

TYPES OF UPWARD COMMUNICATION AND ORGANIZATIONAL CHARACTERISTICS IN JAPANESE FIRMS

TOSHIHIKO KATO^{*}, TSUYOSHI NUMAGAMI^{*}, MASARU KARUBE^{**},
AND MASATO SASAKI^{*}

Abstract

Different types of upward communication in organizations have been examined from various points of view. However, few studies have directly discussed the difference between these types. This paper focuses on two types of upward organizational communication from middle managers to general managers in a business unit—the upward information flow of strategic ideas and the upward information flow of operational problems—and examines the impact of organizational factors on each of the upward information flows. Analysis of a questionnaire survey of 137 business units in 21 Japanese firms reveals that while the upward flow of strategic ideas tends to be affected by organic and employee-oriented factors, the upward flow of operational problems is predominantly influenced by factors related to mechanistic management systems and to a superior's power. The results suggest that a “soft” management approach toward subordinates could contribute to the activation of an organizational process of strategic formation, but might be ineffective in encouraging them to send bad news up to their superiors.

I. *Introduction*

Sufficient communication among the members of an organization is a critical key to effective organizational management. In addition to downward communication from the higher to lower levels in a hierarchy, both upward communication from the lower to higher levels and lateral communication within the same level are requisite for the proper functioning of an organization as a whole.

Among the three basic categories of organizational communication, upward communication has unique characteristics and plays an important role in organizational management, although many managers are uninterested in it and remain ill-equipped to properly respond (Glauser, 1984). Moreover, there are organizational and personal obstacles to realizing appropriate upward communication between subordinates and their superiors. Superiors do not generally want to receive negative information from subordinates (Morrison & Milliken, 2000; Tourish, 2005; Grant, Parker & Collins, 2009), and, even if they do not deliberately avoid receiving information from their subordinates, the superiors, as the nerve centers upon which much

^{*} Graduate School of Commerce and Management, Hitotsubashi University, Naka 2-1, Kunitachi, Tokyo 186-8601, Japan

^{**} Institute of Innovation Research, Hitotsubashi University, Naka 2-1, Kunitachi, Tokyo 186-8603, Japan

information converges (Mintzberg, 2009), do not always have the capability to attend to or deal with it (Huber, 1982; Dutton & Ashford, 1993; Dutton et al., 2001). Neither are subordinates willing to supply their superiors with their ideas and opinions at the expense of their reputations and careers (Roberts & O'Reilly, 1974; Eisenberg & Witten, 1987; Kassing, 2002; Milliken, Morrison & Hewlin, 2003). In addition, structural factors, such as communication channels between the sender and receiver and centralized decision making systems, can interfere with smooth communication (Athanassiades, 1973; Jablin, 1982; Morrison & Milliken, 2000). Thus, the issue of upward communication is important for organizational management, but difficult to resolve.

Another complication is that upward communication in an organization is not a homogeneous phenomenon. There are varieties of upward organizational communication, and the differences between them can affect the state of upward communication (Read, 1962; Baron, 1996; Tourish & Robson, 2006). This paper analyzes the impact of organizational factors on two different types of upward communication. Our examination of the results of regression analysis of answers to a questionnaire survey of major Japanese firms reveals that the two types of upward communication—the upward information flow of strategic ideas and the upward information flow of operational problems—are affected by contrasting organizational factors, and that some of these relationships are also inconsistent with hypotheses presented in previous studies.

II. *Research Background*

Upward communication in organizations was already discussed in the 1950s (e.g., Kelley, 1951; Cohen, 1958). Since then, management scholars have examined the factors and conditions that affect upward communication from diverse perspectives.

One of the phenomena related to upward communication has recently been discussed under the label of “organizational silence” (Morrison & Milliken, 2000; Milliken et al., 2003; Bowen & Blackmon, 2003; Park & Keil, 2009), defined as a situation in which employees tend to withhold their opinions and concerns about organizational problems (Morrison & Milliken, 2000). Proponents of this concept consider that this phenomenon is a dangerous impediment to organizational change and development, since it could hamper effective organizational decision making by choking off multiple or divergent points of view. The situation is thought to derive from the defensive behavior of employees. Park & Keil (2009) focused on the issue of reporting bad news at the worksite to a superior in information technology projects, and empirically tested the hypotheses that Morrison & Milliken had proposed.

In contrast, the notion of “issue selling” concerns employees’ proactive behavior meant to send signals to upper management (Dutton & Ashford, 1993; Dutton, Ashford, O’Neil & Wierba, 1997; Dutton et al., 2001; 2002; Ling, Floyd & Baldrige, 2005; Howard-Grenville, 2007). Issue selling is “the process by which individuals affect others’ attention to and understanding of the events, developments, and trends that have implications for organizational performance” (Dutton et al., 2001). Specifically, Dutton, Ashford, and their colleagues were mainly interested in the issue-selling behavior of middle managers (Dutton & Ashford, 1993; Dutton et al, 1997; 2001), in their position between the upper and the operational levels in an organization. That is, middle managers not only know what really happens at an operational

level but also have the means to direct an upper manager's attention to and understanding of issues to which they attach importance. By proposing an important issue for the upper echelons, middle managers can significantly contribute to a firm's strategy and influence organizational effectiveness.

These two streams of research differ in focus, though they sometimes refer to each other. While the studies on organizational silence focus on negative and problematic situations in an organization, studies on issue selling deal with the positive and constructive side. More importantly, the difference between the two may also reflect the type of upward communication that each of them examines, at least implicitly. The former tends to deal with the transmission of problems at the operational level, as Park & Keil's study (2009) exemplifies, while the latter is fundamentally keen on proposing strategic ideas from middle management—although the notion of issue selling can be applied to issues outside the firm's strategy in a narrow sense (e.g., Dutton et al., 2002).

This distinction is not confined to the streams of recent studies, but is also associated with a broader range of theoretical discussions. In the conventional literature on upward communication, researchers were likely to presuppose that upward information in an organization was some problem or bad news at the operational level. For instance, Rosen & Tesser (1970) presumed the difference between bad news and good news to be the critical variable in their experimental setting. They proposed a notion called the "MUM effect"—an acronym for keeping "Mum about Undesirable Messages" to the recipient. Specifically in early studies, even in the management field, upward information containing strategic ideas might not be posited, since scholars of the time might assume that the upper echelons of a hierarchy had exclusive responsibility for strategy formulation in a firm.

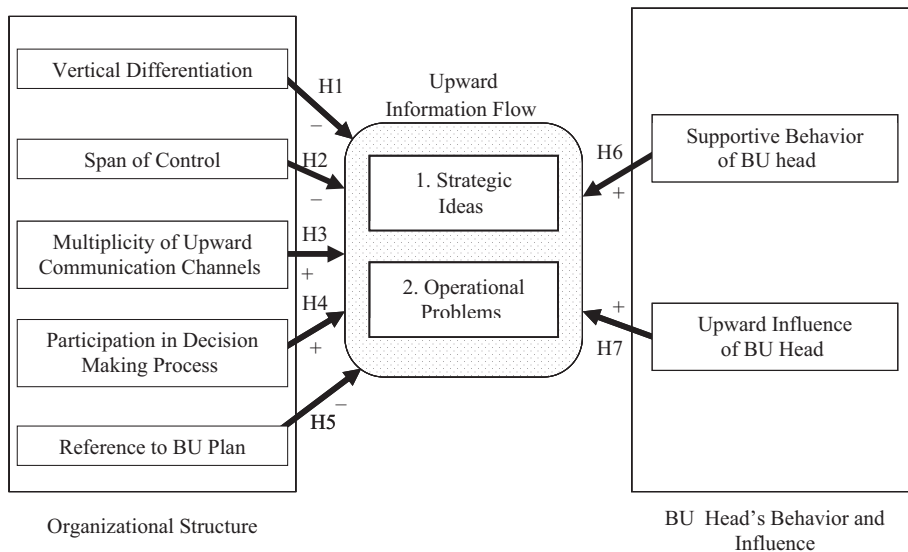
On the other hand, the upward communication of strategic ideas from middle managers is closely related to a novel perspective on the strategic process: not only top management but middle managers, too, can play an important role in the process of strategy formation. Bower (1970) initially discussed the idea that managers at multiple levels, including the middle, were involved in strategic planning and investment decisions. Some later studies, such as Burgelman (1983) and Nonaka (1988), also held similar points of view. This kind of perspective is associated with the idea that realized strategy is composed not only of deliberate actions but of unintended consequences called emergent strategy (Mintzberg & Waters, 1985). In line with the theoretical position of this research, Floyd & Wooldridge (1990; 2000) investigated paths from the involvement of middle managers in the formation of strategy to the firm's performance. As Dutton & Ashford (1993) referred to many of these works as core theoretical elements, these studies are closely related to the notion of issue selling.

Based on the above discussions, we presume that there are critical differences between the two types of upward communication. However, few previous studies have explicitly dealt with this issue, and this is the main reason for our examination of the different types of upward communication.

III. *Hypotheses*

In this paper, we consider organizational structure and the behavior of superiors to be independent variables. However, it is not only these organizational variables that are considered

FIG. 1 HYPOTHETICAL RELATIONSHIPS



to have an influence on upward communication in an organization. Jablin (1982) pointed out that the academic tradition of organizational communication study is basically classified into psychology-oriented research, whose major focus is on individuals and dyads, and sociology-oriented research, whose focus is at the group and organizational level; to date, this division seems successful. We do not regard individual attributes and positions as trivial, as do some of the studies mentioned above in the psychology-oriented category. However, this paper focuses on an organizational-level issue because organizational factors are managerial variables that cannot be ignored. In fact, Bacharach & Aiken (1977) reported that organizational factors, including structural variables, explained approximately 50 percent of the variance in the frequency of subordinate communication.

We apply the same hypotheses to both types of upward communication, because the main purpose of this paper is to examine whether there is a critical difference in the influence of organizational factors on each of the two variables. Neither could we find any propositions or hypotheses in the previous literature that explicitly mentioned the difference between the types of upward communication.

Subject to the premises, we propose seven hypotheses on the relationships between organizational factors and upward communication in an organization. Figure 1 shows the whole set of hypotheses linking seven organizational variables and two types of upward information flow in a hierarchy.

1. Organizational Structure

Structure is one of the most important aspects of an organization, because it constrains members' behavior, at least in theory. Whereas structural aspects of an organization had been

actively discussed in organization studies (e.g., structural contingency theory) until the early '80s, these kinds of factors can still contribute to elucidating contemporary issues in an organization (Donaldson, 2001).

Among various elements of structure, the configuration of communication lines and channels can be directly associated with the state of upward communication. The basic formal aspect of the configuration has been described by two dimensions of organizational shape—the “height” and “width” of an organization. These variables are conventionally constructed as vertical differentiation and span of control, and represent the structural complexity that can affect organizational communication (Bacharach & Aiken, 1977).

Vertical differentiation is the formal structure reflecting the hierarchical division of labor in an organization and can be regarded as sequential links in an upward communication system (Glaser, 1984). The taller the organization, the more links through which information passes to reach the target of upward information. Accordingly, the degree of hierarchical links can have a negative impact on the quantity and quality of upward communication. Dutton et al. (1997) showed that a distant relationship between the seller and his/her target had a negative effect on issue selling. According to their research, a high degree of vertical differentiation between the two can worsen the relationship.

The width of formal communication lines can be associated with upward communication as well. Brewer (1971) held that a narrower span of control tended to increase the degree of both upward and downward communication, because superiors interacted with subordinates more continuously and frequently, although this was not always supported in other studies (e.g., Jablin, 1982).

Hypothesis 1 (H1). The more vertically differentiated an organization, the lower the degree of upward communication.

Hypothesis 2 (H2). The greater the span of control in an organization, the lower the degree of upward communication.

Besides formal lines, informal channels of communication can also be related to upward communication. Glaser (1984) contended that parallel upward channels could have a positive effect on upward communication in an organization. According to his idea, the multiplicity of communication channels provided by informal ties can increase the degree of upward communication. Furthermore, Tourish (2005) stated that informal interaction was more likely to facilitate honest two-way communication, while a manager's over-reliance on official communication channels led to his/her being out of touch with what is happening at the operational level.

Hypothesis 3 (H3). The greater the number of informal communication channels in an organization, the higher the degree of upward communication.

In addition to an organization's shape and informal communication channels, the dimension of centralization-decentralization can also be an important aspect of organizational structure in the investigation of upward communication. Morrison & Milliken (2000) pointed out that centralization of decision making was one of the key variables affecting the organizational climate of silence in their model. Park & Keil (2009) conducted a role-playing experiment in IT projects that supported the relationship postulated by Morrison & Milliken.

In contrast, participation in decision making is one way to decentralize the decision

making system in an organization. Harrison (1985) reported that participation in decision making was positively associated with the quantity and quality of communication between subordinates and their superiors. Krone (1992) also noted that subordinates' perception of participation in decision making increased the amount of communication between superiors and subordinates. In terms of sending up strategic ideas, participation in the strategic formation process via such things as strategy workshops contributes to the emergence of strategy (Hodgkinson, Whittington, Johnson & Schwarz, 2006).

Hypothesis 4 (H4). The more subordinates participate in decision making, the higher the degree of upward communication.

We consider the type of coordination to be the fifth variable of organizational structure. In order to function properly, every organization must have suitable coordination mechanisms. These are classified into two different types—feedback or mutual adjustment, and planning or programming (Hage, Aiken & Marrett, 1971; Mintzberg, 1983). Feedback or mutual adjustment is directly linked to interpersonal communication, while planning or programming is its functional alternative (although, in practice, both mechanisms are used concurrently), because the mechanism of planning or programming theoretically makes direct communication among members unnecessary. Thus, we predict that an emphasis on planning as a coordination mechanism reduces organizational communication. Moreover, this hypothetical relationship is also suggested from studies on the strategy formation process discussed above, chiefly because pre-planned strategy contrasts conceptually with emergent strategy (Mintzberg, 1994).

Hypothesis 5 (H5). The more subordinates refer to planning, the lower the degree of upward communication.

2. Superior's Behavior and Influence

Since a superior's action affects a subordinate's thinking and behavior in general, some aspects of a superior's characteristics should be considered when examining upward organizational communication. Although subordinates may feel that there are important problems around them, they may be reluctant to report them to a superior if they presume that the superior is unlikely to respond properly and that their actions might be in vain (Milliken et al., 2003). In addition, Dutton et al. (2002) showed that the qualities of top management had some impact on female subordinates' decisions on whether to attempt to sell gender equity issues. In this sense, the behavior and attitude of a superior can have an influence on the level of communication from subordinates.

One characteristic of a superior that can be related to upward communication is whether a superior is supportive of subordinates. In particular, a superior's willingness to listen to a subordinate's voice can be a critical factor encouraging upward communication, because the degree of willingness may affect the subordinate's motivation to send up news and opinions (Dutton & Ashford, 1993). Dutton et al. (1997) reported that more than half of the informants in their research mentioned top management's willingness to listen as a key determinant of subordinates' decisions on issue selling. In contrast, if a superior discourages upward communication or reacts hostilely, subordinates tend to withhold their opinions (Morrison & Milliken, 2000).

Hypothesis 6 (H6). The more supportively a superior behaves toward subordinates, the higher the degree of upward communication.

In addition to supportive behavior and attitude, the upward influence of a superior can also have a positive impact on upward communication from subordinates. Trust between superiors and subordinates affects the state of upward communication (Milliken et al., 2003), and such trust and confidence are partly established by the upward influence of a superior (Jones, James & Bruni, 1975). Jablin (1980) also reported that the upward influence of a superior had a positive impact on the openness of a subordinate.

Hypothesis 7 (H7). The greater the upward influence of a superior, the higher the degree of upward communication.

IV. *Research Method*

1. **Sample**

In order to test these hypotheses, we analyzed data collected from Japanese business organizations. Our research group has been conducting a questionnaire survey on organization and strategy in large Japanese firms biennially since 2005. For the analysis in this paper, we utilized data from the third survey in 2009.

In the course of the survey, we first conducted interviews in person or by email and phone with corporate staff managers. The main goals of these interviews were to identify the business units in each firm, three basic functions, and individual respondents in each business unit, since a business unit—the unit of analysis in our study—could not always be clearly identified as an independent product or geographic division in a formal organizational chart. After the interviews, we sent questionnaires to the respondents from January through March 2009 via a staff manager of the corporate personnel or planning department. In total, we collected 874 responses from 137 business units in 21 Japanese firms. Since the unit of analysis in this study is a business unit (BU) in the firms, we then created each BU-level measure for our analysis by calculating the average score of at least six responses to each questionnaire item collected from middle managers in each business unit.

The sample BUs are mainly in the manufacturing sector, including electronics, chemicals and pharmaceuticals, foods and beverages, and so on, as well as several BUs in retailing and transportation services. The size of the BUs measured by the number of full-time employees ranges widely, with the smallest having 10 employees, the largest over 6,000, and the arithmetic mean being 475. The annual sales of BUs in FY2007 range from one billion yen (about \$11 million) to approximately 3 trillion yen (about \$33 billion), with a mean value of 139.8 billion yen (roughly \$1.5 billion).

2. **Measures**

Upward information flow of strategic ideas. The upward information flow of strategic ideas from middle managers to the head of a BU (general manager) is a dependent variable that is

related to the involvement of middle managers in the process of strategy formation in a BU. In order to measure the variable correctly, we adopted an original measurement constructed from the questionnaire. We asked the following question in the survey: "Supposing that the total amount of information you have with regard to the strategic direction your BU should follow is equal to 100 percent, what percentage of it do you believe your BU's general manager receives?" Responses were recorded using a ten-point scale, ranging from 1 (= less than 10 percent) to 10 (= more than or equal to 90 percent) with a 10 percent interval for every 1 point.

Upward information flow of operational problems. The upward information flow of operational problems from middle managers to the head of a BU is the other dependent variable. This variable concerns the proper transmission of bad news at an operational level from a person who is directly involved in a problem to one who is in charge of managing the whole business unit. We asked the respondents to subjectively evaluate the following question: "Supposing that the total amount of bad situations and news at an operational level that your BU general manager should know is equal to 100 percent, what percentage of it does your BU general manager really know?" Responses were recorded using a ten-point scale, as with the first dependent variable.

Responses regarding the two dependent variables were separately converted into actual values, and they are used in the analysis.

Vertical differentiation. In order to measure this variable, we asked this question: "How many persons mediate between you and your BU general manager when you want to accurately transmit critical information to the general manager via formal lines?" The value of each response plus two (for the respondent and BU head) is equal to the number of layers in an ordinary form of hierarchy.

Span of control. Span of control was measured by the number of subordinates assigned to the immediate superior of a respondent. The number includes the respondent him/herself.

Multiplicity of informal communication channels. We measured the multiplicity of communication channels by asking the respondents for the number of their personal ties with higher-ranked persons within a business unit. The responses were assessed on a nine-point scale (from 1 = "10 people or fewer" to 9 = "more than 500") by asking the respondents the following question: "How many acquaintances of senior status do you have in your BU whom you recognize by his or her name and face?" We converted this into the actual number of acquaintances and utilized the converted value in the analysis. We regard this averaged variable as representing a sort of organizational characteristic, because it captures an aspect of communication channels ascribed mainly to each BU. The logarithmic value of this variable was used in the analysis.

Participation in decision making process. We measured this variable by asking the following question: "How much can you actively participate in the process of setting the goals you should achieve?" A seven-point scale was constructed (from 1 = "completely disagree" to 7 = "completely agree").

Reference to a BU plan. In order to examine this variable, we specifically focused on the status of a formulated BU plan. The concrete question in the survey was as follows: "How

much do you refer to a formally formulated plan in your BU when you perform tasks for your BU?" The scale ranged from 1 ("completely ignore it") to 7 ("unable to do anything without it").

Supportive behavior of the BU head. In general, the supportive orientation of a leader is a multidimensional construct. We also asked three questions concerning supportive behavior by the head of a BU in the survey. However, in accordance with previous studies on upward communication (Dutton & Ashford, 1993; Dutton et al., 1997, Morrison & Milliken, 2000), we adopted only one of the three questions, inquiring into the degree of willingness of a BU head to listen to subordinates, as the variable of supporting behavior in the analysis. The respondents assessed it on a seven-point scale.

Upward influence of the BU head. In the questionnaire, we surveyed three different types of BU head influence: (1) influence on top management, (2) influence on other departments and BUs, and (3) influence on suppliers and customers. The narrow definition of upward influence of a BU head is limited to influence on top management. However, the essential effect of upward influence is ascribed not to the object of influence but to the effective implementation of tasks of which the focal person is in charge. We thus regarded all three variables as consistent with the notion of upward influence, and used the arithmetic means of the three items as the variable of upward influence in the analysis (Cronbach's alpha = .815). Each of the three question items was assessed on a seven-point scale.

V. Results

Table 1 summarizes the descriptive statistics of the nine variables and correlation coefficients among them. According to this table, although there is a significant relationship between the two variables of upward information flow, the distribution of correlation coefficients between each of the dependent variables and the seven independent variables is different. All the coefficients between upward information flow of strategic ideas and independent variables are significant at the 5 percent level. On the other hand, only four correlation coefficients with upward information flow of operational problems are significant at the 5 percent level. Another point is that the signs of the coefficients between upward information flow and each of the two variables—multiplicity of upward communication channels in a BU and reference to a BU strategic plan—are contrary to our predictions.

Table 1 also shows the r_{wg} scores of the subjectively assessed variables to check the agreement on each of the variables among the respondents within a BU. Though the scores of the two dependent variables are not high enough to confirm the existence of agreement in a BU, we assume that these results reflect a situation that each respondent faces, at least in part. In other words, the variables of upward communication can also be affected by an individual context in an organization. This assumption is consistent with previous studies suggesting that individual situations affect the state of upward communication (e.g., Withey & Cooper, 1989; Milliken et al, 2003). Therefore, we use the arithmetic means of responses for each upward communication variable within a BU in the following analysis.

We would like to now consider the results of the multiple regression analysis. The results of different types of OLS models are shown in Table 2. The difference between Model I and II

TABLE 1. DESCRIPTIVE STATISTICS AND CORRELATION MATRIX

	Mean	rwg	Correlation Matrix									
	SD		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
(1) Upward Information Flow of Strategic Ideas (%)	50.986 13.597	.347	1									
(2) Upward Information Flow of Operational Problems (%)	72.628 9.167	.615	.395**	1								
(3) Vertical Differentiation	1.475 .644	—	-.489**	-.161	1							
(4) Span of Control of the Immediate Superiors	5.046 2.564	—	-.213*	-.061	.116	1						
(5) Multiplicity of Upward Communication Channels in BU ^{*1}	33.964 23.047	.817	-.469**	-.190*	.545**	.205*	1					
(6) Participation in Decision Making Process ^{*2}	5.738 .521	.753	.325**	.099	-.083	.031	-.046	1				
(7) Reference to BU Strategic Plan ^{*2}	5.764 .502	.809	.239**	.378**	-.137	.017	-.071	.289**	1			
(8) Supportive Behaviors of BU Head ^{*2}	4.932 .569	.756	.301**	.175*	-.056	-.087	-.001	.264**	.110	1		
(9) Upward Influence of BU Head ^{*2}	5.077 .630	.979	.220*	.371**	-.038	.022	.111	.103	.218*	.283**	1	

Note: $N = 137$, ** $p < .01$, * $p < .05$

*1: Logarithmic value of the variable is used in the correlation analysis.

*2: Seven-point scales.

is in the dependent variable: Model I adopts upward information flow of strategic ideas as a dependent variable and Model II employs the flow of operational problems.

In the three types of Model I, two of the three variables concerning communication channels in an organization are negatively associated with the upward flow of strategic ideas. According to the results, *H1* (vertical differentiation) is supported and *H2* (span of control) is not. With regard to *H3*, which is concerned with the multiplicity of upward communication channels, the coefficient is statistically significant at the 1 percent level, but the sign is contrary to our prediction. In other words, a multiplicity of upward communication channels can worsen strategic information flow from middle managers to their BU head.

In the other two structural factors of Model I, while *H4* (participation in decision making process) is supported, *H5* (reference to a BU strategic plan) is not. The two variables of a BU head's behavior and influence are positively associated with the dependent variable in the integrated model, Model I-3, as we predicted, although the relationships are relatively weak.

On the other hand, the results of Model II, whose dependent variable is upward information flow of operational problems, are considerably different from the results of Model I. In Model II-3, only two of the five structural variables—span of control and multiplicity of upward communication channels—have the same tendency as in Model I: *H2* is not supported and the coefficient of multiplicity of upward communication channels is negative. Contrary to

TABLE 2. RESULTS OF REGRESSION ANALYSIS

Model I. Dependent Variable: Upward Information Flow of Strategic Ideas

	Model I-1	Model I-2	Model I-3
Independent Variables			
Vertical Differentiation	-.294**		-.268**
Span of Control of the Superiors	-.135		-.117
Multiplicity of Upward Communication Channels	-.262**		-.303**
Participation in Decision Making Process	.262**		.213**
Reference to BU Strategic Plan	.107		.068
Supportive Behaviors of BU Head		.260**	.166*
Upward Influence of BU Head		.146	.162*
<i>N</i>	137	137	137
F-value	17.907**	8.318**	16.257**
Adjusted R ²	.383	.097	.440

Model II. Dependent Variable: Upward Information Flow of Operational Problems

	Model II-1	Model II-2	Model II-3
Independent Variables			
Vertical Differentiation	-.032		.006
Span of Control of the Superiors	-.035		-.052
Multiplicity of Upward Communication Channels	-.141		-.204*
Participation in Decision Making Process	-.015		-.045
Reference to BU Strategic Plan	.368**		.302**
Supportive Behaviors of BU Head		.076	.062
Upward Influence of BU Head		.349**	.316**
<i>N</i>	137	137	137
F-value	5.423**	11.165**	7.056**
Adjusted R ²	.140	.130	.238

Note: Standardized coefficients are shown in each cell of the independent variables.

** $p < .01$, * $p < .05$

the results of Model I, *H1* (vertical differentiation) and *H4* (participation in decision making process) are not supported in Model II-3. While *H5* (reference to a BU strategic plan) is not supported in this model, the coefficient is significant at the 1 percent level. In regard to BU head behavior and influence, only the upward influence of the BU head has a positive impact on the upward flow of operational problems in Model II.

The results are summarized in Table 3. We can identify some important points in the analysis. First, two structural factors—vertical differentiation and participation in decision making—can have impact on the upward information flow of strategic ideas, as expected from the previous literature, but do not have significant effects on the flow of operational problems. Interestingly, this negative impact of vertical differentiation on upward communication was discussed in earlier studies (e.g., Bacharach and Aiken, 1977; Jablin, 1982), rather than in the context of strategic formation, as in issue selling. Put another way, the traditional variable of organizational structure is still useful in examining the organizational process of strategy formation. Similarly, though participation in the decision making process has been thought to be effective in improving upward communication in general, the effectiveness may be confined to the flow of strategic ideas from middle managers.

TABLE 3. SUMMARY OF REGRESSION ANALYSIS

	Upward Information Flow	
	Strategic Ideas	Operational Problems
<i>H1</i> : Vertical Differentiation	✓✓	
<i>H2</i> : Span of Control of the Superiors		
<i>H3</i> : Multiplicity of Upward Communication Channels	††	†
<i>H4</i> : Participation in Decision Making Process	✓	
<i>H5</i> : Reference to BU Strategic Plan		††
<i>H6</i> : Supportive Behaviors of BU Head	✓	
<i>H7</i> : Upward Influence of BU Head	✓	✓✓

Note: ✓: The hypothesis is supported.

†: The coefficient is significant but the sign is contrary to the hypothesis.

The number of marks indicates the level of significance.

Second, supportive behavior of a BU head has a positive impact only on the flow of strategic ideas, while his/her upward influence is significantly associated with both of the dependent variables. As with participation in the decision making process, the willingness of a superior or leader to listen to subordinates' voices has been considered to be important in improving upward communication in general (e.g., Dutton and Ashford, 1993; Morrison and Milliken, 2000). This view seems to be consistent with our intuition, since an open and receptive attitude on the part of a superior appears to encourage a subordinate to speak up about something on his/her mind. However, the results of our research show that such an effect cannot be seen in the transmission of bad news from middle managers to their general manager.

Third, the sign of the coefficient concerning multiplicity of upward communication channels is contrary to our prediction in both Models I and II. This result suggests that an abundance of informal channels between superiors and subordinates can be detrimental to upward communication. Though the mechanism behind this relationship is unclear, one possible reason is that an increase in informal channels makes the route of upward communication more complicated. Based on this reasoning, formal, not informal, means to transmit information to the upper layers in a hierarchy can be more important than is usually thought. This inference is consistent with the result of the analysis that *H1* is supported in Model I. Also, it partly accords with some studies discussing the importance of formal organizational devices such as formal upward feedback mechanisms (Morrison & Milliken, 2000; Park & Keil, 2009).

VI. Discussion

The results of the analysis suggest that the pattern of organizational characteristics that fosters upward communication can differ according to the type of information flow. In the regression model of the upward flow of strategic ideas, three of the five significant coefficients can be regarded as organic aspects of an organization in the sense that they are generally considered to promote interaction among people. In other words, all of the conditions suggested by the three factors—flatness of a hierarchy, participative management, and supportive behavior of a leader—are related to flexible and employee-oriented management.

In contrast, none of these three coefficients is significant in the model of the upward flow of operational problems. Instead, all three significant relationships in the model—the positive

TABLE 4. CORRELATION BETWEEN UPWARD INFORMATION FLOW AND PERFORMANCE OF A BUSINESS UNIT

	Growth	Profitability
Upward Information Flow of Strategic Ideas	.277**	.201*
	.001	.018
Upward Information Flow of Operational Problems	.129	.205*
	.134	.016

Note: $N = 137$; ** $p < .01$, * $p < .05$

association of reference to a BU strategic plan, the negative correlation of multiplicity of upward communication channels, and the positive relationship with the upward influence of a general manager—seem to be synchronized with mechanistic management systems and the power of senior management. A higher degree of reference to a plan means that middle managers tend to conform to a program designed by the upper echelons, even if the middle managers are involved in the formulation process. Along with the presumable dysfunction of multiplicity of upward communication channels mentioned above, the relationship observed for reference to a plan implies the importance of formal and bureaucratic management in terms of the upward transmission of bad news. In addition, the upward influence of a manager is directly linked to the power of the person in the organization including the department of which he/she is in charge.

Accordingly, each of the types of upward communication may have different characteristics and need different types of management. Ideas and opinions on strategy may tend to be voluntarily sent up by middle managers. If so, management should create an open and free climate in the organization to foster the proposal of strategic ideas. On the other hand, autonomous upward transmission of bad news from the operational level is difficult for a person involved in the problem. In such a situation, disciplined contexts and strong power and leadership of upper managers may be necessary in order to siphon off operational problems effectively. According to this reasoning, we should not give employees in charge excessive discretion in the treatment of operational problems. A “soft” approach to subordinates might not always be functional in ameliorating information flow to a superior. This is an important implication of our research in terms of upward communication. However, similar viewpoints have rarely been discussed in the prior literature.

There are still other data that suggest different characteristics of the two types of upward communication. Table 4 shows correlation coefficients between the two types of upward communication and two performance variables. In the questionnaire, we also asked the respondents to subjectively assess growth and profitability compared with major competitors. According to these results, while upward flow of strategic ideas is significantly associated with growth and profitability, upward flow of operational problems is significantly correlated only with profitability at the 5 percent level. We do not have any means to exactly identify causal relationships among the variables. However, we can assert that growth is linked to the flow of strategic ideas much more strongly than is the flow of operational problems. From this, we infer that the upward information flow of strategic ideas may be more related to constructive or developing aspects of a business organization and that the flow of operational problems may be connected only to the maintenance side of organizational management.

The results and discussions in this paper are tentative, and there are some limitations to our research. One of these is that our analysis deals only with some parts of the independent variables examined in previous studies, and we cannot directly compare the results of our analysis with other studies. Further comprehensive research is necessary in order to confirm the validity of our findings and reasoning.

In addition, our survey was conducted on Japanese firms, which, some studies have pointed out, are likely to emphasize emergent strategy (e.g., Pascale, 1984; Mintzberg, Ahlstrand & Lampel, 1998). This tendency can constrain the generalizability of our discussions to business organizations outside Japan. In order to examine the applicability of our research, we will make an effort to broaden the diversity of subjects in our survey, which has been conducted biennially since 2005.

REFERENCES

- Athanassiades, J. C. 1973. "The Distortion of Upward Communication in Hierarchical Organizations." *Academy of Management Journal* 16: 207-226.
- Bacharach, S. B. & Aiken, M. 1977. "Communication in Administrative Bureaucracies." *Academy of Management Journal* 20: 365-377.
- Baron, R. 1996. "La Vie En Rose' Revisited: Contrasting Perceptions of Informal Upward Feedback among Managers and Subordinates." *Management Communication Quarterly* 9: 338-348.
- Bowen, F. & Blackmon, K. 2003. "Spiral of Silence: The Dynamic Effects of Diversity on Organizational Voice." *Journal of Management Studies* 40: 1393-1417.
- Bower, J. L. 1970. *Managing the Resource Allocation Process*. Irwin: Homewood, IL.
- Brewer, J. 1971. "Flow of Communication, Expert Qualification, and Organizational Authority Structures." *American Sociological Review* 36: 475-484.
- Burgelman, R. A. 1983. "A Process Model of Internal Corporate Venturing in the Diversified Major Firm." *Administrative Science Quarterly* 28: 223-244.
- Cohen, A. R. 1958. "Upward Communication in Experimentally Created Hierarchies." *Human Relations* 11: 41-53.
- Donaldson, L. 2001. *The Contingency Theory of Organizations*. Sage Publications: Thousand Oaks, CA.
- Dutton, J. E. & Ashford, S. J. 1993. "Selling Issues to Top Management." *Academy of Management Review* 18: 397-428.
- Dutton, J. E., Ashford, S. J., Lawrence, K. A. & Miner-Rubino, K. 2002. "Red Light, Green Light: Making Sense of the Organizational Context for Issue Selling." *Organization Science* 13: 355-369.
- Dutton, J. E., Ashford, S. J., O'Neill, R. M., Hayes, R. & Wierba, E. E. 1997. "Reading the Wind: How Middle Managers Assess the Context for Selling Issues to Top Managers." *Strategic Management Journal* 18: 407-425.
- Dutton, J. E., Ashford, S. J., O'Neill, R. M. & Lawrence, K. A. 2001. "Moves That Matter: Issue Selling and Organizational Change." *Academy of Management Journal* 44: 716-736.
- Eisenberg, E. M. & Witten, M. G. 1987. "Reconsidering Openness in Organizational Communication." *Academy of Management Review* 12: 418-426.

- Floyd, S. W. & Wooldridge, B. 1990. "The Strategy Process, Middle Management Involvement, and Organizational Performance." *Strategic Management Journal* 11: 231-241.
- Floyd, S.W. & Wooldridge, B. 2000. *Building Strategy from the Middle: Reconceptualizing Strategy Process*. Sage Publications: Thousand Oaks, CA.
- Glaser, M. J. 1984. "Upward Information Flow in Organization: Review and Conceptual Analysis." *Human Relations* 37: 613-643.
- Grant, A. M., Parker, S. & Collins, C. 2009. "Getting Credit for Proactive Behavior: Supervisor Reactions Depend on What You Value and How You Feel." *Personnel Psychology* 62: 31-55.
- Hage, J., Aiken, M. & Marrett, C. B. 1971. "Organization Structure and Communications." *American Sociological Review* 36: 860-871.
- Harrison, T. M. 1985. "Communication and Participative Decision Making: An Exploratory Study." *Personal Psychology* 38: 93-116.
- Hodgkinson, G. P., Whittington, R., Johnson, G. & Schwarz, M. 2006. "The Role of Strategy Workshops in Strategy Development Processes: Formality, Communication and Inclusion." *Long Range Planning* 39: 479-496.
- Howard-Grenville, J. A. 2007 "Developing Issue-Selling Effectiveness over Time: Issue Selling as Resourcing." *Organization Science* 18: 560-577.
- Huber, G. 1982. "Organizational Information Systems: Determinants of Their Performance and Behavior." *Management Science* 28: 138-155.
- Jablin, F. M. 1980. "Superior's Upward Influence, Satisfaction, and Openness in Superior-Subordinate Communication: A Reexamination of the 'Pelz Effect'." *Human Communication Research* 6: 210-220.
- Jablin, F. M. 1982. "Formal Structural Characteristics of Organizations and Superior-Subordinate Communication." *Human Communication Research* 8: 338-347.
- Jones, A. P., James, L. R. & Bruni, J. R. 1975. "Perceived Leadership Behavior and Employee Confidence in the Leader as Moderated by Job Involvement." *Journal of Applied Psychology* 60: 146-149.
- Kassing, J. W. 2002. "Speaking Up: Identifying Employees' Upward Dissent Strategies." *Management Communication Quarterly* 16: 187-209.
- Kelley, H. H. 1951. "Communication in Experimentally Created Hierarchies." *Human Relations* 4: 39-56.
- Krone, K. J. 1992. "A Comparison of Organizational, Structural, and Relationship Effects on Subordinates' Upward Influence Choices." *Communication Quarterly* 40: 1-15.
- Ling, Y. , Floyd, S. E. & Baldrige, D. C. 2005. "Toward a Model of Issue-Selling by Subsidiary Managers in Multinational Organizations." *Journal of International Business Studies* 36: 637-654.
- Milliken, F. J., Morrison, E. W. & Hewlin, P. F. 2003. "An Exploratory Study of Employee Silence: Issue That Employees Don't Communicate Upward and Why." *Journal of Management Studies* 40: 1452-1476.
- Mintzberg, H. 1983. *Structure in Fives: Designing Effective Organizations*. Prentice-Hall: Upper Saddle River, NJ.
- Mintzberg, H. 1994. *The Rise and Fall of Strategic Planning*. Free Press: New York.
- Mintzberg, H. 2009. *Managing*. Berrett-Koehler: San Francisco, CA.

- Mintzberg, H., Ahlstrand, B. & Lampel, L. 1998. *Strategy Safari: A Guided Tour through the Wilds of Strategic Management*. Free Press: New York.
- Mintzberg, H. & Waters, J.A. 1985. "Of Strategies, Deliberate and Emergent." *Strategic Management Journal* 6: 257-272.
- Morisson, E. W. & Milliken, F. J. 2000. "Organizational Silence: A Barrier to Change and Development in a Pluralistic World." *Academy of Management Review* 25: 706-725.
- Nonaka, I. 1988. "Toward Middle-Up-Down Management: Accelerating Information Creation." *Sloan Management Review* 29(3): 57-73.
- Park, C. W. & Keil, M. 2009. "Organizational Silence and Whistle-Blowing on IT Projects: An Integrated Model." *Decision Science* 40: 901-918.
- Pascale, R.T. 1984. "Perspective on Strategy: The Real Story behind Honda's Success." *California Management Review* 26(3): 47-72.
- Pugh, D. S., Hickson, D. J., Hinings, C. R. & Turner, C. 1969. "The Context of Organization Structures." *Administrative Science Quarterly* 14: 91-114.
- Read, W. H. 1962. "Upward Communication in Industrial Hierarchies." *Human Relations* 15: 3-15.
- Roberts, K. H. & O'Reilly, C. A. 1974. "Failures in Upward Communication in Organization: Three Possible Culprits." *Academy of Management Journal* 17: 205-215.
- Rosen, S. & Tesser, A. 1970. "On Reluctance to Communicate Undesirable Information: The MUM Effect." *Sociometry* 33: 253-263.
- Tourish, D. 2005. "Critical Upward Communication: Ten Commandments for Improving Strategy and Decision Making." *Long Range Planning* 38: 485-503.
- Tourish, D. & Robson, P. 2006. "Sensemaking and the Distortion of Critical Upward Communication in Organizations." *Journal of Management Studies* 43: 711-730.
- Withey, M. J. & Cooper, W. H. 1989. "Predicting Exit, Voice, Loyalty, and Neglect." *Administrative Science Quarterly* 34: 521-539.