FEATURE

Making It in America

By *James Wei*
Asian American Engineer of the Year, 2007

When I first came to the US in 1949, my goal was to get a good engineering education and return to China to work, according to the tradition of that time. I received a bachelor degree in chemical engineering at Georgia Tech in three years, followed by a masters and a doctors degrees at MIT in three more years. There were little pressure on me to learn how to make it in America, and I found lots of time to build theatrical sets for the student theater, and did my minor in Fine Arts at Harvard. But my plan to return in 1955 ran into a roadblock, as the State Department informed me that I could not leave the US as the Korean War was on, and my knowledge of engineering could be of use to the enemy. It never occurred to me that this rule could be challenged, so I got an entry research job at the Mobil Oil Company, and waited for the rules to change. In the mean time, my research in reaction kinetics and catalysis was going very well, and I was winning awards and recognition. But I still had very low expectations on what I can achieve in the US, as I have heard the expression often "this guy does not have a Chinaman's chance", so I am content to do a good job in the lab and get a good pay check.

It was unexpected that I attracted mentors who changed my life, as they promoted my research as valuable and useful, and they also thought I should be groomed for higher positions. They made me rehearse my oral communications, and made critical changes in my method of delivery; they made heavy corrections on my writing and made me polish my papers. They said "how come you do not yell and scream at people when they did something wrong, so how else can they know what you want them to do?" So after a dozen years in research, they said that they are sending me to Harvard Business School to learn about management. I protested that I already have a doctorate in engineering from MIT, and am happily doing research, and what is the use of a business degree for a research engineer? They said that they are preparing me for management, and I needed to learn how to relate to important people. So I went off dutifully to school again, and it appeared that I am further away from my goal of returning to China to work for my career.

However, it turned out that my mentors were too optimistic about the rate of change to equal opportunity for Asians in management, and some top management still have doubts. I remembered the old Chinese hierarchy of Si-Nong-Gong-Shang, (Scholar-Farmer- Worker-Merchant) - where a scholar outranks a farmer, and a farmer outranks a worker, etc. So I resigned from Mobil Oil after 15 years and became a professor at the University of Delaware. My sponsor at Mobil was Rawleigh Warner who later became CEO of Mobil Oil, and he regarded my

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departure as an investment that did not pay off. But oil people are used to the idea that you need to drill ten holes, and find only one hole that would produce oil and the other nine would be dry holes.

Life is full of strange twists and unexpected turns, so after 6 years of being a professor, I received a call to return to MIT as Head of the Department of Chemical Engineering. To make a move like this, you know that MIT must be in distress and ready for drastic actions. I went to see my doctor for the last checkup in Delaware, and told him that I am leaving to be Department Head at MIT. He said "that is impossible, as MIT will never come to Delaware to look for a department head in engineering". It turned out that a powerful trustee Ralph Landau asked the MIT Administration why is the Chemical Engineering Department ranked 9th in the country, instead of the rightful Number One position, and it is time to go outside to find fresh leadership. So I made another career change from teaching and research to managing a complex mix of people, programs, ideas and assets. I changed many of the hallowed Departmental rules to avoid inbreeding, as the problem was excessive inbreeding and not enough looking outward for ideas and talents. Henceforth, a bachelor graduate would not be permitted to remain as a doctorate candidate, and a . . . when Asian students and graduates come to ask how to make it in America, what does a dean tell them? I tell them that there are really two main keys to success: what do you know and who do you know doctorate graduate would not be retained as assistant professor. We scoured the world for new talent, and new money to support their needs of innovations in teaching and research. Happily with the help of many well-placed alumni in industry, the strategy worked and MIT Chemical Engineering became recognized as Number One again.

After 15 years, President Harold Shapiro of Princeton University called to offer me the Deanship of Engineering and Applied Sciences. Of course mentors and friends were pulling the strings again, and one of them turn out to be Rawleigh Warner who is a Princeton trustee, and called me to say that his investment in me would pay off if I go to Princeton, and he would be willing to make more investments. Princeton University is a very different place than MIT, and a dean has to manage at an even greater scale and complexity than a department head. I became an expert in raising money for programs, faculty, buildings, and students, and I exceeded one hundred million dollars. When I put together a Deans Council, I had from the aerospace industry alone such heavy lifting alumni as Norman Augustine of Lockheed Martin, Phil Condit of Boeing, and John McDonnell from you know where. I discovered that at MIT, fund raising consists of putting together a new research program and visiting corporations and foundations to say that we have the best program in the world, and you can tap our research results, faculty and student resources by putting up so many million dollars. But at Princeton, fund raising consists of visiting an old alumnus and said you had a great time at Princeton 20-30 years

ago, and we want you to make a benefit for the eager and bright young students. Both approaches work, and you use the method that suits the place you are.

So when Asian students and graduates come to ask how to make it in America, what does a dean tell them? I tell them that there are really two main keys to success: what do you know and who do you know. You go to MIT because you want to become very smart, learn about manipulate material and energy with great skill, and being a well-rounded person is not high on the agenda; you go to Princeton because you have another agenda in mind, how to meet and network with many important people, who would be your friends and mentors and would help you in the future. The culture of MIT frowns on too many extra-curricular activities as distractions on the main agenda, but Princeton encourages sports, clubs, debates, theater, social services, etc. A semester at MIT is 15 weeks of lecture, but a semester at Princeton is 12 weeks. So when I moved from MIT to Princeton, I had the option of talking 20% faster or to cut out 20% of the course material. Do the deans at Stanford or Caltech prefer MIT to Princeton graduates? They are on my Advisory Council, and they told me that they are equally adorable in similar but slightly different ways. The middle management from industry tend to be more comfortable with MIT engineers, who are more likely to hit the ground running, but the upper management tend to prefer Princeton engineers as they are regarded as having more management potentials. They are paid the same starting salary, despite the difference in the length of the semester.

America welcomes foreigners to entry level jobs willingly, and no other nation on earth is more welcoming. However there are many organizations where the top positions have never been given to an Asian. We Asian Americans often have to do much more to achieve the same level of rank and salary. America has improved tremendously in the last few decades, but it is not a pure meritocracy where the only thing that counts is what you know, as it is still important who you know. There are so many success stories among Asian Americans. The chancellorships of the University of California at Berkeley and at Santa Barbara have been occupied by Chinese. The dean of the Yale Law School is a Korean. The CEO of Rohm and Haas is an Indian. There may still be a “Bamboo Ceiling” for Asians in many places, but it is porous and often yields for exceptions. Where is a place that is as open as America to foreigners? The professors of Princeton Engineering School is more than 50% foreign born. If we look at the professors in Tokyo, Munich, Paris, and Cambridge, how many foreigners would you find?

Asian American engineers tend to be nerds and make more effort to learn things, than to be well-rounded and network with people, more like MIT than Princeton. John Reed used to be CEO at Citicorp, and he told me that there are two types of jobs in a bank, which he calls the “back office” and the “front office”. He said that he himself is an MIT graduate, who tends to work in the back office writing software, and solving investment problems. Other people live in the front office, and tend to talk to customers, play golf with stock analysts, attend parties with stockholders and other businessmen. At an entry level job, the work tends to be more about technical knowledge; but if you have any ambition to move into management, life should not be all spent in libraries, laboratories and computers. You will get out of the back office, and circulate with people from the front office. Besides counting the number of publications and patents that you wrote, you should also count and treasure the number of interesting people that you know and can call on for advice and help. Actually being well-rounded is a good Confucian virtue, where a scholar is valued for his skill in Shu-Qi-Qing-Hua or books, chess, music and painting.

An Asian engineering in America should always act as if there is no barrier to our advancement, when we learn to walk on both legs - of knowing things and knowing people.