Organization for Enabling Emergent Innovation in Changing Times

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Abstract

Emergent innovation is required to respond to the instability and discontinuity of environmental changes. Emergent innovation and new operations of organization in changing times are paramount to address the challenges using new thinking and new invention. The wisdom, insight, discretion, and understanding that implement appropriate organizational operation are required in these new times. This approach is necessary to avoid being trapped by the remains of old successful experiences. We need to explore new divisions of work and adjustment, new organizational structures, new motivation and new leadership, new relationships and new communication, and new values in the organization. These changes are also necessary to redefine an organization from a cooperative system to a collaborative community.

Keywords: Incremental Innovation, Emergent Innovation, Division of Work and Adjustment, Organizational Structure, Motivation, Leadership, Communication, Cooperative System, Collaborative Community

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1 Introduction

Today we are faced with an unstable and continuously changing society. We see a reduced technical life cycle and competition predominance, which disappears in a moment. We see a subdivided market and diversification of customers' needs[*1]. To

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[*1] Daniel Bell (1974) and Alvin Toffler (1970; 1981; 1990), among others, say that industrial society will disappear after the 1970s, and we will become a post-industrial society, an

respond to these rapid environmental changes and to survive, improvement alone is insufficient. Emergent innovation, which addresses the challenges for new invention and thinking, eliminating the bias in favor of the past, is required.

Since the current management model centers on efficiency, productivity, and rationality, it examines how people, objects, money, information, and time are managed and controlled *2. Current management makes subordinates with free spirits and original ideas follow standards and organizational rules. Management obstructs emergent innovation. Such obstruction no longer suffices in a world where adaptability and creativity drive business success.

To implement emergent innovation, all employees in an organization must be able to demonstrate their capability and creativity. A leader has to consider, nurture and support every employee in the organization so that each can mature and address the challenges of new things to implement emergent innovation. This demands we consider a fundamentally different management model from the current management model by arguing how an organization should be managed and how to eliminate the shackles of yesterday's management dogma to implement emergent innovation *3.

In this paper, I would first like to define emergent innovation, which can be successful

information society or a knowledge society. Some believe that since the 1980s we have already become a post-industrial society, information society, or knowledge society. The question is when the historical turning point commenced. In *Post-Capitalist Society* (1994), Peter Drucker states that the turning point started during 1970, certainly after 1965, and will continue until approximately 2020. Charles Handy, the British professor, also called this transformative age "the Age of Unreason" (1990) and "the Age of Paradox" (1995).

*2 Current management model developed from Frederick Winslow Taylor's "principles of scientific management" (1911), and Henry Fayol's "principles of management" (1916). The theory has been further developed through the work of Mary Parker Follett, Chester Irving Barnard, William Edwards Deming, Peter Ferdinand Drucker, and others. There are also arguments on topics including contingency theories, garbage can models, loosely coupled systems, and organic organizational structures.

*3 There are arguments about the innovation of current management in post-modern times: Charles Handy's "the age of unreason" (1990), Charles M. Savage's "fifth generation management" (1990), Charles C. Manz and Henry P. Sims' "business without bosses" (1993), Richard Foster and Sarah Kaplan's "creative destruction (2001), Thomas W. Malone, et al.'s "inventing the organizations of the 21st century" (2003), Adrian Brown's "creativity & innovation" (2007), and Gary Hamel and Bill Breen's "the future of management (2007), among others. In Japan, research includes Shunsuke Takahashi's "organization change" (2001) and Masataka Karasawa's "construction of the model of an emergent organization" (2002).

in an unstable, continually changing environment. And I would like to propose a new division of work and adjustment for carrying out emergent innovation, and to try a new organizational structure as a stable pattern for dividing work and adjustment. Next, I would like to explore a new motivation and new leadership, people's new relationships and new communication, and the new standard of values which an organization should ask for in implementing emergent innovation.

2　Emergent Innovation in Changing Times

Since Joseph A. Schumpeter argued about creative destruction theory in 1942[4], there are probably as many definitions[5], types[6] and processes of innovation as supposed experts in the field.

I would like to type innovation as incremental and emergent innovation[7]. Incremental innovation is an improvement that continues the present extension of innovation and is performed in accordance with common sense. Incremental innovation is unlikely to provide dramatic changes in business in that incremental innovation is a continuous improvement in both product and process-related aspects of a business. Alternatively, emergent innovation is generated by thinking that moves beyond the present condition and by continuing to ask if the old common sense is irrational. Therefore, emergent innovation can turn an industry on its head, creating new bases of performance, new competitors and new business models.

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[4]　Joseph A. Schumpeter defines innovation as "the introduction of new goods …, new methods of production …, the opening of new markets …, the conquest of new sources of supply … and the carrying out of a new organization of any industry" (1942).

[5]　Peter Drucker defines innovation as "change that creates a new dimension of performance" (1985). Fumio Kodama defines innovation as "technology fusion" (1992: 70-78).

[6]　Researchers such as Freeman, Tushman and Anderson, Henderson and Clark, Christensen, and Chesbrough have analyzed the extent and type of innovation; Christopher Freeman has typed radical and incremental innovation (1974); Michael L. Tushman and Philip Anderson competence-destroying innovations and competence-enhancing innovations (1986: 439-465); Rebecca M. Henderson and Kim B. Clark modular innovation and architectural innovation (1990); Clayton M. Christensen disruptive innovation and continuous innovation (1997); Henry W. Chesbrough open and closed innovation (2003).

[7]　Incremental improvement is equivalent to process innovation or continuous innovation. Alternatively, emergent innovation is equivalent to radical innovation, product innovation or disruptive innovation.

I would like to discuss moving beyond incremental innovation to emergent innovation for several reasons. Improvement in the present situation and gradual improvement in common sense ensure survival and prosperity when environmental changes are stable and continuous. However, if we are content with incremental innovation, we can no longer triumph in times of unstable and discontinuous change. The case of Sony Corporation eloquently expresses this idea. Sony Corporation has continued incremental innovation and has prospered since putting the Walkman on the market in 1979. However, the company is facing problems with iPod-maker Apple Inc. and the Sony brand value is being devalued by Samsung Electronics. Gradual innovation is insufficient; emergent innovation is required more than anything else during instable and discontinuous change[8].

In changing times, we must look for a new and better method that will triumph over mere improvement. Suppose we assume a case in which a person travels from Osaka to Sendai. Let's assume that Sendai is a new world for this individual and let's assume that the individual knows how to walk from Umeda to Kyobashi in Osaka. If this person is bound by his or her previous learning and previous ideas of walking, he or she will try to walk faster, using the same walking faster approach when going from Osaka to Sendai. Our walker does his or her best and repeats one improvement or another to walk more efficiently. This is incremental innovation. However, walking is not the only method to reach Sendai. Our traveler could arrive in Sendai by bicycle, horse, car, train, helicopter, or other means. Companies today that are doing their best to walk better cannot triumph over those who are exploring other means[9]. The purpose is to arrive in Sendai, not to walk efficiently. More important is to discover a new and better method rather than working hard to improve the current method. This discovering of a new and

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[8] Although many Japanese companies have succeeded in making products through improvement, they cannot achieve victories by improvement in today's unstable global society, with its discontinuous change. We cannot slip out of recession, the Lost Decade, and the Heisei Recession, which has engulfed us for approximately 20 years. The Japanese economy cannot regain the prosperity from the 1970s to the 1980s. We are leveling off or we are on a downward slope. For the Japanese economy to overcome this situation, society must change from incremental innovation, where one aspect of Japanese management successfully demonstrated power in industrial society in the past, to emergent innovation.

[9] In Japan, when faced with a challenge, people shout "I'll try my best" or "I will do my best." This *gambarism* is the attitude that one must keep trying no matter what and do one's best in the given frame. *Gambarism* is weak as it continues the same approach when a new approach is needed.

better method is emergent innovation.

The question is how to address emergent innovation. To implement emergent innovation, we need to be suspicious of the premise of working with common sense based on an old experience, assumption, belief, prejudice, or hypothesis. We must dare to ask why in all work situations. Asking about what everyone thinks is natural and cannot be changed is paramount. The questions are "why it does so" and "why it does not do so" to continue to address these challenges*[10].

One example of emergent innovation is the 2006 Nobel Prize award in Physiology or Medicine. For years doctors believed that the causes of a gastric ulcer were heavy foods, stress, spices, and alcohol. This belief was the common sense of the medical world. Believing that any living thing could live in the strong acidic environment of the stomach is completely irrational. Two scientists followed this irrational path to discover that the cause of the gastric ulcer is none other than bacteria; they received the Nobel Prize*[11].

Another example of emergent innovation is ticketless travel. Southwest Airlines*[12], working to increase customer satisfaction, was concerned about the tedium of waiting

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*10 For example, Isaac Newton continued asking about a common sense fact about things falling to the ground. That is, he continued asking why the moon does not fall on the ground although an apple falls to the ground, and why does tide go out or come in. The result was that he discovered the law of universal gravitation.

*11 The details are as follows: in 1983 J. Robin Warren and Barry J. Marshall of Australia presented a new opinion about the cause of a gastric ulcer being lower bacteria. The medical world was not open to listening to them. Warren and Marshall presented their theory at a meeting of microbiologists in Brussels. The attendees at the meeting fiercely opposed them; some even going as far as to slandered them and say they were crazy. Warren and Marshall tried to contribute their ideas to two medical journals: in the U.K., *THE LANCET*, and in the U.S., *The New England Journal of Medicine*. Both journals rejected their articles. In 2005, over 20 years since their first experiment, the discovery of Helicobacter pylori was confirmed. Robin Warren and Barry Marshall received the Nobel Prize for Physiology or Medicine.

*12 Southwest Airlines is the largest U.S. low-cost airline headquartered at 2702 Love Field Drive, Dallas, Texas, USA. Southwest Airlines employs nearly 35,000 total Employees throughout the Southwest system in 2009. Southwest flies to 68 cities in 35 states in USA. In December 2009, Southwest Airline topped the list of the 50 best U.S. places to work by Glassdoor.com. And Southwest Airlines was named the seventh most admired Company in FORTUNE magazine's ranking of the 50 Most Admired Companies in the world. I visited the company on March 24, 2010, and interviewed with Elizabeth Bryant, senior director of Talent Development, Richard Sweet, senior director of Planning & Distribution, Marketing et al., about business management and innovation etc.

at check-in time. If the company had used a common sense approach, it would have considered providing better service at the counter. However, the company asked if the old common sense was irrational, why a ticket was required. Southwest Airlines introduced ticketless travel in four cities in 1994 for the first time in the airline industry. And on January 31, 1995 Southwest Airlines became the first major carrier to offer ticketless travel systemwide. This is a kind of emergent innovation. Although it seemed foolish when Southwest Airlines introduced ticketless travel, the company reduced waiting time, simplified check-in procedures, and reduced cost (Freiberg & Freiberg, 1996: 136-138).

3 Organization for Enabling Emergent Innovation

The question then becomes how to manage organizations to implement emergent innovation. Before responding to the question, I would like to first consider Chester Irving Barnard's definition of organization which is the current standard definition for organization. Barnard defined an organization as "a system of consciously coordinated activities or force of two or more persons for at least one definite end" (1938: 65-81). According to this definition, the four elements of an organization are common purpose, cooperative volition, communication, and division of work and adjustment.

If this definition is more simply divided into two, the two elements are the human beings who work to attain the common purpose and the purpose that should be attained. However, current management models and organizational theory focus on motivating human beings to work to attain the purpose. Current management models and organizational theory have emphasized the element of purpose more than the element of the human being. Current management models and organizational theory became the learning from the viewpoint of the manager or administrator centering on achieving purpose. Current management models and organization theory have focused on how to manage resources, such as human beings, things, money, information, and time, in order to attain the purpose[13].

The question then becomes how we can awaken human spontaneity, creativity, and passion in an organization. How should all people participate in innovation and increase

[13] The current management model includes personnel management, organizational management, financial management, production management, information management, and time management. Since human beings are resources or capital more important than anything else, personnel management is also called human resource management (HRM)

their creativity in their company? How should we give all employees the chance to develop their ideas and new values? How should we stop top management's meaningless beliefs from obstructing innovation? How can we build an organization through which this electrifying innovation flows everywhere, and an organization in which all employees use their passion and creativity and where their highest powers can automatically be showcased?

3.1 New Division of Work and Adjustment

I would like to present a desirable division of work and adjustment in an organization that creates emergent innovation. The focus is if the division of work and adjustment through the directions and commands of supervisors and leaders, who provide the goals, work, and roles, is effective for emergent innovation. I would like to examine whether the autonomous division of work and adjustment to address the challenges of the future are more effective.

In current management models and organizational theory, the division of work and adjustment are how work is shared or how to adjust between the shared work to attain the purpose of an organization.

Rene Descartes said, "I think therefore I am." His expression was the modern character of a human being, a whole, self-cognizant person. With the age of mass production and mass consumption after the Industrial Revolution, the pyramid type of organization spread globally. The result is that the number of people who think independently, judge the situation and aim toward the future, working autonomously, are a smaller number as the only people doing so are high ranking management. Almost all employees become subordinates[14], those who silently finish the manualized work created from the directions, commands, plans, and targets of their supervisors and bosses. This is the organization as a binary system termed "the separation of doing from thinking" (Friedman, 1966: 201).

or human capital management (HCM). However, humans are not resources or capital. Therefore, human beings are not the objects of management. The objects of management are resources such as things, money, information, knowledge and expertise, and time. Human beings are the subjects of management. Human beings are led toward a vision and must be able to fully demonstrate the talent that every person has. If management believes that, the concepts of personnel management, human resource management, and human capital management are contradictory.

[14] Subordinates mean those who hear and follow orders, directions, and commands from the top. "Sub" means below, "ordin" means order and "ates" means people.

Therefore, employees in such a pyramid organization depreciate themselves, and such an organizational structure tends to eliminate confidence. Loss of confidence is the fatal blow to addressing challenges and learning. Those who eliminated confidence in many cases did so because they feared challenge.

Therefore, to implement emergent innovation, a new division of work and adjustment are required so that employees in an organization can become autonomous, enabling them to address the challenges of new things. I would like to examine some examples as a model of this new division of work and adjustment.

First is the Orpheus Chamber Orchestra*15, which is attracting attention as a model for a suitable organization in these new times. A common sense precept is that a conductor is indispensable for an orchestra. Countering the common sense of the music world, the Orpheus Chamber Orchestra has no conductor. The orchestra musicians divide their work and adjust themselves in this orchestra, and the orchestra has garnered international attention in the corporate sector for its use of teamwork and motivational management principles. The orchestra has an excellent global reputation and has won a Grammy Award*16. All musicians in the orchestra demonstrate creativity, and do so without a conductor, and all the musicians have the authority to create music in their orchestra (Seifter & Economy, 2001).

The Orpheus Chamber Orchestra eliminates the conductor's role and the 27 musicians in the orchestra share the responsibility of conducting. That is, the orchestra has many leaders and all musicians have the opportunity to become a leader. The innovation was eliminating the conductor so that the creativity and talent of each musician could be demonstrated fully, flexibly and independently. There are not those who supervise the whole orchestra. And there are not also those who evaluate success or failure in the orchestra. This orchestra has infinite freedom for reform. The supervising levels do not determine Orpheus's mission. Each musician determines, and the orchestra continuously improves.

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*15 The Orpheus Chamber Orchestra is headquartered at 490 Riverside Drive, New York, USA; the Orpheus Chamber Orchestra was founded in 1972 by cellist Julian Fifer and fellow musicians to bring chamber music's ideals of democracy, personal involvement, and mutual respect into an orchestral setting.

*16 The National Academy of Recording Arts and Sciences in the United States annually presents the Grammy Awards for outstanding achievements in the music industry. The awards were established in 1958. They were originally called the Gramophone Awards because the trophy presented to the winners was a miniature gramophone.

Orpheus has eight supporting principles. The first principle is placing power in the hands of the people doing the work; the second principle is encouraging individual responsibility for product and quality; the third is creating clarity in roles; the fourth is fostering horizontal teamwork; the fifth is sharing and rotating leadership; the sixth is learning to listen and talk; the seventh is seeking consensus and building creative systems that favor consensus; and the eighth is passionate dedication to the orchestra's mission (Serrat, 2009: 4).

Second, I would like to present W. L. Gore & Associates[17], another example of the new division of work and adjustment in changing times. In the company, all new products and new standards also start from when an employee begins to knead an idea. Like in a game of tag, whoever becomes "it" has the freedom to do as they think best.

At W. L. Gore & Associates, regardless of work experience, anyone with a new idea, can propose a project and involve associates[18] who agree with the proposal. There is no necessary procedure of special recognition for a project to materialize. If approximately 6 to 10 associates who agree with the project gather together, the project materializes. The proposer becomes the leader. Proposals considered unimportant and unattractive are automatically eliminated since they garner insufficient associates for supporting the proposal. The process similarly comes to a stop when the proposer lacks leadership and vitality. Further, a leader is not allowed to command or make arbitrary decisions. This is because anyone can transfer to other teams by separating from the team, or can propose a project at any time. Although the company have leaders, all associates in a team are equal. Leaders may be appointed, but they are defined by followers. More often, leaders naturally emerge by demonstrating special knowledge, skill, or experience, which advances a business objective. A team arises for a specific target, and if the team purpose is attained, the team will dissolve and a new team will develop for a new purpose. The purpose is defined by those who do the work. Since all associates

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[17] W. L. Gore & Associates is headquartered at 555 Paper Mill Road, Newark, Delaware, USA; in 1958 the company was established as a special electric wire maker. In 1969 the company developed Gore-Tex. The company is developing products made from the main material of PTFE (polytetrafluoroethylene) which is a synthetic fluoropolymer of tetrafluoroethylene which finds numerous applications. Gore & Associates employs approximately 6,000 associates at 45 facilities throughout the world in 2009. The company was ranked 10th in 2007 and 15th in 2009 among Fortune Magazine's 100 Best Companies to Work For.

[18] W. L. Gore & Associates do not use the word employees; instead they use associates, meaning coworkers and partners.

participate in the project, they have a strong sense of ownership and eagerly cooperate for success of the project. Therefore, at W. L. Gore & Associates, employees are not managed but manage themselves. At W. L. Gore & Associates, this is termed "operation without management" (Park, 2003: 84-87; http://www.gore.com).

The third example of a new division of work and adjustment in changing times is Whole Foods Market[19]. At Whole Foods, the employee decides on the spot what to keep in stock. The pressure to improve performance is not generated from supervisors but from peers. Team members veto new hires; managers do not[20]. Consequently, all employees manage small enterprises. The basic unit in the company is not in the store but the team, and this degree of autonomy is unprecedented in the retail sector. Each store consists of approximately eight teams, and these teams supervise parts of Whole Foods from the fish to the fruits and vegetables department to the cash registers where customers purchase their goods. A small-scale team assumes responsibility for all important business decisions including price setup, ordering, staff assignments, and promotion in a store. The store manager is consulted about team leaders, and if the team decides on goods which are likely to sell locally, these goods are stocked. The managers at the head office do not participate in determining which goods are displayed at which store. Any store can determine the commodity composition. Each team becomes a profit center and team achievements are measured by labor productivity. The employees have significant accountability when significant power is distributed. Teams that go beyond a fixed standard receive a bonus on the next payday (http://www.wholefoodsmarket.com/company/).

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[19] The world headquarters of Whole Foods Market, Inc. is located at 550 Bowie Street, Austin, Texas, USA; Whole Foods Market is the world's leading natural and organic foods supermarket retailer. The company has over 270 stores in North America and the United Kingdom and annual sales of 6 billion dollars. The profit of $900 per square foot of the company is the highest in the United States, and was twice as high as standard food supermarkets in 2006. In 15 years after issuing a public stock offering in 1992, the stock price rose approximately 3000%. The sales growth rate of Whole Foods stores from 2002 to 2007 was an average of 11%, approximately 3 times the industry average. The company ranked 5th in 2007 and 22nd in 2009 among Fortune Magazine's Best 100 Companies to Work For.

[20] All new employees are provisionally assigned to a team. After four weeks of probationary employment, teammates determine the employee's fate by vote. In order for a new employee to work as a full time employee on the team, 2/3 or more votes are required.

3.2 New Organizational Structure

Organizational structure is a stable pattern in the division of work and adjustment for attaining the common purpose for an organization. The foundation of the current organizational structure is the pyramid in which communication starts from the top and moves down or starts at the bottom and moves up. This pyramid is the centralized system that Henry Ford built as a model based on the Prussian army, the military state that smashed strong countries in Europe in the second half of the nineteenth century. To employee a huge number of unskilled workers, Henry Ford concentrated all authority in a small number of managers to efficiently produce motor vehicles. Subsequently, this centralized system changed to a functional organization, a line and staff organization, a divisional organization, and a matrix organization, among others[21]. Although there is a difference in degree, the foundation of organizational structure is a pyramid, which creates a layered structure of authority.

Since we live in a post-industrial society, knowledge society, or globalized society, we need an appropriate new organization for these new times. Although improvements in a given range can be achieved in a centralized system, such a system interferes with the process of creating and implementing emergent innovation. To be able to respond to great change and to triumph, emergent innovation is the requirement. For emergent innovation, other organizational structures are more effective than the pyramid. A new organization must continue innovation by addressing challenges in new thinking and new inventions that eliminate past prejudices and orientations that may not be appropriate for today.

Ford Motor Company[22] has a centralized system appropriate for mass production of the same type of car, such as the Model T, and has continued telling workers not to think, simply to move their bodies on the spot. The result was that Ford could not respond to current environmental changes, and found itself falling and continuing to lose its market share. To address our new modern age and end the poor business that had been continuing for years, Ford radically reformed its organization in January 2002 to

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[21] For example, Lifort Co., Ltd. is a functional organization, and livedoor Co., Ltd. and Kirin Brewery Company, Ltd. are divisional organizations.

[22] The World Headquarters of Ford Motor Company is located at One American Road, Dearborn, Michigan, USA; in 1903 Henry Ford was founded Ford, which is the fourth-largest automaker in the world based on the number of vehicles sold annually. In 2008, Ford produced 5.532 million automobiles and employed approximately 213,000 employees at approximately 90 global plants and facilities.

turn an old pyramid organization into a reverse triangular organization. The company grants large power on the spot where customer and Ford representatives interact to address customer needs (NHK Special, May 12, 2002).

Even in Japan one company is achieving success through an inverted pyramid organizational reform: the inverted triangle organization of Shiseido Co. Ltd. (Ikeda & Kanai, 2007: 104-105). Shiseido began to introduce the organization after Morio Ikeda became president in 2001. For usual corporate organizational charts, the pyramid has the president and CEO at the top. The next layer in the chart is directors and executive officers. Managers and section chiefs are under the directors and executive officers, with general staff at the bottom. In contrast, Shiseido's inverted triangle organization has customers at the top with the frontline sales such as beauty consultants (BC) who work with customers in stores. Next are the managers and branch managers and then head office sections, such as research and development, production, physical distribution, marketing, advertising, and sales promotion. The president is at the bottom of the organizational chart. President Ikeda says, "I who am at the bottom support all people."

Since 1990, Project-oriented Organization Incorporating Groups and Leaders (POGAL), which is Japan Gore-Tex Inc. (JGI)[23], has been introduced and refocused management, centering on projects. POGAL has no hierarchical chain of order. All activities at POGAL are managed and operated in projects. Using POGAL, JGI has marketed one innovative product after another. In this organization, all employees are called associates and work together. All associates define the missions and vision of the projects in which they participate. Associates in projects work to reach the goals that they created themselves, and they help others working on other projects. Each individual tries to exercise leadership based on his or her purpose and role. Each associate thinks creatively, and acts and achieves success in accordance with these cooperative relationships. Associates are the employees who execute the projects. A leader does not manage employees but orients the organization in the company so associates can work toward success.

In addition to companies, others are also working on such organizational reforms, changing the pyramid type organization which was the common sense of modern

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[23] Japan Gore-Tex Inc. is headquartered at 1-42-5 Akazutsumi, Setagaya, Tokyo, Japan; the company was established in 1974 by the U.S. W. L. Gore & Associates and Junkosha Inc. with a 50-50 joint investment. JGI is a company with manufacturing and sales in Japan of the ePTFE products invented by Robert W. Gore in 1969 (Park, 2003: 87-89; http://www.jgoretex.co.jp). The company posts annual sales of $300 million and employs 500 associates in Tokyo and Okayama.

Figure 1: POGAL
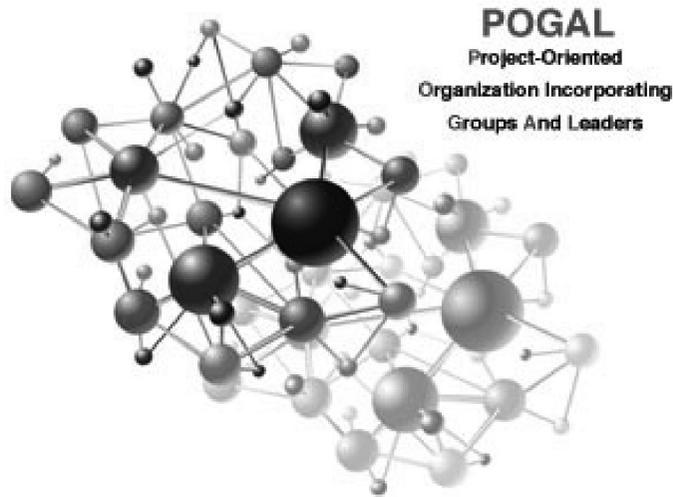
Source: http://www.jgoretex.co.jp accessed October 27, 2002.

organizations. Even a military organization can be a typical example of the pyramid where top-down communication is organizationally reformed to radically improve the pyramid. The organizational reform called FORCE XXI OPERATIONS of the U.S. Army in 1994 is a typical example (NHK Special, May 12, 2002).

According to this organizational reform, orders for soldiers to act were changed 180 degrees. Soldiers who were warned to wait for commands from superiors and not to act arbitrarily are now told to act on their own judgment. In a new system, Land Warrior*24, every soldier on the battlefield can have much authority, and can even discharge heavy weapons such as missiles in accordance with their judgment. This organizational reform is based on management where the directive order system itself has reversed so new organization becomes possible.

Major General Duijck who developed this new army organization has stated the following:

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*24 In 1994, the U.S. Army launched the Land Warrior program. The U.S. Land Warrior is an integrated fighting system for individual infantry soldiers which gives each soldier enhanced tactical awareness, lethality and survivability. Systems integrated into Land Warrior are weapons, helmet, computer, digital and voice communications, positional and navigation system, protective clothing and individual equipment (http://www.army-technology.com/projects/land warrior/).

In a new army organization, even a private is expected to have the capability as a leader. Soldiers who can only follow orders are useless. This is because it becomes a life-and-death turning point whether they use the opportunity in front of them or not. For that purpose, it is necessary to give the soldiers much information (NHK Special, May 12, 2002).

Headquarters, such as commanders who were the center of command, came to provide immediate support on the spot in terms of information. If we look at the organizational chart (Figure 2) that the organizational reform of the U.S. Army comes from, a line has been written so that a superior directly in the chain of command may be bypassed. The pyramid structure has been reformed (NHK Special, May 12, 2002).

Force XXI Operations are characterized by non-linearity. Non-linear operations do not seek a rigid organization of the battle space into close, deep, and rear operations. Instead, the battle space is fluid, changing as METT-T[25] changes through mission preparation and execution. Non-linearity requires soldiers and leaders to possess greater situational awareness, allowing risk to be accepted with space between units rather than more traditional contiguous operations. Non-linearity also increases the requirements for each divisional element for all-around security. The key to distributed operations is empowering soldiers and leaders to use their initiative, will power, and professional expertise to implement critical tasks in all echelons. Distribution enables Army elements to take advantage of internetted communications avoiding the tendency to use the chain of command as the chain of information. Dispersion empowers subordinates to operate independently within the commander's intent, leading to synergistic effects that exceed synchronization by a centralized headquarters. Distributed operations lead

Figure 2: The Organizational Structure in FORCE XXI OPERATIONS
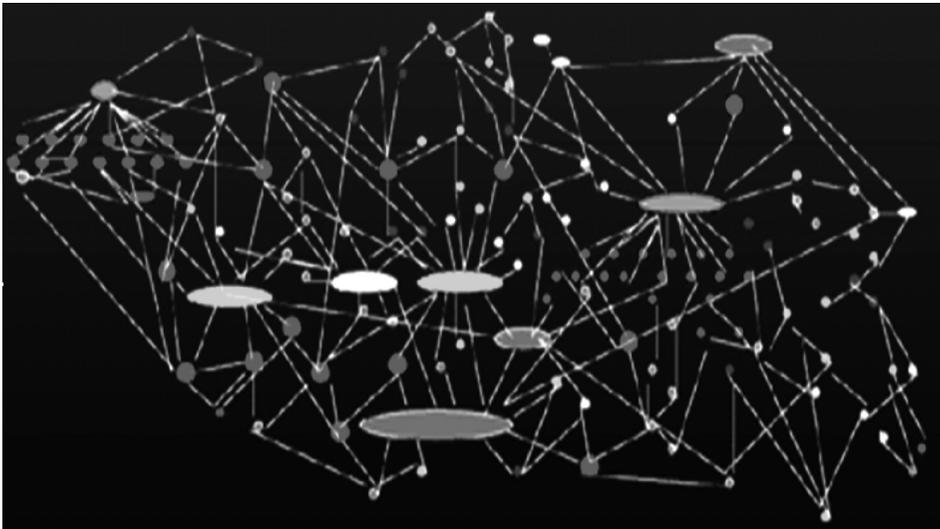

Source: NHK Special, May 12, 2002.

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[25] METT-T is the acronym for Mission, Enemy, Terrain, Troops and Time Available.

to agility, with greater flexibility to react to multiple situational changes. There are certain functions best executed centrally, primarily management of resources. Force XXI Operations seek to execute each function using the best operational scheme (http://www.fas.org/man/dod-101/army/docs/astmp/c2/P2C1.htm).

Thomas W. Malone[26] and others have studied organizations appropriate for the new times in which we live. They selected 17 nations and 264 companies, and analyzed organizational structure and flow of decision-making. According to this organizational chart, the appropriate organization is not the pyramid but a network type (NHK Special, May 12, 2002)[27].

Figure 3: Organization in the 21st century

Source: NHK Special, May 12, 2002.

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[26] Thomas W. Malone is the Patrick J. McGovern Professor of Management at the MIT Sloan School of Management. He is also the founder and director of the MIT Center for Collective Intelligence and was one of the two founding co-directors of the MIT Initiative on "Inventing the Organizations of the 21st Century." Professor Malone teaches classes in leadership and information technology, and his research focuses on how new organizations can be designed to take advantage of the possibilities generated by information technology.

[27] An NHK special on May 12, 2002 asking "How is the information revolution affecting organizational management around the world?" addressed organizational change from a pyramid to an inverted pyramid organization or network organization under the influence of information technology.

3.3 New Motivation and New Leadership*28

The power model of the leadership*29 in which authority was concentrated in the center and based on top down organizational operation succeeded at incremental innovation. The power model of leadership, however, often interferes with emergent innovation. Managing with directions, commands, and controls is ineffective for emergent innovation. Another organizational operation where managers serve, consider, and empower employees in an organization is required to achieve emergent innovation so that each employee, without restraints, can address the challenges. Sony Corporation "could not radically reform its zero bases and has been losing vigor and gradually declining, because the company has interfered based on the glory of the old days, successful past experiences, elitism, and other factors" (Joujima et al., 2006: 3).

To implement emergent innovation, all employees must question the common sense based on their old experiences, assumptions, beliefs, prejudices, and hypotheses. Each must autonomously judge the premise and fully demonstrate his or her capability and creativity. Leaders must avoid arrogance in using their status or control of employees through orders or commands based on a power model of leadership. Leaders need to help every employee so that each can demonstrate his or her talent, capability, and possibility. Leaders must consider employees, facilitate their maturity and support them, so that each employee can address new challenges of new things and feel rewarded.

A leader needs to provide opportunity to all employees so they can decide their directions, extend the breadth of their works, and develop their special fields. To solve problems, a leader needs to support those who will be able to creatively contribute from an independent position. A leader should create a vision in which an organization will progress and put its power into creating a strategy for the vision. To complete the vision, while a leader attracts people and motivates them with a sense of fulfillment and belonging, a feeling of qualification and attribution, a feeling of self-esteem and reward, the leader must make their creative energy blossom and flower. A leader needs to facilitate the growth of those in the organization and accept and praise their growth

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*28 I would like to argue the more detailed contents about new motivation and new leadership in the future as "Leadership for Enabling Emergent Innovation in Changing Times" which is another independent paper.

*29 Robert K. Greenleaf (1970) and Keith (2009) have suggested the current leadership model as the power model. The current leadership models include the great man theories, trait theories, behavioral theories of leadership, contingency theories of leadership, situational theories, and transactional theories, which are mainly leader-centered power models of leadership.

and development. Leaders need to empower and help others to have confidence in themselves. For a leader, directivity is more essential than speed.

Alternatively, managers differ from leaders in that a manager starts from planning and budgeting to skillfully overcoming the complicated environment; a manager puts power into problem solving and the operations of the existing system[30]. Managers want to exercise control if actual performance has not reached its target; a manager does not try to encourage risk; a manager will not address the challenges in the world of an adventure where boiling blood and dancing meet; a manager finds immediate efficiency or speed (Kotter, 1999: 51-73).

We have to consider a fundamentally different leadership theory from that of the current leadership model to achieve emergent innovation[31]. Research has progressed since Robert K. Greenleaf wrote his essay about the servant leader (1970; 2002: 21-61). His servant leadership has been introduced and is successful in companies such as Toro Company, Southwest Airlines, Starbucks, AFLAC, Men's Wearhouse, Synovus Financial, Herman Miller, ServiceMasters, Marriott International, FedEx Corporation, and Medtronic. One report indicates that the pretax portfolio returns of visionary companies by Jim Collins averaged 17.5%. In contrast, the returns of servant-led companies averaged 24.2% (Sipe & Frick, 2009: 2-4).

3.4 New Relationships and New Communication

Current management model is based on management decisions from the top with plans based on secrecy. Management has transmitted these decisions to employees through a chain of directions and commands or management has required reports from the bottom about moving to attain the purpose of the organization. The middle manager layer handles the transfer of information, directions and commands. For organizational communication theory, such a situation is treated as the vertical communication consisting of communication up and down the organization's chain. The current management model also includes lateral communication, which is communication between different individuals, departments, or organisms at the same organizational

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[30] Although many Japanese administrators are managers, they have been thinking that they are leaders.

[31] I would like to say that the seven pillars of new great leadership for emergent innovation are the leader as moderator, peacemaker, server, wisdom-creator, vision-maker, facilitator, and thanks-giver. Please refer to my next paper about this: Leadership for Enabling for Emergent Innovation in Changing Times.

level, or individuals across the base of a pyramid. The premise is the power model because lateral communication and horizontal communication are still used on the condition of a hierarchical authority structure. In the current management model, an immense quantity of creativity and independency has been rendered useless through forcing people with free spirits to follow standards and rules in a top-down world. Subordinating people to the organization of top-down communication is a feudal model, although the current management model has enhanced consumer purchasing power.

Such management simply has too many controls and too few freedoms. Although the current management model has made people obedient or industrious, the model cannot make employees creative and cannot make them feel any zeal in addressing the challenges of the future.

Management must be reduced and reformed to free the greatest power of all employees: emergent innovation. To implement an emergent innovation, commands must be reduced and strict control on subordinates must also be reduced. The goal is an open system in which everyone can participate or leave at any time to implement emergent innovation in an organization.

To create emergent innovation, the open communication among employees in an organization is more effective than the closed communication between employees fixed in an organization. To create emergent innovation, other relationships, such as an empowerment centering on visions and missions, are more effective than those in a hierarchical order such as power and authority relationships.

For example, at Google*[32], employees express themselves without reserve. Googlers have the right to express their opinions to anyone about anything. Wikipedia, a free encyclopedia available to all without cost, is produced by the wisdom collected from such thinking all over the world (Battelle, 2005).

I would like to show another example of open communications and new relationships among employees of an organization At Buckman Laboratories International*[33]. anyone may look for fellow workers via FORUMS on the organization network. FORUMS is an open space on the network which employees access on a personal computer

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*32 Google Headquarters is located at 1600 Amphitheatre Parkway Mountain View, California, USA; the company ranked 1st in 2007 and 4th in 2009 among Fortune Magazine's Top 100 Companies to Work For."
*33 Buckman Laboratories International, Inc. is headquartered at 1256 North McLean Blvd. Memphis, Tennessee, USA; I visited the company on September 16, 2009, and interviewed with M. Catherine Walker, manager of Training and Development Learning Center, about FORUMS.

whenever they have an idea about new products but have reached a dead end. All employees are called on whether or not they have the same or similar interest and knowledge. Different people from around the world can respond and say "I had a similar experience." FORUMS was opened for anybody to ask and answer. Employees answering may be another salesperson, someone in R&D, or an information specialist. He or she gathers information and shares it. People inside different offices, in different groups, and doing different tasks have different contents and they can all share them. One salesperson has some questions about control; an internal specialist answers the question. Then another salesperson contributes. If many employees approve of crossing specific borders, specialties, or sections, projects will independently start via FORUMS. In projects produced one after another, employees do research and development, learning and discussing.

I would like to present a case in which a company employee developed corrugated paper products. Since starch did not work well and the paper under development at that time was not sufficiently strong, employees went to FORUMS to ask for ideas and suggestions. Another employee asked if the problem was bacteria. Working from this question, the employees on the project used chemicals to suppress the bacteria. Approximately one month after the question, the trial product of strong paper to be used for corrugated paper was completed by the FORUMS project. The eight individuals working on the project included a business manager, a researcher, and a vice president, and team members from five nations. In the company, the project success of the team is evaluated, more than the success which the individuals in the project achieved alone. Now, the employees feel that this company is an excellent place to work due to colleague recognition, more than promotion or treatment (NHK Special, May 12, 2002).

Recently, the concept of empowerment has spread. Almost all managers support the concept of empowerment, but many managers are negative when they have to eliminate their own authority or power to empower employees. While saying that they empower employees, many managers cannot restrain themselves from speaking up and interfering. When empowering, trusting employees and encouragement are the most important aspects of empowerment. Even if a problem arises, believing that the employees in the project will promptly address the issue is important; managers need to wait for their project reports.

At Nordstrom*[34], all judgment is left to employees. Nordstrom trusts sales associates

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*34 Nordstrom is headquartered at 1617 6th Avenue, Suite 500 Seattle, Washington, USA;

to make on the spot decisions and has left all required judgment at their discretion at the counter. The Nordstrom's Employee Handbook is as follows:

> Welcome to Nordstrom. We're glad to have you with our company. Our number one goal is to provide outstanding customer service. Set both your personal and professional goals high. We have great confidence in your ability to achieve them. Nordstrom Rules: Rule #1: Use good judgment in all situations. There will be no additional rules. Please feel free to ask your department manager, store manager, or division general manager any question at any time (http://www.klariti.com/employee-handbook/Nordstrom-Employee-Handbook.shtml).

The company empowers all employees; the employees have entrepreneurship and can judge what the best is. Nordstrom employees are cheerful, quick-witted, kind and progressive; they have become able and creative employees. Any Nordstrom employee may accept returned merchandise, not asking why a customer is displeased with the merchandise. A manager's permission is not needed. Nordstrom does not have other troublesome procedures. Employees may sell merchandise at a price cheaper than a rival store, if needed. When there are no items that a customer is asking for, they may accept a customer request and issue a special order or purchase an item from rival stores themselves. Employees can even ask the company for payment after purchasing the item with his or her own credit card at a competing store and selling it to the shopper (Spector & McCarthy, 2005: 113-140).

One film about such empowerment is *Bayside Shakedown 2: Save the Rainbow Bridge,* directed by Katsuyuki Motohiro. In the movie, the chief of the Okita investigation-headquarters seldom empowers police investigators. She treats those she thinks of as her inferiors as things, failing to communicate with the investigators. She believes that she is their superior, and she orders them about. Criminal investigations do not go properly and an investigator was shot with a criminal's pistol. The investigation-headquarters chief was replaced with another chief. The new chief gives permission to shoot a pistol to the investigator on the spot, empowered the investigators on the spot, and the problem began to move toward a solution. The words of the new chief in this movie provide an example of empowerment.

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the company ranked 24th in 2007 and 72th in 2009 among Fortune Magazine's 100 Best Companies to Work For.

Forget status and classes notwithstanding investigators … Arrest suspects immediately after finding them! Don't wait for command from headquarters! Permit to shoot a pistol. Can all investigators hear me? Do as you think best! Report to headquarters! I believe in your judgments on the spot! … I will take responsibility.⋯ (Lines from *Bayside Shakedown 2: Save the Rainbow Bridge*).

3.5 New Values

A fault is never allowed in a pyramid organization because the basic premise to function like an efficient machine. In the organization, the value of efficiency or rationality is respected more than anything. A pyramid organization is based on assuming regulation, emphasizing control or management. The subordinates in this organization wait for the directions or commands of managers, and creativity or adaptability needed for work cannot be easily fostered.

Values such as efficiency, productivity, and rationality are ineffective for achieving emergent innovation, but other organizational values including originality, pliability, validity, and adaptability are effective. To implement emergent innovation, a leader needs to encourage every employee, to foster each employee as an entrepreneur, and to urge each employee to seek the innovative route to success. Values such as effectiveness and creativity are required more than immediate efficiency in times like now.

The 15% culture at 3M Corporation*35 is important to note. 3M has long been known for its innovation. "Giving people room" to innovate is a 3M tradition, exemplified by the 15% culture which encourages technical employees to spend 15 percent of their time on projects of their own choosing and initiative. That is, 3M technical employees can set about their ideas very seriously, working on what they regard as becoming a future new product for the company. They may use company funds and equipment for their research. If necessary, they can also employ an additional assistant. Even if they fail, there is no penalty. Employees have been also given the freedom to address challenges: the freedom to reform, experiment, succeed, and fail. At first glance, the 15% culture seems unefficient and wasteful. However, many new innovations at 3M have been developed from the 15% culture.

The Post-it® notes we use today are a product of the 15% culture. 3M researcher

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*35 3M Center is headquartered in the 3M Center Bldg 22011w02, Saint Paul, Minnesota, USA; I visited the company on March 29, 2010 and interviewed with Kenneth W. Bartelt, 3M International Technical Operations, about corporate culture and innovation.

Spencer Silver invented a trial product in 1969. He was asked to develop strong adhesive. He experimented, repeated the experiment, and repeated the trial production, but the test result differed completely from the expected outcome. The result was a strange adhesive that only adhered lightly but could be repositioned. This was clearly a "failed" adhesive as it was not sticky enough. Usually, such a failure is discarded, but Silver thought that this failure could be effectively used. He turned to others at 3M in quest of comments about this strange adhesive. However, no solutions were put forth. Art Fry, researcher in the Commercial Tape division, finally had a solution. One Sunday in 1974, Art Fry, a tenor in his church choir, turned the page of a collection of hymns. The bookmark inserted into the book slid down the page. Fry thought at that moment about the adhesives that Silver had developed. For the first time, Silver's failed adhesive of five years earlier became a specific image. Art Fry began developing "Glue Bookmarks" the next day, using of the 15% culture and producing the Post-it® notes. Fry invented the Post-it® notes in an effort to create sticky bookmarks that would remain in his hymnal during services (http://www.3m.com/; http://www.mmm.co.jp/).

4 Conclusion

After World War Ⅱ, Japan's economic growth strategy was incremental improvement. Japan has mainly introduced or copied products and production technologies from advanced American and European companies to catch up with and overtake the Western world. At the same time, Japan added improvements and developed mass production technology. Japanese management has lifetime employment, seniority, enterprise unions, and quality control at the bottom. Thanks to Japanese management, Japan became an economic superpower. Now, Japanese companies have become mature and bureaucratic. Rules, procedures, and precedents are emphasized; organizations have lost flexibility. Fear of failure is the dominant culture in Japan. High-risk ideas are avoided, and it is hard to carry out an innovation increasingly.

We are now in a post-industrial society, information society, or knowledge society in a time of change. The industrial society in which the Japanese company demonstrated the strong point until now already passed away. Nevertheless, many Japanese companies live peacefully in their old successful experience called Japanese management. And they have still operated the control-centered management which has demonstrated power doing an incremental improvement. That is to say that many Japanese companies have taken the strategy of incremental innovation, *kaizen* (improvement), and have met not

the leadership but the headship centered directions, commands and controls. Although improvement and quality control are effective in raising productivity, it cannot be certainly effective to an emergent innovation. We can say that the traditional systems, practices and customs, etc. grab an ankle to produce creativity and an emergent innovation*[36].

The maxim "new wine must be poured new wineskins" is in the New Testament (Luke 5:38). If new wine is put into a hard leather bag that has become old and inflexible, the leather bag will tear. The wine will spill and be wasted. New wine must go into a new leather bag.

Similarly, we need new leather bags to encourage emergent innovation. Incremental innovation is also important. But emergent innovation is required to counter instability and discontinuity in environmental change. In times of change the importance of emergent innovation and new operations in organizations to enable new thinking and new invention are paramount.

We have to ask for wisdom and insight from nature phenomena. Unless reptiles like snakes, shellfish like river crabs, and insects like spiders and grasshoppers can molt, they cannot grow bigger and they may not survive. For an egg to become a bird and fly in the wide open sky, it must break out and emerge from the shell that enclosed, protected and nurtured it. Of course, pain follows on breaking the shell. We need to acknowledge that shells become a hindrance, restricting rather helping the bird to fly. Similarly, if the economy of Japan is not transforming itself from using old shells that were once successful in industrial society, Japan cannot mature and may be ruined in the future. If Japanese companies continue living peacefully in the shells of their old success, they cannot become birds that fly into the new world of the future.

Therefore, the wisdom, insight, discretion, and understanding to implement suitable organizational operation are required for a new time, freeing the organization from being trapped in its old shell of old successes. We must explore the new divisions of work and adjustment, and new organizational structures, new motivation and new leadership, new relationships and new communications, and new values in the organization*[37].

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*36 Therefore, the review of Japanese management is now crucial in Japan. The efforts for reconstructing Japanese management have been also continued such as restructuring, spin-outs, shifting to merit-based wage system, changing the employment system, and the expectation for a venture business etc. are it.

*37 Of course, there are difficulties and limits to adapt a new model: if every employee is empowered, he or she tends to fall into narcissism such as I myself am just the center in

These changes are necessary to redefine an organization from a cooperative system to a collaborative community. Peter Drucker argues (1946) that each organization has a mission. Therefore, an organization is a community with a mission and each section has a mission. If a leader holds up the vision for mission achievement, the partners or collaborators who feel the vision resonating will become employee participants in that community. Such an organization can be newly redefined as a collaborative community of two or more associates. An organization is a community of two or more participants together carrying out the vision and mission that they envision.

With Chester I. Barnard's definition of organization, "cooperation of two or more persons" (Barnard, 1938: 65), it is required to coerce subordinates to cooperation and to instill cooperation in those who do not agree because people are the means for attaining the organizational purpose*[38]. However, in an organization that is a collaborative community, since people are partners or collaborators with the same vision and same mission, they become the subject of the vision and mission achievement. They have accepted and embraced the vision. In the collaborative community, because autonomous collaboration is the process, an organization is not a cold system, but a warm visionary community and a community with a mission. This community becomes the autonomous collaboration that identifies with the vision and mission that all share as they spontaneously empathize and do their best. The shared community and vision helps them, encourages them, and meets the needs of the group. They communicate freely

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the world. And in a new management model, there may be a little puzzlement because each member must look for what he or she should do by himself or herself. There may be the unstable situation where what each member himself/herself should do was not decided in a new management model.

*[38] Chester I. Barnard argued for the necessity to "create fear among those not directly affected, so that they will be disposed to render to an organization certain contributions" in a cooperative system (Barnard, 1938: 149). Barnard believed that managers need to instill the purpose of an organization or need to make employees in the organization firmly believe in the organization. He writes that those "who have no initiative whatever, are problems, pathological cases, insane, not of this world, unfitted for cooperation" (Barnard, 1938: 13). Barnard argued that if an abnormal condition arises, the managers of a cooperative system should instill the purpose of cooperation into the employees of an organization, should make them believe firmly. Any view of human nature such as the economic man model, administrative man model, social man model, self-actualization man model, and complex man model in motivation theories assumes operational cooperation or illuminative cooperation in the control and management of subordinates, although there is a difference in degree.

and generously with each other and flexibly divide and adjust in their collaborative community.

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