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OBSERVATIONS ON EDUCATIONAL REFORM IN JAPAN
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It was my good fortune in 1993 to be selected by the Japan-U.S. Fulbright Commission as one of six American university leaders to study first-hand the Japanese educational system. The goals of the program were (1) to immerse us in every aspect of the Japanese educational system, from elementary and secondary schools to universities, technical colleges, and corporate training centers; and (2) to allow us to observe the process of educational reform within the political-social-economic context in which it is occurring. Each of us also had particular individual interests that we pursued; in my case, the internationalization of Japanese universities and the status of women in higher education.

We visited Japanese universities, both public and private; middle schools; high schools; vocational schools; *juku*, or "cram" schools; American branch campuses; ministries of education; and embassies. In all, I was able to visit 21 institutions. Our travels took us not only to Tokyo, but also to Kyoto, Osaka, Kobe, Hiroshima, and Okinawa. We stayed, not only in hotels, but in traditional Japanese inns and private homes, and we had the opportunity at every stage of our visit to meet with former Fulbrighters, both Japanese and American, who shared with us their views of the two cultures. It was a remarkable opportunity to examine the Japanese educational system firsthand, without the oversimplifying and distorting lens of the popular press, and I want to share with you tonight some of my experiences and observations. Although I have been lucky to return to Japan several times since 1993 to continue my observations, I am not an expert. And though I may seem to be critical of certain aspects of Japanese education, I do not mean to suggest that the United States doesn't have its own work to do. Time limitations, however, require that I focus here only on Japan.

CHARACTERISTICS OF EDUCATION IN JAPAN

Let me begin by reviewing what have long been considered the salient features of education in Japan, many of which I observed firsthand. As generalizations, they are certainly subject to exceptions, but I think they give us a reasonable starting point.

1. More than anything else, Japanese education has served to sort people into a social hierarchy, with the schools one attends signaling one's status in society, one's friends, one's reputation, and one's career. Culminating in the famous university entrance exam when you are 18 years old, your education determines, with great finality, your place in the order of things.
2. Because the prestige of the university you attend is all-important, the drive to enter the best schools begins at birth. Parents try to ensure that the kindergarten their child

enters is the “right” one, and from thereon a series of entrance examinations is undertaken over a twelve-year period to better one’s chances of entering the “right” high school and then the “right” university. The ultimate goal is to score high enough on the university entrance exam to enter one of the top institutions: University of Tokyo, Kyoto University, Keio University or Waseda University. (The dominance of these universities in populating key government positions is reflected in the fact that 80% of government officials are Todai graduates.) Some parents enroll their young children in what are known as “escalator schools”---private elementary schools affiliated with universities that guarantee your place in the university if you agree to enroll your child from kindergarten through high school and IF your son or daughter passes the kindergarten entrance exam.

3. Within elementary classrooms, one sees clearly the second major function of Japanese education: socialization. Japanese students stay together in a group of about 30 to 40 pupils for the entire year. The group is assigned one classroom “space,” which is considered theirs and for which they are fully responsible. Students are expected to set and enforce classroom rules and to care for the classroom, including serving lunch and cleaning blackboards and toilets. (Japanese schools have no janitors.) Most of the instruction takes place in this room, with the teachers coming to it. For two or three years each group of students has the same *tannin no sensei*, which can be loosely translated as “homeroom teacher,” though this phrase does not begin to capture the significance of this person in the lives of the students. Part counselor, part therapist, part foster parent, part teacher, the *tannin no sensei* is responsible not only for the academic competence of the students but their socialization as members of a peer group that is ready to function at the next level of society. The power accorded this individual is reflected in the fact that the *tannin no sensei* is almost always an honored guest at former students’ wedding receptions.

It is important to note that nowhere in elementary schools did I find the grim, joyless schools we so often read about in the press and assume is the norm in Japan. We observed much laughter and often playful relationships between the teacher and students and a strong comraderie among classmates. Despite the ongoing pressures to perform, there were clear signs that a sense of community had developed and that students possessed a rather matter-of-fact sense of responsibility and self-discipline.

4. But the emphasis in Japan is on the progression of the peer group over that of the individual. This is reflected in an education law that stipulates the number of years students must spend at each educational level. The system does not allow the skipping of grades at any level, even for truly exceptional individuals.
5. The power of the university examination is enormous, dictating the shape of the curriculum (based largely on rote memory) and creating a whole new category of people, called *kyoiku mamas*, or “education mamas.” Their role and their job for the bulk of their adult lives is to do everything to ensure that their sons and daughters are positioned to enter the best possible university. This means assistance with homework,

it means attending school in their son's or daughter's place when they are sick, it means managing their children's lives with the devotion and intensity we in this society have come to associate with the parents of beauty queens or figure skaters. The pressures created on students as they move through the educational system has created what is referred to as *toko kyohi*, a psychological condition in which a student becomes ill to avoid going to class or *ijime*, the bullying of a member of a group by other students. School drop-outs have increased, and suicide is not unheard of. Students resort to any sort of assistance as they approach the university exam, including written prayers which can be seen at shrines. Students who fail to gain admittance to any university and who spend another year or more studying to take the tests again are called *ronin*. In 1993, it was estimated that there were 400,000 such students.

6. The all-important university entrance examination has also created a powerful industry, the "cram school" or *juku*, which runs parallel to the official educational system. These schools are designed to coach and train students to score better on the entrance exam, and they make Stanley Kaplan look puny. I visited a multi-million dollar enterprise called Yoyogi Seminar, which enrolls hundreds of thousands of students in classes that prepare them for the exam. I visited an English class with more than 500 students, giving rapt attention to an instructor barely visible to them. Many students were using binoculars to see the blackboard, and not one single student looked up when I entered the room, so concerned were they that they not miss anything that might be on the examination. Students attend cram schools as early as elementary school. One of the staff in the Tokyo Fulbright office had a 3rd grader whom they intended to keep out of cram school in favor of a "normal" childhood. However, the child begged and begged to attend the cram school, since that was where all of her friends were. Young children frequently spend every evening at cram school, eating their *bento* en route and coming home with enough time only to complete their homework and go to bed to get ready for the next day. One wonders if this is early training for the life of Japanese "salarymen," some of whom become the victims of *karoshi*, or death from overwork.
7. Because the status of the university to which you are admitted is what is important to employers, not your academic performance in that university, college is a rather relaxed sort of affair dominated by social activities and clubs. In other words, the exam score matters only as a determinant of your future position in society, not as a prelude to challenging academic work. University life is dominated by clubs, which exist not only for entertainment, but to create the social networks that will be crucial for these students beyond graduation.
8. Universities themselves exist in a rigid hierarchy, their prestige determined by their ability to attract the students with the highest test scores on the university entrance exam. Companies then compete for students from the most prestigious universities, so that they will be ranked highly among Japanese corporations. We were told again and

again by corporations that they are not interested in the student's major field or academic performance, since the corporation provides all of the necessary training.

- 9. Not everyone participates equally in Japanese education at the national university level. About 48% of female high school graduates go on to college, but women are dramatically underrepresented at the most prestigious national universities, with estimates ranging between 15 - 25%. The largest number of women go to junior colleges, some of which still function as finishing schools. When I met with junior college women students, they generally mentioned airline attendant or "office lady" as the most frequent career plans, regardless of their intellectual capacity or their academic performance.

THE IMPETUS FOR EDUCATIONAL REFORM

The virtues of Japan's educational system have been widely publicized in the United States. They include the production of technically proficient workers, especially relating to science and mathematics; a high literacy rate; and support of a social system that is highly predictable and consistent with cultural values. There is little question that the educational system has undergirded Japan's economic growth.

And yet, as early as 1983, then-Prime Minister Nakasone appointed a blue-ribbon commission called the "National Council on Education Reform." Why engage in reform if the educational system is so strong?

First, there is a growing realization that rote memorization, while productive of technically proficient individuals who do well on standardized examinations may not produce the creativity, flexibility, or leadership necessary for economic success in the 21st century. It is felt by some that the intellectual demands of the coming century will not tolerate a university experience that is, in effect, a four-year vacation.

Moreover, the pressure on elementary students to conform and perform has led to an increasing number of teen suicides and group bullying. Some question the emphasis on rote memorization and conformity over the individual development of students.

The historic tight central control by the Ministry of Education, or *Monbusho*, coupled with the power of the examination to determine curriculum, has made it difficult for universities and high schools to change in response to global phenomena or to meet new human resource requirements. Officially, *Monbusho* said, "The progress of internationalization in various sectors of society, the spread of information technology, the diversification of the life styles of people will require new kinds of resources for new kinds of jobs . . . Institutions of higher education need to respond to demands from society for the diversified development of higher education in the context of the diversifying abilities and aptitudes of students and the expanding demands of society for the education of working adults."

There was some recognition as well that the traditional structure of universities made them inflexible and unresponsive. Faculties are appointed in schools within a university that are entirely autonomous and that admit students directly, rather than through a centralized admissions office. These separate faculties provide all of the students' education, including general education. Hence, there is little interaction among faculties and very little interdisciplinary work in an age when most of the compelling research questions require such scholarly work.

Meanwhile, the Japanese "chair" system means that a faculty member has the ability to appoint three or four other faculty, generally those who have been the professor's graduate students. This has created tremendous inbreeding, which stifles intellectual exchange. Tenure is nearly always immediate in Japan, and faculty do not go through regular performance evaluation. Promotion, for those who seek it, generally requires some publication of scholarship, but the universities have their own journals and peer review or outside refereeing is rare.

Given this situation, basic research has not been a focus at most universities, and applied research has been the province of private R & D facilities. University research budgets decreased in the 1970's and 1980's, and the labs deteriorated as the result of outmoded equipment and deferred maintenance. But there is a more profound force at work that undermines research---one expressed to me by a young Japanese engineer and former Fulbrighter who spent two years at Stanford. There is a strong ethic in Japan that one not be publicly critical of one's superiors or colleagues. Yet the conduct of basic research in the Western world has turned on the critique of the research that has been conducted before you---the standard review of the literature and identification of false assumptions or inadequacies in previous scholarship. This, said the young engineer, has been the most fundamental barrier to leading edge research in Japan. This from a *Todai* graduate!

It is not surprising, therefore, that Japan experiences a "brain drain" when graduate students leave for the U.S. or Canada or Europe for their training. Some do not return. Similarly, undergraduates who do not get an examination score that will admit them to the top universities often go abroad for their education, many of them remaining as well. This is particularly the case for Japanese women.

A final impetus for reform has been a precipitous decline in the number of 18 year olds in the Japanese population. Anticipating stiff competition for the best students, universities were encouraged to rethink the design of new programs and curricula. This decline also prompted some Japanese to look at "lifelong learning" to keep their market share in an aging population.

WHAT WERE THE REFORMS CALLED FOR BY THE COMMISSION?

In 1987, the Ministry of Education set up a University Council to take the Commission's recommendations and develop specific strategies. They included:

1. Decentralization, in which universities were given more autonomy in altering the curriculum, in proposing new programs, and in designing entrance examinations. Universities are now able to define for themselves their entrance requirements and how much to weight the examination. *Jukus*, of course, are watching with much interest, since their existence depends upon examinations.
2. Universities were also expected to promote more interdisciplinary work and to integrate general education with upper division work. The effects were thought to reduce the caste system among faculty, in which the general education faculty have the least status.
3. Graduate programs were to be strengthened, with the official goal of doubling, by the year 2000, the total number of graduate students, with a special emphasis on science and engineering. There was also a concern to strengthen medical and dental education, to increase partnerships with industry, and to make efforts to include working adults.
4. For the first time, universities were required to conduct self-assessments and to publish them externally. There were no requirements, however, to act on those assessments, but there appears to be a move toward "accreditation" of the type used in the U.S.
5. Finally, the Ministry agreed that it would rebuild or improve obsolete research facilities with "new concepts" to improve basic research.
6. Universities were also called upon to increase the number of international students in Japan. *Monbusho* set a goal of attracting 100,000 foreign students annually by the year 2000.

WHAT HAS BEEN THE IMPACT OF THE REFORMS?

At the conclusion of my Fulbright experience, which was six years after the reforms had been announced, I concluded that the changes had been largely cosmetic. True, universities were on track to double the number of graduate students, and there were fledgling attempts at industry-university partnerships, but by and large the junior and senior high schools continued to be driven by exam preparation. In one junior high school classroom I visited, huge numbers posted next to the clock (where no one could miss them) counted down the number of days left to prepare for the exam. The power and importance of social control dimensions of education were made clear by the face of the principal as he gravely described the efforts they make on behalf of the poor students who have had to be abroad and now must be reintegrated. The Ministry's concern for internationalization clearly did not extend to these principals' valuing of the cross-cultural experiences of returning students.

As for higher education, we observed tremendous resistance to change, especially among the most prestigious national universities. ("We're the best, we get the best students, they

get the best jobs, our alumni lead government and industry---why should we change anything?") Course load for faculty is light, and they like it that way so they can supplement their salaries teaching at cram schools or consulting. Moreover, the staff at a place like *Todai* has come directly from the Ministry of Education, who, once in place, want to keep the system as it is. It is a cushy relationship among those who have traditionally been change resistant. Thus, while the President of *Todai* was impressive for his vision of the future, he faces a daunting degree of inertia and complacency among his faculty and staff.

We observed, however, two instances of genuine reform, both involving prestigious private universities, Keio and Waseda. They provide very different models for change and will be watched closely, given their leadership status.

Keio shows what effective leadership, combined with extraordinary financial resources, can do. The President was smart enough to see that trying to effect change given the autonomous faculty fortresses would lead nowhere. So he decided to create a brand new campus, outside of Tokyo proper, where the educational assumptions would be fundamentally different. At the *Shonan Fujisawa* campus, there are no traditional academic departments, only interdisciplinary programs. They include, for example, Policy Management and Environmental Information. This campus is explicitly dedicated to a rigorous, 4-year education, not the usual "vacation" model. The videotape and the presentations by faculty all stressed the development of the individual, and they might have been describing a U.S. college or university so similar was their philosophy. Unlike any other Japanese campus we had seen, there was a thorough integration of technology in all classrooms, in the library, in learning laboratories. Faculty from the Tokyo campus were invited to apply, and some who shared the set of commitments did so. Then the President took the unusual step of inviting applications from faculty at other institutions and with non-Keio degrees. The result: an exceptional faculty with share values and assumptions about learning. I spent about two hours with students, who were bright and directed and clearly valuing the seriousness of their academic endeavor. Unlike any of the other prestigious Japanese universities, Keio's Shonan Fujisawa campus selects students on the basis of interviews, essays, and high school academic performance.

At Waseda the strategy for change is through the establishment of overseas campuses in which students and faculty spend one or two years teaching and learning with those in the foreign culture. Waseda's campus in Bonn, Germany is already up and running, and they are in the planning stages of a second campus in Portland, Oregon. Faculty development is a major objective. The idea is to take faculty out of the change-resistant home campus and give them exposure to new ways of teaching and designing curriculum. It is hoped that when they return to the Tokyo campus, they will in turn influence their colleagues.

Waseda's bold move is all the more remarkable when it is seen against the very narrow conception of internationalization (*kokusai-ka*) in Japanese education. For the most part it has meant enrolling more foreign students. Despite *Monbusho's* ambitious goal of achieving 100,000 foreign students per year by 2000, the number of foreigners studying in

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Japan has actually declined in recent years. Japanese faculty, meanwhile, are not encouraged to spend time abroad, since extended stays outside of the country might result in a sacrifice of status within a professor's academic department and loss of income from consulting or cram school teaching. (And, as noted earlier, Japanese students who have lived abroad are often ostracized when they return to school in Japan.)

Nor are foreign academics well-integrated into Japanese universities---an issue raised in many of my conversations with faculty at Japanese universities. Ivan Hall, who lived in Japan for 25 years and taught history at *Tsukuba* and *Gakushuin* Universities before retiring in 1993, wrote a book called Cartels of the Mind: Japan's Intellectual Closed Shop, in which he criticizes Japan's insularity. It has deep historic roots. In 1896, a system was established which allowed foreign instructors to hold only lower-paying, non-tenured faculty positions. In 1982, passage of the Foreign Faculty Employment Law was supposed to permit foreign academics to hold tenure-track positions. In reality, Hall argues, there has been no change. Indeed, in 1992, many foreign academics began to lose their jobs and were replaced by younger, less-expensive instructors, some say at the behest of the Ministry of Education itself. This is the same Ministry, you will recall, that articulated a concern for "diversifying abilities" and "new kinds of human resources." Similar criticisms have been made of the JET (Japan Exchange and Teaching Program) which invites nearly five thousand college graduates from Western countries each year to teach English in secondary schools. Once hailed as a means of internationalization, the JET program is now being criticized for the same marginalization of those who were selected to bring international perspectives the Japan.

Ambivalence about outsiders is also seen regarding foreign workers. The country is terribly concerned about the labor shortage, with fewer and fewer Japanese willing to do the most menial jobs. Yet despite this dependence on foreign workers, it is clear that they would prefer not to have them.

The concern for diversity does not extend significantly to women either. Despite the anxiety of universities about the declining 18 year old population, they have only modestly increased the numbers of female students. Yet in nearly every university, the comment was made, with a sense of bewilderment, that their very best students are women. When we raised the obvious strategy of offsetting the decline in 18 year olds by increasing the number of women, there was great throat-clearing and feet shuffling. Importantly, this attitude pervades corporations, especially the largest and most powerful. At *Mitsui* Trading Company, for example, the Vice President for Human Resources flatly stated that *Mitsui* did not have and will not have women in any management positions. "We tried that once," he said. "We hired one of the top students from the University of Tokyo." A few days into her job, she paid a call on one of the client companies, who called Mitsui's CEO to announce that they would take their business to *Sumitomo* (a rival trading company) if she were not removed.

My visit to Okinawa was another lesson about diversity. A separate kingdom until the 1730's when Japan invaded and took over, Okinawans are proud of their heritage, which

shows considerable Korean and Chinese influences, as well as those of the indigenous culture. The Japanese clearly do not consider Okinawans as full participating members of Japanese society, and the Okinawans do not consider themselves Japanese. These tensions are being played out in the schools, where "mainland" Japanese are concerned to assimilate the Okinawans through standard Japanese language and curriculum, while the Okinawans are struggling to preserve their unique culture.

WHERE DO THINGS STAND IN 1997?

Talk of educational reform abounds in the popular press, and the past year saw the Ministry's Central Council for Education issue yet another set of recommendations. They include a reduction of the six day school week to five days; an elimination of the required examination for high school; permission for exceptional students in science and math to enter university at age 17; and the replacement or supplement of the university examination with other ways of assessing the "character" of students---personal statements, references, performance interviews. At the graduate level, there are calls for the adoption of American practices, including the use of course syllabi; office hours of faculty; class evaluation by students; and use of teaching assistants. The Education Ministry also earmarked \$234 million to help national universities construct laboratories and buy equipment. There are also resources dedicated to creating joint R & D facilities between universities and industry, also on the American pattern.

Some progress has clearly been made on the graduate school front: the Ministry goal of doubling graduate students by 2000 has already been achieved, and joint R & D facilities are being subsidized. Elsewhere, however, resistance to change is occurring. Despite the well-publicized stress on students, *juku* are thriving; their number has increased, and they are opening their doors to younger and younger students. One official of the Finance Ministry and parent of two young children noted, "I'd prefer to have the kids enjoying club activities, reading books of their own choice, having different kinds of experiences at this impressionable age, instead of being perpetually preparing for the next exam." But he confessed to fear of the consequences of change, and worries that if his children were to fare less well on university exams, their future would be forever limited.

Pressure from parents is indeed a force in keeping the system the way it is. Some have lost confidence in their ability to do what is best for the children, and rely on the pressure-cooker system to replace parental decision-making. In a recent survey, 80% of elementary and junior high school students said they approved of the 5-day work week planned for 2001 implementation, while only 29% of the parents supported it. Moreover, despite well-publicized stress-related illnesses among teachers, the powerful *Nikkyoso* (teacher's union) opposes change. And, it goes without saying, the powerful *juku* industry (supported by universities and by faculty who moonlight) has a vested interest in the status quo.

But, at the same time, I believe there is a growing sense of unrest among the Japanese, magnified by a number of forces that could, over time, have a profound impact, not only on the educational system, but on the society as a whole. What do I think those factors are?

The first is the economic crisis, which, among other things, has shaken the confidence in the citizenry at large and resulted in Japanese businesses calling for changes in university education. Japanese corporations can no longer support the kind of training and R & D they once did; they are looking to universities to supply some of the research necessary to staying on the forefront. They also need employees who are creative and who have a grasp of matters relating to a global economy---information technology, modern finance, and international affairs. Businesses are also calling for more mature workers and thinkers. For all of this, they need a very different kind of university education from the 4-year vacation model. In essence, they are beginning to ask, "Can our current educational system support the country as a world economic power?"

Secondly, I think people are unsettled about the moral fabric of the society, most dramatically exposed in the political and financial corruption at the highest levels and also in the sarin gas attacks by the cult group. Group bullying is also becoming more widespread. Some Japanese are asking, "Should we put such a premium on compliance and control? Should we instead educate our youth to be more questioning of authority and hierarchy?"

I think there is also a quiet and slow, but significant, change in the expectations of women. Women are marrying later and having fewer children; statistically, the average Japanese family now has one child. Women are also entering higher education at a rate higher than Japanese men and studying abroad with greater frequency. Will women continue to be satisfied with the prospect of no profession and the exclusive role of the *kyoiku mama*? Probably not. Indeed, I have watched with interest over the past 15 years as greater and greater numbers of Japanese women studying abroad are seeking careers in international broadcasting, non-governmental international organizations, or management consulting. Clearly, there is recognition women's opportunities lie, in many cases, outside of Japan.

Though it is not talked about very much, there is also a sense that in the future Japanese women may have greater political influence. They have driven the grass-roots efforts of small communities to engage in international exchange, and their efforts have been in many cases more effective (and perhaps more genuine) than those of the national bureaucracy. Women are also speaking out more frequently on the moral lapses of Japanese political and financial leaders. When I visited Tsuda College for a meeting in November, their president spoke bitterly about the disgusting familiarity of male leaders, their corruption at last exposed, appearing on television, weeping, only to be replaced by another man who does the same thing. She also pointed out the morning's newspaper, which carried the story of a *Yamauchi* employee who had committed suicide over the failure of the securities company. "You see," she said to me, "it is the same pattern, a middle management employee taking the blame from those at the top who are really responsible."

It is not a coincidence, perhaps, that this Japanese college president took her graduate work outside of the country and worked for 25 years at the United Nations. There will be more such women, and they perhaps can be expected to have some impact on education.

I also believe that greater penetration of technology in the lives of everyday Japanese people will have an impact. Americans are usually surprised to learn that despite Japan's brilliant success producing and marketing technology worldwide, its general population, including schools, do not have regular access to computers or the Internet. As this changes, it can be expected to exert some subtle changes over time. Technology is remarkably non-hierarchical; it will change communication patterns and expectations. Students will have access to on-line educational vendors; the Japanese schools will not be the sole providers. Moreover, female researchers and faculty may be better able to continue their scholarship during their childbearing years, increasing the probability that women will not spend their adult lives as *kyoiku mamas* and resulting in more labor force participation. The new president of Nara Women's University, the first female to head a national university, holds to this view.

CONCLUSION

In a given society, education is generally considered to serve two somewhat contradictory functions: (1) to reflect and maintain the status quo within a cultural system; and (2) to act as a change agent for that society so that it is responsive to changing conditions.

Japan BECAME a world power with an educational system that excelled in the first function. Japan's fortunes were aided in no small measure by an educational system that produced self-discipline; concern for the welfare of the group over that of the individual; and a high degree of technical proficiency. These outcomes supported Japan's genius at borrowing and adapting the technology of others and mass producing products at a very high level of quality. Japan's engagement with the rest of the world was to see other countries as markets. That degree of international contact did not seriously affect the home country, its homogenous population, or its social hierarchy. Japan, in other words, could be kept Japanese in a way consistent with its historic insularity.

Japan's ability to REMAIN a world power, however, will require the educational system to accomplish the second function, to be a catalyst for change. For Japan's success in the 21st century will require the development of interdependence, diversity in thought and ideas, flexibility, and a global understanding of interlocking financial and political systems.

The current educational system isn't very good at producing that, and developing the ability to open up and to accommodate diversity will be, in my view, Japan's greatest challenge. In that regard it's not especially encouraging that of the reforms originally called for, now 10 years ago, only those that have allowed Japan to "keep Japan Japanese" have succeeded---increasing the number of Japanese graduate students and increasing university R & D. For Japan, this is traditional stuff---borrowing some American notions of graduate education and adapting them to the Japanese context. But at the same time,

there has been a decline in international students, discrimination against foreign faculty, lack of encouragement for Japanese faculty to be abroad. These are mechanisms that have the potential to change thinking in ways that will be important to Japan in the next century.

Over the next ten to twenty years, we will be witnessing, I believe, a tremendous collision between Japan's historic identity and the requirements of remaining a world power. The debates about educational reform will be a lens through which that struggle can be viewed.

U.S. :

- ① Schools are unsafe
Schools seek to entertain
- ② Diversity a strength for coming century - but access threats
- ③ Myth that all must go to university;
no strong technical schools
- ④ No "civic" function: values, community, democracy
- ⑤ U.S. science + math lags