Interpersonal Communication Systems in Organisations, and their Relationships to Cultural Values, Productivity and Innovation: The Case of Japanese Corporations

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Cette recherche explore les modèles du système de communication dans les sociétés japonaises à la lumière des valeurs culturelles (variable d’entrée) rapportées à la productivité et à l’innovation (variable de sortie). L’analyse s’appuie sur l’étude de dix grandes entreprises de Tokyo et sur l’entretien de 37 salariés cadres et non cadres. On a montré que le système de communication interpersonnelle était modélisé par des valeurs culturelles en accord avec les modèles de communication traditionnels de la société japonaise. Cette harmonie consacre la fluidité de la communication avec deux conséquences importantes: au niveau des motivations, le partage de valeurs communes favorise le consensus et l’adhésion à ces valeurs; au niveau

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cognitif, le partage de connaissances, d'idées et d'information stimule la productivité et l'innovation.

This study examines the patterns of the communication system in Japanese corporations in the light of antecedents (cultural values), and in relation to consequents (productivity and innovation). The analysis is based on visits to ten large Japanese companies in Tokyo, and on personal interviews with thirty-seven managerial and non-managerial employees. It was demonstrated that the interpersonal communication system is shaped by the cultural values in line with the traditional patterns of communication in Japanese society. This congruence intensifies the smooth flow of communication, with two important consequences: on the motivational level, sharing of common values makes for better consensus and commitment to those values; on the cognitive level, sharing of knowledge, ideas, and information enhances the level of productivity and innovation.

INTRODUCTION

For many decades, dominant work values in the U.S. and in other Western countries stemmed from the Protestant Work Ethic, with its advocacy of individual achievement, personal responsibility and independence (Buchholz, 1989; Triandis et al., 1988; Weber, 1930). These values were reinforced by the moral philosophy of Adam Smith, according to which individuals should pursue their self-interest in order to have better consequences for society (Glahe, 1978).

The motivational theories of work behaviour that were developed in the U.S., were shaped by the values of individualism and achievement motivation, and these motives have been studied extensively. By contrast, the need for affiliation and group-oriented values played only a minor role in the study of motivation. For example, social incentives were classified by Herzberg (1966) as hygiene factors, second in their importance to motivators. In Maslow’s hierarchy, the need for self-esteem and self-actualisation ranks above that for affiliation (Maslow, 1970). Hackman and Oldham’s (1980) model of job design focuses mainly on the individual employee and that person’s needs for self-growth. The expectancy theory of motivation examines personal utilities, (Vroom, 1964) and the goal-setting theory is mainly concerned with individual goals (Locke & Latham, 1990). Empirical research conducted within such theoretical frameworks demonstrated that successful managers in Western companies were found to have a high need for achievement, a high need for power, and a low need for affiliation (McClelland & Boyatzis, 1982; Stahl, 1986).

However, in the last decade increased attention has been paid to the interpersonal network in organisations and to its contribution to managerial success and organisational effectiveness. Building relationships with
others and the exchange of information are two of the four broad categories of managerial behaviour postulated by Yukl (1988). Bennis and Nanus (1985) proposed that communication is the only way any group can become aligned behind the goals of an organisation, and Kotter (1982; 1988) identified network building as one of the two major factors in leadership effectiveness. Leader-member exchange is the essence of leadership behaviour according to Graen and his colleagues (Graen & Scandura, 1987). In fact, the common denominator of various theories of leadership was found to be their emphasis on interpersonal skills, on interaction with peers, subordinates and superiors, and on establishment of cooperative and supportive relationships (Yukl, 1988).

The study of interpersonal communication demonstrated (Monge & Eisenberg, 1987) that it is closely related to culture, which in turn can be viewed as a function of an implicit organisational communication system (Deal & Kennedy, 1982; Schall, 1983; Schein, 1985; Smircich, 1983; Sypher et al., 1985). Culture refers to a shared system of values, norms, and symbols. The relationship between culture and communication is reciprocal; the communication network forms the connecting links among group members, transmitting the social values and facilitating their sharing. Conversely, shared meaning and values facilitate the flow of communication. Both shared meaning and shared communication mechanisms facilitate collective action (Donnellon et al., 1986).

The intensity of a value system is mainly determined by the level of agreement among all members. A strong culture is therefore homogeneous, stable, and coherent (Weiner, 1988). On the organisational level, a strong culture is reflected in the high degree of coherence between management and employees' goals.

Only a few studies have so far examined the relationship of the communication network in organisations to their antecedents and consequents, and the need for such a research is obvious (Kincaid, 1987; Monge & Eisenberg, 1987; Triandis & Albert, 1987). The present study aims to explore these relationships.

The interpersonal communication system in Japanese companies serves as the model for our study, which examines two main propositions.

Proposition 1: The Japanese corporate communication system is anchored in the socio-cultural values of the society, and shaped by the values and the patterns of the interpersonal communication system of the society as a whole.

Proposition 2: The effective corporate communication system is related to the high level of productivity and technological innovation.
I. JAPANESE CULTURE AND THE COMMUNICATION SYSTEM

Unlike the individually oriented values of the West, Japan and other Far Eastern cultures are known for their long tradition of group-oriented values, high need for affiliation, and strong emphasis on interpersonal communication (Hofstede, 1980; Odaka, 1986).

In Japan, high priority is assigned to the cultural value of collectivism. According to Triandis and others, the major themes of collectivism are: Self-definition as part of groups; subordination of personal goals to ingroup goals; concern for the integrity of the ingroup; and intense emotional attachment to the group (Triandis et al., 1988).

Odaka (1986) proposes the concept of “groupism” for describing the Japanese set of values. Groupism conveys the priority given to continuity and prosperity of the organisation as a whole. Conversely, the organisation is duty-bound to all of its members’ needs.

The codes of behaviour operating in Japanese society, whether rural or urban, were guided by the values of groupism: (a) Total lifelong membership; (b) the duty of selfless devotion to the community—for ensuring the continuity, prosperity, peace and happiness of the group; (c) discipline and seniority-based rank, for maintaining social order in the community; (d) harmony and concerted effort through cooperation; (e) authoritarian management and participative management: The elderly held the highest status and positions in the community. However, all important decisions were taken in council with all members participating. The elders’ duty was to pass final judgment on the results reached by the council. Responsibility for implementation of the decisions was borne not by individual members but by the group as a whole; and (f) concern for the person’s total welfare: Peace and happiness in the life of the group cannot be achieved unless its members’ needs were satisfied.

The strong emphasis on groupism is supported by the high value given to consensus, harmony, and cooperation. All three are essential for maintaining the group. Even the individual self in Japan is defined in relation to others rather than as distinct from others as in Western societies (Kume, 1985).

People relate to each other in society by fitting into different parts of the social network, thereby forming secondary groups which define the boundaries of the interpersonal communication network. Secondary groups in Japan clearly differ from their counterparts in the West, where group affiliation takes the form of clubs, all of whose members are equal and free to stay or depart (Hsu, 1975).

In collectivist cultures such as Japan, the individual has few ingroups, and there is clear distinction between ingroups and outgroups. In
individualistic cultures, the individual has many ingroups, and those who are not ingroup members do not necessarily belong to the outgroup (Triandis et al., 1988).

Three types of secondary groups can be identified in Japanese society today and throughout its history:

a. The basic unit—father-son dyad called "Ie"—household.

b. The more complex rural unit, called "Dozoku," and consisting of a principal household with branches (Nakane, 1967); it is a goal-oriented corporation concerned with the results of its activities and with its own definite perpetuation (Hsu, 1975).

c. "Iemoto," the urban counterpart of the Dozoku. It is basically a system of school organisations of arts and craftmanships. The curriculum includes flower arrangement, tea ceremonies, judo, painting, calligraphy, dancing, Kabuki, etc. Iemoto is a fictitious family system, with the master regarded as its head. The master exercises supreme control with the authority to prescribe the style of the school, to ostracise any member for misbehaviour and to choose his successor. The master-disciple dyad is analogous to the father-son relationship.

The hierarchic pattern dominates the father-son dyad, the relationship between the inheriting son and his brothers and sisters, the relationships between the principal household and its branches, and between the master and his disciples.

The interlinked hierarchy of the Iemoto is similar to the principal household—branches relationships. Disciples are interlinked with other disciples through their masters, who are in turn interlinked through senior masters. In this way a vast structure is built up.

Groups in Japan are formed on the basis of kinship relationships and meritocracy (Yamamoto, 1986). It is a social system in which performance is translated into status. It is considered natural that one with demonstrated ability should have rights and power.

The moral codes of Japanese society (The Analects of 1365) allow a younger son to inherit if he is more competent than the eldest son. It also allows the head of the family or the master to choose his heir or successor on the basis of meritocracy. It is socially acceptable in Japan to adopt as a son the most competent member of the group; sons-in-law and younger brothers may also be adopted.

The element of volition and choice is involved in the formation of the secondary group. A member who stays away for a long time ceases to be part of the kinship. In this respect, Japanese society differs from the Chinese, in which kinship ties are permanent.
All three forms of secondary groups in Japan share common values and communication patterns. The dominant values are: Hierarchical order, exclusiveness, dedication to the group, and continuity of the group. These values are functional in preserving the social system. The symbiotic inter-relationship between social structure, value system and communication network were observed throughout the history of Japanese society and carried on by the modern industrial corporations of the twentieth century.

In the fourteenth and fifteenth centuries, when the central government weakened, several households formed a civil organisation for the purpose of mutual defence (Yamamoto, 1986). The heads of these households signed a contract guided by group-oriented values which stresses that no member shall take independent action or leave the organisation easily; decisions shall be by majority vote; internal dissentions shall not be disclosed to outsiders; in the case of a dispute between a member of the organisation and an outsider, all other members shall assist that member if judged to be in the right. Again, the values of groupism, perpetuity and exclusiveness underlined the social structure.

During the Edo era (17th century), Japan comprised a large number of fiefs—villages inhabited by patriarchal families and consisting of close-knit communities with a common destiny. The members of a community were completely immersed in it for the duration of their lives. The combination of close-knit relationships, geographical proximity, and ownership of the land, facilitated preservation of group-oriented values which dominated Japanese society.

The group-oriented values and the patterns of the communication system were modelled by the large mercantile houses—originally family businesses—which emerged in the eighteenth century in the metropoles of Osaka, Kyoto and Edo (Tokyo) and preceded the industrialisation period from the nineteenth century onwards. Here the tradition of close-knit relationships was reflected in life-long employment, seniority-based hierarchy, apprenticeships, training and discipline, harmony, consensus and group decision-making.

II. THE INDUSTRIAL CORPORATIONS—CULTURAL VALUES AND THE INTERPERSONAL COMMUNICATION SYSTEM

This part examines Proposition 1, namely, that modern Japanese organisations are successfully implementing the traditional values of the close-knit community and the patterns of the communication system.

The examination is based on three sources: (a) Visits to companies and personal interviews conducted by the author during the summer of 1987
and the winter of 1988; (b) documents and publications of the companies included in the survey; and (c) a literature review.

The companies were selected as a representative sample of large corporations from different industries. The author's host was Professor Tamao Matsui of Surugadai University where he recently moved upon retirement from Rikkyo University.

The companies participating in the study are as follows:

1. Hitachi—the largest electronics company in Japan, with 80,000 employees, producing *inter alia* computers and electronic appliances. The interviews took place at the Institute of Management Development and the Management Improvement Center.

2. Fujitsu—42,000 employees; products: Small- and large-scale computers.

3. Canon—34,000 employees; products: Cameras, business machines, and optics.

4. TDK—about 8,000 employees; products: Ferrite, magnetics and ceramics, printed circuits, electronic appliances, and recording tapes.


7. The Taiyo Kobe Bank Ltd—one of the city banks, 13,800 employees.


9. Pfitzer—2,000 employees; products: Pharmaceuticals and food additives.

10. Aoki Corporation, a construction company—about 3,000 employees.

Thirty-seven interviewees participated in the study, twenty-two of whom were senior executives and middle-level managers, and the other fifteen rank-and-file employees. The managerial levels included three vice-general managers, four directors (two of R&D centres, and two of Institutes of Management Development and Management Improvement); five section managers, five assistant managers, one assistant branch manager, three personnel managers, and one company journal editor.

Each interview ranged from two to five hours. Interviews with managerial levels were conducted in English, those with rank-and-file through an interpreter. Professor Matsui took part in all interviews together with the author, and there was complete agreement between us regarding the content of the interviews.
Three main questions were asked at each interview:

1. What is the company’s managerial philosophy?
2. What is the style of managerial practices in the company: Mainly participative, or non-participative?
3. What are the communication channels, (both formal and informal) in the company?

Answers were written down during the interviews, and their content, across all interviews, is summarised in this paper. As a means of verification an earlier version of this manuscript was circulated among five of the companies for comments (Hitachi, Canon, TDK, the Taiyo Kobe Bank, and Fujitsu), and endorsed by their representatives.

The interviews, as well as the companies’ documents and literature review, suggest that the Japanese system of corporate management is guided by the following principles: (a) Life-long tenure; (b) employment not confined to the employee’s specialised work functions; (c) standardised training, with a view to uniform competence; (d) job rotation with a view to producing generalists; (e) seniority-based reward system; (f) emphasis on harmony; (g) the Ringi system, namely bottom-up circulation of proposals as a basis for decision-making; (h) participative management, and group responsibility; (i) an organisation that is both authoritative and participative; and (j) compassionate concern for employees, including personal problems.

Thus, corporate management in Japan may be defined as “corporate collectivism” (Triandis, personal communication, 1989), as it is guided by the cultural values of groupism and close-knit hierarchical relationships. Kume (1985) used a similar term, “Management Familism”, implying that both management and employees have a high level of life-long mutual commitment. Misumi (1989; Misumi & Peterson, 1985) defined the ideal manager in Japan in terms of both performance and maintenance orientations, namely, a manager who leads the group towards goal attainment and preserves its social stability.

The communication network identified in the course of the interviews consists of highly complex formal and informal systems with top-down, bottom-up, horizontal and diagonal channels, as presented in Fig. 1. In contrast to the linear pattern with a definite point of origin for the communication flow and the decision-making process, in the Japanese case the pattern is circular (Ballon, 1988), whereby any single point on a circle can become the origin, as will be illustrated further on.

1. Top-Down

The natural direction of communication flow along the hierarchy of command is top-down. In Japan, the hierarchical order is determined
FIG. 1 Model of Japanese corporate communication system.

mainly by seniority, and in that sense the company is a reflection of the social structure of the close-knit community. Japanese employees general-ise from the work place, and show respect to their top managers even outside the work premises (Odaka, 1986).
There is strong emphasis on face-to-face communication, including the relationships between top-level managers and rank-and-file employees (Triandis et al., 1988). It is common practice for non-managerial levels to talk directly to top-level executives on work-related matters (Kume, 1985; TDK, 1987; interview at the Taiyo Kobe Bank, 1987). In addition, there are occasions where the president of the company meets with the employees in person and talks directly to them. These inspirational talks are aimed at strengthening the organisational culture and work ethic. For example, a series of talks by President Sono Fukujiro of TDK (1981) covered both topics related directly to the work environment, such as "Being Creative" and "The smart TDK man", and themes concerning family life and society in general, such as "The ideal couple" and "Japan's aesthetic culture".

The personal approach of top-level managers is also demonstrated by their active role in selection interviews, in orientation courses for new employees, and in training programmes (Introduction to Hitachi and Modern Japan, 1986; Canon Handbook, 1987; interviews at Fujitsu and Hitachi, 1987; 1988).

This direct top-down communication serves a dual purpose: First, it emphasises the importance of the subject matter under discussion; secondly, it demonstrates the high consideration top-level management have for their employees.

The strong emphasis placed on information sharing is reflected in the procedures of admission and training. All newly hired employees undergo an introductory programme for a period of up to six months (personal interviews at TDK and Hitachi), during which they rotate through the various departments and become acquainted with the different organisational functions (Takagi, 1958). The experience thus gained provides them with a general overview of the organisation; at the same time, they familiarise themselves with the specific "language" of each department and are able to communicate fluently throughout the organisation once they have settled down. In addition to the actual experience, new recruits attend special courses on the various aspects of the organisation, some of the lectures being given by top-level executives, including the president (personal interview at Fujitsu).

At Hitachi, for example, the introductory programme involves an orientation course, visits to some of the company's major factories, three months' instruction in manufacturing sections, and a twenty-month advanced programme including on-the-job training, classroom study, and voluntary self-development courses (Introduction to Hitachi and Modern Japan, 1986).

The importance of the training system is emphasised by its position in the organisational structure. At Hitachi, the president assumes top
responsibility for education throughout the company and is supported by committees which identify the training needs of the employees. The training system serves as a formal channel of communication which helps the employees adjust to their jobs and to technological changes.

The socialisation process facilitates cultural adaptation by new employees, and the training process supports the existing value system.

2. Bottom-Up Communication

Bottom-up communication is motivated by the belief in the ability of each employee to contribute to the quality of problem solving and decision-making in the organisation (Canon Handbook, 1987; Q.C. Circle Koryo: General principles of the Q.C. circle, 1980; How to operate Q.C. circle activities, 1985). It is a means for consensus and for enhanced involvement and commitment to the organisation. It operates through several channels:

(a) *Ringi System*

A decision-making process put in train by a low-level managerial position. The idea proper may originate with a high-level manager, but a subordinate undertakes to develop it further and prepare the draft as a basis for the decision. The written proposal is circulated among the different levels for approval, each member affixing a stamp of approval called *Hanko*, indicating basic acceptance. The number of these varies according to the number of people who would be affected by the decision and have to be involved in the process.

Simultaneously, there is a process of preparatory communication through informal discussion and consultation (*Nemawashi*). This process reflects the spirit of consensus, and takes place before the formal proposal is presented at the official meeting (Ballon, 1988; Kume, 1985; Odaka, 1986; Takanaka, 1986; personal interview at the Taiyo Kobe).

(b) *Small-Group Activity*

Small-group activity is based on the notion that nearly all people take more pride and interest in their work if they participate in the decisions about it. There is the implicit recognition that workers understand their work better than almost anyone else, and can significantly contribute to its improvement (Canon Handbook, 1987, p.123; Q.C. Circle Koryo, 1980; Onglatco, 1988).

At Hitachi, Management Improvement (M.I.) activity was introduced in 1968. It consists of three channels cutting across eleven target issues: (1) Top-down managerial activity; (2) committee activity associated with ad hoc projects (Task Force Project); and (3) small-group activity involving
teams of about 8–10 employees engaged in problem solving and implementation of solutions (Introduction to Hitachi and Modern Japan, 1986).

The director of the M.I. activity centre pointed out the unique characteristics of the small-group activity at Hitachi: (a) Strong support by top management; (b) challenging and legitimate goals perceived by the group members as directly related to their work; (c) contribution to employees' self-development; and (d) a supportive culture, fostered by special events including competitions, kick-off conventions, prizes, intra- and extramural publications, and nationwide participation in quality circles (personal interview at Hitachi, 1987).

At Canon, the goal of small-group activity is generally increased productivity and improved workmanship through direct participation. Each group begins by selecting a specific target, and each group member has a role in its attainment. The problem is analysed and causes are identified. Solutions are sought, sometimes with outside help. Once all members understand what has to be done, the solution is put in train and the results are checked. Results have official recognition, including awards.

Problems solved by small groups at Canon can be classified in the following categories: Quality improvement, 57%; work efficiency, 22%; overhead reduction, 0.3%; safety and miscellaneous, 18% (Canon Handbook, 1987).

Intangible results of small-group activity include a strong sense of security, acquisition of interpersonal skills, and the development of "thinking" employees of the kind a knowledge-based industry needs. As regards Q.C. leaders, the experience they gain improves their capacity for leadership and in the longer run enhances their chances of promotion (personal interview with Q.C. leaders at Stanley Electric Company).

Group effectiveness in Japanese companies is well integrated into the cultural characteristics of group orientation and collectivism. In fact, group goals in Japan were found to be more effective than individual goals. A study conducted by Matsui, Kakuyama, and Onglatco (1987) demonstrated that individuals who worked in groups of two, jointly set higher group goals than the sum of the two individual goals, and that group goals induced a higher level of goal commitment than individual goals alone.

(c) Suggestion System

The suggestion system enables individuals to put forward ideas for improvement. Suggestions are mainly local- and task-based, but need not be confined to the individual's specific workplace. They are examined and ranked according to their level of contribution, with feedback provided by the evaluators at the same time. Awards are granted annually, ranging from 100 yen to 100,000 yen. At Canon, each award is also rated in points,
which accumulate to a cash prize of up to 300,000 yen and a gold medal. The best proposals rate a special presidential award—an all expenses paid two-week tour of overseas plants.

The average number of suggestions in 1985 was 70 per employee at Canon and 76 per employee at Hitachi, compared to the national average of 24. The record number achieved at Hitachi by one individual (whose name has since become a symbol of creativity), was 2,464 (personal interviews at Hitachi and Canon, 1987; Canon Handbook, 1987; Introduction to Hitachi and Modern Japan, 1986).

3. Middle-Up-Down Management

Nonaka (1988) noted the need to resolve the lack of coherence between the visionary but abstract concepts of top management, and the experience-grounded concepts originating on the shop floor. This key function was assumed by the middle level, and was characterised by Nonaka (who used the new model of Honda City as illustration) as Middle-Up-Down communication.

The role of the middle level consisted in generating information by integrating strategic macro-level with its hands-on micro counterpart, the deductive top-down process with the inductive bottom-up. In addition, it provided the horizontal link across specialities, such as R&D, manufacturing, and marketing.

4. Horizontal Communication

Horizontal communication is both formal and informal.

4.1. Formal Horizontal Departmental and Interdepartmental Meetings

An example is a daily meeting of seventeen sales employees at the Akasaka branch of the Taiyo Kobe Bank. All sales employees have a 45-minute daily meeting, starting at 9.00 a.m., with the branch manager and the assistant branch manager, at which each of them reports concisely their previous day's activity and their plans for the coming day. In addition, each employee reports the problems that are faced and receives advice from the assistant branch manager and from peers. For example, one section salesperson reported on an entrepreneur planning to set up his business near the bank, and discussed the services the bank could offer him in terms of loans, interest rates, etc. (personal interview and observation of meetings at the Taiyo Kobe Bank). The need to summarise the results of the previous day and to plan for the coming day stimulates an active approach to work. The salespersons recognise new opportunities, set themselves short-term goals and make plans for attaining them.
Another example, with both formal and informal aspects, of a departmental meeting is drawn from the Canon R&D Centre. Twice a year the members of the centre meet at a convention centre outside the company, where detachment from the formal hierarchy facilitates freeflow of information and ideas. These meetings are attended by junior and senior engineers and by top-level managers. The new engineers share with the seniors updated knowledge in science and technology, whereas the latter contribute their long-term experience in R&D, manufacturing, and marketing. The brainstorming process and the free exchange of ideas lead to ideas for new patents and to models for new products (personal interview with R&D director).

Interdepartmental meetings are organised for purposes of coordination and synergy. At Canon, the problem of communication between R&D and production has been solved in the following manner: A representative of the manufacturing department sits on the R&D team from the initial stage of product development and provides the relevant input from the viewpoint of the manufacturing process; when the prototype is ready for the production line, a representative of the R&D unit joins the manufacturing department, and the synergy between the two units ensures smooth transition from R&D to manufacturing (personal interview at Canon, 1987).

A similar case of synergy was reported at the Pfitzer Company (personal interview, 1988). The idea of developing a new product is jointly discussed by representatives of the R&D centre and of the manufacturing and marketing departments, in order to ensure that the proposed product has a potential market and that the cost of development and production can be offset by the market price. This procedure enables the company to avoid possible pitfalls due to lack of interdepartmental communication. In the West, this faulty coordination has been known to result in difficulties in the production process when manufacturing constraints were not taken into consideration by R&D; in other cases, the prototype developed by R&D turned out to have no market.

4.2. Informal Horizontal Meetings Among Peers

Several times a week, employees who work together meet for drinks after working hours. These meetings are basically social, but serve for exchange of information and ideas as well—sometimes as part of the small-group activity or Nemawashi process referred to earlier.

The companies encourage the social communication network as it contributes to the smooth flow of information and to mutual support in decision-making. The social activities thus promoted include athletics and cultural clubs (libraries, music classes, etc.). Some companies maintain their own holiday hostels.
5. Jinmyaku—Informal Communication System

Jinmyaku signifies the human vein, and is defined as the connection among people belonging to the same group or the same series of groups in the political, business and academic worlds (Dictionary of Japanese Language, 1974). It represents a hierarchical array of informal networks across groups within, and outside the organisation, likewise serving for exchange of information and provision of mutual support (Takezawa, personal communication, 1988). In this sense, Jinmyaku follows the traditional social structure of the Dozoku and Iemoto. Jinmyaku is sometimes formed around graduates of the same school, and becomes exclusive and out of bounds to outsiders. In that case it is known as “gakubatsu” (Matsui, personal communication, 1990).

Rank-and-file employees described at the interviews how they searched out a prominent person in the organisation in an attempt to join his Jinmyaku, bringing themselves to his attention, and finding opportunities of becoming valuable to him (personal interview at Taiyo Kobe Bank, 1988). Members of a Jinmyaku help one another in obtaining promotion, and support one another’s decisions. In conclusion, belonging to a Jinmyaku is a symbol of security and status. There is actually a saying “Know-who is more important than know-how”.

The closest analog to Jinmyaku in Western organisations would be mentoring; the mentor being a senior helping a young employee within the organisation (Olian et al., 1988). However, these mentor–employee relationships are purely dyadic whereas in Japan Jinmyaku may also take the form of a secondary group.

Dyadic relationships in Japanese companies are formed between an immediate superior and subordinate, the senior providing information and support and helping the subordinate adjust to the organisation and make progress on the hierarchical ladder; the subordinate, in return, complying with the boss’s wishes and supporting the boss’s decisions. This dyadic superior–subordinate relationship was in fact identified as a crucial factor in the employee’s promotion (Wakabayashi et al., 1988).

III. IMPACT OF COMMUNICATION ON PRODUCTIVITY AND INNOVATION

The second proposition, mentioned earlier, focused on the relationship between the effectiveness of the communication system and the high level of productivity and technological innovation.

Japan is becoming one of the leading industrial countries in the world today. It is recognised as being second in the world in terms of GNP, at $1,158.8 billion, (the first being the U.S.A. with $3,304.5 billion), first in
terms of labour productivity—an average annual increase of 3.4% (versus 2.5% in the U.S.A.; 2.7% in W. Germany; and 2.1% in the U.K.), and with surplus in the balance of payments of $21,030 million, compared to −$40,840 million in the U.S.A. (Facts about Japan, 1985).

At the same time, there is less awareness in the West of the increasing level of innovation in Japan. In fact, the Japanese used to be commonly described as lacking in innovative ideas, and as imitators of technological developments in the West without any original contribution of their own. This situation has now been changed significantly. A report of the Patent Agency (Gregory, 1986) shows that Japan is becoming the leading country in the number of patent applications (about 350,000 versus 110,000 in West Germany, and in the U.S.A.). Moreover, seven out of the 20 leading companies in the number of patents issued in the U.S.A. in 1985 were Japanese (Japan Patent Information Centre, 1985: See Canon Handbook, 1986). In addition, there is a significant increase in the number of new products developed each year by Japanese companies—for example Canon reported 81 new models in 1985.

Japanese companies are also emerging as leaders in new product development and in production systems in the electronics industry. In an extensive review of the developments in the electronics industry, Gregory (1986) summarised the major breakthroughs:

— In 1950, Sony introduced the first commercially produced transistor.
— In 1978, Fujitsu was the first to announce commercial production of 64K Ram circuits, and other Japanese companies were involved in the development of 256K circuits.
— Japan has overtaken the American lead in integrated circuit technology.
— In 1981, the U.S. government asked Japan to provide advanced, very large scale integration (VLSI) technology for air and anti-air submarine defence; the Toshiba Corporation was asked by General Motors to help develop an electronic control system for automobile engines.
— General Electric negotiated with Hitachi for extensive technological assistance in the manufacture of VLSI circuits.
— In 1984, the Japan Broadcasting Corporation (NHK) came up with a new system permitting transmission of T.V. images up to three times clearer than those of conventional broadcasts; less than the electromagnetic broadcast spectrum previously required by high-definition T.V. technologies.
— The Japanese electronics industry is emerging as the world's leader in production of colour T.V., videotape recorders, electronic watches, calculators, facsimiles, etc.
— The main achievements of the government-sponsored VLSI Technology Development Union are revolutionary electron-beam exposure equipment and high-speed electron-beam drawing equipment, which will enable the Japanese semiconductor industry to produce mega-class VLSIs.

— In 1986, Japan introduced 4-megabit dynamic random access memory devices.

The most advanced experiments are conducted in Japan these days in communication services. Other advances are in the fields of semiconductors, supercomputers, and robotics.

Japanese management strongly emphasises the values of innovation and creativity. For example, President Sono Fukuiro of TDK explicitly declared that “people with creativity, people with foresight . . . people who can grow . . . these are the kind of people we want in TDK” (Sono, 1981, p.1).

It can be argued that the communication system is one of the factors which facilitates the rising level of productivity and innovation for the following reasons: (a) Communication allows for information sharing and for an increasing level of knowledge and understanding; (b) it enhances the diffusion of innovation and provides the infra-structure necessary for utilising past inventions and developing them into future innovative products and services; (c) technology transfer seems to be a necessary condition for doing advanced research and development today; (d) bottom-up communication stimulates additional sources of innovative ideas of employees, who are familiar with the nature of their own work perhaps more than anyone else; (f) interpersonal communication improves the coordination between different organisational units, which is necessary for organisational effectiveness; and (g) interpersonal communication enhances employees’ motivation by clarifying companies’ goals and strategies, and making them meaningful, and by enhancing employees’ self-efficacy as they improve their knowledge on how to perform their jobs.

Nonaka (1990) proposed that the sharing of redundant information contributes to innovation in organisations. He argued that from a qualitative standpoint, excess information enriches the meaningful functions of the organisation. When excess information is shared within the organisation, it clarifies the meanings of the specific requisite information held by distinct individuals and groups, it increases the reliability, and induces an expansion of the significance of such requisite information. Nonaka demonstrated that the time duration needed for the development of Fuji Xerox FX3500, for example, was significantly reduced (from the expected 38-month period to 24 months). He attributed the improvement in innovation to the parallel development method, in which frequent personal
contacts were developed between employees in different functions from planning to production. Personal contacts between the development project members amounted to about one-third of the total time allocated to work. Similar processes of overlapping information occurred in the development of Canon's Autoboy Camera, and in the development of Mazda's New RX7 model.

In general, the Japanese are willing to invest much more time in information exchange than Western companies. The time required to reach a decision in Japan is much longer than in the West, but once one has been reached the process of implementation is much smoother (Kume, 1985).

**DISCUSSION AND CONCLUSION**

The present study identified the antecedents and consequents of the communication network in Japanese corporations. The cultural antecedents comprise the values of groupism, consensus, harmony, cooperation, and hierarchical order, which in turn have shaped the channels of communication including the Ringi system of decision-making, small-group activity, the suggestion procedure, the practice of departmental and interdepartmental meetings, middle-up-down management, and the informal Jinmyaku network.

Conversely, the mechanism of communication have facilitated the sharing of values by the organisational members. Shared communication mechanisms and shared values in Japan strengthen each other and enhance the occurrence of collective organised actions. Strong mechanisms of communication can sometimes compensate for a low level of shared meaning (Donnellon, Gray, & Bougon, 1986).

Dominance of cultural characteristics was observed with respect not only to behavioural outcomes, but also to organisational structures. Lincoln, Hanada and McBride (1986) demonstrated that organisational structures in the U.S. were affected by the type of technology, whereas in Japan, the technology impact was smaller due to the dominance of shared culture.

The values of group orientation and hierarchical order have modified the style of corporate collectivism. Subordinates respect their superiors by virtue of their seniority, and are highly committed to their company. In exchange, the company is duty-bound to satisfy the employees' needs, including those for security, affiliation, and self-growth. Superiors in organisations show support and consideration to their employees, and allow them to participate in the process of decision-making.

The informal Jinmyaku communication network is shaped by the same value system as its formal counterpart. Surprisingly enough, there is no
specific mention of this term in Western research literature on Japanese management although the phenomenon was described by Drucker (1971, p.120), who felt unable to characterise it properly: As he himself said: "It has no name—the term 'godfather' is mine, not theirs".

Whereas organisational informality probably plays an important role in Western organisations as well, in Japan it is more clearly defined and recognised. This hidden aspect deserves further study.

The unique characteristics of the communication network in Japanese corporations have both cognitive and motivational effects on employee behaviour. On the cognitive level, the communication system enhances diffusion of knowledge and information, technology transfer and innovation. On the motivational level, sharing of values strengthens the organisational culture and commitment to organisational goals. The main goals of the large industrial corporations in Japan today are prosperity, improved product quality and enhanced levels of creativity and innovation (Canon Handbook, 1987, p.54; Introduction to Hitachi and Modern Japan, 1986, p.7; Sono, 1981, p.1).

It is concluded that the congruence between the value system and communication patterns facilitates sharing of the values by group members; this in turn further strengthens the corporate culture, thereby strengthening employees' commitment to corporate goals.

The validity and generalisability of the aforementioned findings and conclusions derive from the following circumstances: (a) The companies included in the study represent a wide spectrum of industries. Therefore, the findings can be generalised to other large companies with more than 300 employees. Although large companies in Japan comprise only 12% of Japanese establishments (Japanese Working Life Profile, 1989) there are reasons to believe that small size companies share similar values and managerial philosophy to those held by large companies, and that they try to live up to the ideal form of life-time employment. For example, in a comparative study between employees in Yokohama and Detroit, Cole (1979) found that the odds of staying with one's first employer in Yokohama are at least four and a half times as great as in Detroit in large-size organisations, six times the Detroit odds in intermediate-size organisations, and ten times the Detroit odds in small-size organisations; (b) reliability of the interviews was assured by complete agreement between the interviewers; (c) the manuscript was reviewed by the five largest companies participating in the study, and the companies gave their consent for the publication of this manuscript; (d) the content of the interviews matched the companies' documents; (e) the generalisability of the relationship between interpersonal communication and innovation was supported by Nonaka (1990) in additional companies such as Fuji Xerox, Matsushita Electric, Epson, Honda, and Mazda.
The implication of this study for Western organisations is that the congruence between the cultural values and the communication system has to be modified by intent. In the West, companies very often tend to apply managerial practices which proved successful in other cultures. The present study demonstrated that Japanese management practices are firmly anchored in the national cultural value system, and this congruence is a key factor in its effectiveness. The communication system in Japanese companies significantly differs from that of Western companies (Hirokawa, 1987). Thus, the success of the interpersonal communication system in Japanese corporations is not a guarantee for its effective operationalisation elsewhere; the system should be carefully adjusted to fit the cultural environment (Erez, 1986; Erez & Earley, 1987; Jaeger, 1983; Lincoln, Hanada, & Olson, 1981; Odaka, 1986; Takanaka, 1986).

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