Leadership and Organizational Behavior

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This article attempts to discuss the theoretical and empirical research on leadership, mainly on the basis of data from the present author's research. We here focus on the results of research that has been stimulated by Fiedler's (1964) contingency model of leadership effectiveness and Fiedler and Garcia's (1987) cognitive resource theory.

Leadership and organizational behavior : Introduction

It was in 1300 that the English word "leader" was used for the first time, and in 1821 the word "leadership" (The Oxford English Dictionary, 2 nd ed., 1989). In the old Egyptian hieroglyphics however, the letters for leader (seshmu) and for leadership (seshmet) have been found; they were written 5,000 years ago (Bass, 1990)."Greek concepts of leadership were exemplified by the heroes in Homer's Iliad"(about 8 BC; Bass, 1990). This would indicate that human beings have been very interested in the phenomena of leadership since the beginning of human history. Fiedler and Garcia(1987)trace twomain streams in the study of leadership, as shown in Figure 1.

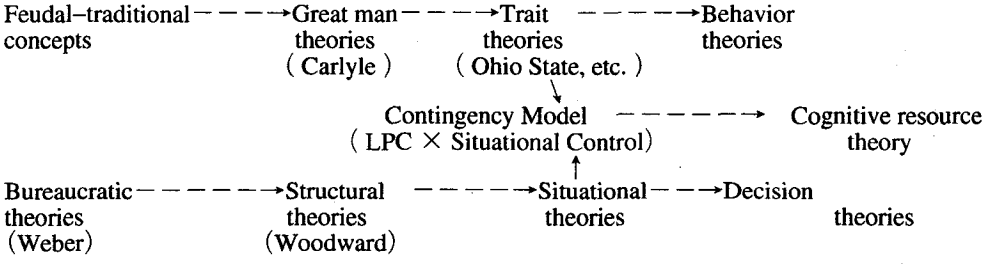

Figure 1. Historical streams of the study of leadership (Fiedler & Garcia, 1987).

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* Presented at the Pan-Pacific Conference XIII, Chiba, Japan (1996, May).

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Fiedler's (1964) contingency model can be located as the integration of these two streams of thought in the study of leadership, because his model uses both of the concepts of leader traits or personality (LPC) and the leadership situation (situational control). Also Fiedler and Garcia's (1987) cognitive resource model can be seen as further development of the contingency model.

As for leader traits, there have been many reports since Terman's (1904) which is regarded as the first psychological study of leadership. However it has been difficult to find consistent results in the differences between leaders and followers or in the differences between an effective leader and an ineffective one across these studies. As described in the following sections, certain factors of a leader's personality in Fiedler's contingency model and intelligence and experience in Fiedler and Garcia's cognitive resource theory, are seen to be very important leadership traits in new the trait approach.

Ohio State leadership research (Fleishman, Harris, & Burtt, 1955) is considered representative of leadership behavior research. In their work they measure leader behavior using "consideration" and "initiating structure", concepts which were identified through factor analysis. The former describes the extent to which a leader exhibits concern for the welfare of other members of the group, and the latter shows the extent to which a leader initiates activity in the group, organizes it, and defines the way work is to be done. Their studies have had much influence on following work in this field. Misumi's (1985) P–M leadership theory has some similarities with the Ohio State leadership research. Misumi conceived of task–oriented leadership behavior, calling it "Performance" oriented leadership behavior, and saw relationship oriented behavior as being a "Maintenance" leadership pattern. Misumi (1985) and Misumi and Peterson (1985) consistently found that in Japanese business and governmental organizations, productivity of the group and the satisfaction of group members was highest under " PM " supervision (i.e. rated as high in both initiating performance and maintenance dimensions), followed by " M " supervision (i.e. high only on the maintenance dimension) and "P" supervisors (i.e. high only on the performance dimension), and the least productivity and satisfaction occurred under a "pm" supervisor (i.e. low both in performance and maintenance dimensions).

Misumi and Seki (1971) showed that the most productive supervision pattern was not " PM " but " P " when the need for achievement of the group members was low (when the need for achievement for achievement of the members was high, the most productive supervisory pattern was " PM "). This result suggests the need to take into consideration situational variables such as the need for achievement of the subjects and the group task variables even under the P–M research framework (Shirakashi, 1985).

When reviewing relevant studies among all the Ohio State Leadership research over 20 years, Fleishman (1973) concludes that the Ohio study needs to take into consideration the effects of situational variables when predicting leadership effectiveness. The effectiveness of leadership

behavior patterns were moderated by different kinds of situational variables such as group task or leader–member relations.

Theories of bureaucracy (e.g. Max Weber) focus their research not on actual human activities or relations, but on rules, authority, status, role etc. Structural theorists (e.g. Woodward) are interested in the characteristics of the organization rather than a leader's traits (Fiedler & Garcia, 1987). Kerr and Jermier (1978) found that the formalization of an organization is a strong substitute for a leader's initiating structure behaviors.

Fiedler (1964, 1967, 1978, 1994, 1995), Fiedler and Garcia (1987), Fiedler and Link (1994) advocate that it is indispensable to consider these two factors simultaneously, namely a leader's traits and the group–task situations and to analyze in detail the relation of these factors on group performance. From this point of view they have been developing the contingency model of leadership effectiveness and cognitive resource theory.

Contingency model of leadership effectiveness

Fiedler (1964, 1967, 1978) states that leadership effectiveness is determined by two factors, (1) leader's personality measured by the LPC scale and (2) a leader's situational control. The LPC (Least Preferred Coworker) scale which was originally developed by Fiedler measures a person's motivational hierarchy structure as being ; relationship motivated (high LPC) or task motivated (low LPC). A high LPC person describes one's least preferred coworker in more favorable terms, and low LPC in less favorable ones on the following semantic differential scales (18 items).

Pleasant	—	—	—	—	—	—	—	—	Unpleasant
	8	7	6	5	4	3	2	1	
Friendly	—	—	—	—	—	—	—	—	Unfriendly
	8	7	6	5	4	3	2	1	
Rejecting	—	—	—	—	—	—	—	—	Accepting
	1	2	3	4	5	6	7	8	
Tense	—	—	—	—	—	—	—	—	Relaxed
	1	2	3	4	5	6	7	8	

Figure 2 . Sample items of LPC scale (Fiedler & Garcia, 1987).

The psychological meaning of LPC score is discussed in the next section. Leader's situational control is determined by the three factors ; (1) leader / member relations, (2) task structure, and (3) position power. Situational control scale isdetermined by high or low leader–member

relations, task structure, and position power (Figure 3).

Leader / Member Relations	High				Low			
Task Structure	High		Low		High		Low	
Position Power	High	Low	High	Low	High	Low	High	Low
Octant	1	2	3	4	5	6	7	8
Situational Control	High Control			Moderate Control				Low control

Figure 3 . Schematic representation of situational control scale (Fiedler & Garcia, 1987).

A high control situation means a situation in which the leader has a great deal of control and influence, a moderate control situation is one in which the leader has a medium degree of control, and a low control situation is one in which the leader's control and influence are relatively low.

Fiedler and his associates analyzed the correlation between leader's LPC and group effectiveness in different group-task situations between 1953 and 1964, and found the bow-shaped patterns of correlation's ; negative correlations in the high- and low-control situations, and positive correlations in the moderate-control situation (Figure 4 .). The graph showed that low LPC (task-motivated) leaders tend to perform better in high control (Octants 1 − 3) or in low control (Octant 8) ; high LPC (relationship-motivated) leaders tend to perform better in moderate control situations (Octants 4 − 7).

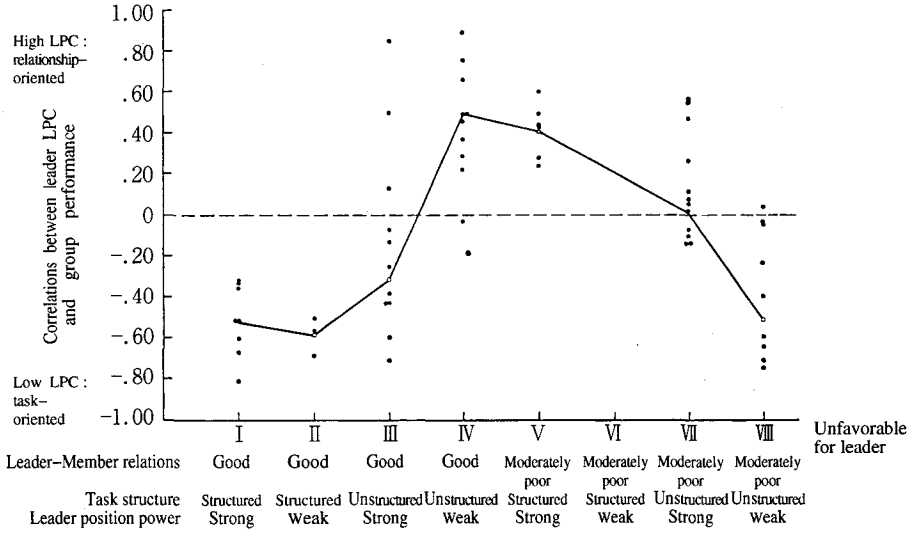

Figure 4 . Median correlastions between leader LPC and group performance for the original studies (Fiedler, F.E., 1964).

Many research papers on Fiedler's(1964) contingency model of leadership effectiveness have been reported since it's publication(Fiedler, 1964). Fiedler reviews these research results and from the data, he educes the validity of the contingency model of leadership effectiveness(Table 1).

Table 1. Median correlations between leader LPC and group performance in the original studies (Fierdler, 1964) and the validation studies (1966－1982 ; Fiedler and Garcia, 1987).

		Original studies		Validation studies	
Control	Octant	Median correlation	Number of relations included	Median correlation	Number of relations included
High	1	−.52	8	−.64	11
High	2	−.58	3	−.21	17
High	3	−.33	12	−.24	14
Moderate	4	.47	10	.22	19
Moderate	5	.42	6	.21	7
Moderate	6	—	0	.13	14
Moderate	7	.05	12	.30	9
Low	8	−.43	12	−.47	16

The psychological meaning of LPC score

There has been much controversy over the psychological meaning of the LPC (Fiedler, 1977 ; Schriesheim & Kerr, 1977a, 1977b). Reanalyzing the data of Sample and Wilson's (1965) laboratory experiment, Shirakashi (1980) found an interesting result. The small group of three undergraduate students (one appointed leader and two as members) were required to "plan" a laboratory experiment with a rat, and "run" it, and "write" a report based on the data which they obtained in the experiment. The leader's behavior was observed and recorded by trained observers using Bales' (1950) interaction process analysis technique. Shirakashi interprets the planning phase as the least structured sub-task, while the running phase as the most structured, andthe writing phase as being between the two phases. Shirakashi plotted the mean behavior figures of leaders for high- and low-LPC scores, as shown in Figure 5. As can be seen, low LPC leaders showed more human-relationship oriented behavior (showing solidarity and tension release, agreement) than high LPC leaders in the most structured task phase ("running" the experiment ; a relatively high control situation), and less of these behaviors in the least

structured task phase ("writing" a report ; a relatively low control situation). Also low LPC leaders showed less task-oriented behavior (giving orientation, opinions, and suggestions) than high LPC leaders in the most structured task phase, and more of these behaviors in the least structured task phase.

This reanalysis suggests that high-LPC leaders were more directive when their situational control was relatively high and less directive when situational control was low ; low LPC leaders were more directive in situations in which their situational control was relatively low and less directive when situational control was high (Fiedler, 1972). Using Maslow's(1954) framework, Fiedler and Garcia(1987) interprets the LPC score as an index of the structure of one's goal or need hierarchy ; high-LPC persons try to accomplish their secondary goal (having a good relations with others) in the high control situation and to accomplish one's primary goal (completing the task) in the low control situation. A low-LPC person, however, tries to pursuit one's secondary goal (having a good relationships with coworkers) in the high control situation, and to accomplish their primary goal (completing the task) in the low control situation.

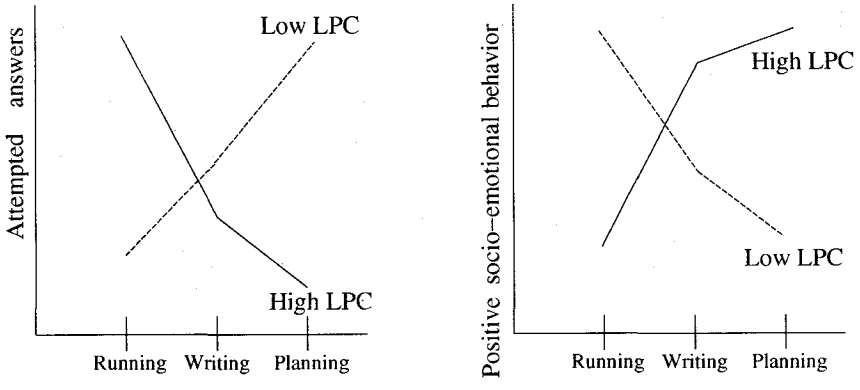

Figure 5. Sample and Wilson's (1965) data reanlyzed by Shirakashi (1980). Comparison of behavior by high- and low- LPC leaders in the different experimental phases.

Job stress of Japanese managers : A contingency model interpretation

Shirakashi(1988, 1991) analyzed the job stress of Japanese managers on the basis of Fiedler's (1964) contingency model of leadership effectiveness. Previous to our research, Chemers, Hays, Rhodewalt, and Wysocki(1985) found that an American manager's job stress was determined by his or her LPC score and situational control ; high LPC managers feel much stress in high and low control situations and less stress in moderate control situation, however low LPC managers feel much stress in moderate control situations and less stress in high and low control situations.

Table 2. The number of the respondents in each position (Shirakashi, 1991)

Private company		Government office	
Director	49(17.1)	Director Geeneral	0(0.0)
Senior advisor, corporate advisor..	3(1.0)	Director	2(4.1)
General manager	62(21.6)	General manager	2(4.1)
Deputy general manager	35(12.2)	Manager, section chief	12(24.5)
Manager, section chief	88(30.7)	Deputy manager	9(18.4)
Deputy manager	16(5.6)	Chief	23(46.9)
Chief	19(6.6)	Group leader	1(2.0)
Section leader	9(3.1)	Total	49(100.0)
Group leader	6(2.1)		
Total	287(100.0)		

The number of the respondents in different positions in Shirakashi's (1988) survey is shown in Table 2. As can be seen, the respondents from private companies and government offices range from top to first line supervisor level. The average age of the respondents was 45.82 years old (SD =7.86, n =336). Table 3 shows the kinds of industries where the respondents works. Also as can be seen here, the companies where the respondents work at cover a wide range of different industries.

Table 3 The industries where the respondents works at (Shirakashi, 1991)

Private companies		
Agriculture	1	(.3)
Construction	14	(4.2)
Manufacturing	99	(29.5)
Sales	47	(14.0)
Financial business	15	(4.5)
Real estate	5	(1.5)
Transportation, communication	7	(2.1)
Electic, gas, water	8	(2.4)
Service (including medical and educational service)	67	(19.9)
Government office	49	(14.6)
Others	24	(7.1)
Total	336	(100.0)

LPC and situational control of the respondents were measured under the framework of Fiedler's contingency model. LPC score was measured by Fiedler and Chemer's (1984) LPC scale (18 items, 8-point scale). The α (alpha) coefficient which was measured by the present respondents was .87, and indicating that the internal consistency of the LPC scale is quite high. The mean of this sample was 64.15(SD =19.74, n =334 ; the mean and SD of the American sample were 68.75 and 21.8 〈n =898〉, Fiedler & Garcia, 1987). The respondents were classified into three subgroups by their LPC scores as shown in Table 4 .

Table 4 . The classification of the respondents by their LPC scores (Shirakashi, 1991)

Category	Range of LPC score	Number of persons
High LPC	74 and above	94(28.8)
Middle LPC	54−72 *	135(41.4)
Low LPC	53 and below	97(29.8)
		Total 326(100.0)

* X ±0.5SD

In the above section we referred to only the high and low LPC, however, Fiedler and Chemers (1984) and Fiedler and Garcia(1987) in recent years take into consideration the middle LPC in addition to the high and low LPC. Fiedler and Garcia(1987) interprets the middle LPC as a "socio-independent", namely "less involved with both task and others in their work settings,.... less emotional about the job, enabling them to gain more from training and experience than those with either high or low LPC scores" (pp. 76−77). The present author assumes that these interpretation of middle LPC has not been confirmed by much empirical data. It would seem to be worth analyzing the responses of middle LPC persons and compare them with those of high and low LPC persons.

Following Fiedler's theory and assumptions, the situational control of a leader was defined by the combination of (1) leader/member relations, (2) task structure, and (3) position power. Leader/member relations were measured by Fiedler's (1967) Group Atmosphere scale which asked the respondents to describe their own group's atmosphere using a 10 item, 5-point scale ; pleasant-unpleasant, accepting-rejecting, etc. Task structure was measured by the scale which was formed by Shirakashi and Mori (1988) referring to Fiedler and Chemers (1984). It attempts to measure the extent to which a leader's tasks are structured, clear, unambiguous. Position power was measured by the scale formed by Shirakashi and Mori (1988) referring to Fiedler and Chemers (1984). It attempts to measure the strength of the leader's formal power within an organization. Both scales of task structure and position power were 10 item, 5-point scales. The

situational control score was defined by formula (1) as follows ;

SC = 4 (L/M) + 2 (TS) + 1 (PP) ..... (1)

where

SC : Situational Control

L/M : Leader / member Relations

TS : Task Structure

PP : Position Power

This weighting method for each variable of obtaining situational control followed Fiedler's theoretical assumptions.

The job stress of managers was measured by a scale created for this study. It tries to measure the degree of stress which the managers usually experience at their place of work. It is a 10 items, 5 -point scale, and ask respondents to indicate the degree to which they agree or disagree with each statement ; "I sometimes feel unreasonable pressure from my boss" "The job assignment is very hard" "My subordinates don't understand me well", etc. The α (alpha) coefficient of this scale was .75.

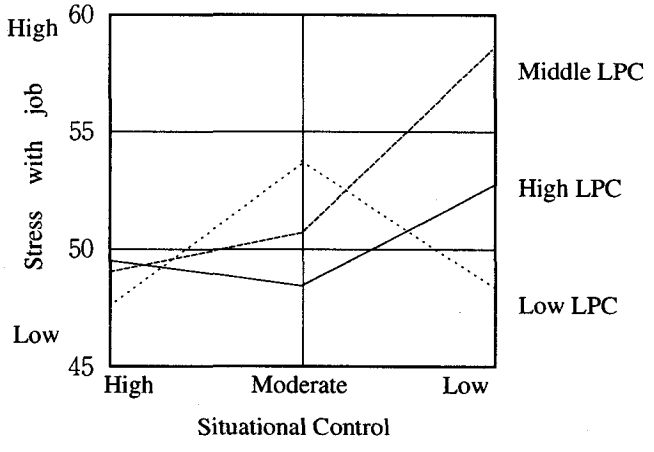

Figure 6 . Japanese managers' LPC, situational control, and job stress (Shirakashi, 1991).

The main results are shown in Figure 6 . As can be seen, low LPC managers experience more stress in moderate control situations, and less stress in high and low control situations. High LPC leaders feel more stress in high and low control situations, and less stress in moderate control situations. These results are very similar to those which Chemers et. al.(1985) found for

American managers. Our research results also suggest indirectly the validity of Fiedler's contingency model of leadership effectiveness. Also in our research, middle LPC managers felt higher stress when the degree of situational control decreased. Table 5 shows the results of the analysis of variance on job stress of managers. It means that the interaction between LPC and situational control is statistically significant. Namely the effect of LPC on manager's job stress is moderated by situational control.

Table 5 The analysis of variance of job stress of the Japanese managers (Shirakashi, S. 1991)

Source	*SS*	*df*	*MS*	*F*	*p*
LPC	406.43	2	203.32	2.18	.113
Situational Control	820.78	2	410.39	4.39	.013
LPC ×Sit. Cont.	1564.79	4	391.20	4.19	.003
Within cell	29622.38	317	93.45		
Total	32414.38	325			

Intelligence and experience : New approach to effective leadership

Fiedler and Meuwese(1963) were interested in the effect of a leader's intelligence on group performance, and found that the correlation between leader intelligence and group performance in cohesive groups, was higher than in uncohesive groups. One of the most remarkable things among all the criticism and controversy over Fiedler's contingency model of leadership effectiveness is that it has not accounted for the process in which a leader's LPC score and situational control, have an effect on group performance. In other words, so the argument goes, this process occurs in a black box. Replying to these criticisms, Fiedler and Garcia(1987) presented a new approach to effective leadership, "Cognitive Resource Theory". It is composed from two assumptions and seven hypothesis. This theory treats the different variables such as leader LPC, intelligence, experience, directive behavior (task oriented behavior), leader's stress with boss, support from the subordinate groups, and performance. For example, " hypothesis 1 predicts that the leader's intellectual abilities correlate with group performance only when the leader is not under stress"(Fiedler & Garcia, 1987, p. 106).

Fiedler and Garcia (1987) found the correlations between leader intelligence and performance in American squad leaders, public health team leaders, ROTC group leaders, and college student small group leaders, were moderated by the leader's stress with his/her boss, namely the mean correlation between intelligence and performance was .30 when they felt less stress with their boss, and .23 under moderate stress, however .02 when they experienced high stress. Fiedler and

Garcia(1987) state that hypothesis 1 is supported by these empirical findings.

Okahisa (1987) and Okahisa and Shirakashi (1988) analyzed the correlation between intelligence and academic achievement of Japanese senior high school girls under conditions of high, moderate, and low stress with their teacher. The subjects were 177 female students (16 and 17 years old). Verbal intelligence and English academic achievement was measured by standardized tests. The student's stress with their English teacher was measured by a questionnaire developed by Okahisa(1987) for this study. The scale is composed of 17 items, on a 5-point scale. Two factors were identified through a principal component analysis. One of them was named factor "Hurry, hurry, hurry" which means ("The teachers speaks so fast", "The teacher uses taped materials in the class", "The speed of instruction is too fast" etc.) ; indicating the student feels a great deal of stress due to these teacher behaviors.

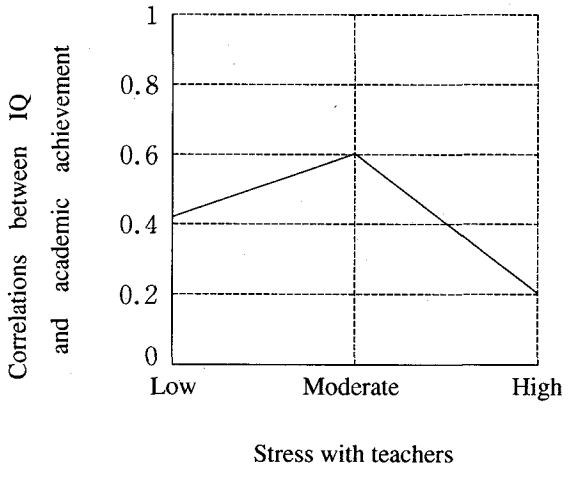

Figure 7. The correlations between IQ and academic achievement of Japanese senior high school girls, separated into groups based on different levels of stress experienced with their teacher (Okahisa, 1987).

The subjects were classified into three sub-groups based on the degree of stress with teachers ; high, moderate, and low stress. The correlation between IQ and English academic achievement was calculated in each of the sub groups. As can be seen in Figure 7 , the correlation between IQ and academic achievement was higher under conditions of moderate stress with the English teacher than under conditions of high or low stress with their teacher. The correlation between intelligence and academic achievement was moderated by the degree of stress which the students felt with their teacher. The difference among the three correlation coefficients was statistically

significant at .025% level.

Fiedler and Garcia (1987) also discuss the effect of directive or performance oriented behavior on group performance in their cognitive resource theory. Namely hypothesis 2 of the cognitive resource theory postulates that"under low stress conditions, the intellectual abilities of directive leaders correlate more highly with group performance than do intellectual abilities of non-directive leaders" (Fiedler & Garcia, 1987, p. 106). Also hypothesis 7 postulates that "Directive behavior of the leader is in part determined by the contingency model elements, the leader's task -motivation or relationship-motivation (LPC), and situational control" (Fiedler & Garcia, 1987, p. 106). These hypotheses are the bridge which connects the contingency model of leadership effectiveness and cognitive resource theory. Our research results (Okahisa, 1987 ; Okahisa & Shirakashi, 1988) does not accord completely with that of the study by Barnes, Potter, and Fiedler (1983) on American students, however, this data provides a hint for the direction of future research. Fiedler (1995) further discusses the development of cognitive resource theory in Applied Psychology : An International Review (1995). This paper has been selected as the best article in this journal for that year.

Culture and leadership

In the last part of this article, we want to mention briefly the problem of culture and leadership. In recent years the internationalization of societies has been accelerating. People with different languages backgrounds, behavior patterns, and cultures, live and work together in the same organizations and communities. They need to understand each other well and collaborate with other to live peacefully together. Reviewing relevant studies, Ayman (1993) discusses the problem of leadership and culture as follows ;

(1) The patterns of human relationships vary between those with homogeneous values and strong behavioral norms in cultures called "tight" such as Korea , and those cultures with a high degree of heterogeneity where the presence of norms are not as explicit called "loose" such as the United States (Pelto 1968).

(2) When comparing American and Korean students' responses to identify the expectations held of an ideal leader, the results depend not only on the country but also on gender, values, and work experience.

(3) Expectations for an ideal leader in a Japanese sample were masculine, however, at the same time, kind, emotional, understanding, aware of others' feelings, and helpful.

(4) Leadership training needs to take into account multicultural perspectives.

Acknowlegements

The author would like to thank Mr. Shawn White for his assistance in preparation of this article.

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