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## Organizational Environment and Innovation

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# ORGANIZATIONAL ENVIRONMENT AND INNOVATION

Magoroh Maruyama\*

## *Abstract*

*There is a popular notion that the life of innovators and inventors is a glorious and enviable one because they have talents which others do not have, and because they can overcome any obstacles. These talents are, in the popular interpretation, something mysterious, indefinable and inimitable.*

*But in reality, the innovators and inventors have to deal with many serious and pernicious obstacles which are unknown to other people. Those who are unaware of the obstacles must become aware of them and must reduce them, because the reduction of these obstacles will greatly facilitate the works of innovators and inventors.*

*Another problem is the assumption that all people use the same logic, and therefore if you explain hard enough, you will be understood. Existence of heterogeneity of individual logical types (perceptual/cognitive/cogitative action types, abbreviated as mindscape types) is ignored, or at least exoticated as irrelevant.*

*This article discusses these problems, with concrete experiential examples. This article also uses the methodology of raw-experience visualization-enabling communication (REVEC) with which the readers can formulate their own grounded theories independent from the theory of the writer.*

## INTRODUCTION

Innovators must cope with several types of obstacles: (1) human obstacles such as resistance, inertia, misinterpretations, incomprehension and being enemized; (2) institutional obstacles such as counterproductive regulations and inbreeding; (3) absence of “right” personal connections; (4) bad luck.

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The purpose of this article is to spell them out in order to reduce them, which is easier said than done. Many of the obstacles are pernicious and malignant. Instead of abstract theorization, we must understand them concretely, by means of vivid examples.

Therefore this article uses an unorthodox format of “raw-experience visualization-enabling communication” (REVEC). REVEC is designed to enable the readers to build their own “grounded theory,” independent from the writer’s own grounded theory and independent from one another’s grounded theories. This makes REVEC different from the conventional qualitative methodology, which strives for making a “consensus” in one way or another.

An excellent example of REVEC is Sorstalanság by Kertész (1975), who described his experiences in three Nazi concentration camps. Not only he had an extraordinary ability to describe events in details, but also he had a more difficult ability not to let the later events influence the memory of earlier events, not to let the earlier events bias the perception of later events. For example, everyone knows now that

Auschwitz-Birkenau (Oæviêcim Brzezinka) was the most horrible of the Nazi concentration camps. However, when Kertész arrived there, he did not know the horror. He was impressed by the impeccably neat way the camp was maintained, and by the efficient and even courteous way the camp officials behaved. (Actually, these officials were themselves prison inmates who had advanced in ranks, and were covertly sympathetic to new-comers even though they had to behave according to official instructions.) Sorstalanság won a Nobel Prize around 2002, and subsequently was translated into many languages. The word “sorstalanság” consists of “sors” (fate), “talan” (without), and “ság” (ness). Thus “sorstalanság” means “fatelessness.”

REVEC must be based on first-hand experience. This article discusses the four types of the obstacles against innovations. In my career I experienced many obstacles in all four types. Therefore this article is a REVEC of my own first-hand experiences. Malinowski wrote that ethnography is implicitly informed by autobiography as much as by explicit theory (Young, 2008).

However, in order to clarify the necessity of REVEC, I first summarize the fallacies of conventional methodologies.

During the past five decades, the intellectual climate and the organizational environment in North American and West European academic world have undergone considerable changes, not only in theoretical and methodological fashions and fads, but also in processes and procedures of publishing and research funding. As a whole, the organizational environment became increasingly rigid because of the proliferation of rules and requirements which were conducive to inbreeding, such as referee systems and peer review systems which excluded those who do not please the inbreeders. All these tendencies constituted a *Zeitgeist* (socio-historical intellectual environment) which has been peculiar and unprecedented, but hopefully non-recurrent. This *Zeitgeist* itself was an overall common denominator of the four types of the obstacle against innovations.

Fortunately since 1995, two new developments are beginning (but not yet sufficiently spread) to reverse this *Zeitgeist*: (1) rapid advances in neuroscience technology, which can dispel tenaciously and uncritically held fallacious assumptions in social sciences, psychology and biology; (2) outburst of hitherto subjacent dissatisfaction among scientists with regard to the referee systems and peer review systems.

On the theoretical side, a prevalent academic ideology and belief have been the uncritical assumption of normal distribution (the bell-shaped curve). Many of the researchers either forgot or never learned that normal distribution is valid only if the events are independent and random, such as tossing a coin many times and counting the number of heads and tails. However, social, psychological and biological events are neither independent nor random. They are connected with various causal relations: (1) One thing may cause many things; (2) One thing may be caused by many things either jointly or disjointly (separately); (3) Causal loops make things cause one another. Therefore it is illogical to assume a normal distribution (Maruyama 1995).

A variation of the assumption of normal distribution is “superimposition of several normal distributions” which is a desperate and irrational attempt to hang onto the belief in normal distribution. Prominent examples are Anastasi (1958) and Lazarsfeld (1968). They conjured up ad hoc individual types, each of which has a normal distribution, and tried to superimpose the several normal distributions. They hypothesized the relative sizes among these normal distributions, and displacements (distances between the centers of the bell shapes). Lazarsfeld

was more mathematical than Anastasi, but a mathematical weakness of his approach was that the proportions did not have a unique (only one) solution: there were infinitely many solutions (Maruyama 1958).

Paralleling the theoretical fallacy of normal distribution is the methodological fallacy that it is believed to be “scientific” to compare groups (for example an experimental group vs. a control group; or Social Group X vs. Social Group Y) in terms of statistical means (averages) and standard deviations (widths). This procedure stands on the uncritical assumption that individual variations are subgroup phenomena. It never occurred to these researchers that individual types exist across boundaries between groups. This fallacy stems from the hierarchical mentality which sees the universe in terms of the hierarchy of groups, subgroups and supergroups.

Another fallacious argument for the use of averages is the assumption that differences between individuals are due to random fluctuations, accidents, abnormalities, etc. which can be ignored. Random fluctuations should be cancelled out by making the sample size larger.

The only neuroscientist, who took my advice seriously to look into the heterogeneity of individual types, was Manfred Fahle of Bremen (Maruyama 2003). Many other well-known neuroscientists such as Michael Tomasello in Leipzig (Tomasello and Call 1997, Tomasello 2001, Tomasello and Carpenter 2005) and Daniel Povinelli (Povinelli & Eddy 1996, Povinelli 2000, Povinelli 2001) in Louisiana are quite aware of differences between individuals, but they keep sweeping the matter under the carpet.

Some psychologists looked into the personality types which cut across the boundaries between humans and chimpanzees (King & Figueredo 1997, King 2007). This means that heterogeneity of personality types, which cut across the boundaries between species, began 6 or 7 million years ago, and must have evolutionary advantages. Moreover, Samuel Gosling (as summarized in *Science*, 4 March 2005 issue, p. 1405) found that personality types cut across boundaries between 64 species, indicating that the heterogeneity of personality types originated much earlier.

Furthermore, let us consider the process of heterogenization within a species by means of females' preference for “minority” males. Studying the mate selection patterns in *Drosophila* (the tiny fruit flies who gather around bananas), two groups

of researchers independently (without knowing the conceptualization and results of another group of researchers) found that if you mix two types of males in different proportions, females prefer whichever male type happens to be “minority.” This will lead to heterogenization within a species. The traditional sociobiologists, in contrast, looked for “optimal” characteristics in males. If all females prefer the same optimal type of males, including an artificially created “supernormal” type, i.e. the type which exaggerates the optimal type (artificial dummies), then the evolution results in the same “optimal” type, converging to homogeneity.

It is interesting to note that one group of researchers consisted of two women (Ehrman and Propper in North America, 1972, 1978), while the other group consisted of two males in Japan (Watanabe and Kawanishi 1979).

The importance of heterogeneity of individual types and of interactions among heterogeneous individuals is made clear again in these examples. In addition, organizations should not assume the existence of “supernormal” types, nor look for it. Instead, they should foster and encourage “minority” types.

Another obstacle, enemization, is a tendency among some researchers to regard anyone as enemy if the person has published even one article in the “enemy camp” regardless of how many articles he/she has published in “their camp.”

### **OBSTACLES: NON-REVEC EXAMPLES**

Before going into my REVEC presentation of many types of obstacles, let me make a non-REVEC mention of resistances against my major contributions to sciences.

My 1963 article “The second cybernetics: deviation-amplifying mutual causal processes” was rejected by ten journals before it was accepted by American Scientist, and once published, by 1988 it has been cited in more than 230 publications according to Citation Classic. However, even though its quantitative aspect of change-amplification by causal loops was immediately understood, its qualitative side, i.e. the basic principle of biological and social process is rise of sophistication of the system by causal loops, went unnoticed. Therefore, I elaborated this in Theory and Society (1978a) and Current Anthropology (1980). These were exoticated and “put on the shelf” by readers. The same fate continued for my “heterogram analysis,” in Human Systems Management (1999).

## REVEC OF MY EXPERIENCES

### Childhood and Lower Teens: The Second World War

I was born in 1929. When I was almost six years old in 1936, a small group of young army officers assassinated government officials who were international-minded and pacifists. This was the culmination of the army/navy rivalry, and it marked the beginning of Japan's aggression in China, South-east Asia, and Pacific Ocean islands as far as Pearl Harbor. Meanwhile, Hitler gained power in 1933.

A short summary of the army/navy rivalry is useful here. In 1867 the Tokugawa "Shogun" government ended, and Emperor Meiji took over the administrative responsibility in Japan. After 264 years of anti-foreign isolationistic policy of the Tokugawa Edo Shogun government, Japan had much to catch up with European and North American science, technology, and political and institutional systems. During that transitional period, Japan imported the navy system from England, but the army system from Germany. The British Navy was internationally experienced, not only within Europe in terms of its politics with Dutch and Spanish navies, but also in Asia and Africa where England, France and the Netherlands had numerous colonies. France had colonies also in the Atlantic Ocean and in the Pacific Ocean. In contrast, German Army was not only nationalistic but also more narrowly Preussen-centered. In 1861 Wilhelm the First became the King of Preussen. In 1862 Bismarck became the Prime Minister of Preussen. In 1867, in the same year as the beginning of the Meiji Era in Japan, North German Alliance was established centered around Preussen. Wilhelm the First became the Emperor of Germany. This contrast between internationalist British Navy and nationalist German Army was clearly mirrored in Japan.

Between the First World War and the Second World War, the top level of the Japanese Navy had many persons who had lived in foreign countries. For example Admiral Isoroku Yamamoto, the top commander in the Navy at the beginning of World War II, had been sent by the Navy to study at Harvard University. He also served as a Japanese naval attaché in Washington, D.C. from 1925 to 1927. In contrast, the Army had very few generals who were interested in foreign countries. An exception is Tsukahira Fujita, a high-ranking Army physician. He had relatives who traveled to foreign countries (including the famous painter Foujita), and he liked to listen to news of foreign countries (Birnbaum 2006). Furthermore, he was well-versed in Chinese classics and history, and

would not have tolerated the atrocities committed by the Japanese Army in China and other Asian countries, for example “the rape of Nanking” and “Bataan Death March” in the Philippines.

The Army/Navy rivalry culminated in the 1936 incident of the assassination of anti-war officials. Thereafter Japanese Army provoked a war against China. At that time, Chang Kai-shek was busy fighting Mao’s communist army, and ignored the Japanese invasion. Incidentally, Chang had graduated from the military Academy in Japan.

While the Japanese Army was busy instigating and preparing for an expansion of war to Southeast Asian countries in order to plunder oil and other natural resources, the Navy maintained its anti-war stance. Admiral Yamamoto, who knew the geographic size and industrial capacities of North America, knew that if North America would become involved in a war against Japan, it would be impossible to maintain Japan’s control of Western Pacific Ocean. When he was asked: “How long would Japanese Navy be able to hold out in the Pacific Ocean?” he replied: “Two or three years.” Actually that time estimate was shortened because the Japanese secret message code was deciphered by the American Navy, and the tide turned against Japan already in June 1942 when the Japanese Navy was baited, ambushed, and demolished at Midway Island. That is to say, only six months after “Pearl Harbor.”

Now, back to the political climate in Japan after the 1936 incident. I was born in April 1929. I was living in Zushi, about 50 kilometers south of Tokyo, far way (by a child’s standard) from Tokyo. In April 1936, I entered Keio Primary School in Tokyo, and learned that one of my classmates’ grandfather, Korekiyo Takahashi, was assassinated in the February 1936 incident. By the way, my classmate Korenobu Takahashi is still quite active in Japan, and he and I exchange telephone calls several times a year.

The life in Zushi was peaceful until “Pearl Harbor,” when the Army-dominated Japan declared war against USA and UK. [to the type setter: Do not say “United States” because Mexico is also a “United States.”]

After “Pearl Harbor,” Zushi was quickly annexed to the City of Yokosuka, a Navy town less than 10 kilometers from Zushi. In retrospect, this saved my life because the Navy was well-informed of the realistic situation of the war, and Navy officers who moved into our neighborhood kept us informed of the war



situation realistically. Without their advice, I probably volunteered to become a kamikaze suicide pilot, as some of my classmates did, excited by government propaganda. The Navy officer who lived next door to us persuaded me to enter Yoka Heigakkoo which was designed to allow selected secondary school students, who during the war were mobilized to factories, to continue academic education needed for the reconstruction of post-war Japan (Maruyama 2008).

The Army and the Navy differed not only in philosophy, but also in operational modes: (a) The Army's air raids were aimed at enemy installations on land such as factories, and no suicide bombers were needed, but the Navy fought against enemy ships, and kamikaze suicide bombers were very effective; (b) The Army's recruiting was done by obligatory induction by "the emperor's order," while the Navy depended on voluntary enlistment. The life on ships was more sanitary than the combat life on land, and many young people entered the Navy in order to avoid the unsanitary life in the battlefield on land.

My first eye experience with the war occurred in April 1942 when I saw a B-24 bomber flying very low, almost touching tree tops, to avoid being shot by anti-aircraft artillery. I happened to be on a rooftop of Keio University Hospital in Tokyo. I had an abdominal hernia surgery, and a few days after the surgery, a nurse took me to the rooftop for rehabilitational walk exercise. Then the bomber came. It was dark-green, and was larger than most of the Japanese airplanes. Therefore I knew it was an enemy airplane. But I was not scared. I was just curious because of the unusual sight combination. On the rooftop were many patients of rectal hemorrhoidectomy, men and women mixed together, exposing their rectum to sunshine, apparently as an ultraviolet therapy. They lay on their back, pulling their legs toward their chest, showing their bare bottom. The enemy bomber flew over their bare bottom. The surgery patients were not trying to insult the enemy, nor to entertain the bomber crew. This curious sight was so intriguing that I did not experience any fear of being bombed.

But because of this first bombing of Tokyo, the Japanese government began encouraging city dwellers to move out to suburbs and rural areas. Therefore I transferred from Keio Middle Scholl in Tokyo to Shoonan Middle Scholl in Fujisawa, about 15 kilometers from Zushi. This school had another advantage. It had a high success rate of students to enter the Naval Academy (Heigakkoo) which I will explain later.

Soon after my transfer to Shoonan Middle School, mobilization of middle school and college students, both boys and girls, to war weapon factories began. This meant an interruption of education which entailed several consequences. Shoonan Middle School students were mobilized to a nearby factory in Fujisawa which manufactured bolts and nuts. My assignment was to make technical drawings of “bites” (hard metal teeth to cut screw threads). This job did not involve physical danger. But some other students had to work in job spots which lacked adequate safety measures. For example a girl’s long hair truss was caught around a machine shaft but there was no “emergency stop” button nearby, and her head skin was partly peeled off. Obviously before student mobilization, no girls worked in the factory.

The B-29 “superfortress” bombers flew in formation over our Fujisawa factory on their way to Tokyo. Their shiny bottom side of wings and fuselage reflected clouds beneath them and looked brightly white in the blue sky. They flew 10,000 meters above ground undisturbed. They made a majestic sight. No Japanese anti-aircraft artillery or fighter plane could reach them. Japan did not have fighter planes with a pressurized cabin to enable them to fly over 3,500 meters high.

At the beginning of 1945, as the bombing of Tokyo intensified, many of the Shoonan Middle School students took the entrance examination of the Navy Yoka-Heigakkoo (Pre-Naval Academy), and I passed the examination. Actually, the Yoka-Hei was a clever device, invented by the Navy, to take top students out of their factory assignments and give them the education needed for the redevelopment of Japan after the war. The Navy knew that the war was nearing its end, and Japan would need scientists, engineers and foreign relations experts. In Yoka-Heigakkoo no war-related subjects were taught. Instead, physics, chemistry, biology, world history, world geography, and English were taught (Maruyama 2008). While the civilian population was starving due to food shortage (The students who were mobilized to factories ate only a thinly diluted rice soup for meals), the Yoka-Hei students ate meat, plenty of rice, and occasional cakes.

In order to support this luxury, the Navy ran a parallel infrastructure of slavery, euphoristically named Yoka-Ren (Yoka-rensuusei) which supposedly trained the glorified kamikaze suicide pilots. But actually these Yoka-Ren students were assigned to hard labor, for example digging air raid shelters for Yoka-Hei

students. When the air raid alarms sounded, the Yoka-Hei students were evacuated to nearby hills, while Yoka-Ren students continued to dig air raid shelters. I, as a Yoka-Hei student, watched their misery from a hill.

Near the very end of the war in June 1945, Japan became able to produce fighter planes equipped with a pressurized cabin. They could climb up to the cruising altitude of B-29s (10,000 meters). Several B-29s were shot down over Tokyo. My friend Korenobu Takahashi, who still lived in Tokyo, saw a B-29 which fell about 1,000 meters from his house. These Japanese fighter planes had a very short cruising range, and could not intercept the B-29s before they reached Tokyo.

As for the B-29 which dropped the atomic bomb on Hiroshima, people saw it coming, but because it was just one plane, they assumed that it came for reconnaissance, not for bombing, and no effort to shoot it down was made. People did not even go into air raid shelters and they just looked at the B-29.

Yoka-Hei campus was initially located on Hario Island in Kyushu. But as the enemy neared the home islands of Japan, Yoka-Hei was relocated to a western part of the mainland of Japan, about 50 kilometers west of Hiroshima. On August 15 Japan surrendered. We students were in the dormitory when the emperor's message was broadcast. Most people got depressed even though they anticipated it. But I was excited. I began talking loud about the post-war developments: importing cows, etc. As you recall, Yoka-Hei students had already learned about world economics and world industry.

About a week later, the students were sent home. The train I was on stopped at Hiroshima for an hour or two. The city was still burning, and there must have been plenty of radioactivity around. Fortunately I did not receive enough radioactivity to make me sick. But on the train, my fellow ex-yokahei students stole my baggage, containing mostly blankets, clothing and books. The Japanese society was beginning to become lawless. I was surprised that people could switch their morality so quickly.

### **Post-War Change of Morality and Philosophy of Life**

Life after the war turned out to be harder than the life during the war. During the war, people had jobs because of the scarcity of manpower: all able-bodied and even feeble-bodied men were outside the country fighting as soldiers. Inside

the country, women and middle school students had to work in factories and on farms. Food was rationed, even though it was not sufficient quantitatively and qualitatively to maintain good health. Many people suffered from vitamin deficiency, and tuberculosis among young people increased. But there was at least “something to eat.” There was an orderly system.

But after the end of the war, this “order” disappeared, and people had to resort to all sorts of “illegal” activities, mostly black-marketing, even though straight theft occurred only under rare circumstances. Eating of dead persons’ bodies occurred occasionally. To live became very difficult and some people did not care whether they died or lived. Here are some examples. A mother had several children. One child died. The mother cooked the dead child in order to feed other children. City people went to farms to buy potatoes on black market. Once a train derailed and many passengers died. Some survivors stole money from dead passengers. In these days trains were scarce and overpacked, because many trains had been bombed during the war. Doors of overpacked trains often cracked open due to the body pressure of people inside, and spilled out passengers while the trains were running at full speed. Because the trains were overcrowded, many passengers rode on the roofs of the trains, and sometimes they fell down.

I often had “seizures” due to malnutrition. While I was in bed, my body suddenly became paralyzed and I could not move. I could not even shout for help even though I could hear the wall clock ticking. It was a terrifying experience.

It must be added that unemployment rate was very high: Soldiers who came back from the war could not find their factories destroyed during the war. The unemployment situation was worse than in post-war Europe. In Europe, people could find jobs to remove the stone debris of bombed buildings. In Japan, the buildings were made of wood, and did not leave stone debris.

My experience of “survivalism”, which I saw around me, later turned out to be very useful in the 1960s when I worked in the ghettos in San Francisco, East and West Oakland, and in San Quentin Prison: I had deep first-hand experiential insights in “survivalism.”

### **Unpleasant Remnants of Japanese Rigidity**

The surrender of Japan entailed several mental adjustments among the

Japanese, in a way paralleling the culture change which occurred at the beginning of the Meiji Reform which began in 1867.

In 1945, the Japanese again saw themselves as “backward” in comparison with North Americans and West Europeans. They superficially tried to imitate these foreigners but the inherent rigidity in the Japanese social interaction pattern still persisted. Here is an example in my own experience.

One day I was walking on the streets in Tokyo, and stopped at a corner because of a red signal. Then a group of American students came down and also stopped at the signal. I began talking with them, and found that they were on a group trip around the world. One of the students invited me to the lobby of their hotel in order to continue our conversation. One of the Japanese guides for the group came to me and told me not to socialize with the American students, and took me to a side room, and asked me to write a statement of apology. He said that he and some other Japanese students were “responsible” for the American group, and I had no business talking with the American students. Therefore I should apologize. I said that I did not have to apologize for talking with anyone on the street. Obviously he thought that he had to “protect” the American group and prevent strangers to talk with the Americans. He summoned his Japanese friends to sit with me until I would sign a statement of apology. I refused to write such a statement. We sat all day, all evening and all night. In the morning they gave up and let me go home. Decades later, I experienced an incident very similar to this. The strange Japanese sense of possessing “foreigners” still persisted for half a century (Maruyama 1996).

In 1994 I met a Hungarian social scientist, Dr. Peter Szirmai, in Budapest. He told me that he planned to be in Tokyo in October for a conference. I said that I would try to organize a colloquium by him at my university. He told me that he would be free on one of the days during his short stay in Japan. Upon my return to Tokyo I phoned to the office of his conference and asked which the free day of the conference was. A woman gave me the information, and I organized a colloquium. On the day of Dr. Szirmai’s scheduled arrival, I called the conference office to check whether the participants arrived on schedule. This time a man answered, and accused me for not having obtained his permission. I asked him why I would need permission for conference participants’ activities on their free days. The man said that his office was instrumental in issuing a document for

Dr. Szirmai's visa, and therefore the conference office was responsible for Dr. Szirmai's whereabouts. He also added that it was international common sense that I should obtain his permission. I said that I had lived in many countries and had never heard of such a requirement, and that it was he who did not have international common sense. He said that if I did not agree to his procedure, he would sue me in a legal battle. In order not waste any more time with that fool, I sent him a fax requesting his permission. Then he became happy and gave me his permission. I wondered why he was so authority-hungry. As a possible reason I thought the conference might pay Dr. Szirmai's travel expenses. Later Dr. Szirmai told me that the conference did not pay his travel, but showed their authority to "permit" Dr. Szirmai to attend the conference.

### **My Middle School Pranks Helped Me Get Interesting Jobs**

After the end of the war, I returned to Shoonan Middle School, and found it boring because the Japanese school education was still based on memorization. I decided not to go to Japanese schools any more, and did not apply for entrance examinations of kotoogakkoo (lower divisions of universities). One day a geometry teacher at Shoonan asked me which kotoogakkoos I applied for. I said none. He panicked, and said that I must go to some kotoogakkoo. At that time the deadlines for entrance examinations to almost all kotoogakkoos had passed. But he found that Musashi Kotoogakkoo was still accepting applications one more day. He spent the whole evening to prepare necessary application documents for me, and next day I applied for the Division of Science and Technology at Musashi. I was accepted. It turned out that even though the school was as boring, I had some side benefits. The president, Dr. Miyamoto, had studied philosophy in Germany, and was an expert on Kant. I took his seminar, which interested me much. In Japan, students gave nicknames to teachers. His nickname was Miyamoto Musashi, a famous samurai in Japanese history. The second side benefit was that one of my classmates, Seiya Uyeda, later became an internationally know expert on earthquake and plate tectonics. He later spent half of his time in foreign countries, studying the structure of ocean bottoms. He and I kept in touch. It turned out that I asked one of his daughters to translate my "Mindscapes and science theories" (*Current Anthropology* 1980) into Japanese. The translation was published in a Japanese philosophy journal *Risoo*. The third side benefit was that I played intellectual pranks on teachers, and the teachers

were annoyed but accepted them as “nothing you can do about them” (shikataganai).

My pranks consisted in writing term papers and examination answers in foreign languages. In physics I used German. In mathematics I used French. In history I used Esperanto. In order to write the term papers, I had to study foreign languages. The knowledge of foreign languages became useful in my later life. I got interesting jobs using foreign languages. Two examples are: a teaching job at a Catholic missionary school in Yokosuka, where I could borrow Bergson’s *Matière et Mémoire* from a French missionary. Another example was my “civil censor” job at SCAP-GHQ (General Headquarters of Supreme Commander of Allied Powers). The civil censor system was created in order to monitor communist activities in Japan. The job consisted in opening sampled letters to see if there were communist activities. I got a job in the foreign language section. I opened letters in French, German and Japanese. The lady next to me read letters in Finnish. The man next to her read letters in Indonesian.

I did not find letters which wrote about communist activities, but I gained much sociological knowledge. For example, a love letter exchange between a Japanese immigrant in Brazil and his girl friend in Japan mentioned, in addition to love and sex, a strange incident in Brazil: A woman was accused of being a witch and was burned alive on a stake: The letter said, “The flame entered her vagina, and she died. I was very sorry for her.” Witch-burning was not in the Japanese tradition. It must have come from Europe. Jeanne d’Arc was burned in France. Giordano Bruno was burned in Italy.

I did have a possibility to get much money from a wealthy neighbor whom our family knew well: The father worked for the Ministry of Foreign Affairs, and had a hobby of woodcut printing. Their house was very large, while my own family, with four brothers and sisters, had a small house full of noise. The neighbor’s family was taking care of two extra girls of my age in addition to their own son and daughter. The two girls’ parents had died and left a fortune to them. The family was trying to find ways to get rid of the extra girls. The neighbor offered me a nice large quiet study room with a bed, and put the study desk of one of the girls in the same room. She came to study in the room every evening. But I did not fall into the scheme because: (1) I wanted to get out of the rigid Japanese social system; and (2) to experience the world as an independent

individual, and my experience should include, among other things, the culturally different courtship behavior.

### **Sailing to San Francisco**

In August 1950, I was able to borrow \$2,000 from a friend in Connecticut in order to study in Berkeley. In those days, it was extremely difficult for young Japanese to study in foreign countries. They simply did not have money.

At the beginning of August, I left Japan on the ship "General Gordon" which belonged to American President Lines. The company had three ships: President Cleveland, President Wilson, and General Gordon. General Gordon was the least luxurious of the three. It transported soldiers from North America to Asia, and on its way back from Asia, it carried Chinese immigrants. It was the cheapest ship, which cost me \$285. Uyeda came to see me off as I sailed out.

I was very happy on the ship, except an incident involving the ship physician. One day I had a sore throat and went to see him. He treated me normally, and invited me to have a dinner in his room. It turned out that he was a homosexual, and I refused the homosexual act. Next day I went to see him to get my throat treated. But this time he painted my throat with something which burned my throat, and I could not speak for three days. If I had been a "white," he would not have done it. But I was an old war enemy.

The rest of the trip went well: mostly sunny. The ship took the southern route via Honolulu to discharge Japanese and Okinawan Hawaiians going home, probably also Chinese Hawaiians. When the ship approached San Francisco, the sky was covered with low cloud and summer fog.

My choice of Berkeley depended on suggestions from two persons whom I met while in Japan: Lieutenant Benjamin Hazard, and James Hoyt, both from Berkeley.

### **Berkeley: Flexible Academic System**

The universities in Japan were, and still are very rigid in several ways. (a) The course sequence is predetermined. Students cannot skip courses even when they already know what is taught; (b) If students want to change universities, they must "resign" from a university, take the entrance examination to another university, and start as first-year students. Whatever they have learned at other



universities are not credited, even though in recent years some universities formed an alliance to make credits transferable between member universities.

In contrast, I found in Berkeley that if a student already knows what is taught in a course, he/she can take an examination on the course and if he/she passes, he/she is given the credit for the course. I benefited from this option. I built many credits by examination. I entered the University of California in September 1950, and graduated in July 1951. Most of the credits I gained by "credit by examination" were in mathematics, and the rest were in French and German. Moreover, I took some postgraduate courses (12 units), but my graduation date was July 1951, and any credits I earned before July 1951 were counted as undergraduate credits.

### **Ethnic Disidentification**

While in Japan, I studied German philosophies and French philosophies (Kant, Bergson, Sartre). Therefore intellectually I was not a "typical" Japanese. I was philosophically a West European. Furthermore, I disdained North American philosophers such as Dewey, and I detested Jazz. But I was stereotyped as Japanese. I wanted to shake off the stereotype. This was one component of my ethnic disidentification. Another component of my ethnic disidentification was that Japanese people in foreign countries tended to (and still tend to) form a group among themselves and do not associate with non-Japanese. But I was an outbreeder. I associated with non-Japanese Asians, Europeans, South Americans, Arabic Students, etc. who were in Berkeley. The third component of my ethnic disidentification was what Black Americans called "self-hate." In 1950, the Japanese were "bad guys," sneaky and untrustable because of "Pearl Harbor."

Young Japanese Americans felt inferior, and a way to improve their self-image was to date whites. If a Japanese boy tried to date a Japanese girl, the girl felt insulted because she suspected that the boy came to her because he failed to get a white girl.

### **Relative Deprivation**

I graduated from the University of California at Berkeley, with major in mathematics and with honors. That level of qualification was highly demanded in industry, research and engineering. In fact, my classmates received many excellent job offers to choose from. But I could not get any, because I had no citizenship.

I resented this situation, and became sympathetic to anyone who was “on the same boat.” This personal experience in relative deprivation, in addition to my earlier experience in survivalism, was very useful in my later work in ghettos.

The only job that was open to intellectual non-citizens was to teach at the Army Language School (later renamed as Defense Language School) at Presidio of Monterey, 200 kilometers south of San Francisco. I got a job there to teach Japanese language. Monterey is a very small town, a famous tourist attraction but boring and isolated from “civilization.” But there were some side benefits. The teachers there included intellectual political refugees from many countries: physicians, psychiatrists, historians, etc. I learned much from their specialized knowledge, in addition to getting information about their countries. And I could practice foreign languages, especially German and French. But the Department of Japanese Language was unpleasant. Its teachers were mostly uneducated immigrants from Hiroshima and Okayama areas in Japan. They disliked me for several reasons: Tokyo people looked down upon Hiroshima and Okayama people as ignorant peasants, and the Hiroshima and Okayama people considered the Tokyo accent (which I spoke) as snobbish. They almost hated my association with German, French and Scandinavian teachers. Even though they did not know anything about European languages, they insulted me by saying that my pronunciation of German and French sounded like “Japanese” (meaning that all foreign languages should sound like English).

Furthermore, the Army concept of “teaching” was very rigid. It specified for each day the textbook pages and paragraphs to teach. I subverted it by inserting jokes, often dirty jokes, as exercises.

The salary was decent. Mine was 3,650 dollars a year. I repaid most of the 2,000 dollars which I had borrowed from a friend in Connecticut. To be more precise, out of the \$2,000 I spent \$285 on the sailing from Japan to California. In Berkeley I had to pay the “non-resident tuition,” \$300 for two semesters. I had to pay room and board (room with meals) in Berkeley.

### **Marine Corps: An Excellent Solution**

I did not want to spend the rest of my life in Monterey. To get out, I had to obtain my citizenship. One way to get my citizenship was to marry a citizen or to become a father of a baby born in USA, because the baby becomes a citizen by

birth. But neither would do, because as I mentioned, I wanted to live in Europe as an independent unmarried individual in order to experience the life in several West European countries.

A solution occurred to me: to serve as a soldier in the military service. Nowadays many foreigners volunteer to enlist in the USA military service in order to obtain citizenship, and this procedure has become a routine. But in the 1950s it was not a routine. One had to get “inducted” (receive a letter to call you into the military service). Non-citizens could not volunteer. Therefore I wrote a letter to the “draft board” to request to send to me a letter of induction. The draft board answered that it could not induct non-citizens. I wrote a letter to the Immigration Service, indicating my desire to get inducted. The Immigration Service exchanged several letters with the Draft Board, and finally the Draft Board sent me a letter of induction. This was a calculated move on my part.

I expected that I would be inducted into the Army, and in that case the Army would assign me to the Army Language School. Then I would sign up to study Russian, which I had not yet learned.

But it turned out in a completely different way. When I went to the induction center, it was announced that every fourth person should go to the Marine Corps, and I was a “fourth person.” It threw me off my original plan, but it turned out to be beneficial for my future. Along with many “fourth persons,” I was sent to the Marine Corps Recruit Depot in San Diego, and because of my mathematics background, I was assigned to the Electronics School, located also in San Diego.

The basic training in the Marine Corps is known to be very strict, hard and humiliating, because the instructors insult you all the time. But I found the basic training to be easier than the military training in Japanese Middle Schools. In the basic training in San Diego, I was considered strange because I was not suffering: I was even enjoying it, except an incident.

One of our instructors, Sergeant Michon, was a gambler and a heavy drinker. He lost much money in gambling. He was also a “savage” instructor compared to other “civilized” instructors. He insinuated to us trainees that if we collected money and secretly put in his car, he would make the training “easier” for us.

Because most of the trainees were afraid of Sergeant Michon, they obliged. But I thought his deed was unethical. The trainees were always under the

surveillance of several instructors except on Sunday mornings when they could go to church. I wrote a note on the incident and inserted it under the door of the church chaplain. He showed it to the battalion commander Colonel Beals. He summoned a court marshal (military tribunal), in which all the trainees were to testify. But all trainees except me said that they knew nothing. I was the only one to testify against Sergeant Michon. The trainees said nothing because: (1) they were still afraid of Sergeant Michon; (2) the court marshal would delay their going home, which was scheduled within a week or two, and for which they had already purchased their airplane tickets. I was in a precarious position. Fortunately Colonel Beals saw the situation through, and transferred Sergeant Michon to a place where he would no longer have contacts with trainees. This made me respect the fairness in the Marine Corps, and in spite of all wild habits of the Marines, I respect the Marine Corps more than the Army, the Navy and the Air Force. When I meet a Marine nowadays, I give him/her a verbal salute "Semper Fidelis," and tell him/her the story of Colonel Beals. "Semper Fidelis" is the Marine Corps Motto and a password.

Between my basic training and my assignment at the Electronic School in San Diego, we (trainees) spent half-a-year at the Navy Electronics School on Treasure Island near San Francisco. I spent my off-duty hours in Berkeley, fifteen kilometers away.

The electronics training I received in the Marine Corps was useful later in my work in cybernetics. Furthermore, one of the instructors, Chief Wagner, at the Navy Electronics School on Treasure Island made me realize that military service has a vast reservoir of scientific talents. In fact, he was the one who mentioned to me Norbert Wiener's book *Cybernetics* in 1953. But at that time I had no confidence in the scientific knowledge of military persons, and I did not even look up the book. Thus I learned that a bad luck may turn into a good luck, and a good luck may turn into a bad luck.

While I was stationed at Treasure Island, one day I drove to Monterey. I dropped in at the Army Language School and paraded into the faculty room of the Japanese Language Department in my Marine Corps uniform, just to tease the Hiroshima and Okayama teachers. They gaped wordless.

### **Marine Corps Air Station in a Wilderness**

Upon graduation from the Marine Corps Electronics School in San Diego, the graduates could choose the location of their next assignment. My hope was to be stationed in Philadelphia where I would be able to go to the famous Philadelphia Symphony Orchestra concerts and other cultural activities. The choices depended on the week of graduation, or the week in which the assignments were obtained. My calculation was that if I took a one-week vacation, I could choose Philadelphia. Therefore I took a vacation in Berkeley. But it turned out that when I returned from Berkeley, I was ordered to be stationed at the Marine Corps Air Station in North Carolina, in a wilderness good only for fishing.

Nevertheless, I would get two most important things: citizenship and G. I. Bill (educational financial support after the completion of the military service to study anywhere in the world in any specialization for 36 months). I got both in due time.

I was not interested in fishing. I spent my spare time studying a thick book (650 pages) in German, on history of philosophy by Wilhelm Windelband (1950), as a preparation for my study in Germany. I also learned Danish language in order to study Kierkegaard, and Swedish because I liked Sweden.

After my “honorable discharge” from the Marine Corps in 1954, I sailed on a Norwegian ship Stavangerfjord, an old steam turbine ship reputed for smooth sailing, and the cheapest, from Québec to Bremerhaven. The ship sailed indeed without rolling. On the ship, I met Prof. Paul B. Sears of Yale, who was starting “human ecology.” I dined with him during the entire trip, and learned much about human ecology.

### **Germany and Denmark: Stepping Stones**

In Germany I learned what I wanted to learn: The foundation of German philosophies. I attended Universität München and Universität Heidelberg. But I was disappointed by the lack of creative vigor among students. German students were still suffering from the post-war “Ohne-mich-ism” (leave-me-alone-ism). The atmosphere was stale and stuffy. I was in need of fresh air.

Therefore I went to Denmark. It was a relief: relaxed, informal, and cozy. But there was a catch. I wanted to study Kierkegaard, but there were no

philosophers who were Kierkegaard specialists. In Denmark, Kierkegaard belonged to theology, not philosophy. Nevertheless, I read several books by Kierkegaard on my own. I especially enjoyed his *Begrebet Angest*. He wrote that a man on the top of a cliff is afraid, not because the cliff will throw him down, but because he has the possibility of throwing himself down. It is this fear which paralyzes many intellectuals and disables them to face new possibilities. 100 years later, Sartre (1943) wrote that “the authentic human being” (pour-soi) is a double negation: the future which he wants to create negates the present, and the present negates the future change. In this sense Kierkegaard was closer to Sartre than to Heidegger. Heidegger’s “Dasein” (existence) gradually turned into collectivistic “Deutsches Dasein” which supported Nazism. Incidentally, Hitler and Heidegger were both born in 1889.

Though Denmark gave me the fresh air and coziness which I needed, I could not find Kierkegaard philosophers. Therefore I studied music composition theory. What I learned in music composition theory, together with my later interest in architectural design principles, led me to my theory of individually different cognitive/cogitative/action types (mindscape types: Maruyama 1977, 1978a, 1980, 1981, 2001), and to my theory of nonredundant complexity (Maruyama 1995, 1999).

### **Sweden: Optimal Environment for Laying the Foundation of My Lifetime’s Work**

While studying in København (Copenhagen) in Denmark, I visited Lunds Universitet in Southern Sweden to explore possibilities for my research on cognitive/cogitative/action types. I found that Professor Aspelin was receptive to my idea, and I transferred to Lunds Universitet. Lunds Universitet was the second oldest university in Sweden. The oldest was Uppsala Universitet. Historically, Lund was famous because Carl von Linné (1707-1778) lived and worked in Lund. Last year 2007 was the 200<sup>th</sup> anniversary of Linné’s birth, and on that occasion, *Science* published (November 2, 2007 issue, page 752) a short note on Linné’s life, complete with the menu of a royal banquet of his time. What interests us here is Linné’s passion for food, and his question: “Is there an ideal diet for each person?” That is to say, he was well-aware of the heterogeneity among individuals.

In Lund I found a combination of excellent conditions. The first was that Professor Aspelin gave me total freedom as to how I organized my research. The second was that the university library carried the newest books and gladly purchased all the books I requested. This condition existed because the library had the lowest user per budget ratio. There were then five universities in Sweden: Uppsala, Lund, Stockholm, Göteborg, and Umeå. Uppsala, being the most famous university in Sweden, had more students. Stockholm and Göteborg, two large cities, had many library users from outside the campus. The university in Umeå was not yet fully developed. Yet the libraries of the five universities received the same amount of library budget allocation.

There were also additional individual financial help in the form of educational assistance. My G. I. Bill was to last for 36 months. In Germany and Denmark I used 30 months of it. But American Scandinavian Foundation gave me a one-year assistance, and Professor Aspelin added one more year of postgraduate financial assistance to me in competition with other students of his. These students were quite jealous and angry at me, because they did not understand my unorthodox research. They thought the money should go to more “normal” students. Professor Aspelin had been impressed not only by my interdisciplinary knowledge but also by the fact that I could discuss philosophy in Swedish in his seminars.

### **Margaret Mead: Her Warnings Regarding the Politics in North American Universities**

While I was in Denmark, Margaret Mead had read some of my articles published in France and in Denmark on the Danish culture (Maruyama 1959). She became interested because she was planning to come to Denmark for a conference of World Health Organization. Therefore she arranged to meet me in København (Copenhagen). When we met, she warned me that I would have difficulties in finding a job in North America for three reasons: (1) I was a non-white; (2) My post graduate research was done in Europe; (3) My interdisciplinary work does not “fit” in the North American academic system.

I thought she was over-pessimistic. After all, I had been impressed by the flexibility at the University of California Berkeley. I did not experience any job discrimination in the Marine Corps. I knew that there were interdisciplinary individuals such as Gregory Bateson. Incidentally, Gregory Bateson was NOT

given a university job, and he worked at Veterans Administration Hospital in Palo Alto. Toward the end of his life, he got a professorship at the University of California Santa Cruz.

But after my return to USA, I found that her warnings were all too true. She knew the academic politics. Her main job was at the American Museum of Natural History, even though she taught anthropology at Columbia University. The politics in museums is also quite vicious, as she described it in her autobiography *Blackberry Winter* (Mead 1972).

Let me begin with an incident after my return to Berkeley. I sailed from København to Halifax again on Stavangerfjord which I loved and which was the cheapest. From Halifax, I passed through Yale and M.I.T. In Boston there were people I had worked with while I was in Denmark: Prof. William Locke of linguistics at M.I.T., and Dr. J. Roswell Gallagher of Children's Hospital in Boston.

In 1955 in Denmark, I learned about "ordblindhed" (congenital dyslexia due to orientational confusion such as b-d-q-p and N-Z. Often up-down confusion in reading music scores was also involved.) It was found that inbreeding in a small community near the German-Danish border in Schleswig-Holstein area during the war was the cause (Herman 1955). I became interested and wrote to Prof. William Locke in the Linguistic Department of M.I.T., who in turn contacted Dr. J. Roswell Gallagher of the Children's Hospital. They together raised funds from a blindness association to translate the book into English. The translation was published from C.C. Thomas, a medical book publisher in Springfield, Illinois around 1960.

I could have gotten a job in Prof. Locke's department at M.I.T., but turned it down and headed for Berkeley because I liked the dry climate in California. On the way, I stopped at University of Michigan where I got acquainted with Kenneth and Elise Boulding. I found Kenneth's use of superficial analogies annoying. He had a popular appeal, but he did not say anything new, and his work had no rigor, nor careful attention to details. But I immediately struck a chord with Elise, partly because she was a Norwegian and did her Ph.D. in Netherlands. She and I became close friends and exchanged letters until last year, when she stopped writing to me (She was ten years older than me).

In retrospect, my academic career would have been easier if I had accepted the job offer at M.I.T. But I was eager to return to sunny and dry California for



outdoor activities, especially for camping. I do not regret that decision. When my son was small, I camped at many lakes and reservoirs with him.

When I stopped in Michigan, I was penniless, and worked at the Radiation Laboratory of University of Michigan to save money to continue my return to California. After my return to Berkeley, I found that it was not easy to find a job. I worked part time at a small electronics firm for \$3 an hour, and wrote three manuscripts: (1) "Communicational epistemology," which was published in *British Journal for the Philosophy of Science* (Maruyama 1961a), (2) a mathematical article "Morphogenesis and Morphostasis" on causal loops, which was published in *Methodos* in Italy (Maruyama 1960); and (3) an article on the communication pattern in the Danish culture, which was published in *Phylon*, a Black American journal, because I mentioned a Black scholar in my article (Maruyama 1961b).

In the manuscript I lauded an erudite Black American author Richard Wright, who came to København to give a lecture. His lecture was highly intellectual, and he quoted in Latin several Roman authors. But the Danes' main reaction was: "He is suffering from an inferiority complex." In my manuscript I used this episode as an example of the Danes' propensity: (1) to hammer down the nail which sticks out; (2) to use their cheap amateurish pseudo-psychology to tear down intellectuals (Maruyama 1961). In other words, the central focus of my manuscript was the Danish mentality. It is possible that the editor of Phylon sympathized not only with Richard Wright but also with other Black Americans who were disdained in many other ways. In the case of Richard Wright, for Danes it did not matter whether he was Black or White: what Danes did not like was that he was too intellectual. But for the editor of Phylon, what mattered was that he was Black, regardless of whether he was intellectual or unintellectual.

### **My Initiation to Academic Politics: Revenge between Professors**

In the summer of 1960, Professor Jack Holmes of the School of Education at the University of California Berkeley heard about my theory of change-amplifying causal loops. He had been exploring a similar concept. He told me that he "fell of the chair" when he heard about my theory. He offered me a temporary part-time job, by squeezing out a small amount of money from his project. I wrote computer programs for Holmes.

In those days computer programmers punched their programs on IBM cards,

using “assembly languages” such as SAP, FAP, and FORTRAN. They did not use ready-made computer packages. The process was slow, but because the programmers chose each step of calculation, they had a precise knowledge of how the computation was done step by step. Nowadays programmers simply combine packages of ready-made program parts. This is faster, but the program parts remain invisible to the programmers.

When you wanted to run a computation, you stacked your IBM cards in the following sequence: program cards (usually one or two hundred cards), followed by data cards (as many as necessary). These cards filled a small box. There were no compact disks. While you fed these cards to the computer, the computer stored the contents of the cards in a large magnetic tape wheel, about 40 centimeters in diameter, and read the tape as the computation proceeded. You could see the tape wheel turning in discrete steps: click, click.

The computer itself was very bulky, almost two meters high and 70 or 80 centimeters wide. Computers used vacuum tubes (like tiny electric bulbs). Transistors were not yet available. Therefore a computer room which housed several computers was a large room. But today all you need is a small laptop.

But the convenience of using a laptop has a drawback. The users rely too much on conventional computational methodology, and do not know what to do if they want to switch to new methodologies such as my heterogram analysis. People have become too automated, and reluctant to make efforts to switch to a new methodology.

A little later, Professor Jacobus tenBroek, of Department of Speech approached me. He had read some of my publications while he was at the Center for the Advanced Study in Behavioral Sciences (nicknamed as “the Think Tank”) near Stanford University. He was trying to build an interdisciplinary team and wanted to add me to the team. The chairperson of the department, Professor Geiger, was a poet and was not particularly interested in tenBroek’s idea. TenBroek was a blind lawyer, and was a good political fighter. His team already had diverse professors whom he wrung out from various departments: Ethel Albert from Anthropology, Borah from History, Lowenthal from Sociology, and Barhhart from Psychology. He was trying to steal a course from the Philosophy Department. Prof. Rynin was teaching that course. TenBroek’s strategy was to have me teach the course. In order not to give Rynin a chance to oppose, tenBroek

kept his scheme secret until just before the beginning of the fall semester. He did not tell his plan even to me, and he did not know that I already knew Rynin, nor that Rynin and I were good friends. When finally tenBroek told me to teach Rynin's course, I very naively went to Rynin and told him about my new job. He turned pale, sank into his chair, and stared at an empty space for several minutes. Finally he spoke with agony: "You and I are good friends and I have nothing against you. But what tenBroek did cannot be forgiven."

Rynin discovered that the salary rank which tenBroek was offering me was three ranks higher than what Holmes gave me. Rynin tried to pull down my salary level to Holmes' level. TenBroek resisted. They fought for several months. Meanwhile I did not get paid. Finally they settled my salary level two levels lower than tenBroek's proposal.

TenBroek told me that I could stay in Department of Speech only for two years. Fortunately after two years, Nevitt Sanford took me to his Institute of Human Problems at Stanford University, with a half-time appointment. Stanford never understood my theories. But he chose me as a curious guy. I used the other half time to write computer programs at California State Department of Public Health, and later became Research Psychologist at Napa State Hospital which belonged to California State Department of Mental Hygiene. All these were "patchworks."

I wanted to do something new. In March 1964 a tidal wave destroyed several Aleut villages in Alaska, and I went to Alaska as a community department specialist. It was for me a fresh air. Alaska was later corrupted by an "oil boom." But in 1964 the people in Alaska, both Native Alaskans (Inuits, Thlingits, Haidas, Athabaskans) and non-native Alaskans (whites) were very informal and cooperative. For example, when I flew from Anchorage to an Aleut village, the hospital in Anchorage asked me to take some children back to the village, and handed me the children without any paperwork, completely trusting me. They were full of "pioneer spirit," which inspired me immensely.

In the autumn I had to return to California because of a throat infection. After my recovery I became a teacher at a Job Corps school. The trainees were teenagers from poor families from all parts of the country, for example from white rural communities in Appalachian Mountains. Some of them asked me to correct their letters which they wrote to their families. Many letters said: "Here I

have my own bed, and three meals a day for the first time in my life.”

Then Douglas Grant, who was running a project in prisons to organize teams of “endogenous researchers” (prison inmates to become researchers) asked me to run his projects in two State prisons: San Quentin and Vacaville. This became another turning point in my life. I learned more from prison inmates than from anybody else. I found that theories by academic criminologist, psychiatrists, psychologists and sociologists were wrong, and that some inmates can outwit prison psychiatrists by playing out various symptoms to obtain desired results, such as being transferred to an isolation unit in order to escape being killed by other inmates (Maruyama 1978b).

### **Migratory Life: From Discipline to Discipline**

Margaret Mead’s warning that I would have difficulties because my interdisciplinary frame of mind does not fit in the North American academic system, turned out to be very true. I had to survive with “visiting professor” appointments, migrating from university to university, usually as a replacement of someone going on his/her sabbatical. I had to pretend to be a “specialist” in the discipline of the person going on his/her sabbatical.

I already mentioned my appointments at University of California Berkeley (speech) and Stanford University (psychology). I also took temporary appointments at San Francisco State University (psychology), California State University Hayward (sociology), University of Hawaii (psychiatry), Antioch college (philosophy), Army Corps of Engineers (water resources and social impact assessment), Portland State University (systems science), University of Illinois Urbana (anthropology, architecture and landscape architecture), University of Kansas (psychology), Southern Illinois University (administrative sciences), Uppsala Universitet (anthropology), National University of Singapore (business administration), University of Hawaii (international business), Université de Montpellier in France (international business).

In 1987 finally I got a tenured position at Aoyama Gakuin University in Tokyo when I was 58 years old, where I taught for nine years in international management. But because of the interdepartmental fights and resulting faculty overloading (which I will discuss later in details), I moved to a new university in a northern part of Japan. From there I retired to San Diego. Because of my

movings between countries, I did not accumulate much retirement credit.

All these movings entailed not only extra expenses but also extra time to look for a new job while teaching. For example in late 1970s I wrote more than 2,000 letters per year, tailored to the specifications of each advertised job. I was on unemployment compensation three times.

To vindicate Margaret Mead's warning, I published a comment in Chronicle of Higher Education in November 1978, and I was planning to send a copy to Margaret Mead. But she died one week before its publication. See appendix. (Maruyama 1978c)

In 1960 I was caught in the feud between tenBroek and Rynin at the University of California Berkeley. In 1979 I was caught in another feud between John Sutherland and the Dean at Southern Illinois University at Carbondale. Sutherland was the chairperson of the Department of Management. Darling was the Dean of School of Business Administration. Sutherland invited me to teach in his department, and from Darling's point of view, I was Sutherland's Protégé. The feud was very violent and Sutherland soon left for Rutgers University. I was kicked out of the School. Fortunately I got a job in the School of Engineering to teach electronic circuits. Half a year later, Southern Illinois University got a new president. Albert Somit, whom I had met previously in a conference. Somit put me in the Coal Research Institute at the university, using the President's discretionary funds. From my point of view, it was like a beggar's job. In 1982, I was invited to Uppsala Universitet in Sweden to teach anthropology. I went to Somit to tell him about my new job. He looked surprised. He obviously expected me to stay under his wing longer. He did not understand how a beggar feels. I resented his reaction.

After Sweden, I was invited to the University of California Los Angeles, and National University of Singapore, University of Hawaii, Université de Montpellier in France. Finally in 1987 I got a tenured position at Aoyama Gakuin University in Tokyo, where I taught for nine years. But there were problems between departments, and I moved to a new business school in northern Japan. Because of my movings between several countries, I did not accumulate much retirement credit.

### **Escape from Extreme Work Overload: From Tokyo to Aomori in the Pioneer Spirit of Old Alaska**

At the beginning of 1995, I was under a heavy psychological pressure primarily due to extra workload needed to avoid anticipated attacks from other components of the university. The situation was that I could be scapegoated or symbolically pinpointed, not by my department, but by other departments which did not understand my student projects. Other components practiced mass-production methods in teaching: memorization and examination. Therefore their student/faculty ratio was very large.

My unit, School of International Politics, Economics and Business, was only 15 years old then, and had a much lower student/faculty ratio. Consequently, the School was a target of political attacks from other components which did not understand the fact that the faculty members of our School worked several times harder than theirs.

One of my courses was a student project course which required very intensive work on the part of both the students and the teacher (Maruyama 1994). I had about 150 students in this class each year. In Japan, the duration of each course was one academic year. The students were divided into about 20 groups. Each group had to choose a business category, and compare 5 or 6 firms from various countries within that business category in terms of their strategy and management practices, using anthropological on-site observational field work methods and sociological participant-observation methods.

Tokyo, where the university was located, is one of the few places in the world, along with Singapore and Hong Kong, where firms from many countries are present, and students can learn by directly talking with the firms' managers, employees, clients and competitors, as well as conducting on-site observation of their behavior and performance which may contradict the impression the managers try to give or their illusory self-image. Thus I was in one of the most ideal places in the world to run student projects with business firms. This was for me a great good luck, even though life in Tokyo had several disadvantages: long commuting time, two hours or more one way (four or more hours round trip); hellish packed trains; very hot humid summer.

I made a maximum use of this opportunity. Since the beginning of my teaching

career, my method was to let students conduct their own projects to learn from their direct experience in unfamiliar environments, not from books. When I taught in California in the 1960s, my students, for example, spent time with homeless beggars and participated in the beggars' life, or went to esoteric clubs. I also invited community people to in my classes. For example I invited a Black Panther member. Black Panther was a motorcycle gang reputed for their rebellious philosophy, but actually very helpful to people who were stuck with car problems on highways. Unfortunately in my class there was a lady from John Birch Society, an ultra-conservative organization, who wrote a letter of complaint to Ronald Reagan, then the Governor of California, and he and I had to fight on the issue.

In Tokyo, there was no government interference, but there were politics between academic departments. You may recall my description of the feud between tenBroek and Rynin in Berkeley, and the fight between Sutherland and Darling in Carbondale. In Tokyo, the issue was the student/faculty ratio. I had each year about 150 students. (The school terms in Japan as well as in Singapore are one year long). In other units and departments of the university, many professors had 300 students or more, but their teaching method was "mass production," memorization and examination. Therefore I became a target of their attack.

In 1995, there was a re-organization in my unit, and I might have fewer students. Therefore I anticipated being attacked, and as a precaution I announced several new courses to attract students. My strategy was too effective: I ended up with seven new courses to teach. In addition, there were several external events which increased my stress.

If you put ten tons of load on a truck designed for three tons, there will be accidents. This is a simplified metaphor. The actual situation was much more complex (Maruyama 1997). Several "causes" became intertwined among themselves. In addition, they got enmeshed with inopportune and unanticipated bizarre external events. The result defies clear causal analysis. It is better to present it as a REVEC. Here I divide my REVEC into several phases. But before presenting Phase I, I must mention some events which preceded Phase I because they were a prelude to Phase I.

The victims of the accidents included two students of mine in Tokyo and several research colleagues in many countries. I feel deeply sorry for the two

students because their future depended on my letters of recommendation for their postgraduate studies in foreign countries. On the other hand, for my research colleagues in several countries, the accident caused only some inconvenience which did not affect their career.

As mentioned, at the beginning of 1995, I took precautionary measures to increase the number of my students by advertising several new courses, and ended up with too many courses to teach. My advertising strategy was to announce my new courses, not inside the campus, but in one of the leading Japanese newspapers Asahi Evening News which many students at my university read. An article which described my methods of teaching appeared on April 24, 1995. But while I was trying to arrange this article, two very improbable incidents occurred: (1) the big earthquake in Kobe in Western Japan, in which almost a million people died, were injured or lost their houses; and (2) the subway mass poisoning by a strange religious sect, in which several hundred people were killed or became paralyzed. All newspapers were busy writing reports of these two happenings. I spent days to find a newspaper which would write about my courses. Finally Asahi Evening News became interested.

Another external event was a sudden and short-lasting USA dollar depreciation because of a dollar surplus in South America. In 1995, the usual exchange rate was about 125 yen to a dollar. But the dollar depreciation kicked down the dollar to about 80 yen. But I was too busy to act on it. I could have gained more than \$40,000 by converting yen, which I had in a bank, to dollar. There was another externally caused event which wasted three weeks of my time. A conference organizer in Cleveland had invited me to give a talk at the end of April. Because many Japanese tourists travel to foreign countries at the end of April during the "golden week" (one-week vacation), the airplane reservations must be made several months in advance. I had made a reservation six months in advance. But the conference organizer in Cleveland thought that she could make a cheaper reservation for me, and cancelled my reservation. Of course she could not get a new reservation in the tourist class, and she ended up buying a first-class ticket. Stupid indeed. But while this negotiation was going on, I had to go to airline ticket offices in Tokyo many times to try to scrounge out other alternatives, wasting three weeks, because the airline ticket offices were overcrowded and I had to wait in long lines.



**Phase I: Resignation**

The dollar devaluation was like a beautiful girl, and I missed it because of my work overload. Was she real? Was she a phantom? My resentment toward the work overload was stronger than before. This resentment was an attempt to counteract my loss of self-confidence rather than a loss of money. I was stupid but I was not really stupid. It was my fault but it was not really my fault. This question haunted me even though I tried hard to forget it. This phase lasted for a long time.

**Phase II: Puzzle about Penny-Saving Mentality**

I lost 40,000 dollars. So why bother to save pennies when I was shopping? The whole thing was irrational. Then it gradually dawned on me that “saving pennies” could not be explained in terms of economics or microeconomics. It was more like a hobby or a game. It was my “stupidity” to miss the opportunity of the dollar devaluation which bothered me more than the loss of money, in the sense that I lost the game.

**Phase III: Out Of The Blue Sky**

At the end of November, I received a telephone call from Prof. Kato, who taught at Aoyama Gakuin in Tokyo in the same department as mine, but moved to Aomori in northern Japan to create a new business school. He sounded out whether I would be interested in joining his new school, and offered me an attractive package including small teaching load (only four classes) and a large research allowance (more than US\$ 15,000 per year), and inexpensive apartment partly subsidized by the school. He would begin to pay me from April, but my work will start in September.

Immediately afterwards there was a faculty meeting at my university in Tokyo. The dean announced that from 1996, everyone must teach six courses each trimester. I decided to move to Aomori.

In Aomori, I would be able to create a program of a new kind, for example a program for export product adaptation to foreign users' habits. Users' habits cannot be discovered by interviews or questionnaires. It is necessary to use anthropological observation methods and sociological participant observation methods. The necessity of consumer habit study can be illustrated with the following

example (Maruyama 1990, 1992). In the early 1980s Japanese cars tended to stall on the streets of Beijing, even though they had no similar problems in North America and West Europe. The reason was that drivers in Beijing stopped the engine while waiting for the red signal to change in order to save gasoline, and in many Japanese cars the air-conditioning (acclimatization, or air cooling) kept running after the engine was stopped. The battery went dead and the engine could not start. The problem was in the way the ignition switch operated. But from the point of view of the users, the entire car was no good. The solution was simple: to modify the ignition switch to stop the air-conditioning when the engine was stopped. To understand such problems, observation of users' habits is indispensable.

Aomori produced no cars or other machines. Aomori's main products are apples and aquaculture of scallops. Apples are now exported from Aomori to Siberia, but apples need no user habit study. On the other hand, aquaculture methods are exportable to Norway, Alaska and Siberia, possibly also to Iceland, Canada, and Chile. Norway already practices aquaculture of sea urchins, but not yet of scallops. The Aomori method of scallop aquaculture is as follows: to tie many scallop-producing shells on a string, and hang the strings from a raft. Scallop shells are insensitive to gravity. They grow regardless of whether they are upside-down or in any direction. Use of this method in foreign countries requires minor adaptations, for example the length of the strings, the size of the rafts, depending on the ocean current.

Aside from the export of aquaculture methods, Aomori had a special allure for me: its many similarities with Alaska and Scandinavia. The forest landscape in Aomori was very similar to that of some parts of Alaska and Scandinavia and I felt quite at home in Aomori. (In German there is a word "Heimat," which means home environment in terms of landscape and social traditions (Biess 1999). In a sense I knew Aomori would be a new Heimat for me.)

#### **Phase IV: Delayed Traumatic Effects Of The Stress: I Almost Lost My Right Eye**

Toward the end of February 1996, I noticed a darkening of a part of my vision field in my left eye, but I kept ignoring it because the symptom resembled a problem I had in 1974 which had no serious consequences. But my 1996 problem, as it turned out, was very different and dangerous. My 1974 problem

occurred in the following way. While driving at night in Portland, Oregon, the lower left corner of the vision field of my right eye suddenly went blind. I immediately stopped my car. Realizing that my left eye was normal, I drove home using my left eye. By the time I reached my apartment, my right eye almost recovered. The blind quadrant was by then a dark quadrant, in which I could see things tinted purple. Next day I went to an ophthalmologist. He could find nothing wrong, and concluded that it was probably due to a temporary blood occlusion which might or might not have damaged the retinal nerves, and therefore the darkening might or might not disappear.

It turned out that it took the symptom three or four months to disappear completely. The darkening was most noticeable when I blinked my right eye. Immediately after the opening of the eye, the “shadow” appeared but gradually disappeared. The shadow was always there, but the brain adjusted for the darkness. As days passed, the dark quadrant receded to a smaller and smaller shape, becoming like a slanted hammer. By mid-summer, even the hammer disappeared.

In 1996, recalling that I was given no therapy or medication in 1974, yet the eye healed by itself, I thought that it was unnecessary to go to an ophthalmologist immediately when a new problem began toward the end of February. In any case, I was too busy to go to an ophthalmologist.

An exciting experience had begun in October 1995 which alleviated my psychological stress. A graduate student of mine from Canada, Kelly Baxter, was making a progress in her research. She devised and sent out several hundred copies of a questionnaire, one third of which was printed in English, another third in French, and the rest in German, to European and North American managers working in Tokyo. Her questionnaire was a composite of several psychological tests, including Adorno-Sanford F-Scale, and Rokeach scale of open-mindedness. Her objectives were: (1) to check the validity of these tests when used with subjects from many cultures; (2) to find correlations among various tests; (3) to see whether these European and North American managers working in Tokyo would score differently from those staying in their home countries; (4) whether the differences were the “cause” or “effect” of coming to Tokyo; (5) whether the individual epistemological types would be found across national or cultural boundaries. She was getting a very high percentage of questionnaire return. They

were sufficient to meet all five of her objectives, and could generate several Ph. D. dissertations even though she was going to use them for her master's degree.

By mid-January 1996 the data were beginning to pour in, and she was making surprising discoveries. I was in touch with her every day and night over the telephone and by fax.

Her oral defense of the thesis would take place on March 6. I decided not to go to an ophthalmologist until after March 6. The darkening of the lower left portion of my left eye somewhat stayed steady, similar to the one in 1974. But around March 6 it began to spread toward the center, gradually spreading beyond the center of the vision field. On March 7, I began to look for an ophthalmologist. On the morning of March 9 I went to an ophthalmologist near my university, and she advised me to go to a specialist for this type of problems. I went to a special clinic, and its director Dr. Tobari alerted me of the seriousness of the problem: bleeding in the retina, very different from my problem in 1974. Dr. Tobari was a professor at Toohoo University Medical School and was a pioneer in several types of new eye surgery. He gave me a medication. The bleeding stopped spreading, but the already blinded portion did not recede. Soon my left eye was quite dysfunctional, especially for reading and writing.

On June 6 a new problem struck, this time my right eye. I was taking a short walk before breakfast as a daily routine. Suddenly my right eye went almost blind. Dark purple color covered my vision field and the sky and trees disappeared. It was as if ink was spilled over a somewhat bumpy table, leaving islands which gradually submerged. I stood stupefied. Fortunately the "ink" began to subside after about three minutes and disappeared gradually. It was almost similar to what happened in 1974. Therefore I did not panic. That day I had to go to a driver's test for a Japanese license in preparation for my moving to Aomori. In Tokyo I had no car because it was faster to use railway trains and subways and because there was no parking space near my university. But in Aomori I had to drive. On June 6 I had an appointment to take the driver's license test. After I took my driver's license test, I went to Dr. Tobari's clinic. He was shocked: the main vein in the retina was almost completely clogged and I could go blind at any moment. He immediately assigned Dr. Iwaki, who was his assistant, to give me an intravenous drip treatment. The treatment was to continue for one hour every day for a week including the Saturday and the Sunday. Dr. Iwaki came to the

clinic on the Saturday and Sunday just for me. It was for him very time-consuming because his train trip between his home and the clinic took several hours, especially because during weekends the trains did not run as frequently as on week days. Dr. Iwaki's dedication to his work saved my right eye.

In 1996 my two eyes had opposite problems. In the left eye I had bleeding. In the right eye I had occlusion. The treatment for occlusion may increase bleeding. But curiously my left eye began to get better during the intravenous drip treatment. Therefore some invisible occlusion in a small vein in the left eye retina may have been the cause of the bleeding because a blockage at one point may increase the blood pressure at a point upstream. Consequently Dr. Iwaki added an anti-clogging medication to stop my left eye bleeding even though it seemed contradictory.

Judging from the symptom of the "ink" in 1996, what happened in 1974 must have been also a blood occlusion, much lighter in degree and without heavy clogging.

But the psychological stress of 1996 must have been much greater than that of 1974. The spring of 1974 was a time of great psychological stress for me. I was undergoing the process of divorce with my first wife. It was supposed to be a friendly divorce. But the lawyer of both sides, in order to make the divorce legal, made it appear to be based on great hostility. The lawyers of both sides prohibited us to communicate directly, and this created tremendous anxiety and worries in my mind, even though after the divorce we remained as good friends.

In comparison to the severity of psychological stress caused by complex combinations of situational contexts in 1996, the stress of 1974, though quite serious, was much minor. Furthermore, the 1996 stress compelled me to move to Aomori, which after all turned out to have positive consequences.

Here again, we confirm that a bad luck may turn out to be a good luck, and a good luck may turn out to be a bad luck. Another point I made at the beginning of this article was that one's career opportunities should not depend on good lucks and bad lucks: the social system must minimize obstacles against innovators. Overloading is one of the overlooked obstacles. In this article I gave numerous examples of other obstacles.

## CONCLUSION

The goal of this article was NOT to present a theory, but to enable the reader to build his/her own theory based on REVEC (raw-experience visualization-enabling communication). If you could visualize some of the incidents described in this article and could build your own theory, the goal is achieved. Individuals differ in their cognitive/cogitative types (Maruyama 1980). Therefore your visualizations should differ from person to person.

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## Appendix

*The Chronicle of Higher Education*, November 20, 1978, p. 18.

*Seven Moves in Seven Years* by Magoroh Maruyama

To the editor:

“Academic Musical Chairs” in the October 23 issue was of great interest to me, because I had to move, as a full professor, seven times in seven years in six states, including Stanford University, University of Illinois, Antioch College, University of Missouri, and University of Oregon, for reasons quite relevant to your discussion but you did not mention.

I would like to focus on problems at two levels: a meta-level; and a procedural level.

The first consideration is that meta-level activities do not fit the existing departmental structures. This affects a considerable number of faculty members. Let me illustrate the situation with my own case. I have 87 publications used in 30 disciplines in 20 countries in six languages, including “The second cybernetics” and “heterogenistics: an epistemological restructuring of biological and social sciences.” My researches are on different structures of reasoning which vary from discipline to discipline, from profession to profession, from individual to individual, from culture to culture, and from community to community.

My data come not only from psychology and anthropology, but also from my experience in urban planning and community design with federal agencies ranging from Corps of Engineers to NASA. This type of work is a meta-science. What is crucial is that such basic science is regarded as peripheral by academic departments, who do not consider it important enough to justify a full-time permanent position.

Fates of meta-level scientists vary. In my case, I have survived on “Distinguished Visiting Professor” positions at a number of universities with departmental assignments which varied from university to university: anthropology, psychology, sociology, urban planning, architecture, landscape architecture, systems science, administrative science. This is highly inconvenient, as I have to move my whole family around.

The second level is procedural. Very often, when a department has an open position, a list of priorities is made, which often turns out to be a list of factions, and sometimes a list of inter-faction compromises. The final criterion becomes either very narrowly specific such as “kinship specialist,” or a strange combination like “statistical methodologist who can also teach a course in gerontology.”

In some other cases the criterion may be polarized. A sociology department was divided into Marxists and anti-Marxists. They compromised by stipulating that, of the two candidates to be interviewed, one should be a Marxist, and the other an anti-Marxist. Applicants who were neither Marxist nor anti-Marxist had no chance. In any case, factions compete with one another to maintain their existing interest. Innovative applicants as well as meta-level applicants have very little chance.

#### **ADDENDUM to appendix**

Needless to say, there are many phony “equal opportunity” positions. The department has already selected a new person, but pretends to be looking for many applicants. The trick is to add, at the end of the specifications, a sentence: “and otherwise meets the needs of the department,” which is an escape clause.