work. A number (26 percent) felt it was merely important to know. Interestingly, few respondents distinguished between the effects of positive and negative feedback.

Third, Table 4 shows why employees felt the Feedback dimension had a significant impact on company M productivity. Note that 30 percent of the responses fell in the "it makes me work harder" category while 27 percent of the responses indicated that feedback was "nice to know." Somewhat surprising was the finding that 12 percent of the responses

Table 2
Meaning of Productivity
Company M

Rank	Category	Percentage	n	Representative Comment
1	Time Efficiency	24	32	"How much you get done in a given amount of time."
2	Quality	14	19	"The quality of work we do."
3	Quantity	14	19	"How much work gets done."
4	Standards/Goals	12	16	"Meeting corporate sales goals."
5	Complete Work	10	13	"Accomplishments, getting the job done."
6	Quality/Quantity	10	13	"How much you get done and how well you do it."
7	Best I Can Do	6	8	"Doing as much as you are capable of."
8	Value Added	6	8	"Relationship of the value the person adds to the corporation."
9	Others	4	5	(No example)

Note. Interrater reliability = .90. A total of 13 responses were coded in multiple categories.

were in the "unimportant" category which meant that feedback was of little use.

Productivity Ratings

Figure 3 presents the average ratings given by employees of (a) their own productivity (b) their supervisors' productivity as well as (c) the ratings given by supervisors of employee productivity. A 0-100 scaling device was used. For each of the three ratings, unique "low," "medium," and "high" groups of employees were determined. These employees were rated high, medium, or low, relative to the overall mean scores.

Impact of Communication on Employee Productivity

Based on these groups, an ANOVA was performed for the purpose of detecting relationships between productivity ratings and employee per-

Table 3
How Feedback Impacts Productivity
Company S

Rank	Category	Percentage	n	Representative Comment
1	Morale (feelings)	31	20	"Need approval of work level. Why work if no one cares."
2	Important to Know	26	17	"It's important to know how we are doing."
3	Motivates (task)	21	14	"Feedback makes you want to do a better job, whether it is negative or positive."
4	Receives little	8	5	"I like to be told about job performance but I am not."
5	Sets Expectations	6	4	"It's very different to measure your own performance . . . you need to know what's expected."
6	Depends on Source	3	2	"Feedback depends on the source of it. You must know where the criticism is from."
7	Others	3	2	(No example)
8	No Comment	2	1	(No example)

Note. Interrater reliability = .92.

ceptions of the impact of the CSQ dimensions. When the .05 level of significance was achieved, secondary analyses were conducted in which polynomial curves were computed so as to partition the between-groups sum of squares into linear trend components. Essentially this technique determined if the data could be accurately described by a straight line.

Most of the analyses revealed few trends but there were some noteworthy exceptions. First, company S employees who were deemed by supervisors to be the lowest and medium producers felt that the Personal Feedback dimension had the greatest impact on their productivity (M=91.1; M=88.3). Those employees judged most productive rated feedback as less important (M=82.0). The data fit a linear curve (F=5.9; df=1; p =.02).

Table 4
How Feedback Impacts Productivity
Company M

Rank	Category	Percentage	n	Representative Comment
1	Work Harder	30	38	"I get a lot of feedback . . . about a '95' from a boss because I take it seriously and do what he says."
2	Nice to Know	27	34	"It has some effect. If I feel I am doing a good job it isn't all that important but it's nice to know."
3	Unimportant	12	15	"I don't need feedback from my boss 'cause I know if it works correctly."
4	Like to Know	10	13	"If no one tells me, how do I know? People like to hear how they are doing."
5	Source Dependent	7	9	"It depends on what is said and who says it."
6	Other	6	7	(No example)
7	Want More	3	3	"There isn't enough positive feedback."
8	Negative Demotivates	3	3	"If bad, it has a negative effect on you."

Note. Interrater reliability = .90. A total of 9 responses were coded in multiple categories.

Second, company M employees who rated their supervisor's productivity higher felt that the Supervisory Communication factor had a greater impact on their productivity than those who felt the supervisor's productivity was lower. The data fit a linear curve ($F=17.5$; $df=1$; $p=.00$).

Third, the same trend was found with company M employees for the impact of the Communication Climate and Media Quality factors. That is, a linear relationship existed, such that an increase in rating of supervisory productivity showed a similar increase in the perceived impact of the Communication Climate ($F=11.35$; $df=1$; $p=.00$) and Media Quality ($F=8.75$; $df=1$; $p=.00$) on personal productivity.
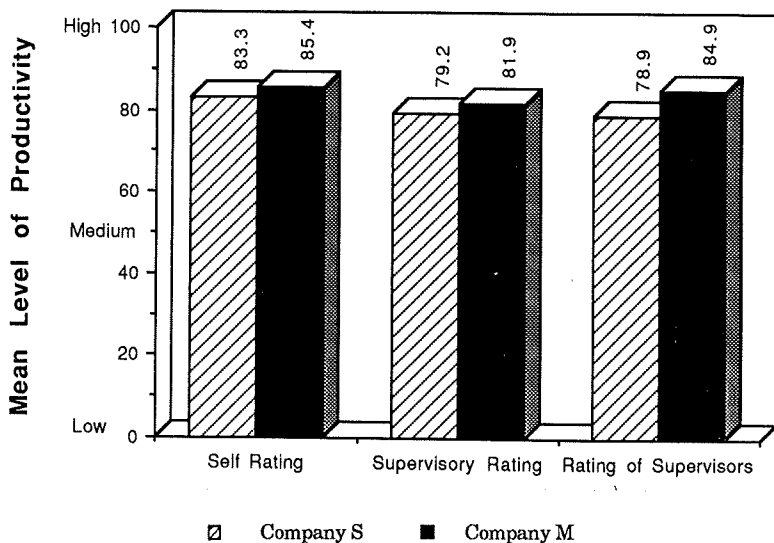
Figure 3. Productivity Ratings

CONCLUSIONS

Eight observations can be made from the above results. The first two observations concern the general relationship between communication and productivity. The third and fourth observations regard internal organizational influences that modify the relationship between communication and productivity. The next three observations focus on how organizational types moderates the relationship. The final observation pertains to some cautionary notes.

First, communication was perceived to have an "above average" impact on productivity. Employees in both companies felt that all eight of the communication satisfaction dimensions impacted their productivity. As seen in Figure 2, the mean scores ranged from 53-87 which is above the conceptual midpoint of 50. Furthermore, in the interviews employees noted numerous specific ways in which each dimension of communication satisfaction impacted their productivity. In fact, when the CEO of company M was initially asked about the impact of communication on productivity, he responded, "That's all I have to get the job done." Clearly, such a finding is congruent with previous research (Lull et al., 1955; Tubbs & Hain, 1979).

Second, the communication satisfaction factors differentially impacted productivity. No doubt communication consultants would find

it encouraging that this study demonstrated that communication had an "above average" impact on productivity. However, of equal significance, the data analysis revealed that certain communication factors were perceived as having greater effects on productivity than others. These findings are discussed below.

1. The Personal Feedback factor had a significant impact on productivity in both companies. Employees in Company S ranked the feedback dimension first in terms of impact on productivity with an average of 86.5 (0-100 scale). The most frequent rationale (31 percent) given for this rating was the impact on morale (see Table 3). Company M employees rated the impact of feedback on productivity at 74.8 (0-100 scale). Only one dimension, Subordinate Communication, was rated higher. Yet, this factor was only completed by those in a supervisory capacity. Moreover, t-tests revealed no significant differences between these dimensions but they did differ significantly from all the other dimensions. The major reasons employees cited for their impact scores were that feedback made them "work harder" and that "it's nice to know."

   The interviews provided more evidence of the importance of feedback. When company S employees were asked to recall a specific incident that increased their productivity, over 70 percent of the responses involved examples in which the employee received some type of feedback. Likewise, over 50 percent of company M's employees responded in a similar fashion to this question.

2. Communication with co-workers, meetings and memos (Media Quality), and corporate-wide information had relatively low impacts on productivity. The means for these three factors are all above the conceptual midpoint, but compared to the other factors these scores were the lowest (see Figure 2). While employees in both companies indicated that they received useful communication from these sources, they suggested that other sources, such as the supervisor, were more critical communication concerns.

   While no causal implications can be drawn from these results, employees seem to believe that more effective communication in particular areas could enhance their productivity. Hence, general communication training is less likely to have the

desired effect on productivity improvement than more focused training on issues like personal feedback.

Third, the impact of communication on productivity varies with job design and information utility. One of the most striking aspects of the interviews was the large number of employees who rated a given dimension low in impact because their jobs involved little of that type of communication. For instance, 31 percent of the Company S employees justified their numerical rating of the impact of Supervisory Communication on the basis of "knowing their job." That is, they felt that they knew their job responsibilities and duties well enough that the supervisor had less of an effect on them. In short, the job was designed in such a manner that after initial training, the employees needed little direct supervision.

The other major factor that influenced the impact scores was the utility of information. The Corporate Information factor was rated low in impact in both companies. Yet, closer examination of the data shows the ratings varied widely depending on the level in the hierarchy of the employee. As Figure 4 clearly shows, those in higher management and supervisory positions felt that information about the corporation as a
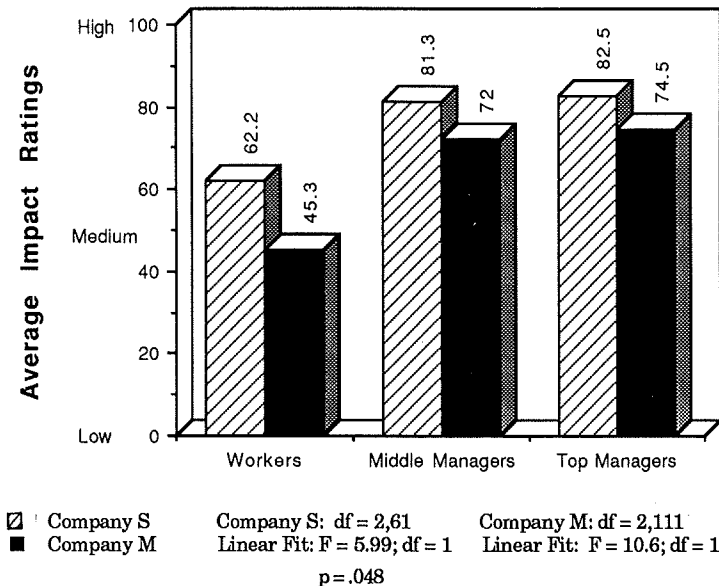

Figure 4. Perceived Impact of Corporate Information on Productivity.

whole had a more significant impact on their productivity than did nonsupervisory employees. Indeed, both sets of data fit a linear curve. These managers used such information on a daily basis, while most employees had little daily use for such communication. On the other hand, feedback was ranked high in impact for both supervisory and nonsupervisory employees because it provided useful information and motivation that no other source could provide.

This observation suggests that the relationship between any given communication factor and productivity is a fairly complex one. For instance, interventions designed to increase productivity may have one effect at one level of the organization and a quite different one at another level. Hence, any recommendations to improve communication in an organization must take into account the impact of the suggestions on the different subsystems within the organization.

Fourth, the satisfaction level associated with a CSQ factor did not appear to be necessarily linked to the impact of that factor. Just because an individual was dissatisfied with a particular area of communication did not imply that this area affected his or her productivity adversely. Nor did satisfaction with an area ensure that the person felt that the factor was important.

Personal Feedback, for example, was perceived as having one of the greatest impacts on productivity but was also the area in which subjects felt the least amount of satisfaction. However, Co-worker Communication was an area of high satisfaction in both companies, but it was deemed to have a low impact on productivity. Corporate Information, by contrast, was an area of low satisfaction and low impact for both organizations. Thus, just about any configuration of satisfaction level and productivity impact was found in this study.

Past researchers have often assumed that the greater the dissatisfaction, the more significant was the "problem." However, the implication of this finding is that this assumption is not always warranted. Thus, organizational auditors should also be concerned with the degree to which a given communication variable relates to key organizational outcomes.

Fifth, employees in the two companies had somewhat different conceptions of productivity. While employees in both companies made similar and perhaps predictable comments about the meaning of productivity, including quality, quantity, and goal attainment, there were differences. For example, 13 percent of the savings and loan employees noted that "pleasing the customer" was an important dimension of productivity. No one in the manufacturing plant mentioned this aspect of productivity.

The savings and loan employees focused more on external measures of productivity like customer satisfaction, while Company M focused on internal measures such as meeting time, quality, and quantity goals.

This type of orientation may be indicative of general differences between the service and manufacturing organizations. Service organizations have direct customer contact and, in order to be successful, need an external focus. On the other hand, manufacturing organizations are indirectly connected to the customer and thus tend to gauge productivity by internally generated standards.

The implication of this observation for researchers is that generalizing results across different types of organizations may at best be difficult and at worse misleading. Effectiveness is judged in a variety of ways and the way communication (or almost any other variable) is linked to productivity is bound to vary. Indeed, these results support the conclusion of Lewis et al. (1982) that organizational type moderates the link between communication and productivity. The communication consultant also should be aware that the different conceptions of productivity imply that one kind of training might work best in a service industry but be less useful in the manufacturing setting.

Sixth, the service industry employees had a greater emphasis on how the relational aspects of communication affected their productivity. One of the traditional ways to account for the impact of communication is to suggest that communication serves four basic functions in an organization—task, maintenance, human, and innovation (Goldhaber, 1983). The number of times employees used relational (human) reasons to explain their impact ratings proved revealing. (The other three categories did not prove unique.) Table 5 lists each CSQ factor along with percentage of comments about relational aspects of communication for the respective companies. In every case, except for the Communication Climate factor, the Savings and Loan employees (company S) expressed more concern about the effects of interpersonal relationships on productivity than did the employees of the manufacturing plant (company M).

Perhaps the nature of the "product" and the types of people attracted to these organizations can account for these apparent differences. The service industry demands that employees be more sensitive to customer needs because that is the measure of effectiveness. Hence, they may become more cognizant of how a relationship may impact productivity. Yet, manufacturing employees have other measures of effectiveness that focus less on personal relationships. Hence, they become less sensitive to how relationships impact their productivity.

Table 5
Interpersonal Relationship Comments
Influencing Productivity Impact Ratings

CSQ Dimension	Relationship Issues Given as Explanation for Impact Rating	
	Company S	Company M
Supervisory Communication	21	6
Co-Worker Communication	48	21
Organizational Integration	11	6
Corporate Information	—	—
Communication Climate	29	33
Feedback	—	—
Media Quality	—	—
Subordinate Communication	33	23

Note. Table values are percents.

Seventh, feedback impacted productivity scores in different ways for each company. In company S a negative linear trend was found. Employees more highly rated by their supervisors on productivity, tended to believe that Personal Feedback had less impact on their productivity. Yet, individuals rated lower in productivity felt that feedback had a relatively greater effect on their productivity.

Employees from Company M did not feel that same way. A linear relationship was not found. Indeed, individuals in the "high" and "low" productivity groups felt feedback had a relatively greater effect on their productivity than the "medium" group.

Ultimately these findings indicate that feedback had different effects on different people. One explanation for the savings & loan finding might be that "high"performers were impacted less by feedback because they had a greater degree of self-corrective feedback. Indeed, 31 percent of the employees felt "knowing their job" accounted for their impact ratings on the Supervisory Communication factor. One employee said, "I've been here a long time, so I don't need his assistance." Presumably, she also felt that she did not need his feedback about the effectiveness of her performance. The job design or length of time at a particular job may influence how external feedback from others impacts productivity.

One of the most curious findings was that the moderately rated performers from company M felt that Personal Feedback had an "above average" impact on their productivity but it had a comparatively less impact than for the "high" and "low" productivity groups (see Figure 5).
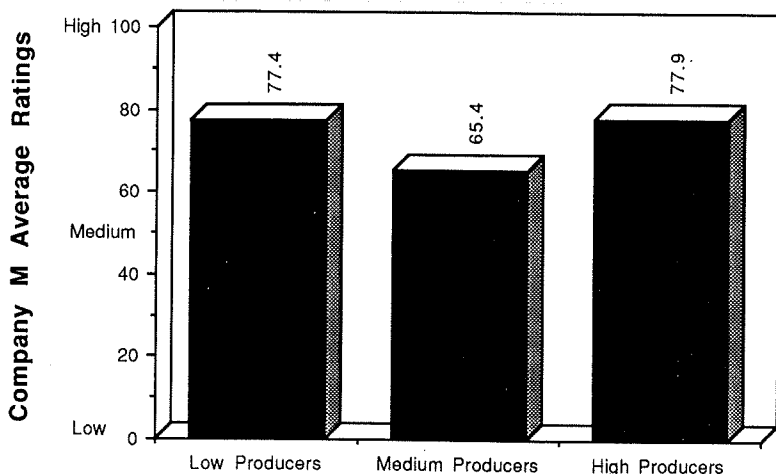
Figure 5. Perceived Impact of Feedback on Productivity

Why? Many explanations are possible. But it is intriguing to note that the "medium" group was also the group most satisfied with Supervisory Communication.

Satisfaction with the supervisory relationship could indicate that these employees were less dependent on explicit feedback about their performance. In fact, the groups *cannot* be distinguished on the basis of their satisfaction with Personal Feedback, but only in terms of satisfaction with Supervisory Communication. Employees may have reasoned: "Since I communicate effectively with my supervisor and we seem to have a positive relationship, then my productivity must be acceptable. I may not get a lot of feedback, but that is fine because the supervisor would surely tell me." The "high" and "low" groups did not enjoy such a positive relationship and could not assume that the information would be communicated. The fallacy in the "medium" group's reasoning is that just because employees feel satisfied with supervisory communication does not necessarily imply that supervisors accurately and effectively provide feedback performance.

Kim (1975) noted that employees who received feedback tended to be more productive. While this case study clearly points to the importance of feedback, the results also indicate that the relationship is more complex than originally thought. Since feedback is such a critical part of organizational life, the precise nature of the relationship between feedback and productivity may warrant closer examination.

Eighth, the generalizability of these findings should be tempered because of the unique characteristics of each organization and the use of perceptual data. In each of the conclusions presented above, the focus was on broad areas of difference that may be indicative of service and manufacturing organizations. Any two organizations are certain to have idiosyncratic differences. Parcelling out which differences are idiosyncratic and which can be generalized is a tricky business.

During the course of the research it became apparent that the generalizability of certain conclusions could be hampered for three reasons: (a) company S was in a transitional state, while company M was in a state of steady growth; (b) the top administrative staffs of the two organizations had remarkably different job satisfaction levels; and, (c) the apparent weaknesses of the organizations differed in various ways.

The focus of this study was on how the *type* of organization may moderate the relationship between communication and productivity, not how *idiosyncratic* organizational differences alter the relationship. Inevitably these differences do enter into the research. This is one of the hazards of field research.

Another concern is the perceptual nature of the data. As most organizational consultants can testify, employee perceptions may or may not be grounded in reality. By identifying some of the potentially confounding variables, we hope the conclusions reached can be appropriately framed.

In sum, this exploratory study did confirm that employees perceived that different communication factors impinged on their productivity in a variety of ways. The degree of impact and the reasons for the impact varied. In addition, the type of organization was seen to moderate the link between communication and productivity. Therefore, future theoreticians seeking to explain the relationship between communication and productivity will have to account for both internal and external organizational influences. Future practitioners as well as scholars will have to be more precise in their approaches in order to cope with what appears to be a fairly complex relationship between communication and productivity.

NOTES

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[1]Some researchers have a much broader definition of "communication climate." Falcione, Sussman, and Herden (1987) provide an excellent review of the different operationalizations of "communication climate" including the CSQ construct.

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