

Managing creativity: a Japanese model

Dr. Min Basadur, McMaster University

Executive Overview

Dr. Min Basadur visited several major companies in Japan to conduct comparative research on organizational creativity. Unexpected insights emerged during interviews with Japanese managers and are the basis for this article. These managers knew a great deal about North American motivational theory and how to implement it. Employee creativity is managed through deliberate structural means, not to effect direct economic outcomes, but to develop motivation, job satisfaction, and teamwork. Contrasts to North American suggestion systems are made.

Article

Claiming An Unstable Future

The rapidly accelerating rate of technological and environmental change demands much greater organizational adaptability than in the more stable past. Attempting behavioral change has turned out to be very difficult for many North American organizations because they have, by and large, developed along bureaucratic, non-flexible, and non-adaptive lines. Recent research has indicated that people at all organizational levels in North American business and industry can learn to think more creatively, to discover and solve important interfunctional problems, and to innovate new products and new methods faster, all of which results in greater organizational adaptability.¹ Simply put, creativity in organizations is a continuous search for and solving of problems and a creating and implementing of new solutions for the betterment of the organization, its customers, and its members.

Much has been written about the recent business success of Japanese corporations. It is often implied that superior management methods are the key. At the same time, the Japanese are viewed as not being truly creative. They are accused of being very good at copying and nothing more. For example, it is pointed out they have not produced many Nobel laureates, nor have they made many basic science discoveries. It could be argued that this is because they have not yet had the world class training needed by their scientists. Some observers believe the Japanese will soon begin producing Nobel laureates by making world-class training available. This belief is based on the fact that Japanese students are being sent to top North American institutions to learn mathematics and science from the current "masters," much like North American students went to learn from the European masters in the 19th century.

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The Japanese may already be better students of creativity than North Americans. They appear to be ahead of North Americans in implementing new ideas about management from the behavioral sciences which our own managers find difficult to accept. These new ideas include improved manufacturing and service management methods for higher quality, efficiency, and flexibility, such as "Just in Time" (J.I.T.), "Statistical Process Controls" (S.P.C.), and "Quality Circles" (Q.C.C.).

Many of these ideas originated in North America in the 1940s and 1950s but have

never really caught on and were left in the classroom. Attempts to apply them in the workplace have often failed. Rather than admit we just don't want to change, North American managers have found it easier to assume that there is something mysterious about Japanese culture that permits new approaches to management to work over there but not here. This article examines the ways in which management ideas that originated in North America are being applied in Japan.

Finding Out About Japanese Creativity

A bilingual Japanese colleague of mine set up open-ended interviews with five major Japanese companies including second and third visits in cases when it was necessary to probe more deeply. Comparisons were made with North American firms on emerging themes. To facilitate comparisons, data were gathered during the same time period from eleven leading North American companies. These data were obtained by a combination of questionnaire, in-depth interviews, and shop floor visits. The data from the Japanese and North American companies were organized along emerging themes, similarities, and contrasts. For example, would Japanese styles of creativity favor problem finding activity more than their North American counterparts? Another purpose was to see if Japanese organizations understood creativity as the process pictured in Exhibit 1 and do they try to implement the model.

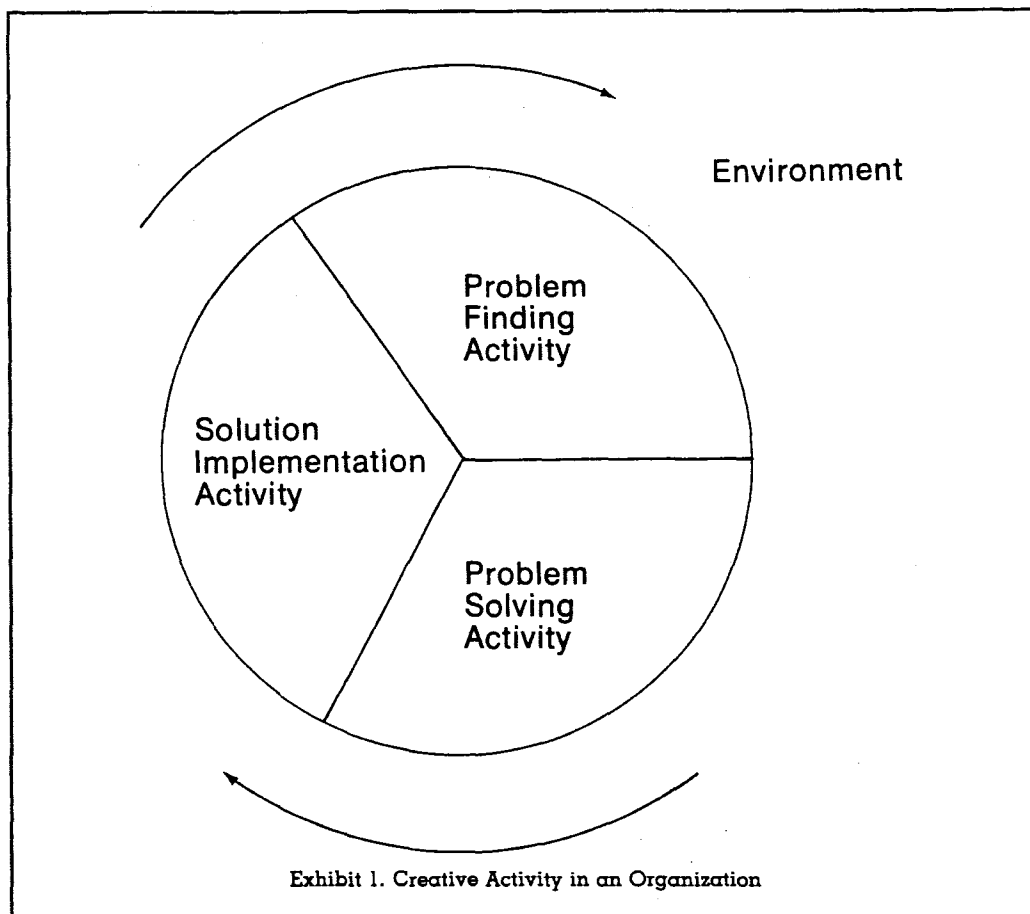
Problem finding may be the key in Japanese management success. The more emphasis placed on problem finding, the less is needed for solving and implementation.

The model in Exhibit 1 provides a framework for speculation about Japanese management practices. Creativity in organizations is a continuous finding and solving of problems and a creating and implementing of new solutions. *Problem finding* activity means continuously identifying new and useful problems to be solved. This may include finding new product or service opportunities by anticipating new customer needs, discovering ways to improve existing products, services, procedures, and processes or finding opportunities to improve the satisfaction and well-being of organizational members. Finally, problem finding includes defining such new problems and opportunities accurately and creatively. *Problem solving* activity means developing new, useful, imaginative solutions to found problems. *Solution implementing* activity means successfully installing such new solutions into the ongoing life of the organization.²

Problem finding may be the key to Japanese management success. The more emphasis placed on problem finding, the less is needed for solving and implementation. Solutions are more on target and successful implementation is facilitated. This is especially true when hierarchically lower level employees are invited to participate in the problem finding phase. Ownership and commitment are increased by early inclusion in change making. It takes less time to implement solutions when those affected have been permitted to participate from the beginning in finding and defining the problem and developing the solution.

Trained by traditional business schools in the "scientific management" approach originally identified by Frederick Taylor, most North American managers do not understand the importance of involving employees in early problem finding activities. They assume they are the only ones who know what needs to be done or that they can solve problems faster or better on their own. When these managers attempt to impose their solutions on their subordinates, there can be resentment and subordinates are often left uncommitted. Solutions fail either due to inadequate problem definition or lack of ownership. The same managers are likely to repeat the cycle over and over again hoping to find one solution that will finally be accepted and do some good. Such haphazard problem solving activity wastes human resources and detracts from managerial productivity. Training in creative problem solving is designed to improve upon these inadequate attitudes and behaviors but it is difficult to get many North American organizations to provide such training and to get it used on the job.

Organizations often view training as a luxury to be initiated only when business is



good and the pressure is off. It is regarded as an educational experience serving as a reward for people having done a good job, rather than to change attitudes and behaviors. The training is not seen as something that can genuinely change and improve the way work is done. As a result, many management methods are rejected after a short trial period even when they have worked well elsewhere, notably in Japan. The real reason for rejection is often a lack of desire or willpower to make significant changes. Since change is the essence of creativity, the ability to foster change is a major indicator worth observing when comparing management practices in Japan and North America.

Problem Finding Is Emphasized

The first Japanese company visited was a large international consumer electronics firm. Discussions were held with several senior R&D managers about managing this function. While there were many similarities to North American R&D management, one major difference that emerged was that newly hired R&D scientists and engineers always start their careers with six months in the sales department. The company wants them to learn first hand at the beginning of their careers about the needs and problems of their customers. In the long run, their jobs will focus on meeting those needs and solving those problems. For the next eighteen months, the new hires gradually work their way back to R&D through stints in various other functions including manufacturing and engineering. This suggests an interesting organizational emphasis on inducing problem finding behavior (anticipating and sensing customer needs) through structural means (job placement and rotation).

The remaining four companies visited were world-class manufacturers of car parts and scale measurement instruments. This time the interviews were with manufacturing and personnel managers and centered on the nature of their Employee Suggestion Systems (E.S.S.). It is not uncommon for employees of top Japanese companies to conceive and implement between forty and one hundred new suggestions per person, per year on average. This figure might amaze most North American managers since leading U.S. companies consider themselves lucky to obtain an average of about two suggestions per person, per year (see Table 1). The rest of this article explains not only how it is possible to achieve the Japanese levels, but also the theoretical rationale and comprehensive organizational benefits.

The interviews were in-depth, open-ended question and answer sessions, and shop floor visits. The collected data reveals that the primary objectives of the E.S.S. are motivation, job satisfaction, and group interaction. There is an infrastructure which guarantees that all three phases of creativity are completed. Individuals are encouraged to find problems with their work and improve their own jobs. Suggestions are submitted only after the solution has been demonstrated to work successfully. All suggestions are accepted and given credit. Monetary awards for most ideas are small.

Quality circle activity provides a reservoir of problems to aid individual problem finding activity, and smart managers learn how to get individuals to select problems of strategic importance to solve. Employees are trained that suggestions desired include new and improved products as well as methods. Individuals are encouraged to ask co-workers for help in problem solving. If individuals or informal teams cannot solve certain problems, they are referred to a quality circle team or the engineering department for help.

Group-oriented quality circles work supportively with the individually oriented Employee Suggestion System in other ways as well. The team gets credit every time one of its members submits a suggestion. Major celebrations are held by top management each year-end honoring teams and individual members of teams who have performed well in their suggestion work. All new employees are trained the first day on the job about the importance of the E.S.S. and how it works. Managers and supervisors are trained to work closely with subordinates to help them find and solve problems, implement their solution, and provide plenty of positive feedback throughout.

Table 1
Leading Japanese Companies

Company	# Of Suggestions	# Of Employees	Per/Employee
MATSUSHITA	6,446,935	81,000	79.6
HITACHI	3,618,014	57,051	63.4
MAZDA	3,025,853	23,929	126.5
TOYOTA	2,648,710	55,578	47.6
NISSAN	1,393,745	48,849	38.5
NIPPON DENSO	1,393,745	33,192	41.6
CANON	1,076,356	13,788	78.1
FUJI ELECTRIC	1,022,340	10,226	99.6
TOHOKU OKI	734,044	881	833.2
IVC	728,529	15,000	48.6
TYPICAL LEADING U.S. COMPANY	21,000	9,000	2.3

Reference: Japan Human Relations Association, April, 1988: "The Power of Suggestion"

R&D is Everybody's Business

In all four companies, suggestions for improving both procedures and products are encouraged. Employees are trained from the first day on the job that "R&D is everybody's business." For example, in one company of 9,000 employees, 660,000 employee suggestions were received in one year. Of these, 6,000 were suggestions for new products or product improvements and the remainder were suggestions for new methods. New methods are improvements to the work itself—simplifying jobs, accelerating procedures and work flow, and so on.

Problems Are Golden Eggs

In the companies studied, creative activity is deliberately induced on the job in a manner that is consistent with Exhibit 1. On the first day on the job, new employees are trained that problems (discontents) are really "golden eggs." In other words, it is good to identify problems. One should be constructively "discontented" with one's job and with company products and seek ways to improve them. In some of the companies, the "golden eggs" are posted on large sheets of paper in the work area. Employees are then encouraged to interact with their co-workers to solve such problems and demonstrate that their solutions can be implemented.

In North America there is a real reluctance to identify problems. Employees, especially managers, often don't want anybody to know they've got problems because they are seen as a sign of weakness and poor performance. Subordinates soon pick up this attitude and adopt a problem avoidance approach to their work ("it didn't happen on my shift" and "that's not our problem"). This leads to neglect of important interfunctional opportunities for improvement and customer needs.

In these Japanese firms not only are people taught, but there is also a structured mechanism for causing problem finding activity. Workers are provided with problem finding cards. If dissatisfied with something about one's job, the worker writes the discontent on the card and posts it up on a wall poster in the column marked "problems." Workers post their problems, their "golden eggs," their discontents, so other people can see them. If others notice a problem posted which is of interest to them, they will join forces to help solve it.

Group interaction is stimulated and people work together on the problems they select. Later they can write their solutions in the second column beside the problem on the wall poster. There is a third column for implementation documentation. When all three columns are complete, and the individual or small team has done the problem finding and the problem solving and has shown that the solution works, then it can be said that a suggestion has been completed, but not until then. This suggestion can now be submitted.

Implementation Before Submission and All Suggestions Accepted

Although not all suggestions are actually implemented, all of them are accepted. In other words, when all three phases of the creative process are completed (problem found, problem solved, solution shown to be implementable) by the employees themselves, a suggestion has been created and is accepted. About ninety-six percent of the suggestions end up being put into practice.

An "idea" is not a "suggestion" until it has gone through all three stages of the creative process modelled in Exhibit 1. Every suggestion receives a monetary award. The vast majority of the suggestions are small \$5 (500 yen) ideas. These are accepted and assigned the award by the supervisor on the spot. The suggestions that are more creative and significant are evaluated by a committee against multiple criteria including creativity and contribution to goals; they receive bigger awards of up to \$10,000 and more.

The main objective is to accept all ideas and encourage the little ones as well as the big ones. It is the process of getting involved in one's work that counts, not the quality of any single idea. The goal is to have thinking workers and a spirit of never-ending improvement. Of the small ratio (about four percent) of accepted suggestions that do not get implemented right away, most are the kind that require skills beyond the scope of the suggestors. The team leader or the supervisor can get additional help from other departments for these ideas. Also, it may be found that the implementation of a suggestion is not timely or is inappropriate in the bigger picture. In this case, the idea is not implemented, but is given credit anyway. This is the way the system is supposed to operate and works very well in actual practice.

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Employees are told they are expected to create new ideas. Some companies even establish informal goals per person per month. Each formal work group has a team leader who ensures that daily production is met and new ideas keep flowing at the same time. The team leader communicates, coordinates, and gets help across the organization as needed. This prevents the work group from worrying unduly about maintaining daily production and saying "we don't have time to work on new ideas." Workers are given overtime as needed to complete their suggestions. The overtime is usually aimed at implementation work. Much of the problem finding and problem solving work is done continuously in people's minds off the job as well as on the job. When people are creatively involved in their work, ideas about new problems and solutions can occur to them at any time.

Coaching, Positive Feedback, and Facilitator Skills Emphasized for Managers

The secret to making this process work begins with getting people to take ownership of problem finding as well as evaluation and implementation. Employees learn to accept evaluation and implementation of their ideas as part of their jobs. Their supervisors and managers support them and help them to be successful throughout the process. This includes helping the employee evaluate a potential suggestion's worthiness and how to make it work.

The boss is trained to be an encourager and coach, providing positive feedback at every opportunity. The system is structured to make sure such coaching and feedback occurs. A supervisor will help a new employee find a "golden egg" and develop a suggestion as part of the orientation process. Employees are given coaching on the appropriateness of "golden eggs" to be posted and positive feedback on all contributions.

On larger projects, the team leader and supervisor make sure that additional time (including overtime) and other resources are made available to workers as needed. Also, teams routinely make presentations to the rest of the organization during working hours, typically in the company cafeteria. The plant manager acts as a master of ceremonies, giving praise, recognition, and expert commentary as each project is presented. Suggestions which require higher level consideration for awards or implementation enter a formal system of evaluation and feedback. The suggestors are given feedback and positive recognition by design at several stages of this formal process.

Managers are not permitted to submit suggestions—that is, to get directly involved in the Employee Suggestion System; however, they are trained to get indirectly involved. For example, if a manager happens to think up an idea, rather than submit it, he or she is trained to figure out what problem that idea is trying to solve. The manager then goes down into the ranks and seeks out someone willing to post that problem. The group, or anybody in the group, can solve it themselves, probably with a different solution. This is how problem ownership is built.

Managers learn how to "dump problems into the fray" and let the ownership grow. This contrasts with the old-fashioned scientific management approach which designates management as "thinkers" and labor as "doers," which is not very scientific at all because thinking is done from the top down and wastes the minds of the workers. Worse yet, changes are usually sprung on the work force suddenly and are resisted.

First line supervisors find themselves stuck in the middle—expected to support the change but facing an unwilling, untrusting, and unaccepting group of subordinates who feel no ownership for the change. According to this research, Japanese managers are trained to facilitate change, not impose it. The Employee Suggestion System provides an excellent tool to accomplish this facilitative approach.

Motivation is the Outcome

When the top managers of these leading companies were asked what the primary objective of their Employee Suggestion System was, none of them said new products or new methods. Furthermore, none of them said lower costs, or higher profits. In fact, none of them mentioned any final economic outcomes. In contrast, all of them said *motivated people*.

These Japanese organizations believe that workers get motivated when they get a chance to be creative on the job. Employees enjoy coming to work. This is what the Japanese call "cheerfulness" and we call "job satisfaction." This creative activity also stimulates group interaction. People help each other solve problems which provides the opportunity for genuine team building.

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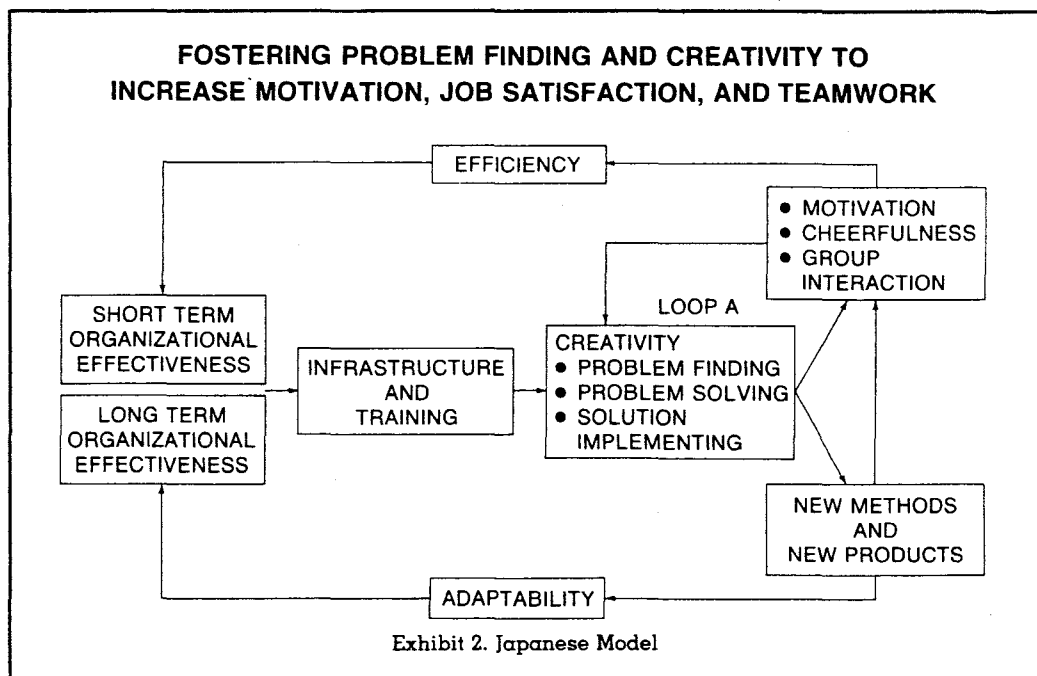
People find real reasons to work together and feel good about their accomplishments, monetary awards, and the fact that their work team gets credit for their individual suggestions. Individual awards, especially larger ones, are shared with the team. The team decides how much the individual gets and how much they keep for their "activity fund." The activity fund is accumulated by the work teams to fund personal development, recreation, physical education, and other growth activities. The fund grows from quality circle awards and employee suggestion awards. Individuals get recognition and the team gets recognition.

All of the companies said they have found that when people are given the opportunity to engage in creative activity (as it has been described here), they become very motivated. This causes them to want to participate even more in creative activity. It also causes them to work harder on performing their normal routine jobs better—more quality, more quantity, and lower cost. This is consistent with increasing organizational efficiency and short-term organizational effectiveness. Exhibit 2³ models this simple management process.

Consistency with Motivation Research

Organizational research conducted by P.E. Mott showed that effective organizations have three major simultaneous characteristics: efficiency, adaptability, and flexibility.³ Efficiency is the ability to organize for routine production. Every organization is turning out some kind of product (a needed good or service).

Efficient organizations are customer focussed; they know their customer and product. Over the years they have developed good routines for making their product the best they can with current technology. They produce a high quantity, quality product, and maintain a high output over input ratio (low cost) during production.



Effective organizations are also able to respond and react to sudden temporary changes or interruptions. They can deal with unexpected disruptions and get back quickly to their normal routine without getting stuck in red tape. Flexibility is a way of preserving efficiency. Flexibility and efficiency are both necessary in the short run.

Adaptability is a longer range characteristic and refers to an organization's capacity to continually and intentionally change its routines and find new and better ways to do the work. Adaptable organizations anticipate problems and develop timely solutions. They stay abreast of new methods and technologies that may be applicable to the organization. The organization's members accept good, new ideas and make sure new solutions and techniques get installed and maintained. Acceptance of new ideas is widespread across all organizational departments.

The creative process of problem finding, problem solving and solution implementation becomes more vital as the amount of change confronting the organization increases. Up until recently, many organizations could be effective by concentrating only on efficiency and flexibility. Today, adaptability is equally important because of the rapidly accelerating rate of change. Adaptability is crucial for long-term effectiveness.

Motivating people by providing the opportunity for creative activity is consistent with the motivation literature in industrial and organizational psychology. One major category of motivational theories are the need theories. Two important motivational need sets are the need for competence and the need for curiosity and activity. These two needs and related motives provide the most direct explanation of how creativity is a means for motivating people.⁴

People have a desire to master their environment. Such mastery is intrinsically pleasurable and independent of outside rewards. This need for competence is

aroused when people are faced with new challenging situations and dissipates after repeated mastery of the task. The concept of intrinsic motivation is also consistent with the notion that curiosity, activity, and exploration are enjoyed for their own sake. This was discovered in early animal research and in later studies in humans.

People develop negative attitudes toward repetitive tasks and report experiencing fatigue and boredom. Berlyne suggests that people adapt to certain levels of stimulation and take action to reduce discrepancies from these levels. The implication is similar to Herzberg's notion that challenging jobs are motivating in themselves.

Other motivation theories are also consistent with what is being practiced in the companies in this study. Herzberg proposes that the way to motivate most people is by redesigning their jobs so the work itself provides opportunity for growth, challenge, stimulation, learning, and recognition.⁵ McClelland has advanced the need for achievement as the primary driving force motivating organizational members.⁶ By giving employees the opportunity to find challenging problems, solve them, and implement solutions, the Employee Suggestion System taps into both the forces of intrinsically rewarding work and the need for achievement. According to Maslow, offering employees the opportunity to satisfy their higher level needs for self-esteem and for self-actualization through work accomplishment is the best way to motivate them.⁷

The Japanese Employee Suggestion System is a straightforward example of how these two highest level needs can be met. People are provided with the opportunity to use their creativity. They seek out work-related challenges of interest to themselves, then find success and recognition in developing implementable solutions that are welcomed and celebrated by the organization.

Motivation theory has not remained static since the 1950s and 1960s. Deci and Ryan provided a comprehensive review of intrinsic motivation.⁸ Locke and Latham showed that when people are given a chance to set their own goals (the problem-anticipating aspect of problem finding) and the more specifically they state those goals (the problem definition aspect of problem finding), the more motivated they are to achieve those goals.⁹

The Japanese may not yet be at the forefront of initiating theoretical research, but their ability to apply motivation theory is impressive and far more than simple copying. As Japanese students continue to learn from the "masters," the time will come when their research informs our practice.

The vast majority of North American business and industry is still organized and managed on the scientific management concept made popular by Frederick Taylor in 1911.¹⁰ One of the main premises of scientific management is that people at work are motivated by one dominant factor—money. This is the concept of "economic man." In spite of research showing that most people at work are multi-motivated (money does play a role but in a complex way), most managers continue to manage by simplistic, economic formulae.

The motivating factor in most North American employee suggestion systems is extrinsic, usually money. A few employees suggest a few big ideas that save the company large sums of money and win major cash awards for themselves. Most people don't participate.

In contrast, Japanese employee suggestion systems emphasize a large number of small ideas and everyone participates. There are small monetary awards for each

implementable suggestion shared by the participating members. Larger awards are given for ideas of greater scope, but the vast majority of suggestions win small awards. The real awards, as far as employees are concerned, are the feelings of accomplishment, recognition, and growth.

Top Down Impetus and Strategic Alignment

In the Japanese companies interviewed, training and a well-developed infrastructure are used to make creative activity important. They are also used to align creative activity strategically with important organizational goals as an every day routine. Managers are trained to help their employees find, solve, and implement problems and solutions.

As clear company goals are articulated by top management and specific departmental objectives and subgoals are developed, these are communicated downward to guide individuals and teams in their selection of problems. This results in a close alignment of E.S.S. activity with strategic corporate needs. Managers who are skillful in the E.S.S. learn how to influence their subordinates toward including problems which are related to specific goals and objectives for their departments.

The reward system reinforces the importance of creative activity to the company. Not only does the E.S.S. provide extrinsic and intrinsic rewards for employees, but their managers' performance appraisals are also based in part on their ability to get their subordinates to perform well in the E.S.S.

In the Japanese companies I visited, Management by Objectives (M.B.O.) is integrated with the Employee Suggestion System. Typically, the manager's objectives will include helping people create and implement suggestions. This emphasis on getting subordinates involved in creating new ideas is part of the long-range process of management. The belief is that if people are encouraged to use their thinking power on a habitual daily basis, major tangible benefits will accrue to the organization in the long run.

Quality circle (Q.C.C.) group activity also serves to help align E.S.S. activity with strategic goals. Q.C.C. work is a concentrated attack on major "theme" problems identified by upper management. These themes are assigned about every six months. A bonus of Q.C.C. activity is that it also provides a regular forum for spontaneous discussion of spinoff problems during Q.C.C. team meetings. The Q.C.C. infrastructure serves as a deliberate reservoir for problem finding to fuel the Employee Suggestion System program. Both the group-oriented Quality Circles and the individually oriented Employee Suggestion System are sparked by top management involvement. Not only is top management instrumental in setting direction and relevant goals, it also works hard insuring that such goals are followed up. Celebrations are hosted at the end of the year by presidential level management for teams which have performed well in Q.C.C. and E.S.S. activity.

Job Redesign, Enrichment, and Adaptability

Proactive creative activity leads to a continuous supply of new methods and new products. This is synonymous with Mott's definition of organizational adaptability. Not only are new problems deliberately anticipated and solved, but also acceptance of the new solutions by employees is virtually assured because the employees are finding and solving their own problems and implementing their own changes. They have high ownership of the solutions and are redesigning their own jobs. This is consistent with a well-documented axiom of organizational psychology: "People don't resist change; they do resist being changed."

Herzberg's research on job satisfaction suggests that motivation can be achieved

best by factors intrinsic to the work itself, such as responsibility and opportunity for growth and achievement. The validity of job enrichment, which is based on Herzberg's dual factor theory is supported by the findings reported in this article. Many companies have tried to redesign employee jobs to make them more intrinsically rewarding, however, evaluation of research results have been inconsistent. This may be because employees do not participate in it. The Japanese model goes one step further by letting employees be creative and allowing them to enrich their own jobs. Perhaps this is the missing link for North American companies who have tried other approaches to job enrichment and failed.

Teamwork and Individual Work Harmonized

When individuals start working together on problems of common interest, solve them, and implement solutions together, group cohesiveness develops. Cohesiveness is an important factor in group productivity. The E.S.S. encourages small, informal teams to develop. People who want to work together on problems of common interest join up. The attraction contributes to cohesiveness. Group cohesiveness is also built more formally through the Quality Circle approach. Even though Q.C.C. activity is, in theory, voluntary, in actual practice everybody is a member of a quality circle team because it is the same as their functional work unit team.

One of the firms stressed that in their experience Q.C.C. didn't work well alone and neither did E.S.S., but together they worked very well. The firm recommended that both be used for best results.

The Quality Circle (Q.C.C.) system provides opportunities for group performance, recognition, and initiative. The Employee Suggestion System (E.S.S.) adds opportunities for individual performance, recognition, and initiative. Q.C.C. activity is highly structured and uses analytical problem solving tools such as fishboning and root cause analysis. The team must stick to the theme and not pursue other problems or ideas. Prior to the introduction of E.S.S., this restriction bothered many people. If one were sitting in a Quality Circle working on the assigned theme and suddenly thought up an idea to solve a totally unrelated problem, it would be frustrating to not be permitted to voice the idea.

The Employee Suggestion System provides an outlet for finding, solving and implementing solutions to off-theme problems. The team gets credit for every suggestion that one of their team members submits individually and there is little conflict between the E.S.S. and Q.C.C. systems.

In contrast, attempts by some North American companies to install group-based Q.C.C. systems have run into conflict with long-established individual-based suggestion systems. These companies have not yet figured out how to integrate the two systems.

How Do North American Systems Compare?

One key to the success of the Japanese Employee Suggestion System is the emphasis on problem finding. In North America, promotions and rewards go more often to people who appear not to have many problems. Managers don't feel they have enough time for problem finding. They feel they are too busy doing their "regular work" which often means fire-fighting activity and meeting short-term cost and profit goals. They want their people feeling the same way, and put focus on solutions, not problems. While the term "constructive discontent" is something that is often given lip service in North American organizations, the Japanese companies studied in this research are promoting and implementing it through simple structural methods.

Most North American suggestion systems use the suggestion box approach. Employees dump ideas in the suggestion box without the responsibility of evaluating them first or explaining just what the problem is that they are trying to solve. Managers evaluate the ideas and the employee waits to hear the judgment. Usually, the wait is long and most ideas are rejected. Managers find it onerous to judge so many suggestions and worry about the amount of change they represent. Many suggestions are difficult to understand since they have neither been discussed, nor shared with other employees. There is no incentive to share an idea with anybody for reasons such as the boss may not want to hear about new changes, other employees will want to share in the award, or someone may claim it as their own idea. The main incentive is to make lots of money for the individual submitting the suggestion. Small ideas are not worth the effort.

While the term "constructive discontent" is something that is often given lip service in North American organizations, the Japanese companies studied in this research are promoting and implementing it through simple structural methods.

Teamwork, job satisfaction, and motivation are all secondary. In addition, many employees of North American companies do not receive awards for suggestions to improve their own job. They are rewarded only for ideas that are outside their own job. This goes against all the rules of motivation theory.

Finally, in many traditional North American companies, new product ideas are considered the job of R&D departments exclusively. Suggestion systems are concerned only with methods and procedures to save money or increase efficiency. New product ideas are not encouraged from employees of other departments and usually there are no organizational mechanisms to facilitate their emergence or development.

Discovering How and Why Japanese Organizations Induce Creativity

The major discovery of this research is that Japanese organizations demonstrate a great deal of knowledge about inducing employee creativity through deliberate structural means. They believe they derive important benefits in doing so. This study indicates that top Japanese organizations recognize, emphasize, support, and induce problem finding which is elevated to at least equal priority as problem solving and solution implementation. They recognize all three as separate important activities which is consistent with research that suggest that all three activities need to be nurtured and managed to achieve organizational creativity.

Table 2
Contrasting Elements Summary Employee Suggestion Systems

	New (Japanese)	Traditional (North American)
Culture	* Group & individual synchronized	* Individual
Core objectives	* Thinking workers * Never ending improvement * Individual growth * Communications	* Breakthrough * Produce savings
Management	* Decision making * Primary responsibility	* Improve safety * Secondary at best
Area of suggestion	* Within your job & your workplace	* Outside of your job or your workplace
Evaluation	* Simple * Quick answers * Supervisor responsibility * Lots of suggester involvement * Most accepted	* Very structured * Slow answers * Evaluator responsibility * Little suggester involvement * Most rejected
Communication	* Employee to supervisor * Employee to employee	* Employee to evaluator to supervision to management
Awards	* Intrinsic	* Extrinsic

They have devised structural means through the way they place R&D hires and their Employee Suggestion Systems to induce creativity throughout the organization.

Through managing the Employee Suggestion System, the Japanese companies in our study implement what theory and literature suggests needs to be done to induce creative behavior, to get creative output in the organization, and to motivate members of the organization. By doing so, they get tangible creative output like short-term costs savings and new products and procedures. They also reap other important benefits, the most important being motivated, committed people who enjoy their jobs, participate in teamwork, and get fully involved in advancing the company goals.

Endnotes

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¹ For discussion and supporting data on organizational creativity see the author's following research. M.S. Basadur, G.B. Graen, and S.G. Green, "Training in Creative Problem Solving: Effects on Ideation and Problem Finding and Solving in an Industrial Research Organization," in *Organizational Behavior and Human Performance*, 30, 1982, 41-70; M.S. Basadur, "Needed Research in Creativity for Business and Industrial Applications," in S.G. Isaksen (ed.) *Frontiers of Creativity Research: Beyond the Basics* (Buffalo, N.Y.: Bearly, 1987); M.S. Basadur, G.B. Graen, and T.A. Scandura, "Training Effects on Attitudes Toward Divergent Thinking Among Manufacturing Engineers," in *Journal of Applied Psychology*, Vol. 71, No. 4, 1986, 612-617.

² For more information concerning the creative process in organizations, see M.S. Basadur, G.B. Graen, and M. Wakabayashi, "Identifying Individual Differences in Creative Problem Solving Style" in *Journal of Creative Behavior*, Vol. 24, No. 2, 1990, 111-131; M.S. Basadur, "Managing the Creative Process in Organizations," in M.J. Runco (ed.) *Problem Finding, Problem Solving and Creativity* (New York: Ablex, 1991, in press). The latter is also available from the author as McMaster University Faculty of Business Research and Working Paper Series, No. 357, April 1991.

³ See P.E. Mott, *The Characteristics of Effective Organizations* (New York, NY: Harper and Row, 1972); M.S. Basadur, "Impacts and Outcomes of Creativity in Organizational Settings," in S.G. Isaksen, M.C. Murdock, R.L. Firestein, and D.J. Treffinger (ed.) *The Emergence of a Discipline: Nurturing and Developing Creativity*, Volume II (New York: Ablex, 1991; in press). The latter is also available as McMaster University Faculty of Business Research and Working Paper Series, No. 358, April 1991.

⁴ For more discussion on human needs and related motives see D.E. Berlyne, "Arousal and Reinforcement" in *Nebraska Symposium on Motivation*, D. Levine, ed. (Lincoln, NE: University of Nebraska Press, 1967) and R.W. White, "Motivation reconsidered: The concept of competence," *Psychological Review*, 66(5), 297-333.

⁵ For further discussion on motivation see F. Herzberg, B. Mausner, and B. Snyderman, *The Motivation to Work* (2nd ed.) (New York, NY: Wiley, 1959).

⁶ See D.C. McClelland, *Personality* (New York, NY: Dryden Press, 1951).

⁷ See A.H. Maslow, *Motivation and Personality* (New York, NY: Harper and Row, 1954).

⁸ See E.L. Deci and R.M. Ryan, *Intrinsic Motivation and Self-determination in Human Behavior* (New York, NY: Plenum Press, 1985).

⁹ See E.A. Locke and G.P. Latham, "Work Motivation and Satisfaction: Light at the End of the Tunnel," *Psychological Science*, Vol. 1, No. 4, July 1990, 240-246.

¹⁰ For review of scientific management see F.W. Taylor, *Principles of Scientific Management* (New York, NY: Norton, reprinted 1967, originally published in 1911).

About the Author

Min Basadur is the founder of the Center for Research in Applied Creativity. Upon completing his degree in engineering physics at the University of Toronto, he joined Procter and Gamble in Research and Development. Soon after, he began developing and practising on-the-job applied creativity skills within the organization. As his experience implementing creativity expanded, he was awarded three patents and helped bring several new products to market. Dr. Basadur integrated his practical experience in creative problem solving with doctoral studies at the University of Cincinnati. This combined research and implementation program culminated in his dissertation being selected as the

best doctoral research in industrial and organizational psychology in 1980. The following year he joined McMaster University as a faculty member in the School of Business, created the Center and began to build a strong applied research program with business and industry.

The Center has grown into a worldwide network of associates expert in applied creativity research and consultation. These associates work closely with Dr. Basadur and are located in Europe, Asia, South America, and throughout North America.