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Spontaneity, Agility, Craftsmen's Pride, and Informalization

Magoroh Maruyama
Interactive Heterrogenistics, San Diego, California, United States

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***Magoroh Maruyama**

Abstract

To counteract rigidification by standardization, we need: (1) employees' self-generating experimentation without punishment for failures; (2) letting "the nail which sticks out" grow instead of hammering it down; (3) examining crazy ideas seriously; (4) cultivation of craftsmen's pride instead of filling the requirements like robots; (5) spontaneous change-generating quick interaction among heterogeneous employees (morphogenetic process); (6) barrier-free outbreeding to and from outsiders; (7) elimination of ponderous and rigid procedurism and overcontrol; (8) elimination of inbreeding; (9) mastering the masterpieces before moving ahead.

Most of the organization research has focused on: (1) how to structure; (2) how to categorize; (3) how to standardize and homogenize; (4) how to procedurize; (5) how to automate or robotize; (6) quality control by inspectors instead of workers' interaction.

Consequently, organizations tended to become homogenistic, inflexible, classificational, pattern-maintaining, inbreeding, noninspiring, and sometimes dehumanizing. This article discusses how to remedy these tendencies. The article consists of nine topical sections:

1. Employees' self-designed experimentation without punishment for failures.
2. Letting "the nail which sticks out" grow instead of hammering it down.
3. To consider crazy ideas seriously.
4. Agility and high-speed circulation of ideas

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* *The writer has been on faculty at Stanford University, University of California Berkeley, University of Illinois Urbana, Uppsala Universitet in Sweden, Universite'de Montpellier in France, and has been consultant to Volvo in Sweden, Monsanto in USA, NASA in USA, OCDE in France, NEC in Japan, Federal Motors in Indonesia.*

5. Cultivation of craftsmen's pride instead of filling the requirements like robots.
6. Spontaneous and change-generating interactions among heterogeneous employees.
7. Barrier-free outbreeding to and from outside.
8. Elimination of procedurism, inbreeding, and spoon-feeding of predigested ideas.
9. "Master the past masterpieces, then go beyond"

EMPLOYEES' SELF-DESIGNED EXPERIMENTATION WITHOUT PUNISHMENT FOR FAILURES

Even though many individuals prefer to follow given orders or routine procedures, some are, if opportunities are given, inclined to try new ideas or new methods. Actually, at the stage of applicant selection, the following can be explored in the job interview: (1) Have you done something that nobody else did? (2) Have you doubted "established" common sense and experimented to see whether the common sense is true? (3) Have you invented a theory which others thought false, but which later proved to be true? (4) Have you challenged established beliefs and superstitions? Example: When Ede (Edward) Teller was in a primary school, a school teacher told the children that snakes had been condemned to crawl because of their sins. Teller asked: "Then how snakes moved before they were condemned?" (Hogyan mászkált a kígyó korábban?)

Another method to select creative applicants is to ask the applicants to solve a problem in an unforeseen future situation. The "unforeseen" situation must be something that the applicants have never heard of, for example, to design a large-scale orbiting outer space community which contains 10,000 humans, and animals and plans to make the community ecologically self-sufficient (Maruyama 1976, 1977, 1984, 2004a; O'Neill 1977). The interviewer must keep inventing new situations because the applicants might "leak" the question to subsequent applicants.

An example of a firm which encourages employees' self-designed experimentation without punishment for failures is Uni-Charm in Japan. The details are explained in Maruyama (2006).

LETTING "THE NAIL WHICH STICKS OUT" GROW INSTEAD OF HAMMERING IT DOWN

This is easier said than done. Innovators encounter obstinate and pernicious resistance from others. This is not because of so-called "vested interests," but because of the differences in cognitive/cogitative types. There are many individual cognitive/cogitative types, but four types and their mixtures account for approximately two-thirds of the population in most of the cultures. These four basic types were independently discovered by Maruyama (1959, 1980, 1981) and Harvey (1966). Some cognitive/cogitative types do not understand other types, even though they may delude themselves to understand others. This happens especially when a person, whose cognitive/cogitative universe lacks some of the cognitive/cogitative dimensions of other persons, reduces the latter to his/her cognitive/cogitative dimensions. As long as the person's misinterpretation does not contain internal logical contradictions, the person is unaware of the misinterpretation, and insists that he/she understands others perfectly. This is called "dimension reduction" (Maruyama 1962, 1979, 1985, 2004b). Especially the cognitive/cogitative type H (See below) is prone to dimension reduction. Here the word "dimension" is used in the sense of orthogonal spatial coordinates (such as the axes X and Y in a graph), even though in some languages, especially in French, "dimension" means "size."

The basic four cognitive/cogitative types which account for about two-thirds of the population in most countries are:

H-type	I-type	S-type	G-type
Homogenist	heterogenist	heterogenist	heterogenist
Hierarchical	independent	interactive	interactive
Classificational	random	pattern-maintaining	pattern-generating
Competitive	uniquing	cooperative	cogenerative
Zero-sum	negative-sum	positive-sum	positive-sum
Opposition	separation	absorption	outbreeding
One truth	subjective	poly-ocular	poly-ocular

Innovators are of G-type. They encounter resistance and even hostility from

other types, especially from H-type.

To visually appreciate the differences between the types, let us take design principles by different types (Maruyama 1980, 1981):

H-type: Unity by repetitions, symmetry and similarities. The dominant theme is reflected in subdominant themes. Mass opposes space. Space is a transparent mass, and has boundary, volume, identity, and specialized function. Design for permanence.

I-type: Randomness, unexpected surprises, capriciousness.

S-type: Avoid repetitions and similarities. There is harmony of diverse elements and interrelations between elements, in such a way that the individuality of each element is enhanced by the interactions among heterogeneous elements. Maintain the interactive pattern.

G-type: Similar to S-type. However, instead of maintaining the pattern, it generates new patterns by interactions.

As you see, the differences between the four types are considerable, especially between G-type and H-type. Furthermore, the concepts of "house" and "room", which are directly relevant to management, can be contrasted:

<u>House</u>

H-type: separate the inside from the outside.

I-type: Insulate between households.

S-type: Continuation of outside into inside. Removable or transparent outer shells. Garden continues into house. River flows under the floor. Floor extends to outdoors. Lyrical appreciation of environment, for example change of seasons. Suck the outside into the inside.

G-type: A house is a base for interaction with environment, such as a traditional farm house in Japan.

<u>Room</u>

H-type: Each room is specialized (bedroom, dining room, etc.) and is occupied by permanently placed furniture (beds, tables).

I-type: Each room is an independent cubicle.

S-type: Rooms are connectable by removing partitions. Rooms are convertible by changing the portable furniture. In Japan, the same room can be a bedroom at night, a dining room at meal times, a play room for the rest of the day.

G-type: Same as S-type.

Parallel differences can be seen in the design principles in art, such as music, painting, landscaping, ornaments.

Music: (taking H-type and G-type for contrast).

H-type: Compositions by J. S. Bach.

G-type: Compositions by Stravinsky, Indonesian gamelan music.

Painting:

H-type: Persian carpets, interior of Islamic temples.

G-type: Picasso's Guernica.

Landscaping:

H-type: Traditional Italian, French and German gardens, Dutch tulip gardens.

S and G types: Traditional Japanese gardens.

Ornaments:

H-type: Common flower bouquets.

S and G types: Traditional Japanese Ikebana.

Independent from Maruyama's study of individual cognitive/cogitative types, O. J. Harvey's study of university students yielded four basic epistemological types (Harvey 1966). His first type is similar to Maruyama's Type H, and his fourth type is similar to Maruyama's Type G, as follows:

Harvey's Type 1: high absolutism and closedness of beliefs, high evaluativeness, high dependence on representatives of institutional authority, high identification with social roles and status position, high conventionality, high ethnocentrism.

Harvey's Type 4: high perceived self-worth despite momentary frustrations and deviation from the normative, highly differentiated and integrated cognitive

structure, flexible, creative and relative in thought and action, internal standards that are independent of external criteria, in some cases coinciding with social definitions and in others not.

Innovators are of Maruyama's G-type, and of Harvey's Type 4. On the other hand, many of the "mainstream" and orthodox individuals are of Maruyama's H-type and Harvey's Type 1, who are unable to see the cognitive/cogitative dimensions of innovators. This inability is impossible to overcome by increased explanations. It is as impossible to explain colors to congenitally blind persons, or to explain music to congenitally deaf persons. If blindness and deafness are disabilities, then H-type persons and Type 1 persons have cognitive/cogitative deficiencies which cannot be cured. This is why it is extremely difficult or impossible to practice "letting the nail which sticks out grow."

TO CONSIDER CRAZY IDEAS SERIOUSLY

History of science and technology is full of examples of ideas, which were once considered incorrect or chimerical but later turned out to be correct or feasible. An example is the theory of continental drift, which was once considered idiotic, but turned out to be correct. Take this theory as an example, and discuss why it was considered stupid and incorrect, and why it turned out to be correct. The idea that Europe and Africa were once joined with the North and South Americas looked childish, because children who were playing jigsaw puzzles would come up with such an idea. But later, the discovery of plate tectonics made the idea correct.

There was first a "hunch," then later a proof. A hunch may look unscientific, but it should be investigated until proven to be true or false. But it takes time, money and efforts to pursue a hunch. Therefore, a firm must allocate money and free time to individuals who want to pursue a hunch. The money is for conducting experiments, travelling to collect data, etc. The time can be named "release time for research," initially for several months, with an option to extend.

Another method to generate hunches is interactive brainstorming sessions, participated by those who are interested, preferably from diverse specializations within the firm. Outside experts, who are serious researchers (NOT "consultants" who do not do research themselves), may be invited to the brainstorming sessions. (DO NOT pay them as consultants, but as "expert resources.")

AGILITY AND HIGH-SPEED CIRCULATION OF IDEAS

In economics, there is a concept called "velocity" of money, as related to money supply. One dollar inside your locked safe has velocity zero. One dollar which goes through many business transactions quickly has high velocity. In terms of money supply, a dollar which moves twice as fast doubles the money supply value. Similarly, we can talk about the velocity of circulation of ideas. If a new idea moves twice as fast, it doubles its creativity value. Therefore, any method to make it easier to exchange ideas, especially face-to-face interaction, for example a cafeteria or a coffee shop easily accessible from many departments, increases the creativity value of the system.

CULTIVATION OF CRAFTSMEN'S PRIDE

Violin makers are craftsmen. Each violin maker's name is known among connoisseurs. Famous violin makers' products are as treasured as masterpieces of famous painters. Old time sword smiths of Japan were craftsmen. They put their soul into their product. Even semi-massproduced products such as grand pianos, for example by Steinway, may have individualities, and among the connoisseurs, each unit is known for its unique quality (Lawrence Smith 1975, personal conversation. Smith was the conductor of Oregon Symphony Orchestra).

Some handicraft teachers in schools teach children to be craftsmen. I knew a teacher who told children to be "kind" to their products, as if their products were human beings.

I knew a car repairman in France, who repaired cars not as a mechanic, but as a craftsman. He had to satisfy himself with his work. He did not charge extra fees for his extra work.

Philippe d'Iribarne calls this mental approach "La logique de l'honneur" (d'Iribarne 1989).

Scholars and writers may crystallize their craftsmen's pride in their work by developing person-specific styles, and may feel insulted if their styles are tampered with or changed by an editor or a publisher.

Authors who write with utmost care in their own styles can notice any change made by editors. Even a third person who does not know the authors but who are experts on individual writing styles can detect any slight change made by

editors or anyone else. Ibsen and Karg (1928) were such experts. They developed a method of analysis called "Schallenanalyse." Like immunological rejection of grafts, Schallenanalyse can pick out inauthentic alterations.

I was a mathematician, and trained myself to write precisely, but concisely. A friend of mine from my student time in Sweden, Hans Wilhelmsson, who studied under Niels Bohr in Denmark and became a plasma physicist at Chalmers Tekniska Högskola (Chalmer Institute of Technology) in Göteborg in Sweden, told me that he had seen a doctoral dissertation in mathematics consisting of only three pages.

Later I moved onto social sciences, but my writing principles have always been concision and precision. My literary models for concision were *Les Lettres de mon Moulin* by Alfonse Daudet (Daudet 1979) and Tsurezuregusa (Yoshida, written around 1320-1350, in Japanese). Over several decades I developed my own style based on concision and precision.

Then an incredible and shocking incident occurred in the early 1990s. An anthropologist friend of mine asked me to write a chapter in a book on North American society seen from outside. The chapters would be written mostly by foreigners, but he also wanted to include me as a person who had lived in many countries. I sent my manuscript to him. He responded that my manuscript was fine and required very little editing, and therefore he would first tackle the manuscripts by non-English speakers, and come back to mine after finishing theirs. He basically re-wrote theirs in his own style. He got carried away and re-wrote mine. When I received his "edited" version of my manuscript, I got shocked: I could not recognize it as my own writing, I wrote back to him that I did not approve his imprecise version, and advised him to go back to my original and start from scratch, retaining my precision. He answered that it was too late because all manuscripts were to go to press immediately. I had to withdraw my manuscript. If he had "edited" my manuscript before the others', there would have been enough time for him to restore my precision. Even though he was an anthropologist, he was completely ignorant of and insensitive to the concept of craftsmen's pride which he should have known by watching how tribal craftsmen worked. If he were my student, I would have given him a failing grade. Many anthropologists

have a patronizing "do-gooder" attitude which is resented by members of the community.

To cultivate craftsmen's pride in employees, it is necessary not only to recognize but also encourage each individual's work style. Standardization and homogenization should be avoided.

SPONTANEOUS AND CHANGE-GENERATING INTERACTIONS AMONG HETEROGENEOUS EMPLOYEES

Inventors and engineers tend to be nonverbal thinkers and nonverbal communicators. They communicate best with drawings, graphs, and body movements. Communication via written reports is not only inefficient but also almost useless. Ample opportunities for face-to-face interaction must be provided.

Two other considerations must be added: to facilitate spontaneous contacts between different specialists; and discovery of one another's cognitive/cogitative types among employees. All these necessitate architectural reconfiguration and activation of interior surfaces such as ceilings and walls as well as corridors.

There must be "informally meetable" places accessible from many departments and divisions, for example a cafeteria or a coffee shop which is not distant from any departments and divisions. For this purpose, it is best to locate all buildings on concentric circles, and provide a meetable place in the middle.

Corridors, where many people pass through, can be used as exhibition halls to display visual works of employees, such as paintings, sculptures, machine models, etc. which express employees' ideas and hunches. The displayed items do not have to be directly related to work, but can be art hobby products, because any artwork is an expression of the underlying cognitive/cogitative types of the employees. By looking at the exhibits, the employees can discover others whose cognitive/cogitative types are compatible with their own.

Currently, most of the ceilings and walls are "dead," i.e. they have no aesthetic function. There are ways to make them alive. For example, you can stick many small pyramids, about half-an-inch each, and paint their surfaces directionally: surfaces facing left in green, facing right in orange, facing upside in yellow, etc. As you pass through the corridor, the wall changes color. These surfaces are called "polyparallel surfaces." They produce "wallscapes." I have seen a clever use of

polyparallel surfaces at a subway station in Tokyo: as you walk along a wall, a scenery of trees in green spring colors changes to an autumn landscape with red and yellow tree leaves. Similarly, the ceiling can be activated by polyparallel surfaces.

For the exhibitions, amateurish, informal self-made art products are a better means of mutual communication than formal, selective exhibits. It is important to change the displays often to make visible the incessant creativity and to enable many people to participate. In order to encourage shy people, or people who do not like to compete as individuals, a variation is to have job groups, not ethnic groups, compete to see which group can decorate their space more beautifully with the artwork of their members. It will be a cooperative effort within each group. A requirement is that in each group, every person must contribute one piece of art.

BARRIER-FREE OUTBREEDING TO AND FROM OUTSIDE

Interactions can be encouraged between the insiders of the organization and outsiders. Insiders can get paid sabbatical leaves to work in outside organizations. It is better to call such extramural activities "sabbatical leaves" than "assignments" in order to emphasize freedom and flexibility: One can move around anywhere in the world, like the scholars on their sabbatical leaves. Currently there is no business firm that practices such sabbatical leaves. Of course it costs money, but the costs should be considered as investment costs. Care must be taken not to abuse or misuse such systems. Many Korean business firms, and some Japanese business firms, give paid vacations to their employees under the guise of "study abroad," and there are universities which have programs for these phony "students": the universities collect "tuition," and the "students" get a paid vacation. Another variation is to send away unwanted or useless employees to foreign countries. Instead of "kicking someone upstairs," this can be called "kicking someone into the garden." This method is used by some dictatorial countries to reduce the number of political opponents. It is a form of forced exile. An architect friend of mine in a Middle-East country was given a "scholarship" to do research in Boston because his political view disagreed with the dictator's.

Even some uncreative honest scholars automatically get sabbatical leaves periodically, which are as wasteful as the phony "study abroad" and "kicking

someone into the garden."

The best way to prevent such wastes is to select individuals who have demonstrated genuine creativity and hard work. Other criteria for the selection of individuals for a meaningful sabbatical are, as mentioned earlier on the topic of job interview: (1) whether the individual has done something that nobody else did; (2) whether he or she has doubted "established" common sense and did experiments to see whether the common sense is true; (3) whether he or she has invented a theory which others thought were false, but which later proved to be true; (4) whether the individual challenged established beliefs and superstitions.

ELIMINATION OF PROCEDURISM, INBREEDING, AND SPOON-FEEDING OF PREDIGESTED IDEAS

Nowadays editors of journals and books, and organizers of conferences rely on standardized procedures, especially the system of reviewers and referees. This procedurism resulted in two anti-creative tendencies: (1) inbreeding; and (2) spoon-feeding.

Inbreeding. The system of reviewers and referees which became the mainstream procedure in selection of manuscripts in publications, grant applications, and conference organizing has become a very rigid inbreeding system which reject those who do not please the inbreeders. As an example, ten years ago I found the following comment by a reviewer of Review of General Psychology, which revealed not only the inbreeding tendency but also the complete ignorance of the reviewer regarding well-known concepts and theories which are outside his narrow subdisciplinary and sub-sub-disciplinary knowledge. The reviewer wrote: "whether causal loops can amplify changes, whether heterogeneity increases or decreases over time, are so abstract and impressionistic that they are nearly impossible to adjucate. Unfortunately there is little or no evidence."

Change-amplifying and heterogeneity-generating causal loops (often called "positive feedback") were already used in 1910 in radio wave generators (Milsum 1968), genetics (Wright 1931, 1932), economics (Myrdal 1943, 1957), and were formulated by Maruyama as "the second cybernetics (Maruyama 1960, 1963), and thereafter were used widely in sociology (Buckley 1968), biology, cancer research, psychiatry and several other fields. According to Citation Classic's Current contents (22 February 1988), Maruyama's "Second Cybernetics" had

been cited in more than 230 publications in many disciplines. Yet the editor of Review of General Psychology of that time, Salovey, rejected the manuscript on the basis of the reviewer's comment quoted above.

The criticisms on the inbreeding system were voiced from time to time. Criticizing the biological and medical peer review system in the National Institute of Health in Washington, DC, Science (November 5th issue, 1999, pp.1074-1075) quoted the following complaints: "Under the present focus on fault finding and amplification of minor errors and discouraging innovative research, nearly all NIH founding has gone into confirming, reconfirming what is already known. The reviewers often do not understand the underlying principles or broad objectives of a proposal and resort to nit-picking. Basically all new ideas are rejected."

There are many similarities between communist managers and North American grantsmen (Maruyama 1998). A good manager in a communist system is the one skilled at obtaining allocations, not the one who can maximize profit. Allocations do not have to produce profit. They do not have to be repaid. If you ran out of allocations, you request more allocations. Similarly research grants in North America do not have to produce profit. They do not have to be repaid. If you ran out of grants, you apply for more grants. Even now, many of the Russian enterprises regard foreign joint-venture partners as grant-giving foundations. They do not produce profit. They do not repay. They keep requesting more investments.

Communist managers have to show allegiance to a political ideology. North American grantsmen have to show allegiance to a dominant theory or methodology.

Spoon-Feeding of Predigested Baby Food

There is a widely held fallacious assumption that if you explained yourself hard enough, people would understand you, and therefore if you are not understood, it is your own fault.

This assumption is based on another fallacious assumption that there is only one cognitive/cogitative type.

Because of these assumptions, most of the editors and reviewers assume that any manuscript will be understood by everybody if the author gives sufficient explanations.

But the readers are heterogeneous, not only in terms of specialization, but more importantly, in their cognitive/cogitative types. Some cognitive/cogitative types are incapable of understanding other types no matter how much explanation is added (Maruyama 1961, 1962, 1985, 2004b).

It is impossible to explain colors to congenitally blind persons, or to explain music to congenitally deaf persons. Therefore 100 per cent understandability to 100 per cent of the readers is logically impossible. What is important is that some percentage of the readers understand the article even though the editor and the reviewers do not understand it. The more innovative and unorthodox the article is, the smaller the percentage of the readers who understand it. But these rare readers may be the most important researchers in carrying on and going beyond the innovations in the articles.

During the second half of the 20th century when the theories in physics changed quickly, there was a saying among the editors of journals in physics: "If you can understand a manuscript, it is not worth consideration. You should reject it immediately without wasting time".

Now this principle is reversed: The editors and reviewers reject manuscripts which they do not understand.

Most of the 18th and 19th centuries classics such as Kant's Kritik der Reinen Vernunft would never have been published if these master pieces had to go through today's review system. Nowadays publishers want to spoon-feed pre-digested baby food to readers.

Kant's Kritik der Reinen Vernunft is raw meat. Scholars of past several centuries cherished and savored the challenge of raw meat. The more difficult a book, the more satisfaction they felt when they began to get new insights. They chose difficult books like mountain climbers who chose difficult peaks. There was a superb reward. It is like groping through dense fogs until you glimpse a ray of new revelation.

An additional problem is that some reviewers complain that a large percentage of references are the author's own work. But what can you do if not many authors dealt with the new concepts? Of course cosmetically the author can reduce the number of his own references, but such a "trick" is a gimmick, not honestly scientific.

MASTER THE PAST MASTERPIECES, THEN GO BEYOND

In Europe, serious artists begin their self-training first by obtaining some museums' permission to copy the masterpieces of the past which are inside the museums. This process is: (a) a full-time work and may take several years; (b) learning-by-doing par excellence. The purpose is to replicate the brush strokes and hand movements of the masters to produce the intended effect. This cannot be learned unless the apprentice sits in front of the masterpieces. One must use his/her muscles, not just eyes. As an old proverb says: "He who does it gets the benefit, not he who sees it done."

Some great masters learn even from the way younger artists work. Picasso often stood behind young artists at work on the streets, and copied their work (Birnbaum 2006). They thought he stole their ideas.

Mastering the past masterpieces gives the artist not only a large repertoire of concepts, but also muscle agility and flexibility. This provides a strong springboard for going beyond.

Where do new concepts and design forms come from? They come from the individual-specific way to interpret first-hand raw experiences. One does not passively wait for experiences to happen. One actively seeks and creates new experiences. Bergson wrote, "Le présent penche vers l'avenir" (Bergson 1896), and Sartre discussed the "double negation" between the present and the future: the present is not what one wants, and the future is not what the present offers (Sartre 1943). Maruyama introduced the concept of "outbreeder": explorer, contact-generator, eliminator of inbreeding practices (Maruyama 1991, 1992, 1998, 2002) and further in this article the concept of "craftsmen's pride."

CONCLUSION

Craftsmen's pride in meeting one's own standards of creativity is a new topic of management. Genuine pride occurs spontaneously. Informalization is needed for spontaneity. Patronizing do-gooderism destroys craftsmen's pride. Management theories tended to look at inventions as works of isolated geniuses, ignoring the importance of interactive inventions among heterogeneous individuals. This article connected these considerations together.

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