

D. イェール大学インタビュー調査

D.1 George Joseph

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GJ: One of our faculties is creating a sort of text book for Yale administrators, because they want to put in more educational terminology and things like that. So that when they travel to be, they can use it for that. I thought what I would do is to talk generally about Yale in terms of over all, its top level administration.

What I thought I would do is a point of comparison is, now having spent three years in this propositions and having some exposure to structure, ... Japanese university system. What I thought I would do is to just sort of talk about.... And feel free to interrupt.

As a starting point I think, one of the key differences I find between Yale and most many Asian universities is what I mentioned earlier in our conversation, just a notion of how the power is distributed within the system as to... It's very functional. That is to say that my sense is that the Asian Universities tend to be very top down. That is to say that the power less the very top in terms of president and vice president of the institutions.

And the University system in particularly in Yale and many other American institutions, the power is actually not based. There are obviously the president and provost and such, but ultimately the power in terms of the kinds of activities, actions and directions of the university are really based in students and faculties

Students also, because I don't want make this analogy to class, but in a sense, one of the primary mission of educational institution is to teach. So that means that we have to be responsive to students. If you want to look at a business model, in some sense, students are customers. If you are not responsive to your clients or customers, it is difficult.

YM: Can I focus on that now? First of all, my small comment is, most of Japanese schools, at least former national universities, in terms of distributed decision making, may be similar to Yale. That's one of the reason why their term is so short. Because president is not so important from their stand point. Some people don't think, but it may be similar in that level. Faculty does make a decision in Japan too, University of Tokyo or department head, deans. One different may be students. In my, I am a graduate from the University of Tokyo. Based upon my personal experience when I was a student and now, we do not pay enough attention to students. Could you describe how and what way they can.

GJ: There are a couple of different things I think. One of the things we have been talking off and on this afternoon is the issue of the notion of the ranking, what makes some universities more popular in terms of or more attractive than others. One of the things comes up is that some ways really reflection of how competitive or how badly the students want to be part of the university community. For instance, Yale College on an annual, past two years, we get somewhere between 20 and 25,000 applications for a student for a class it's going to be 1,400 students. On average that means, to get that class, we really have to, we admit somewhere about 9% of students who apply. But the thing is that some years, number will go down and some years the number will go up.

The competition is 20 to 1 roughly. The key here is that some years some universities are more popular than others. Some others, there are the things that change and shift the popularity and attractiveness of institutions. The students do have quite a bit of power, what I mean really by is that they have the potential to shape institutions policy in a couple of different ways. One is that, I think that the students pay a great deal of attention to the university, to the students. For instance, if there is a significant decline in the number of applications, you have to ask why is that has made our institution more unpopular. Why it is that the competition is doing that gives (them?) an edge. Why are they more attractive more applications than we are in any given year.

YM: Do you ask applicants or do you do different kind of surveys?

GJ: We don't. There are some kind of informal kind of evaluations. For instance, one of the things that are undergraduate, speak largely about Yale College, undergraduate division. Their process is sort of their best studied, but I do know that, for instance if a student is offered a place like Yale, they turn us down, the admissions office would do ask them why, because they do want to what is that where we did fall short. Or what is that Harvard did better for you than we did? What did Princeton do better than what we did. Stanford did better than we did. That makes you want to go there as opposed to us.

YM: Why indicate may be decline of the number of application is another, is so called yield?

GJ: But I don't want to say, should not become too focused on numbers or criteria because I don't think that we would rather see 10,000 or 15,000 very good applications, than just random number. We don't want to create more work for our staff that we have to. The other issue in terms of being responsive to students is in terms of kinds of courses they want to study and in terms of kind of things they would like to do. Now I can give you a good example that happened very recently, which is that at the very beginning of May, at the last faculty meeting of the Yale College, they approved a new major, a new degree in South Asian Studies. So, for students who want to be focused on India, Pakistan or Sri Lanka ... that region, they now have, you can now come to Yale College and receive a degree in South Asian Studies. This is actually, I would say that this creation

of the majors is a combination of 10 year effort by the students. They came to beginning of in the mid- 90's they say want to study Hindi. We want to study Tamil. We would like to study more courses about India, Bangladesh, Pakistan, because those were the areas that the university did not have a strength. We have been focusing so long on China that when we began to say that Yale is going to be an international institution, we had to develop a strength in an area we did not have a strength. So, the entire faculty meant all of these different things, but the students, however, were the first to tell us this is something we want to do.

YM: In what way? These students are not applicant, but those students who are already in. In what way do you listen to them?

GJ: They wrote letters to the administrations. They wrote letters to the president.

YM: Do you have the kind of system installed?

GJ: This is not a formal system. This is a grass-roots advocacy. The fact is that you have to remember is that our college students are here for only four years. That means that this was important issues that were carried and transmitted to the success of the classes. Because they started in 1995 the students who first said that they want to major in South Asian Studies. That drive, those students are now all gone, but the students who came after them, kept pushing. So the point is that once an issue is around which the students want to clamor, they will or can make their point heard whether by writing letters or where by talking to the faculty by creating connections of the faculty.

YM: This may be grass-root efforts, but you have the system to receive it and evaluate?

GJ: When we, everything is done on ad-hoc bases, that is to say because creating a major or department or anything do not happen over night. Especially, institutions like Yale, because it's a very old institution. Many things will, there is understanding if you create a full professorship or some kind, it's not just, it's for perpetuity. It's forever. So you have to be very careful with that. For instance, some universities, for instance, have set up chairs and programs on internet studies which is, but the realty is, the question is in 100 years, is there going to be such a thing as Internet? (There is a matcher?) So, you have to be very careful about the chairs and departments you set up. We have an issue now, for instance, in our Faculty of Engineering, in 1800s there were several chairs and funds set up that were specifically for railroad engineering. Because in 1850 and 60, that was cutting-edge, that was leading edge. Now we have this chairs which are unfilled, funds which are unused because no one is studying rail road engineering. No one wants the chairs in the area. So the point is, that's we are very careful that. When we set things up, there is a potential to be sustainable.

YM: Isn't a railroad coming back in this country?

GJ: The question is whether it's placed in Yale. Whether there is a place in Yale is a question.

YM: Without going too much in detail, in a faculty, your administration people, the students' request, the students' interest are important part. Probably the University of Tokyo, people don't even think about it. In theory, if they are pushed they may say yes this is important and listen. But we don't have accustomed to listen to student. At least, the faculty's mind, it's not there.

GJ: I think that again, that the part of is really a reflection of the kinds of changes that American higher education system underwent in the last century. That is to say, until the 1960s, when no one is, there is a very liberal period in American history, as well as American politics and such. The faculty, there was a great deal of the authority and respect placed under. But then, I think in the beginning of 1960, there is a great deal of question of the authority in American culture generally.

The result is that because 1960 is the time of the students' movement in the United States, protest, political protest and other things. So the result is that the authority, the president of the University, the faculty held began to break down. So what I think the current composition and the current atmosphere of the American universities is really post 1960's reflection.

YM: Then the different subject. Yale College, this is the main part of Yale?

GJ: It is the main part of Yale of the sense that it is the largest division. So roughly half of the students at the university are here pursuing the undergraduate degrees.
It is the largest division of that sense.

YM: Half of the undergraduates go to Yale College.

GJ: No, half of the student population, half the students in the University are in Yale College. That is the only faculty that awards the BA and BSc.

YM: In other words, all the undergraduate, if you are the freshman, they come in and they go to Yale College.

GJ: If you are studying engineering or political science, whatever the subjects, you end up in Yale College.

HS: There is no department within Yale College?

GJ: There is, well, not within Yale College. There is something called Faculty of Arts and Sciences, which constitutes about 80 different departments. So everything from anthropology to archeology to political science and so on. All together, about 80 departments. They constitute what

is called FAS, the Faculty of Arts and Sciences. Those faculties, in those departments teach undergraduates and they also teach graduate students. The students who are studying for the undergraduate level are enrolled in Yale College, but they are taught by the Faculty of Arts and Sciences.

If you study for a PhD, you enroll Graduate School of Arts and Sciences, so that's a PhD-granting school. But again, you are taught by the faculty in those departments.

So any one faculty member, their first are (..?) member of Faculty of Arts and Sciences. They may teach undergraduates or (admit?) to teach graduate students too.

YM: I hear that in the first year or the first two years you give general liberal arts education to them, but in some Japanese schools, let's see, in the University of Tokyo, the all the students come to the School or School of Arts and Sciences where you do not have specialty yet. Then later you choose specialties and move on. So, the University of Tokyo is one of the huge Japanese universities who emphasize on liberal arts or general education. Do you do the same? Or some other schools, they enter specific departments. In my case, I went to mechanical engineering, but first I went to the College of Arts and Sciences. Then at the end of the second year, I chose Department of Mechanical Engineering. Same here?

GJ: Same model, that is to say that when you are undergraduate to get, I'll explain there is. If you are graduate school to apply to Yale, let's say if you want to study for a PhD, you will apply to the graduate school. But you will indicate the specific department. So, if you want to receive a PhD in history from Yale, you apply for the Graduate School of Arts and Sciences. That application is evaluated by the History Department and its admissions committee.

For Yale College, you will apply for admission to Yale College, You do not apply for admissions to specific department or a program. On your application, you are asked what will you likely major in, but you are not committed to it in anyway. This is largely just for our purposes. Just, so that we don't end up with 400 engineers. We want to make sure there is a diversity of interests for ...

YM: You want to know there is some possibility that they will probably want to be engineer.

GJ: This is just, so that we have a good sense of what their direction is .

YM: Is it different from, say, Harvard?

GJ: No, same idea. That is to say you apply for admission to Harvard College or Yale College. Even the business of how many years do you study liberal arts is not there. Because you begin to focus on your majors even from the very first days. Let's say if you want to study biology. Your first

year, you will be taking organic chemistry, zoology and all these subjects, in addition to literature and philosophy, and another subjects. There is nothing that says that you wait for 2 years before you begin your major study. You can begin as soon as you want.

YM: You can begin by selecting course you like.

GJ: There are many students who think that they will want to do biology as a major they will study for one semester and decide this is not what I thought it was.

YM: They can change.

GJ: Yes, they will change.

HS: You can change any time even like sophomore or senior.

GJ: By the time you get to the senior level, it's too difficult to. Because if you want to change a major you are meant to spend more time

YM: May have to go back again? In case of University of Tokyo, although all the students go to the College or Arts and Sciences, inside this College or Arts and Science, they are kind of subdivided into 6 groups. Mainly, science versus liberal arts. Within sciences, section 1,2 3 and the other side also section 1,2,3. It is one college but kind of subdivided. When I went there, I know at least I'm going to science and technology side, instead of liberal arts, or humanities and social science side. Is it the same in Yale? Or it can be or you don't have to decide?

GJ: You don't have to decide.

YM: So, if I am coming in with kind of likely selection or engineering, I can go to history.

GJ: You can do anything you want to. In terms of declaring a major, that must be done only before the beginning of every third year. Even then, you can change. And even then you can also add a major as well. That is to say, if you decide you want to do more than one major, which some students do, that could be done even after the second year. Because there are enough flexibility built into the curriculum, because Yale College degree is 36 courses. Of that, roughly 12 are in your major, 12 are the liberal arts distribution requirements. That means you still have initial 12 courses that you can play with. You can take more liberal arts or you can use those 12 for another major if you wish.

YM: This is first two years.

GJ: No, that's all four year program, 36 courses for four years.

YM: Do you only constrain maybe the total number? For example, if everybody wants to go to biotechnology, there may be some capacity. Capacity might be the only constraint?

GJ: That can be a constraint, but again we have good enough handle on who is coming and what they want to study, that we can cover it for that. To give you a very specific example, which is that past 3 years, for instance, the number of students who want to study Chinese has doubled.

MY: How many by the way?

GJ: Probably about 600 now. I can give you the exact number. But again that's an example where all of a sudden you now have to have 3 or 4 language instructors. You have to have 8 or 10 whatever the number is. The point is that there are some functions and enrollment management. So, we know what areas will need more attention.

YM: We have a similar problem at the University of Tokyo. More students want to study Chinese, either language or history or something. But we have a shortage of Chinese instructor, whereas we have an excess of French teachers. It's used to be popular; no one is interested in French study. We are not flexible enough to increase teachers at College of Arts and Sciences. In your case, what do you do if you don't have enough professors to teach?

GJ: We hire them.

YM: It's very flexible.

GJ: It's flexible. This is again part of what I was saying from the earlier, the part is that we have to be responsive to the students' want.

YM: But, in terms of, let's see, if you have excess French professors, what are you going to do?

GJ: The language is an exception, because faculty who are scholars, they focus on Chinese language, is the area of research. Some of them are maybe tenured by the University, so you cannot simply fire them, because all of a sudden there is no need for them. But the language lecturers are a different matter, because they are not tenured or not a permanent contract. So the result is that their employment is (contention?) on the needs in terms of languages.

YM: So, tenured people, you can increase to.

GJ: But, right now, for instance, the University offers 51 different languages. That means we have a

faculty and staff that can do those languages.

YM: Very interesting.

GJ: We also have the potential to do additional 50 languages. That means the University can teach more than 100 languages in any given year.

YM: Still more than 100 languages over this world?

GJ: But additional 50 those are, what we call are, there is a technical term, it's called LCT, Less Commonly Taught. Those may be, for instance, there is a student who is doing research in some exotic country which is not an ordinary language. They can work through individual department to get the direct study in that language.

HS: Within 36 courses, are there any core courses that everyone, that are required to take?

GJ: No, there is no course that everyone has to take. Of the 12 distribution courses, they know they have to be broken up into language. Everyone who graduated from Yale has to be complete and be fluent in one language, math statistics. They have to do humanities, social sciences, all that is broken up and described in materials you have. But those are distributions. So, some one person may meet their social science requirements. Someone could take anthropology. Somebody else could take sociology. Doesn't matter to the University, as long as you take courses considered social science.

YM: One debate among Japanese universities is what to do this liberal arts educations.

GJ: That's one of the things we discussed. We discussed when we were at the symposium last March.

YM: Own national university in Japan or especially University of Tokyo abandons the College of Arts and Sciences. Instead of just doing general admissions, they are doing admissions by department, I believe. I don't know if it is tilted to mechanical engineering, or just electrical engineering or just something. They, the students are required to enter in that department from the start and I was feeling maybe that's the better way. I didn't like the University Tokyo's general education too much, because it's too general, not focused. To some extent, it's similar to what I learned in high school. There are some target, some goals which is to be accepted to the University of Tokyo. So I pushed myself to study general. After I entered the University of Tokyo, you don't have a motivation to do in general. I was ready to do something more specialized.

GJ: I think part of the reason that this is a question came up when we did the symposium in March is that the issue of why is the liberal arts so strong at Yale and places like Harvard College, Yale

College. For instance, Stanford, the heart of it is still liberal arts college. So why is it that the liberal arts (...?) so strongly entrenched in the US but not as another places. The part of it is a cultural issue of what is the role, what is it to mean to be educated. What is it to mean to be considered a (learner?) person in your society? I think in American culture, there is this notion to be educated means that it's not just about mastering a single field, but rather you are equipped with the skills to function in any job. Any kind of profession. So you are someone who read critically, how to think critically, how to be quantitative, to know something about politics and history. Little bit of everything. You are not a master of anything, but you can have some exposure to all of these areas. Moreover, there is a recognition that your true professional (call?) is going to be defined your second degree. Most students at Yale will go on to graduate study. Virtually, every student at Yale, once they finish Yale College, will go on for Law School or Medical School or Business or whatever.

YM: Graduate. Do you remember how much percentage of them?

GJ: We can find it out, but it's very high.

YM: 90?

GJ: I would say very close to that. It's very very high number.

HS: And they can major completely different things at grad school.

GJ: Yes

YM: Which means undergraduate should be liberal arts, general

GJ: Doesn't have to be. I mean, again, like I was saying, 36 courses. If you know that your life mission is to be a mechanical engineer, if you want to take these additional 12 courses, and focus on engineering.

YM: However, if you are not ready to make the decision.

GJ: Or if you don't want to. One of the things students side see and advise often times, they ask me "my major in biology. I'm doing XYZ courses and liberal arts. What should I do with my other courses". I always tell them to do something else. Because if you want to become a biologist or go on to medical school or something, you want to be able to do the things that you will never have a chance to do again. If you are going to study biology for the rest of your life, take this one opportunity. You have to study art history and other things, because you won't have this chance again. Once you go to grad school, that is more focused, more rigid, much more requirements.

YM: Now, that's what the University of Tokyo believes so in a way. My personal feeling is different. However, the University of Tokyo administration is in line with what you think. One difference may be student's satisfaction. I don't have too many data point. But last time, I visited here. You put us on a tour. The person who gave us tour was very high on Yale liberal arts education, whereas if you talk to average students at the University of Tokyo, they are not high on that. I'm wondering why it's the case, maybe depending upon how you do, you can make this so-called general education very boring. If it is very well done, it could be very important.

GJ: The key to doing it well done, there is no requirement. These requirements you take is liberal arts courses, but how you meet those requirements are expansive. You can meet these requirements from any of the 3,000 courses that University offers. In other words, there is more than one...requirement that you take three courses in humanities if everyone has to take the same three courses, it is boring.

There is no flexibility, there is no. But if you offer that option and say you can meet humanities requirements by taking history or literature or philosophy or French literature, whatever, then I think people will be much more. In other words, their interest is there. And the other part of this is that also I think is driven by who you are attracting to the University. Because my understanding this is, the University of Tokyo, still the entrance examination is credits of all criteria.

YM: (Not...) This is the only criteria. That's one problem.

GJ: That's a major problem, because in our case for instance, your academic score is only one component of your admissions bases. You can have perfect marks, perfect examination scores. We turn down many many of them every year because that's not all we are looking for. We want students who have leadership attention, capabilities. We want individuals who are interested about being, who are interesting people, because of their work activities. So, it's much more qualitative evaluation.

YM: That makes a very good sense. But I entered the University of Tokyo. I was numerically evaluated by the exams and score, total in five courses and or something. If you are 484 you are in, 483 you are...

GJ: I see the same issue raised in India or elsewhere. Because of all of these are, Korea is the same thing. Because their admission base is solely on where you rank on the examination. And, whereas I could tell you every person applies to Yale has to complete fairly lengthy application and recommendation and other things. That materials are all of them, even if you get 25,000 of them, are read by somebody. In fact, it will be read by entire committee. So that's not one person decides whether you are admitted or not. Rather, it's a full selection of people who are making a decision.

YM: In Japan, if you go to a good school like Keio, University of Tokyo, all three years in high

school, you have to dedicate yourself to preparation for exams. It only numerical. You are fighting completing for scores. All of a sudden, you enter the University of Tokyo, you are given opportunity to learn liberal arts. No motivation there. Or you have to change motivation which is not given to you, which you are not accustomed to.

GJ: Because for the students who come to an American university by and large, this goes back to what I said earlier, even in an American high school you have to complete a whole area of all these different areas of studies. Even in high school you have to do literature, history, mathematics, science and physical education. In other words, the American high school system is not focused either, basically broad exposure of different things. Again, this goes back to there is a very strong tradition, a notion of common education. Every one who is a member of American society has the same. There is a qualitative similarity about education.

YM: If you are not familiar with American education system, some say many Japanese people feel opposite way. Americans are so specialized. Americans are so professional. Therefore, they think the American education system would encourage specialization instead of general education. That's what they can feel from distance.

GJ: You are absolutely right that the system does eventually specialize. That is to say that you do have experts on 3rd century B.C poetry, great poetry who spent their entire career focus on that area. But they at some point, everyone reaches cross roads where after you complete the college, you now decide what you are going to do now. You can go on to graduate school or you can go on to work. You can do all kinds of different things. That's the point of specialization.

YM: The typical model at Yale is, do more, in undergraduate, do more general education to be a good person, good thinker, then to go to graduate school and specialize. So, in a general education, strong broad foundation, undergraduate something may be now, but more deep.

GJ: Because you want to have a mix of depth and breadth

YM: You first get.

GJ: You first get breadth. Breadth is the idea that the course in breadth are meant to give you skills. How to think, how to read, how to write, and you focus.

YM: Good sense. At the same time, however I'm thinking opposite way too. In a college education is expensive regardless of who pays. Either students, parents, government, company through endowment, it's expensive. There fore, I could argue that the four year concentrated years, you should do only specialization. Depth and you should do depth in four years. Breadth can come life time. After graduation, continued education for example. If you are interested in something broad, it

can learn from Internet. You can do go to community library or something.

GJ: There are two parts to respond to. I don't think any of us would lay that a claim that Internet is a substitution, or community libraries are substitute for the seminars or for discussions that happens in a class room. So I don't think that's a viable alternative. That's my (...?) The second is that all of our life experiences would lay would be a test of a claim that once you have finished something, very focused, it's difficult for them to think going broad. That is to say that once you decide that you want to become a lawyer. And you become a lawyer. It's highly unlikely that you all of a sudden no longer be a lawyer, go back to study literature and philosophy. I think that the life cycle and such does not allow for that.

The question is that funding. The economic argument. Here I think this is again difference between certainly Japan and certainly in the US, that is to say an institution like Yale, the part of the idea here is that there is nothing that says you have to come to Yale. That is to say there are 3,000 (all?) universities in the US. So this is not the only place in the US that offers a bachelor's degree. But it is however, in other words, each school has something to offer. For instance, if you want, MIT, Cal Tech, Perdue are often very different from Harvard College and Yale College. If you want to have four years of highly focused training, you have options.

YM: Cal Tech is very focused.

GJ: They also have liberal arts requirements. But they are very much scientific culture, technical culture, same as MIT. If you go to MIT, the exception is that 90% of the people around will be going to be scientist. If you come here, the expectations you have scientists, philosophers, and writers, everyone is here. The point is that you have choices in your system. There is nothing that claims one or the other.

YM: If you are going to be focused,

GJ: There are options for you. Funding is an issue, but again for place like Yale, we are less concerned about that, because if you cannot afford Yale, we will help pay for it. Because of financial policy, our first commitment is "are you qualified and worthy of being part of Yale College class". Then, we worry about how you pay for it.

YM: Can you move to depth topic now? As I said during life time I'm already almost shocked by the weak support by the University of Tokyo, and by Japanese universities. Because the tuition fortunately, at national university tuition is not very high, but still it's like 5,000 dollars or something, you can get exemptions, but most of them have to pay. When it comes to living expenses, they are very very limited. Right now, still many people are going to college. That means parents burden is very very big. Some people have to really give up going to college. In your system, the

American system as you said if the first more important thing is whether students are qualified or not. If he is qualified, then you support them. Let's see first, why can you do this, because you can afford to do it?

GJ: We can afford to do it, but the second part of that is not only that we have the means to do it, but we regard it as a part of our mission. We are an educational institution. That means that we do whatever is necessary to educate the best and brightest that want to be part of our community.

YM: So, you are (..?) mission, you do it and also you can afford to the means. To make it possible, you raise funds. You end up...

GJ: The vast majority of the money that the University has goes into financial aid. Because again, when you look at the materials that's on line, that gives you statistics, I think. For undergraduate level, you have to remember that if you are admitted to Yale Graduate School for PhD you receive an automatic scholarship, fully paid. All PhD, automatic. So, that means a student who is admitted to Graduate School for PhD annually receives a fellowship for 35,000 dollars in tuition. They receive 28,000 dollar annual living stipend, health insurance, (..?) families, all of the students' services and etc. So the result is that if you are admitted to Yale Graduate School in any given year, your fellowship is worth roughly 250,000 US dollars over 6 years. All students automatically get that.

YM: No one pays graduate tuition.

HS: Only Ph.D? Master Students, they.

GJ: We have a very few master students. The reason is that we admit what we call to the terminal degree. That is a PhD degree. You cannot apply to Yale to study to get a master in literature, because we don't offer the degree. There is nowhere between.

YM: No where between. So, graduate means PhD. It's very impressive, but even at undergraduate level, 40% of them receive some kind of financial aid.

GJ: At least 40%. I would say that the number is higher than that even. There are, because 40% really is looking at only what the University gives. But there are others who receive private scholarships and other things, which are not counted as part of (..?) The number is probably much higher than 40%.

YM: Then, as long as, let's see. If I'm a senior in high school and thinking about going to school, if I'm accepted by Yale and also some state university, by Japanese standard, I would think, "hey, state university, hey I should go to state university because it's much cheaper." But If I'm accepted

to Yale, as long as I'm accepted to Yale, I don't have to worry about it, come to Yale. I don't have to worry about, because you'll give me financial aids, based upon need.

GJ: In fact, our financial aid is not only (..?) need but cut offs are very public. Currently, if your family earns less than 45,000 US dollars, you are not expected to contribute anything at all to your education. 0.

YM: I will be fully paid by Yale. 45 is not big, but it's not that very small either.

GJ: If you look at the criteria of what constitutes middle class family in the US, that made that criteria met. Other cut offs are 65,000 US dollars, where again, substantial portion of your financial aid will be covered by the University. We are thinking about raising those numbers. But, the point is that 45,000 dollars is not very much particularly if you are coming from Japan, because of high cost of living there. But as a measure of middle class, the average US income is 30,000 something. So, it's actually, we are above that cut off.

YM: So, what is the common to be believed in Japan is, in the US, only rich kids go to Yale. That's not true.

GJ: That's not true. Completely wrong. I think that there is a perception because I think everyone knows half the story. Everyone knows that Yale is expensive but they don't know the other half of the story is that if you can't afford it. most people focus on rather than the fact that it is successful and affordable, if you cannot afford it. The result is that you actually attract a cross section of from all over social economic mass. There are people here who are coming from the billionaire, sort of the wealthiest people in the world. There are those who know that for instance, children who are children of homeless, coming from broken homes and families and such. It is very much a cross section.

YM: The only thing is that if you are a son for homeless, you may not get good primary and secondary education. However, if he or she studies very hard on his or her own and if he is qualified to come to Yale...

GJ: Certainly. Even if you are a homeless, you have access to public education in the US, primary education. Number of students coming to Yale, we have more students come from public school than private school. There is not any, public school, you don't have to pay for the public school. There is no cost. Because in the US, public schools are entirely government supported. I pay my tax to the government and they provide the education. So, for that reason, even if you are no matter what your family background is, you have access to primary education and secondary education.

YM: Is there, talking about secondary education, is there a big difference between public and

private? In Japan, all public schools used to be strong, now, public schools very low, for various reasons. Private schools, some of them are doing well. Is there a big gap between public and private?

GJ: There is a big gap, but many places the strongest schools are often public schools. Because again, because of the taxes and based taxes they have, they can actually provide strong set of resources to pay for education.

YM: This is, there are many interesting topic here, most frightening to me after we studied this benchmark study is financial aid system. Private school, you do because you can afford, and you have commitment to private good education to people. Your sense of mission and your ability. State universities are funded by federal as well as state.

GJ: Even Yale gets some federal and support.

YM: Not as much as state university?

GJ: Some case we get more. The reason is that the money is often market and research. In other words, we receive 100 millions of dollars annually for research from the federal and state government. We do get money as well, but we don't use that for tuition, pay for building or things like that. Those are the things that we have to raise through other means.

YM: We used to be very strong education, but we don't have good system any more. In Japan, that's the biggest concern I have now.

GJ: I would say that most people in the US, however, still look to Japan because as a stronger model than what US presently has. Because the primary and secondary schooling in Japan are probably much stronger than it is in the US. That is to say that there is a uniformity that is probably makes it much stronger than US. Possible to go from, if you take a subset of 20 schools in Tokyo, the likelihood is that they are all fairly uniform in terms of level of polity. The United States, if you take a group of 20, that is going to be much greater variance.

YM: What do you think, what you said used to be very (...?) in Japan. Uniformities are very high. Right now, in the public school compared to what my child, my daughter receives today versus what I received 30 years ago and 40 years ago are very different. Less uniform now. Do you think, do you agree? You went to private school?

(Interruption of telephone call)

YM: Any way, if you compare 20 American schools and 20 public schools I don't know. You could

be wrong. Japan may still be high or more uniform. But today, public schools today compared to 40 years ago, much lower in average, and much less uniform. We are very concerned.

GJ: The part of what I just described, issue of variances large part of that, because of the how the public education in the US is funded. That is to say that each town each village or whatever you can think of, they are responsible for the education and system what ever taxes and funds that they collect. So, the US, the local property is what essentially paid local taxes, so if you are in a town that has a lot of large homes and lots of property, wealthy individuals. More their money is going to education system, to taxes than the ones that is poor community.

YM: Poor community, unfortunately, their education level...

GJ: They have fewer resources. That's the part of the reasons contributing to variance.

YM: For that sense, maybe, did you (..?) region or location may be less in Japan, because it's more uniformed. But it's not because of resources but some part is more serious about education. Some other part is not.

Now, another big issue is admission. There are some discussions at the University of Tokyo and some universities about kind of general admission in stead of numerical quantitative exam alone. We call it admissions office decision or something, because admissions office, are discretion or something. Have you thought about just doing exam only? It never happed right?

GJ: Never.

YM: This kind of admissions system, which is based upon combination of quantitative and qualitative. Has it be long?

GJ: It's been always that way.

YM: But, some minor change?

GJ: A good example of this is that the whole issue of testing SATs and standardized testing. That only came in the 20th century. Because it's not, I don't know the exact date, but I believe it it's only 1950 and 60's that standardized testing in the US. That is a, its fairly competitive recent development. No point in admission's history of Yale has test ever been the only criteria for admission. I would go as far as to say that I don't think any point in history has test ever been the most important criteria. Middle of the, in terms of, if you look at academic performances in high school, your letters of recommendation from your faculty and high school level, your extracurricular activities, your interview, your application essay, then you are sort of your qualities of character and

integrity things like that which are factored to all of this. Finally, your exams that list of things I gave you, exams are in the middle of pack.

YM: Exam is a SAT, standardized. Where as in Japan, the first cut is standard cut, but final exam is just a university. We put a lot of effort in that. Let's see when you meet with President Komiyama next time, could you give the recommendation or some kind of advice to him about admission criteria? He is aware of this system. He aware of American system and he still think that Japanese way is better.

How could you convince him we should change?

GJ: Again, part of the issue here is that he is a chemist by training, so one of the issues here is that he is scientist and he is very quantitative and really rational. Things are sort of black and white, in terms of the divide. Thinking about his own perspective, one reason why he was that way. The other part is. Part of my difficulty is that I hesitate to make decision on someone's performances or quality based on solely by a single day's of effort. That is to say I would rather if you are to look at analogy to financial world, I would rather see the stock performed well over 10 years than one good day. I think focusing on the exam means you are focusing on what one person did for one day rather than the long term. At least again, the university system in the US, 4 year degree or 6 year whatever it is, it's not a one-day performance. It's a long term performance. And you want someone who is capable of performing for the long run, not for the short term.

YM: I agree with that, because my friend from high school and I took the same exam for University of Tokyo. I was lucky enough to pass. He was a good student from high school. He had flue on that day and he failed. It can happen. It can determine your life.

GJ: Sure. My analogy that I can sort of give you and my personal experiences is when I applied to graduate school to come to state for PhD at Yale, I took Graduate Record Examination, GRE. For various reasons, I ended up have to take the last possible testing data that I could during my undergraduate career. It was the last day that if I could take the score will be reported to the University in time for the admissions. So, the day I took it was the final examination for my organic chemistry examination. So, I remember that literally went to spend several weeks preparing for my final examinations. That same afternoon, I had to go and take the GRE. I completely did not do well the GRE, because I was focused on preparing for my everything else. I didn't worry about the GRE so much. But I think myself that it was there the only criteria to be chosen, I would not be here. Because again, looking at the total record, then there is no question that you had one that day does not mean that's going to affect.

YM: That's much about the system. One reason why the University of Tokyo can not do qualitative side is much more difficult to evaluate. Quantitative is easy. 350 to 355.

GJ: It's also very demanding on staff. You have to have a staff.

YM: Quantity and quality.

GJ: Each of the 12 faculties at Yale has their own admissions. Each of them is a full time staff that's dealing with entirely the issue of admissions. Tomorrow, you will be going to meet Peter Chemery, the admissions office. Earlier this semester, we had visits of deans of admissions from Seoul National University Korea. He came and said one of the things he was impressed was the size of our admissions office, because he has roughly about 10 people evaluating 100 and some thousand applications. We have 50 people in our office, evaluating 25,000 applications. He was making this comparison. You don't need a large staff because you have testing culture. In other words, if you are in the top 1000, doesn't matter. Nothing to evaluate. You would administer the test, you get the score. Either you are in or not. But Yale's case, if you have 21,000 or 22,000 applications for the college, each of us has to be led by committees. They have to spend literally between October and April every year preparing the evaluations.

YM: Japanese former national universities, now it's called, national university corporation, I believe they are solely on the test scores. However, private schools have this, so called AO admissions. In Sophia University you went, do they do the same?

HS: No, our school is still exam based on. SAT and TOEFL score.

YM: Because she went to English side, so SAT and TOEFL. No essay?

HS: We also submitted an essay.

YM: Some private universities are becoming more like you qualitative evaluation.

GJ: Of the thousands of universities in the US, I don't think any of them would ever say that, none of them ever tell you that test score is the only means of getting it. No matter what level they are, they all have an evaluated process. Even if it is a local community college or the lowest of low schools, they have an evaluated process. Their criteria for admission review more lacks or they may not be as intense to receive admissions. But nevertheless, they have an evaluated process.

YM: Ok, that's to me, this financial assistance to the students, need bases. This admissions review may be a very too big issue to me we have to. Another thing is that selection from liberal arts to specialization, talking again. What we learned in UC Berkley is, in their case, even though they do give liberal arts education first 2 years, they have to apply to departments. Therefore, sometimes, they have to turn down good students who want to do EE where capacity is limited. So, sometime they have to talk to the students, if you promise not to apply to EE, you decide to go to mechanical

or civil engineering, you could be admitted. Students can say yes or no. You don't have this system, because this is more general admission, right?

GJ: I hesitate because. It's not because general admission that we don't have that problem, but because we don't impose on admissions that way. If someone wants to this is again, this is one of those distinction between Berkley and Yale, is that they are much larger institutions than we are. Their classes may be as large as our entire Yale college class. The result is that they are much more resource and capacity constraint than we did. In any given year, we only have to deal with 1,400 new students. The scale is very different. Some degrees and majors, you do have to apply to them, but not all of them, because, some of them are designated as honors or special majors. So, if you want to do international studies for instance, you have to first declare some subjects such as history political science.

YM: You have to declare at the entrance?

GJ: Not at the entrance. After the 2 years. Then you have to petition for the major. But it's not an issue of resource or constraint for capacity, but rather simply that they are looking for specific qualities in students they want to make sure that students have those quality. For instance, for internaiothnal studies, they are looking for strong language skills, some travel experience or looking for an exposure to different classes, so they want to make sure those records are met. Not because we cannot take so many students, because we don't have the faculties or something like that, but rather simply an evaluation. There are only a few majors are that way. Most of them, you can simply declare and you are accepted. There is no evaluation.

YM: Simply declare and do it. Some year, you may have many major in one field next year, it could be.

GJ: It's possible. By and large, we know that from experience, most people will focus on history, political science, economics, and biology. We know the major popular areas.

YM: Even though students do not have to declare, they are asked to indicate likely field of specialization at the entrance you can kind of plan.

GJ: It's not we are not so focused on the issue of capacity, because, we are at the point where it's manageable. We know from experience we can do and we cannot do. We do, however, think all those issues, because for instance, a lot of things we are now evaluating with the President Levin, is that every year we have 25,000 applications for these 1400 slots. There are many more students that we would probably like to take if we had space. One of the things that are no in discussion is the idea of expanding Yale College, maybe additional to 300 and 400 students, still not a large expansion, but it's substantial in a sense that it's 33% increase from the current staff, 40% increase

over the current size. But the thing is that what's holding from saying tomorrow than just do it. The reason is that in order to scale up the size, you have to hire more dormitory rooms, hire more faculty, more custodial staff, more librarians, in other words, everything, if you scale something, now you have to continue to expand. So, it's not an overnight saying now we take additional 40 students. You have to be prepared to give same experience with each inner students (...?)

YM: You have to maintain Yale quality.

GJ: Exactly. This may, when we talk about an expansion of Yale College, 5 years way or 10 years way. To hire additional 100 faculty members, by Yale standard, it takes literally years.

YM: About internationalization of school, let's see, probably I have learned here, if I ask you again, how much percentage is the international undergraduate.

GJ: Undergraduate number is about a little under 10%.

YM: But graduate much higher.

GJ: Graduate school is about 35% to 40% right now. Then we haven't even talked about professional schools, law and management and all that. All those we call professional schools. They vary. Some of them have 10%. Some of them have as high as 20%.

YM: Undergraduate, 10% of students are international. Do you use the same criteria to give financial aid to them? Need based?

GJ: Same criteria.

YM: As long as they are qualified to come to Yale.

HS: Same criteria for admissions too?

GJ: From our stand point, there is no matcher whether you study in Russia or United States, you can benefit from Yale education, if you have criteria to meet.

YM: Is there any quota for international students and graduate? 10% is sole. It's current number. If there are many many qualified Chinese students, in theory, it could be 30%. At certain point, would you say no more international students?

GJ: There are no quotas in place. We do however strike a balance across countries. In other words, if we can only admit 200 international students in any given year, then Yale college, we to (...?) how

do we divide that up. Because we don't have, we have 200 slots, we don't want 185 from China and 15 from anywhere else. We want them to be balanced.

So there is some sorting going on. But, no hard quotas. No soft quotas either. Simply we want equal representation and we want equal distribution.

YM: Balance between international and domestic. How can you prove the needs for international students? For American student, maybe it's easier. You can actually ask students for parents' tax return.

GJ: International case, there is, we ask for same kinds forms, bank account information, tax forms to find out. Obviously if there is limit as to how much we can sort of investigate. We don't push it too much far, that is to say we basically have to go on the bases of what people would tell us. Our priority is that what they are telling us is the main truth. If people understand if there could be consequences, if someone lies and are later found out, what they told us is not true.

YM: You said that it is not hard quota but there are some kind of balance.

GJ: Balance is one of the things. You have to consider is that there is a financial budget that's in place. So, we don't look at financial need as anyway for we decide, but we do understand. However, that in any given year that we have some amount of money we give out. So we have to think about it as one issue. The other thing is that what I have come to appreciate over years, at the end of the day, Yale is American university. It's not, we are not pretending to be multi-cultural. It's an American university. The University of Tokyo is a Japanese institution. The vast majority of your students, the vast majority of our students will be Americans or Japanese. We want students from around the world to be part of our community, but we are not going to try to pretend that, 25% from China, 25% in India, we do not figure out any kinds of distribution.

YM: This may be a little different, because I'm talking about professional school. One time, when Japan is a boom, talking about business school, they really increased the number of Japanese students, maybe double or triple sometime. My school at Stanford, out of 300 business class, 10 people, 10 students at maximum from Japan. But it went up to 30 sometime.

GJ: Yale had the same experience, now it's on a decline. Chinese increasing. Yale School of Management, right now, there are more students from India than any other countries.

YM: Our problem at the University of Tokyo is that we are ok with the Chinese students, probably in Japan there are more Chinese students studying in Japan than US now after 9.11 thing. However, very very few Indian students now. Do you make any conscious effort to attract Indian students? We would like to.

GJ: Our admissions office travel to the region on regular bases. At Yale, after China, India is the second largest number of the students. The order is China, India, and Korea. Korea is number 3. I can give you a full list.

YM: Korea is number 3? Japan number 10?

GJ: Not even a number top 10 any more. Right now there are about 300 Chinese out of 100. These are off the top of my head. For give me. 165-175 Indians, 140 Koreans.

YM: Why so many Koreans?

GJ: There has been long line of history. From Japan, we currently have 45 students. Most of them are in undergraduate school. Sorry, most of them at the graduate level, PhD. Most don't come for undergraduate, because the very best and bright students still go to University of Tokyo or Waseda.

HS: English problem too.

YM: One question this afternoon. You said, someone is in charge of international exchange outgoing. Do you have systematic way of sending students overseas? How do you do it?

GJ: There are a couple of different ways. One of the commitments we made by next year, every Yale College students will go abroad at some point in their career. That's absolute. During their 4 years. At least once they go abroad.

HS: Compulsory?

GJ: It's expected, it's not requirement. But just give you an example, by the end of their time, our students, virtually, they are already doing it. First to say is that it's not hard. If they cannot afford it, Yale will pay for it. In other words, the financial aid policy will travel with them. So how do we do this? There are formal study abroad programs. Let's say someone wants to study Japanese, they could come to Tokyo and Kyoto or any place to study Japanese. So there are formal programs in place. There are internships all over the world. Last year, Yale offered about 300 internships at some 25 different countries. We had arranged through our alumni and our connections.

YM: At local companies.

GJ: Or Japanese companies. For instance, just this morning, I was talking with somebody in Nikkei, newspaper, who is going to be hosting 5 young students.

YM: For how long?

GJ: 8 weeks. Once a student gets into Yale, they don't want to leave here. They didn't come here to, they didn't work to get into admissions in Yale and spend one year abroad is very small. Our number of students who study for a whole year is very small. Most of them want to be a part of the stay-on. Where would most of them however, we do have a long summer recess. We have May, June, July and August, so four months. Most of the students who go abroad will go abroad during summer months.

Some of them will do a formal study abroad program. Some of them will do internships. Some of them will do Yale Summer Session. For instance, Professor Koichi Hamada from Economics Department is teaching at Todai this summer. So he is teaching a course on Japanese economics, so that course is going to consist of 18 students. 12 of them will be from Yale. 6 coming from Todai. He is teaching at Todai this summer. Those students will be coming to Tokyo for 8 weeks. That kind of program we have are in about 25 different countries. We can expand the number every year. Then the final way of going to abroad is an independent research. So if they have interest in Brazilian poetry, or Brazilian politics, want to go study or work for themselves, they can do that. The university again has money to. They can apply for to do that.

YM: Do they encourage your students to study foreign languages?

GJ: They have to study. Yale degree requires you complete and to be fluent in language.

YM: There is a joke that. I forgot how it goes. Americans are notorious for language. You are famous for not speaking any languages.

GJ: It's changing. The expectation is that at least from here, everybody finishes, at least one fluency in something. If you are coming from abroad, you have to be fluent in some other than your native language. If you are coming from Japan, you cannot complete your examination in Japanese and say finished. You have to do something else.

YM: I think George is advocating for foreign language study. He is from Yale. I listen to him on CNN, saying something like this. Americans are used to be notorious for not studying foreign languages. But now we should understand countries. Studying foreign language is not to just study language, but it is a way to show your respect to people and culture. I was impressed. I'm usually not impressed with him.

GJ: What I was going to say is that that tomorrow we can meet up again, happy to continue the conversation. Also, if like I said, as you sort of begin to take all this information, if you have follow-up, we can always talk by phone, once you get back to Tokyo as well. We are happy to help

you in any way that would be helpful to you.

YM: We did a lot of preparation study, however after listen to you, we know where we have to study more. A lot of information is available through your web, which we looked at.

GJ: Some of them, it's obvious to us, so we don't put it out on the website. One of the things you consider is, I don't know your timeline is for the preparation of your report. Certainly coming back in the fall is an option for you that we should consider as well.

YM: At least, for this current study, we have to have kind of report by November for our symposium, where we are going to invite some from Yale, maybe you, because you'll be a very rational person to attend. Then, it is only the middle of our academic year, we will continue it. Next year, we may have budget (?)

GJ: Certainly, we are also, you'll be having faculty located here next year. By August, you'll have administrative staff also.

YM: I heard that how many a few faculties.

GJ: Three faculties and one administrator.

YM: We have, we run out of time, one thing is faculty training, but our administrative staff is mixed. Some of them highly qualified, but many of them are very inexperienced.

GJ: I picked up on when I visited. Professional staff at Yale, their expectations, it's in many ways, another track for academic route. For instance, just the office of the international affairs, one person is a former investment banker. One person is a former diplomat in state department, a Yale Ph.D. Their levels of training or experiences are very very high. That's something that also Todai has to work too. Because especially looking at Stanford, Yale and Harvard and other places, staffing is a very high qualification. That's something you think about.

All: Thank you very much.

D.2 Ann Kuhlman

Yale University: Ann Kuhlman (Director of the Center for International Students and Scholars
Center for International Students and Scholars)

University of Tokyo: Yoshihisa Murasawa, Hiromi Seki

YM: I went to China and then Shanghai. We have an agreement with a Chinese university and the city of (...?) on a sustainability area. This is where I belong, Sustainability Science, which deals with environmental climate change, energy issues related to human sustainability and also, I may have (...?) my another card, which is an international relations division that I'm adjunct Professor in that area.

This time, I'm represented at the international side, rather than sustainability science. You promote sustainable campus?

AK: Yes we are.

YM: I meet President Levin at least once a year at Davos, World Economic Forum. Last year, about this time, I came here with the President Komiyama of the University of Tokyo.

(Small talk)

YM: Maybe, you can explain what you do.

AK: This is Yale's Office of International Students and Scholars. The Office has to my mind, three pieces of its mission. The probably the most important and certainly the most enjoyable to execute is helping new international students and scholars arrive at Yale, helping them find their place, feel comfortable, become connected, feel part of this community and to support that mission, part of our mission, we have orientation programs, we run English conversation groups, we run a spouse program, we plan trips, we have lecture series on US culture both practical and intellectual perspective. We work with individuals, one on one to help them solve problems and find resources.

We work with student groups and another part of the university all to the end of making students and scholars comfortable and welcome. The second piece of the mission is, to we are the office that manages all the immigration issues and these issues for the University. While we would like to do the first part of the mission more, we spend more time on the second part of the mission, because we are working with the population of about 1,780 international students and about 1,800 post docs, visiting professors. So, we do all the immigration work, We issue I20 for the students, forms for the J-Scholars. We do all the petition work. H1B we get permanent residency for faculty members. We trouble shoot for things don't work and stuck.

YM: This is not only undergraduate, all entire everything, all international.

AK: Out of this 1,780 students of, 440 are college students and graduates. They remain in our 10 professional schools and graduate schools. I'll print out the front page of our annual report and then you can go on-line, all the statistics are available.

YM: Actually, we did some of the...

AK: Ok, you have seen some of them. The third part of mission is to make sure that the campus is alert to cognizant issues related to international relations and scholars. As they roll out a new policy for health insurance or any kind of policy and procedures both academic and administrative, I think my job is to look at that and say does it for just for international students or American students? Are there any issues that we need to think about as an institution as they relate to international students? I'm trying to have a look at more proactive agenda.

YM: Have you worked in other universities in the same area?

AK: I have worked at the University of Pennsylvania over 20 years before coming.

YM: Also international?

AK: Yes.

YM: How do you compare your support, work here compared to Pennsylvania. You do much more?

AK: It's a different time, so the whole field has changed somewhat. But I have to say that I'm much more satisfied with my work here, because we have a greater impact on international students and scholars' lives. We are actually, for some of them making experience at being at Yale and being in New Haven better one. We are contributing positively to the experience. I'm extremely grateful to have the support of senior administration at Yale. I came to Yale, at a time when President Levin was launching his international agenda.

YM: About 10 years ago?

AK: About 7 or 8 years ago. I got on the very beginning of that. It was great to see him recognize that the presence of international students and scholars on our campus was a very important element of being a global institution.

YM: The reason why I asked the question is to actually get feeling in two ways. One is that 7 years and 10 years ago versus now. I have a feeling that American university is more global now than 10 years ago, both in terms of, American universities have been global in accepting students from overseas but you are more interested in sending your students overseas.

AK: We are...long long history of (Yale?) university accepting international students, especially from China. That's certainly other parts of the world. I think that a couple of things happen in last 10 years. The university as you said, are we are really focused on what it means to work in a global institution to be preparing graduates for global work place for recognizing the importance of international non-US based experiences. The experience is certainly intrinsic nature of what means to go outside of your comfort zone. I think, yes, that's been a very important part of the push. But I think the other event that happens is post 9.11, so we have really tried in the last 5 or 6 years, urge a balance of security and open boarders. We have been advocates for our students in the national agenda and ways we had to be prior to 9.11.

YM: 9.11 the time, you are already here.

AK: I was here

YM: Year of 2 after you came to Yale?

AK: That's right.

YM: Do you see a big change before and after 9/11 in terms of balance, security versus?

AK: We saw a huge change in federal requirements. Visa, visa processing, the actual reporting requirements, we moved from a paper based reporting requirement to the federal government, which didn't work at all, to (non-mining?) data base requirement, which actually works pretty well.

YM: It used to be paper form now on line.

AK: We all do database. That, itself wasn't a negative thing, but what we saw was every government agency rightly or wrongly I'm not going to pass the judgment, felt they needed to play a part in a role of volunteers. You have the people who, the state agency issues drivers license changing their regulations and making it more difficult. You have this security administration, all of the sudden, changing the rules on who can get the social security number. You probably know that if you don't have the US social security number, then you are doing other things becomes more difficult. Banking, sell-phone, credit cards...

YM: I still have my social security number from many years ago.

AK: You do have even though that number is long, if you came back, needed social security number, you would use.

(Small talk)

AK: So, those kind of changes, really I think, accumulation of all those little changes created an atmosphere that was not welcoming as a country. I think what Yale tried to do and other universities tried to do was counter that on campus. Might have been a negative feeling. We really then began to step up to say we welcome you, you are important to us. You are important part of our campus community, even though they may get a different message from the drivers' license place, or immigration place. We worked harder as campus community to reinforce. Now I have to say that, 6 years after 9.11, the federal agencies are, they are not relaxing, but they are coordinating a little better. The state department and visa issuance have improved greatly since 2001, 2002 and 2003. I think that there is concentrated effort to both address the security needs but also to make sure we are welcoming (...?) you for international students.

YM: In terms of this umbers, international students, currently 1,780, visiting scholars, 1,800, how do these numbers compare to before 911?

AK: They are very constant. We did not see a decline in number.

YM: In general, we heard, which could be wrong, the number of students willing to come to the US declined.

AK: I think that's true but you have to look at, if you look at the universal picture, it did decline. Yale, Harvard, Stanford, those numbers didn't decline. Some of them are, applications may have declined, but they are back up to the level of (...?) and growing. You know that one of the important initial initiatives of President Levin's globalization, internationalization plan, was extend need blinded admissions to international undergraduates. So the financial aid policy that has been available to the US students was extended to international students.

YM: Is it unique here?

AK: There are not many schools in this country to do that.

YM: We are, first of all, we are visiting you as part of our benchmark study. Did you hear from George?

AK: I did hear that.

YM: This is to compare especially education side with an emphasis on international education. So we are comparing the University of Tokyo against you, UC Berkeley and Cambridge UC Berkley is of course different kind of school. Amazingly, domestic students, you and they are very similar. It is to my surprise, because I was thinking, UC Berkley, students may be smart but maybe not from wealthy family. Then, I was thinking, to go to Yale, you have to come from a wealthy family. I'm hearing it may have been the case in the past, but now, as long as you are accepted, if you are qualified to come to Yale.

AK: The finance is not the issue.

YM: So you are trying to make finance non-issue for them. That's very impressive. As far as domestic students are concerned, almost same, but international, because they are a statue university, they don't give assistance to students from outside students. But you do you do, you treat

AK: We treat all undergraduate, admit the same financially. So, I would say probably between 55% and 60% of the international students in Yale College, receive financial aid. Some are all.

YM: Undergraduate or graduate?

AK: Undergraduate. This policy is just for undergraduate. MBA, Law school, PhD are different.

YM: MBA dents, you don't have to give a support.

AK: They take a loan.

YM: You can charge a big interest. They will be rich and they can pay.

AK: We do have a little bit of aid for MBA students. We do have a little bit of aid for students who do masters' in forestry, environmental science at professional schools. At a PhD level, like many of our peer institutions, if you are admitted to a PhD program, automatically, your tuition is covered and you get a stipend.

YM: I was asking the same question to other people. What does tuition to PhD students mean, because no one pays at PhD?

AK: I have to let you ask the graduate school dean that question but it's a good question.

YM: There is a fee, tuition. Someone is supposed to pay, but in reality, no one, because as long as you are accepted as a PhD student, you are exempted from not only tuition payment but you get

some assistance, living assistance.

AK: You get health insurance.

YM: Very interesting.

AK: It's an interesting scheme.

YM: You are actually supported by donors.

AK: Or by endowment, by research grants. I think kind of depends on what department you are in. General funds.

YM: That's one difference. UT, we have a basic budget covered by the government, because we are still national university. In the past, until 2 years ago, we are really strictly national. It's part of governmental organization. In 2004, we went through change from being part of government to, so-called, autonomous corporation.

AK: I have heard this.

YM: Singapore, they did the same thing 2 years later, in 2006. They converted national university of autonomous university. But we are still funded by the government, but we are not as tightly controlled by them. But it will decline slightly, little by little and they say we are free to (.our own...?) We are not used to it. Even before, it was worse. Japanese general public and corporations, wealthy people are not used to the concept. So, Japanese wealthy people think, it's my money. In the US, I don't know this may not be everybody, but they are more willing to give.

AK: There is definitely, a sense of giving back.

YM: Bill Gates, he is wealthy enough. 5% of his asset he gives, but 5% is huge.

(Small talk)

YM: However, in any event, American companies, corporations, individuals, foundations, are more used to giving. In Japan, what we have to do is to cultivate and educate general public and corporations. We did relatively well last year. From last to this year, because we have marked the 130th anniversary. We did commemorative campaign. Then, Alison Richard said they are doing the same thing for the 800th anniversary. You are 300.

AK: You have to find those hooks and then you do for the university and then you look at the

school of business and you find next anniversary or you drill down to the institution and look for those things.

YM: We have to create a hook. It was successful, and President Komiyama was encouraged. We cannot continue to do this every year, we said no. Companies are prepared to do this because they knew that it was one time. Sure enough the second year, no. They said we already did it last year, so no more. So we have to really educate the general public. Some of the private universities do much better. A longer tradition. They have much better alumina organization. We have had alumni organization but it's very weak. Now, all of a sudden, we are organizing. Trying to find who is rich.

AK: Do you have the practice of naming buildings after donors?

YM: We started doing that. In the UT, we have few. In the past, before the war, there are big zaibatsu, wealthy family. One big building auditorium was named after Yasuda, we call it Yasuda Auditorium. Right now, we can name. We are doing telling people either company name or individual name. If it's big money, entire building, small money, small conference.

(Small talk)

YM: Korean people and companies are much better, more generous and they are prepared. Another hook is business school which we don't have. Having management school, they interact with corporations more routinely, which we don't have. So we may do that, not because of fund raising, but it could be part of it. That's what we do. Therefore, we can provide enough support for international students. That's a big institute, UT. That, what we knew. You may be unique, but some other schools give good financial support not as comprehensive as you do. What were shocking to me was a support for domestic students. I was thinking, maybe, University of California Barkley can do this to state residents, because they are a state university at a top level. I was the under the impression that American private institutions continue to be very expensive. Only wealthy people can afford to send their kids to here. I was wrong, and I learned that you are very strong support for domestic students as well as international. What was even more shocking is that California state, I was thinking, maybe UC-Berkeley, top school's only, what I learned was, this is University of California level. California State University do have a good support for that level. Even community college has support. Then what this means is we are not doing well in a supporting students in Japan at all. International is what we knew we are focusing, but domestic side.

(Small talk)

AK: Remember Yale is a need based. What Yale and other school so is that they look at financial picture of the family or sometimes parents or students who are independent. So, they look at your ability to pay is. So, a school like Yale, says ok, we have looked at your financial background, and

your parents. We think you can pay 67%. The cost we will cover in grants and work study and maybe a little loan. 30%.

YM: In the UT, we cannot do that. There is some semi-government scholarships from some foundation available. Students loan program, yes. I received a student loan, which I was lucky to get it. But not everybody can get it and I had to pay back. Probably 0 or low interest. You can give grant to some students plus some loan.

AK: We have small federal grants. What is the tuition?

YM: At UT, it's about 5,000 dollars per year.

AK: It's not significant.

YM: It's not significant, but not insignificant for some of students from family whose income is not big. This is Cambridge. British university's tuition used to be very small. It was raised to 3,000 pounds or something, so it's bigger than ours. 6,000 dollars, right? She went to private school.

HS: 13,000 to 15,000

YM: Very few scholarships are available. If you are from middle income family, two kids to private school, it's very hard. Why two kids to private school? Because out of total university, only 25% are national where I used to have to pay tuition but it's not as big.

AK: Highly competitive?

YM: Highly competitive. Most of them have to send kids to private school where financial aid is very weak. I was shocked. It's a big problem for Japan.

AK: There is recognizing Japan's need like every country needs to have workforce for the 21st century. Is it the government; is there national conversation about this? To get students in colleges, to get them college educated because you are going to need college educated work force.

YM: Luckily, the percentage of the students who go to higher education has been increasing. This means, parents, they cannot save enough for retirement. Education cost is a big part of it and we have to change it. Now, the birth rate is declining in Japan. It's only 1.26 or something. Increasing percentage of people enrolling in higher education versus declining birthrate are offsetting now. We are seeing net reduction in number of applications to school. So, like some private schools, they are not meeting capacity. In the past, the selection is, university selects were to select students. Now, the students select the universities.

AK: That's very much we are, because we have seen, in the US, such a huge growth in institutions higher education, 33,000 colleges and universities. I'm not sure exactly right, something around there. As the baby boom comes and goes, there are schools that go out of business.

YM: Some Japanese private universities are now going to out of business. They have to merge or they have to move to.

AK: When you remember a time when Japanese schools set up campuses in the US. Teikyo Post, I think they still have a campus in CT, in the 80's, immergence on the US of a Japanese university.

YM: The number of Japanese students studying was much higher at that time.

AK: Our number of Japanese students have really declined.

YM: I went to Stanford Business School in 77 to 79. My class, out of 300 or so, maybe it was 10 Japanese students, went up to 30 in two years. It stayed like 30 or so, now declined, came down 6 or 8.

AK: I was at Wharton during those time. A huge presence of Japanese. 40 per class. In mid 80's.

YM: Japan boom. Now, at Wharton?

AK: I don't know. But I'm sure it's much less.

YM: Then Chinese students increased.

AK: In early days, the Chinese students shouldn't see Chinese students at an MBA program, but now, of course.

YM: Probably in my class maybe 1. Even if she or he was Chinese, probably from HK or Taiwan. Now, it was very difficult for them to get out of the country that time.

AK: A Whole orientation was not, not compatible with an MBA degree. Now very different.

YM: They can use MBAs now.

AK: Those students are going home, We are seeing, Instead of seeing a large numbers of Chinese students stay, we have seen many of them not staying and just going back, going back to the 3rd country, or working globally.

YM: Working at a global firm. Also starting their own business.

(Small talk)

YM: Back to what you do, you are taking care of international visitors not only the students, not only undergraduate, but also faculty, researchers.

AK: Faculties, post docs and families.

YM: You say, for exchange researchers, do some of them get permanent residency status?

AK: In a research category, very few do. We don't sponsor many, unless they have completed their post doc and have more permanent research appointment here. But, we do sponsor. We hire faculty around the world.

YM: What is the percentage of foreign national among the faculty, rough number?

AK: I don't know. Many of them will come here already have permanent residency. I don't know the number of foreign born faculty. As you look around the faces and names, there is definitely a presence of foreign born faculty here. We probably sponsor 10 maybe, 10-12 per year at all ranks.

YM: In a foreign faculty sponsor, is there any particular field or nationality conspicuous?

AK: No, again I think is, the departments look for the world's best from many different national backgrounds.

YM: President Levin, did he promote some area of internationalization at Yale?

AK: Related to international students and scholars? Well, I think he has done a couple of things. We talked about the financial aid policy. So, that was very significant. That was one of his initial initiatives, so he was very much a leader in that. It's called need blind policy, this means we admit you regardless of your ability to pay. We admit you first, and then if you cannot pay, we will help you to the extent it's needed.

YM: Levin's initiative.

AK: Another way that President Levin has been particularly helpful and supportive of international students and scholars is that he was one the first presidents in the US to speak out after the terrible events of 9.11. to say. We need to pay attentions to international students. International students are

important to this country. We need to find a balance between security and the presence of international students. He was a leading voice nationally in that. Of course, further evidence of his support of international students and scholars is this international center, which is only a year and half old. We are excited and grateful for this evidence of support from President Levin and other officers, because we now have a place that's welcoming, the place that we can do programs, a comfortable place and respectful place to welcome people. So that was wonderful to.

YM: He has been here for 13-14 years. Is there any maximum years he is allowed?

AK: It's a tenure term.

YM: Our problem is not exactly related to this, but internationalization, but related to university reform is our term for presidency. It is used to be four years at the national university. Not renewable 4 years. Now, it is 6 years not renewable. The President Komiyama, current president is very unique, pushing globalization of the University, but this is the 3rd year for him. Almost he thinks he is very active, but some people start thinking about next president. That's a big problem.

AK: Does he come from faculty?

YM: All presidents have to come from faculty for now, which may change in the future.

AK: Which is not the case in the US universities, but Levin, he did come from faculty. The new president at Harvard has come from their faculty.

YM: But, summers didn't come. Interestingly, Alison Richard, she is from Yale. Alison Richard in Cambridge. Also, which I knew, Susan Hockfield was,

AK: A provost at Yale.

YM: Did she go to school here?

AK: I don't know where she got. She was a provost and she was a dean of graduate school before she was a provost. She is a long standing faculty member here.

YM: So, Yale trained many.

AK: We just lost another one of our deputy provosts, which we just announced a month or so ago. She is going to be the president of Wellesley University, Kim Bottomly. There is a long tradition. If you goggle Yale's website, there are occasionally articles about presidents. Every time someone else becomes a president, they revive the articles, how many presidents come out Yale and gone to other

schools.

YM: What is the main difference between president Levin and Summers?

AK: I'm not probably the right person to ask. I'm pretty removed from the center of power here. It seems to me that there was some a lot of dissention at Harvard over the presidency and a lot of the camps are divided. I have never seen that here.

YM: What I'm hearing is that, (...?) some change, but presidency Levin take more step wise revolutionary approach, whereas Summers tried to do it very quickly.

AK: That might be the difference of coming from within the institution and coming from the outside.

YM: This is, what the same thing is happening in Oxford and Cambridge. Alison Rich taking Yale approach, versus Dr. Hoot came from somewhere, and he is taking something drastic. He is not well supported.

AK: But, Alison Richard is fairly well supported.

YM: Because she is taking Yale approach.

AK: She in someway (...?), because I believe her degrees were from Cambridge. I'm not sure they are.

YM: Dr. Hoot comes from Auckland, New Zealand.

AK: So, He is a way outside.

YM: Not even in the US. Alison Richard probably went to Cambridge.

AK: She is definitely British. She is the provost at higher (...?). I think that she does our current provost, because she is also British, has an appreciation for what it means to be an international student and an international scholar. I think that's beneficial to institution.

YM: That's one thing we never did it. The Japanese university is really notorious for not hiring foreigners in important position. The highest rank was in the UT, for professor. Even to be full professor is very rare occasion. I think there is only one president, foreign president in Japan.

HS: Clark of Tama University.

YM: It's not that minor but not major school. In the US, you hire foreigners as a provost.

AK: In the cases I have seen here, there are members of faculty. So, they come up to a faculty. At the University of Pennsylvania, they hired Canadian provost, a legal scholar from the University of Toronto.

YM: Also, the president of University of California Santa Barbara is a person born in China. Henry Young. We are very close. That's another problem. Next time after President Komiyama, I'll be an advocate for hiring from overseas. Maybe, Alison, maybe she is still successful in Cambridge, so some one.

AK: Then, will be very revolutionary.

(Small talk)

AK: If there is anything you need to know, or we didn't cover, thank you for that.

(Small talk)

D.3 Jane Edwards and William Whobrey

Yale University: Jane Edwards (Associate Dean of Yale College for International Affairs, Yale College Dean's Office), William Whobrey (Director, Yale Summer Session and Special Programs, Assistant Dean, Yale College, Lecturer, Germanic Languages and Literatures)
University of Tokyo: Yoshihisa Murasawa, Hiromi Seki

YM: Let me explain why we are here and what we are doing. We are conducting, what we call a benchmarking study between and among University of Tokyo, Yale, Cambridge and UC Berkeley. Our study is funded by the government. We are doing it on behalf of the University of Tokyo. We are supposed to be obligated to make some kind of report. It can take any different form but one thing is to compare this four schools not quantitatively or anything, but we learn from each other. This what Yale does, this what Cambridge does now. The University of Tokyo, we have been talking about the possible reform in education and what we should be doing, directly for the University of Tokyo and more indirectly other universities That's the objective. However, the motivation came from published rankings. Times Higher Education, Newsweek, or something you are usually number 2, 3.

Linda Lorimar sent us email saying that we are so please to announce that we have been ranked number 2 in some. People pretend they do not to care about it, but MIT and Susan Hockfield says she doesn't care, but if you visit their website, it says ranking.

Asia school like Singapore National we are number 19 or something. We are the only one of two Asia universities ranked within top 20 together with University of Tokyo. We do not care, but we thought we can learn from it. If our score is low in some spectrum, for example, in a globalization, it may sound silly. The president of University of Tokyo says, "our school is low in internationalization, why? A number of students? We don't have too many students, number of foreign faculty." Globalization of the university is high on his agenda. But he learned "we are so behind. We are not so international at all." So, it's good learning. We do citation in physics; we are number 2 in the world. But humanities and social science side, our publication is very small in English side. Citation is small. We learned from it. These are all quantitative. Now, the UT and the government came up with the idea is there any better way to learn, not only qualitative but qualitative way. Some those rankings may put more emphasis on research side. We are a research university, so it's important, citation. But let us focus on education side. It cannot be too quantitative. Qualitative is ok. Let us learn what UC Berkeley does, what Yale does. Hopefully end of the day, we will publish the report, I hope you could learn from this. That's way here. Several we have set of questions for you. Before we are doing that, could you help us by telling us what you do?

WW: A couple of things. Actually, a couple of jobs. I guess my main job is a director of summer

session, summer school that started yesterday. That goes for 10 weeks. Along with that, some of them also have positions in, I'm an assistant dean of Yale College. Essentially, what that means, along with the directorship of summer session, is there is a certain authority over students and their academic performance, but also sometimes, we have punitive measures against students. Obviously, deans are authorized to some way to interact with students in that sense. I'm a lecturer at the German department. I teach German literature. That's sort of aside. Internationally, I think with the summer session, over the last 4 or 5 years, began to offer courses abroad. We sent Yale students, others, primarily Yale students to courses abroad. Some are language, some are science courses, some are culture courses, and we send them abroad with Yale faculty. That's something not unique but different from some other programs. For instance, we have courses this summer with the University of Tokyo. In July, professor Hamada will be teaching his economics course. We have 11 Yale students going. As I just found out that we have 4 guest students from the University of Tokyo will be sitting on the course as well. Those students will be able to interact in class as well as outside class on campus.

YM: Guest students means, university students studying here at Yale going back to Japan or from Japan?

WW: From Japan. We are interested in this course, so we made a special arrangement that they could sit in.

JE: Undergrads?

WW: I'm not sure. That's a good question. It's an advanced course, so it's possible that they might be more graduate level, a 400 level course. That's just one example. We have about 20 other courses. We are students going abroad. The last thing I would mention is that what's particularly interesting to me too is a constellation of 4 universities. We are more involving with the international alliances research universities. Obviously, before you name, this is part of the alliance. We are also working with Australian National University.

YM: IARU

JE: That's right. National University of Singapore is developing the office, right upstairs, we are neighbors.

YM: We are going to join them. We have two offices for the University of Tokyo.

WW: That's terrific.

YM: That's IARU suite.

WW: We will be neighbor down the hall. We are developing an initiative and draft proposal for overcoming a global summer program, which will involve all 10 universities at some point hopefully. In a kind of summer study and exchange both through students and faculty.

YM: You take IARU very seriously. We do too.

WW: We do. As I said, that was the last thing, but one more small last thing. We are also able to welcome 4 students from University of Tokyo courses (...?) Last summer, they were taking courses.

YM: Was it a Fox Program?

WW: No, that's different. This was part of our English language institute. They were taking advanced academic English courses. My understanding is we have 2 students this summer who in July will be coming to Yale here from the University of Tokyo.

YM: Then, can I call you, Jane?

JE: My title is Dean of International Affairs in Yale College. This is a new position that was created last year. I have been here since last August. I was previously Harvard, and before that Wesleyan University.

YM: Is it in Massachusetts?

JE: No. That's Wellesley. Wesleyan is a liberal arts institution half an hour up the road, in Middletown. So, I came here from Harvard to assist who is strategic planning and coordination of the ranges of international activities for undergraduates here. So, this includes trying to provide a matrix in which is the source of the activities where Bill is engaged in, can be well coordinated with our study abroad initiatives. The activities which bring international students to campus and also internship and research opportunities that students have abroad. So, basically, I'm working in general mandate of all of our undergraduate students should have an international experience before they graduate from Yale. My job is to try to make sure the portfolio of opportunities that Yale makes available to those students, meet our expectations for the significance for their efficiency, if you like, the economy which you ran them, for their integration into Yale's curriculum for undergraduates. Also try to make sure, this is a second order business, it's been a busy year. I think what frequently happens within a large research university, which is equally true in Tokyo is that you have sub fragmentation that occurs. You have decentralization, which means that interesting things happen in the School of Public Health, or the School of Management which might well have an important interface for our undergraduates or vice versa. But those connections are really (main?). We are interested here at Yale in using the opportunities that come from having a big and diverse

portfolio of graduate programs to try to enhance the opportunities we make available for undergraduates, and also to build institutional relationships coherently, which is one of the reasons why we are interested in the international alliance of research universities, because of the sense that you get more out of these experience if you pursue them not in a fragmented way but in a coherent way.

YM: Some new research happening in graduate school, you try to make the results available to undergraduate education.

JE: Actually, what we would mostly be interested in doing is making sure the students who have an interest in that area of research have opportunities to be involved, (..?) or field projects or in other ways of in the actual generation of the knowledge.

YM: Take part in the activities and eventually these undergraduate may go move into graduate school.

JE: Absolutely. Or the very least, the students therefore, because of course, if you think of the Faculty of Arts and Sciences here, our faculty, not graduate faculty, undergraduate faculty, a faculty within the Faculty of Arts and Sciences, many teaches undergraduates and graduate students. We are very interested in promoting intense relationships between undergraduate students and our research faculties. That's a priority.

YM: Just talking about faculty, where they belong, do they primarily belong to undergraduate? The reason why I ask is we have a little inflation of title at the University of Tokyo. They tend to think to belong to graduate schools is superior to undergraduate. In the past, we used to be called Professor of the University of Tokyo, now they prefer to be called, professor of the Graduate School of the University of Tokyo.

WW: I think it is probably a natural tendency. We have that probably here as well and where else. But I think that Yale makes a great effort in stressing undergraduate education, that Yale College, the oldest part of the university that teaching of undergraduates is honorable and important for everyone. So, I think that there is actually a conscientious effort to tell professors as well as students that, especially faculties, they have an obligation to teach undergraduates, many full professors teach introductory lectures or seminars. I would say virtually everyone teaches at graduates. Graduate students as well as Jane said, most schools in a sense, the Faculty of Arts and Sciences. But I think that there is a very deliberate effort constantly reinforce the importance of undergraduate teaching to counteract this tendency of rising to the top. "I only do research I don't teach very much" - at Yale, that's not a good thing. Professors know that they should not brag about not teaching, because teaching is the mark of the good professor.

YM: Very important. Now, at the University of Tokyo, their obligation may be similar to yours. They have obligation at graduate as well as undergraduate. Sometimes, some certain professors may spend more time with undergraduate. However, they like to be called, the title of professor of Graduate School of University of Tokyo. For example, this is a trivial thing. A certain professor from Yale appears on TV. He is described as a professor at Yale University or professor of Graduate School of Yale University?

JE: Even within, I think the first thing you learn about, if you are talking about faculty member of School of Management, the first thing you know is he is from Yale University. Only secondarily, you will know he is from a med school or any other divisions.

YM: When even they appear on the TV or newspaper, they like to be identified as professor so and so of Graduate School of University of Tokyo, ridiculous. Small point.

WW: It's a matter of institutional priority. Harvard and others, they are proud of old tradition of having what we called colleges for undergraduates that specifically teaching undergraduates.

JE: But I think that, I don't think that in the world as a media world, in this country at least I don't think that would buy you nothing. Are you from Michigan or Pennsylvania? Only exception to that is that certain named business schools. Kellogg or Wharton, that means something. But I would say.

WW: I agree. Possibly Yale Law School and Medical School, those are the kind of two big ones. But, still Yale is big enough for everybody.

JE: I think that I don't think that public in general would feel prestige accrued to somebody working or graduating. We know what shapes like in the institution. But by and large, no.

YM: Let's see. Now students at Yale University, for the students to spend overseas experience, is it mandatory now? They are encouraged to?

JE: Very much. I think you will find in all Yale's materials, admissions materials, pre-admissions materials. You find the sense of Yale understanding of it as a global institution, plays out for undergraduates with this very frequently found knowledge about significant international experience. You are supposed to have an international experience. And ask our undergraduate students, I don't think any one of them would not say I'm not supposed to do it. How do they understand that? Very tremendously. There is no requirement in any kind that the students do this, I would be astonished if we have such a requirement. Although they are required. Although I always believe in proposing it on the grounds that it's only when you actually look at what you really mean. If you required that, you really understand how you are committed to that.

YM: You may not be required but you are encouraged to do. Then the school would provide the opportunities.

JE: Yes. There is the way in which this happens. First of all, study aboard at Yale during academic year is no harder or more expensive than it is in any comparable institutions. In so far, as you wish to study abroad during the academic year, if you wish to study for example at the University of Tokyo for a year, we will be delighted to have you do that, we will give credits for the courses that you take. And you would receive, you would have to negotiate it obviously to make sure you took courses made in sense in your degree program, but in undergraduate level, you would certainly receive credit, if you got permission to do, and you would pay the cost of the program or tuition if you receive financial aid, (...?). So that, you are going abroad during the academic year, is not finally costly nor as academically impossible here. However, Yale has probably the lowest number of students who study abroad during the academic year for credit (...?). It's nearly low. The reasons for that, because this is deeply distressing to me. What I'm also a believer in studying abroad during the academic year, because I believe, what I always call visible study abroad. I would like to send students to disappear it to the society which the studying is only way you can do is during the academic year, otherwise they are always going to be something a little different. I think for some students this is very important, but the way in which Yale has constructed, if you like, is narrative over the last 3 years, has produced a sense of the living community of the four years of being undergraduate experience which makes it very difficult for the students to make the decision to leave. And it's the combination of cultural factors to do with the housing situation and the way in which they come into Yale and the way they identify with the people. There are some really strong factors which design to make people happy here, which do make people happy, therefore, which make it difficult for people to decide.

WW: They are too happy.

JE: I was able to increase the numbers at Harvard very rapidly, because Harvard students at undergraduate level have an extremely intense and interesting (...?). They are not particularly happy. Therefore, it was relatively easy to persuade them to go somewhere else. Yale students are deeply happy here and they don't want to go somewhere else. That's a problem. The second problem is that, it is not an institution where the decision has been made about the curriculum at undergraduate level, which privileges the idea of international study. In most majors, for undergraduates here, it's not made particularly easy for you to study abroad. That has been the case we recognizing, if we wish to make sure that rapidly we got to the point where our students (...?) a large number of participating in it (...?). So, of last year, 19,077 international experiences 18,033 during summer, should I have number for this?

YM: Bill, you are in charge of summer sessions. So this can be, some students at Yale and the students from overseas. The other way around?

WW: That's right. One thing I wanted to add in this is 180 degrees (...?) but I think we could still talk about international experiences by our agenda of bringing international students to Yale. That's in a sense, the other side of coin. Yes, we want all our students go abroad, but it's also very important for our students to live with here at Yale, within an international community. Jane is also involved in talk about efforts to diversify our own student body in terms of full time Yale students who study here come from China, from Japan, from all over the world. It's about 10% right now for undergraduate population. But it's a significant experience for Yale students to have a roommate. Especially during the year, during the summer for students to have roommates from all over the world, whether in a short period of time or over 4 years. They get to know other points of view, and they get to know people from all over without necessarily traveling abroad. That's important part of Yale strategy of internationalization.

JE: I would say so. People coming in and people going out also think about what's happening in classroom. What to extent, for example, it's very important for us to have always international (...?) faculty. But it's also important that we have visiting scholars, who teach at Yale. We have a language requirement in Yale, which all of our students are required to continue with their language study for (...?) semester, even if they have (a tight?) level of proficiency in the language. Many of the people who teach the language are native to the country where the language is spoken. So, the combination of all those things, I think.

YM: Are the students here in Yale College required to take language courses?

WW: Yes. This changed a couple of years ago. I personally think, it is even better that it was. The basic standard is intermediate level. There are 3 and 4 semesters. Our students in 3 or 4 semesters reach fairly high intermediate level, if they start at the beginning. Our students who go abroad again during the summer, for instance they would be doing immediate and they come back after living, even just for a month, their speaking is already quite fluently. Of course, they are very bright students and they learn quickly. So they have a good level of language that is required. This is addition, if their native speakers of another language, Japanese, Chinese, we call it going a step further that they use their expertise in their language skills in an academic setting. Rather than, for instance, I also studied in Germany we have many students so called, heritage learners, who learn a language at home. But didn't attend a school of the language, so may not be that advanced in a higher level of use or academic. We require them to take, for example, a literature course in, again, French literature, let's say, at a high level, similar to what they would take at French university. They are using the skills that they already have. We are not saying, ok, you are already speaking in another language, that's fine. We are saying show us what you can do with your skill.

YM: Most popular language to learn here is Spanish right? And Chinese, second.

WW: Well, French maybe and Chinese.

JE: Chinese is getting up.

WW: It is sort of leveled off a little.

YM: You have a lot of programs with Chinese university here. You have a historical relationship? You were there. President Levin, last week, 2 weeks.

JE: Yale 100.

YM: So, you went to Beijing?

JE: Beijing, Xian and shanghai.

(small talk)

WW: If I can just make a comment on language learning and program in Chinese, Yale, a couple of years ago, it was quite new, began this experiment. It's still somewhat controversial, again encouraging our students to study during the year, during the term time, not summer, in China. You talk about our joint undergraduate program, but the interesting thing somewhat controversial at the faculty level was the fact that Chinese language is not required for participation. The reason for that is somewhat obvious but still controversial in terms of, we want to encourage especially scientists, especially people whose primary interest is not the study of Chinese culture to experience China, and use that experience in their own field. It could be a scientific field. They could become bankers at some point. They do learn Chinese while they are studying in China. But rather than really previous term time philosophy was that you must reach a fairly high level of the language before you study (..?) something. Obviously you need to be fairly fluent but we made it, we created to the opportunity for students who don't need to study Chinese for 3 years, for example, which is very difficult for some students to do, before they can experience an academic environment in China.

JE: It's new departure for Yale. I think what you have already observed, which is global English has become (a problem?). The whole concept of emergence has shifted somewhat, that's by saying to the students, you can only study in China if you have already reached (..?) Chinese was closing the door. I think that's one of the crises who are working in international education this country. A whole question is how to manage, language acquisition, and contact students (..?) the ground shifted (..?)

YM: The Chinese learning English is much faster than American learning Chinese. Younger generation like junior, sophomore, freshman at college, they are very fluent. There is an order age,

my age, very little. Very few of them can speak English. That's one of the reasons why study self-teaching Chinese because conference after dinner table, we cannot talk. We are next each other and we are quiet. I tried to talk to them in English, but they don't even respond. The younger generation is totally different. They are fluent but the challenge for you guys is to be, you used to be Chinese accent.

JE: I think also that the one of the, it's may have been, I don't know much about the history of foreign language study in China. The history of foreign languages study in the US has been fairly disastrous we have a break record of mono-lingualism. As I do, it's a matter of social (..?) history is much of anything else. But it does mean that when the US government announces plans to put a large amount of money into teaching Chinese and Russian and Arabic, specifically Chinese and Arabic, for the younger generation, they are faced an enormous problems because we don't have a tradition of having our children go to elementary school studying languages. We don't have teachers. We don't have the methodologies in place which work well with that kind of language teaching. For the US, I think (..?) English is next 100 years. I think it's very interesting to see what the US would do to adjust when that perhaps starts to change.

YM: We will be living; especially you will be living in the world for the first time in history in which there will be another super power whose language is not English. Russia was a super power but not economically. Military super power. China is today number 4 in GDP, but it is based on nominal exchange rate. If you adjust PPP (purchasing power parity) they are already number 2. Their emission of CO2 will be number 2 soon. The economy size will even surpass the US. You are 300 million, but they are 1.5 billion. So, in 15 years or so, 20 maybe, you will be faced with a world where someone is bigger than you in economy, speaks different language. Your mentality may have to change.

WW: This is really why we do this. This is our obligation to the next generation. We recognize that I think that they live in a different world. We hope, at least from this program in China, that they at least gain an appreciation of small, I think it takes a life time to especially cultures are quite different. To understand Chinese culture, but still gain an appreciation for differences. If you are a banker or whatever you might be doing, the students of ours do to gain an appreciation of this huge country out there. The fact that it seems that there is all dialects and Shanghai speak differently in Beijing, those of things, hopefully to immerse themselves and some will then become fluent. Chinese and Arabic are so hard. The problem is that they are very hard languages. Spanish or English, they are not so hard. It's the writing. Chinese, speaking that seems to be easy.

YM: (Character) Not exactly, but we share about a half. I can read Chinese at least 65% of them. Arabic, I have zero clue. Back to what you do, Jane, international affairs, and international affairs. This is like making sure the portfolio of opportunities for students overseas. Could you describe more about these opportunities?

JE: Sure. I (said..?) into fist of all, Yale's own study abroad program, which is Yale summer session and joint program in Beijing, (...?) Then there is study abroad opportunities in which we send students to other people's universities. There are internships we ran. We have 16 countries this year. We have (...?) fully understand bulldog program abroad which is what it is. We send students who are placed in either the corporate or non profit world for working experience in 10 weeks during the summer. They can receive what, Yale seriousness about this is demonstrated by the fact that is essentially created an additional semester of our financial aid for us to receive financial aid, which is between 50 to 60%.

WW: Close to 50.

JE: Anyway, say half Yale students receive some kind of financial aid. Discount wages, single most you can test the aspect of American higher education. What we say to students is that for one summer, they choose designated international experience and they will receive financial aid for that summer and the same percentage as they receive during the academic year.

YM: From Yale or Company?

JE: From Yale. Same percentage. If you receive 50% financial aid during academic year, you can also receive 50% during one summer. In addition, what we do for those students is, every student who receives financial aid has an income contribution. That is they are supposed to, the expectation that the students work during the summer. They would be expected to provide 2,000 dollars towards the payment for coming year. If you accept one of these international experiences, then your student income contribution is forgiven

YM: Instead of working here, you can choose to go.

JE: So instead of working here, you could choose to go study abroad or you may pursue internship abroad. The other area in which we do (...?) research. This is primarily but not by any (...?) imagination, or juniors, students at end of the 3rd year. Many of them pursue research towards their senior thesis or other purposes aboard. Yale has a lot of money to be given by donors and it is available through the Macmillan center. As you know, there is a very large number of international experiences funded (..?) to 50 in last year funded through that kind of money .So, those students can also have a student income contribution forgiven. (..?) So, what we know is that between the financial aid that we give to students to purse this experience during this summer which is also, by the way, includes other kinds of summer studies, intensive language programs, if they wanted to go to Japan to study Japanese during the summer, they can get funding for that. In addition, if they are science students and if they wish to (...?) replacement abroad, if they wish to go to Asia, they could receive financial funding for that or they could receive fellowships for that. There are so much of money moving that we are pretty confident that there is an experience that every Yale students.

YM: This is almost too good to believe. You have, are given an opportunity to go abroad and study or work, you are still given a financial assistance during the time. Or your obligation is forgiven. If you get paid by IBM Japan can they keep the money?

WW: I don't think most internships are paid.

JE: But, some students do get paid in internships. So, obviously, the payment that they receive is adjusted down because it is not faire to be paid double.

YM: Ok, very interesting.

JE: If you are interested in that phenomenon, I think there is very interesting program. We put 1,700,000 last year during the summer into financial aid. 346 students.

YM: 1.7 million? I think the University of Tokyo we have an intention to do that, we don't have money. You have endowment more than 20 million dollars. You continue to raise funds. We were not allowed to raise funds until 2 years ago. We are national university, it's ok for individual laboratories, allow to do corporative work with Sony, Toyota. We get money for research but the university wide funding was prohibited, because we are part of the government. Now, we are half way, private, still mostly supported by the government. Their intention is that we continue to support for certain years. This money will gradually decline, you have to be increasingly independent .We are now allow to do fundraising, what we did so far is a tiny fraction of what you do, but we are learning. And the President Komiyama says our minimum requirement is met by the government, still all right. We need some strategic fund to fund overseas experience for the University of Tokyo students and more importantly to invite students and researchers from Yale and other international schools.

JE: I think that it's difficult to add to the financial burden (...?) university faces this kind of programming quite frankly I have worked with institutions with less money than Harvard and Yale. It's ok not realistic expectation (...?) enormous amount of money.

YM: Only a few schools even in the US can do this. Harvard, Yale, Sanford...

JE: Yes, very few. Harvard, we didn't, we have two reasons actually why we didn't do this. First of all, because so much money. We budgeted it out, we figured out we needed (60?) million endowment to make this work. If we have done this, it was going to cost us 3 million dollars a year. If we (...?) we would have done that we did not (...?). But the other thing was that we knew that if we provided extraordinary experiences during the summer for our students, they will be much less likely to study abroad during the academic year. We wanted to put more emphasis on studying

during the academic year. That's proofed to be the case here. The involvement in international activities during the summer here goes exponentially. Academic year is flat. That's because, why would you? Our students maximize everything. They can have four straight years at Yale and then they can also have these experiences.

YM: When you have more fund, resources are available, President Komiyama's priority is on international exchange. We will be sending more sending students here. We will offer exchange programs for the US students and researches. Now, so many of the programs at the University of Tokyo both ways, you are paying. To have Japanese University of Tokyo students here, you pay on behalf. You send students to the University of Tokyo, you pay. We are willing to share the cost. We are hoping that we will be able to do it.

JE: (...?) during these kinds of things in Japanese universities is, as I understand it, quite widely spread at this point. I know I have spent a lot of time in meetings with Keio and Waseda, talking about international initiatives of the similar kinds. So, is it as important for Japan the same way as the US?

YM: It is even more important for Japan. The US is the center of academic activities, economic activities. People would come, even if you don't invite, they still come. Japan is not some. Some Chinese and Koreans want to come to Japan, but many of them. For top Chinese students, first choice is American university, Japanese is only second choice. Although in terms of number, we have more Chinese students studying in Japan than in the US now. It flip-flopped after 9.11, however, we still feel that the top quality people want to come to the US. Japan, we need a conscious effort to promote exchange. Otherwise, especially, with the rise of China, it could be between the US and china. We could be in between. It is very important for Japanese schools. Almost first time, we are serious about this international exchange in a kind of institutional way. Japanese students wanted to come to the US without going through the University of Tokyo. They quite the University of Tokyo or take leave of absence. Now, it's almost the first time we are trying to support them for that activity.

JE: Can you give some credits for it?

YM: That's I have to learn. Not always, therefore this will impose extra burden on them. They have good experience of studying in the US for one year. They have to spend another year, total five years instead of four years. It happens to other schools like Keio and Waseda.

WW: That's one of the challenges we face. These kinds of efforts and exchanges. Another challenge may be peculiar, but it's true in European universities as well, but also Asia, the school calendar, poses challenges in both ways. Your students as well, they don't get out early enough in summer to able to. That's just two calendars, very hard to put together. I know that Peking

University, (...?) actually adjusted to their calendar somewhat to make it easier for their students to have international experiences. Sometimes, I think Australia has moved it a little bit too. Sometimes, it takes presidents of the university saying we need to do this in order for this to work. Otherwise, we are trying. It just won't work, for students.

YM: Some Japanese university offer courses which starts in September, and ends in May or June whereas many programs start in April or March. But she went to international school of some university.

HS: We have two semesters - in-coming students in both April and September.

YM: University of Tokyo, some program we can do that. Some students coming in April, some other group coming in September.

WW: I mention that only because it's sometimes these practical things can have a huge effect. It put a lot of money into something without practical aspect of calendar that works. It can be very difficult.

YM: What is the percentage of international students?

JE: At undergraduate level, it's 9%. As a whole.

WW: I look at recently, some professional schools, it's quite high. School of music, I think 30-40%.

JE: The average in the whole institution, it doesn't tell you anything, because it varies so much.

WW/JE: 5,000 undergraduates is, a little over 5,000 undergraduates, you could take roughly 9 to 10 % - those be international.

YM: At the University of Tokyo, this institution wide, about 8% including graduate. Mostly 90% graduate, but our undergraduate is very weak in internationalization. Partly because, we are not offering courses in English.

JE: Of course, that does present the problem. For Yale, this is actually a strategic decision because we receive so many applications. Just it's very difficult to manage. I can imagine if we increase, if we were to build two additional residential colleges, there is a speculation that the undergraduate international students percentage might be allowed to rise as high as 12%, but no higher than that. I would say it will be stuck at 10% forever.

YM: Do you know how much percentage your faculty is from overseas?

WW/JE: George Joseph should know the answer

YM: He has been our very good contact. As I said, we will have office starting. Maybe we have a formal opening in November.

JE: We particular enjoyed our relationship with Australia National University. It has been a great fun.

WW: I will be in Tokyo in September. I have circled on my calendar already. There is an IARU meeting, the 19th of September. I will plant to be a global summer program meeting.

YM: Yes, IARU seminar. I may have to help President Komiyama. We have to go to our last meeting across the road.

JE: Ann Kuhlman, she will be able to tell you everything you want to know about. She can certainly tell you how many international scholars and faculty we have. The problem is that the vast of majority of our international faculty is (...?). They would not appear on her data. Because there is, we just treat them as we were (...?) citizens but George might have a sense of.

YM: George has been our contact.

WW: As anybody talked you about the World Fellows Program?

YM: (...?) Yes, I met him in Davos, World Economic Forum last year.

WW: I just mention it, not because we can talk about it now. I'm involved in a little bit. It's one of those small programs, but that has put alumni (...?) way that

YM: He keeps asking me to nominate people. I don't know, some prominent business people right? They are too busy.

JE: I think that's true. It only works for people who are set (..?) career. Most of the people who participate are relatively junior, so rising start, but it's wonderful.

WW: I don't remember exactly, but I want to say they must have had over 1,000 applications this year, I think, for 18 positions. It's gone from, maybe 100 applications to. It's known around the world.

JE: I think that's right. One of the nice things is that from the point of view those of us who care

about the international experience of our undergraduate, the World Fellows have a structured relationship with the residential colleges and doing (...) with undergraduates. We think that's another, having people who are not (...) than they are, who are engaged in all kinds of fascinating (...) all over the world, who come here and participate very attractively in the life of the institution. It's just as important as having international students and teaching assistants.

YM: OK, great thank you very much

D.4 Larisa Satara

Yale University: Larisa Satara (Director, Fellowship & Visiting Scholars) University of Tokyo: Yoshihisa Murasawa, Hiromi Seki

LS: Economics, law and environmental policy is one of the fields as well.

YM: I know of the program. When I visited here last year with President Komiyama, I have a feeling that we talked about it. We are very keen on increasing an international exchange. One limiting factor is our resource. We are not as rich as you are. But we are trying to develop funds, raise funds for globalization, including the cost and expenses for exchange program. I think this is very important for us.

LS: That's why we pick up everything. So you don't have to worry about it. We just expanded the Fox program with the University of Tokyo. It used to be just an exchange with your Graduate School of Arts and Sciences, but now we expanded it to include the entire university, faculty of law.

YM: Now I know exactly what you are talking about. Arts and Sciences. I now understand.

(Small talk)

YM: Today, we are doing a benchmark study. George told me many many schools in world who want to do a benchmarking with you. You are limiting the number of study partner. One of the motivations is, in a global ranking, you are really worried, because you are number 3, but sorry, you are not number 1.

What we trust the ranking or not, we are somewhere 10 and 20 in the ranking. We compared with others before, President Komiyama's policy is not worry about ranking itself, but if we can learn something from it, let's learn. For example, We score globalization, internationalization, exchange for number of foreign students that school has, we are really small. So, we would like to learn from it. But the ranking is not probably a good indicator. It's biased. Times Higher Education or News Week compare Yale in the US versus Peking. Apple to orange or something. So we should do our own benchmarking study. We are funded by the Government. We will be asking more about qualitative question and try to learn, and hopefully learn from you and hopefully you can learn from us. To start with, I'm asking very rough explanation, come back to this and give more detailed explanation. As a start, if you can start talking about what you do in your group.

LS: We are sort of very unique center on campus. I say unique because it's hard to explain what we do. We are not actually a department, but we do have undergraduate majors that we administer, we

have master's programs we administer, basically driven by the faculty at Yale. But basically what we do is to coordinate most of the international activities here on campus and you'll see because you'll be meeting with the Office of International students and scholars, George's office is the Office of International Affairs. So you'll notice that there are many international offices at Yale. What I think we want to distinguish from us is that we tend to be faculty driven. It's really the faculty who started the center and runs most associated with it, which is different from the office of international affairs or any other offices. We can assist of 9 area studies. That's the big one, I will tell you. We have area studies council in different parts of world, different regions. We have a African study council, a Canadian council, basically any part of the world. Councils are led by the faculty who have appointments throughout the University. So, we could have faculty, let's here in East Asia, Mimi is a faculty member at the History of Art. She is a professor there. For European study chair, Professor History. These chairs can change. Sometimes, there is someone who are chairs for a couple of years, sometimes, just one year, but the council basically consists of different professors throughout the university who has interest in that part of the world. They could be working on environmental science, history, literature, or whatever. They are interested in the part of the world.

YM: I think Mimi actually came to Japan a year and half ago.

LS: She comes to Japan very often.

YM: This faculty driven, it means, someone who is interested in East Asian studies globally proposed this program.

LS: Yes. So, started. I cannot tell you exactly when the center was funded. It's been a while, but obviously we have grown a lot during the years. But it was basically started to coordinate a lot of the international activities that happened. If you are in anthropology, just sitting in your department, you don't know about maybe the historians who are also working on the same region. Basically created to coordinate all of the international that take place on campus. Each council has many faculty members associated with it.

YM: These are just a few names. There are more.

LS: Yes, there are more. Each council has their own website. Many more faculty members are associated with it. We also have some students. Students have interest in this part of the world. Sometimes, they work and help out and involve in organizing some activities and invents. These are sort of centers for coordinating the activities for that part of the world. Each council has staff members and administrators, full time staff members who just work with that councils. Some council have more staff members than others.

YM: It's a degree here. So this is mainly education or mainly research?

LS: These are degree program that students enroll in. We actually administer these degree programs. A Master's program in African studies, East Asian studies, international relations, actually students, we do the admission. We have international relations or any of these master's degree programs, councils actually run these programs. They take care of admissions, everything. They have directors of graduate studies. It's basically all done as if it was a department.

YM: On a graduate level only?

LS: On a graduate level. Undergraduate level, some of these majors can only be secondary majors, meaning that a student has to be major in history, international studies as second. International studies are one of the most popular one at Yale. This is all run out of council; all of these programs are run out of our council and run by the faculty one here and administrators.

YM: These can be for domestic Yale student and also for incoming international students?

LS: Yes, undergraduate majors they would go through their regular Yale admissions process. Obviously, they take this as a major.

YM: As a second major?

LS: Some cases it's second, or first. Because there is growing interest among Yale students to study international affairs as well, actually for example, just recently, a month ago, we added South Asian studies as a major. Yale approved South Asian studies. So, that's going to be a new major. We are also working on Middle East studies. But the master's degree program, basically we run. We have international students can apply and we have a lot of international students in these majors. International relations is the biggest run. The others are kind of small, We have only a couple of students.

YM: How old is this center?

LS: I don't know. Associate director, she has been here for a long time. I think it's been at least, it started in the 60's. It was a very small center, obviously and just kept growing and growing. I think it started off just with one or two area study councils and now it's just growing. As you can see, we also have a lot of programs and initiatives This is separate from the councils. For example, this British studies initiative was just started two years ago are driven by a faculty, professor, Steve Pinkas has interest in this and he started this initiative and active workshops and seminar series. We are actually working on agreements with a couple of universities in France. We actually do have a lot of programs and initiatives that are started by our faculties.

YM: How would you run initiative to relate to the degrees? If you want to do British studies initiatives, do you get that degree in British study initiative or is it one of the courses you get a degree on one?

LS: These are the only degrees. This is basically like I said before, faculty driven so, this has a lot of organize conferences, workshops. They have agreements with other universities. Students who are interested, can take part in all of these activities. It's very open to students. They can sit in seminars. They might help their professors organize something. They can help with their research. Students can take advantage of any of this. For example, there is a program ".. order Arts". It does not give degrees, but they have a weekly workshop and seminar series. Every week, they bring speakers. They have students affiliates, undergraduate and graduate students who attend all of these seminars, who maybe get to have dinner with the speakers after, they get to talk about their research. They talk about their interests. So it's not a formal class room kind of, but it's still the students by being exposed to these different faculty to the visitors, by getting a chance to talk to them, by attending this seminar. They learn tremendous amount, even though it's not a formal classroom. All of these are open to them.

YM: In terms of reach, how many students earn degrees in all these?

LS: This is not much the area I am actually involved. Exact number, but rough numbers in international Relations has 20-25 students in each year. And it's a two- year program. African studies, I think that they have increased lately 10-15. East Asian, they don't have that many. Maybe 4 or 5, it's a much smaller program. Same thing with European and Russian studies.

YM: East Asian should include China. So it should be growing.

LS: Honestly, I know that Europe and Russian studies has about 4 or 5. East Asian is a little smaller to, because in general, here in the US, most students going to PhD programs. I think international relations is a big master's program that is popular, but in general, most people who are studying something like East Asian studies are probably go on to PhD. If you start your PhD, you start right away. You don 't necessarily do master's.

YM: In Japan, lots of departments, you do master's first and then PhD. Sometimes, the master is first-half of the PhD program. I only did a master's. Here, as you said, if you are interested in PhD and you just straight going to PhD without going to master. You go to PhD. Do you get credit from?

LS: This is it you have to start the PhD program again. I think it will depend. Each university deals with it differently. I went to NYU, for example and I went straight into a PhD but I ended up getting a master's. You can stop and just get the master's or you can go onto the Ph.D. Or you can't do the

master's. It depends on the university. I think most of these master's degrees are taken by students who want to go on to professional field. A lot of international relation students want to go and work for organizations. One of our recent graduates told me yesterday she got a Human Rights Watch. Most of them tend to go on to the professional fields. Maybe the UN, or something like that. Master's degrees are for students who don't necessarily want to go on to academia. It doesn't mean, some point in their life, they change their mind and they can go back. It's meant more professional. We also have joint degree programs here. Someone in international relation program can do a joint degree program with school of management for example or forestry school. So, they can get MBA and MA at the same time, or they can even do something forestry master's and environmental science.

YM: These are all area studies based, not subject based.

LS: Programs are kind of subject. But very interdisciplinary too. This is one of the good things too, we have a lot of professors who like to do interdisciplinary things.

(A program bio??? professor X X?) Do you believe in order to find the right answers to questions you need to study all disciplines. Not only political science, history, and economics. The center allows them to take interdisciplinary approach to these problems.

YM: Students, if someone majors in African studies, did you say they need to have another major?

LS: For international studies, they do have to. These are mainly second major, mainly. They have to have something else.

YM: This is the second major. In terms of classrooms, are there classrooms here?

LS: Yes, there are classrooms here in this building, but the way that classroom allocation works at Yale is centralized. Actually there is a central University Register and they determine classrooms space for every class on campus. So, I can show you around the center later if you like. We have one big class here and classrooms upstairs. Biology classes can take place here. It's sort of university register determines. I think that's determined based on the number of students in class. Biology class can be big, so they go into. Do you know about Yale shopping system?

The Yale students do not pick their classes ahead of time. They don't register for classes

YM: There are freshmen. They come to Yale College, most of them?

LS: It's all Yale College. Yale College is the first four years. Freshman, sophomore junior, seniors in College.

YM: UC Berkley, the College of Arts and Sciences is the biggest one. Most of them come to college, However, other people may go to different college. Here, everybody comes to Yale College.

LS: So the first four years is called Yale College, Yale also has residential colleges. I don't know anyone explained them to you.

YM: We haven't studied it. It's like Cambridge?

LS: It's different from Cambridge, people are assigned randomly. There are 12 residential colleges, I believe. I usually deal with visiting scholars and fellowships, but so I'm not precise at it. Rough idea, 12 colleges. All of them are freshmen, they are randomly assigned to one of the colleges.

YM: In Cambridge, it is in application.

LS: This is random. All of them live in that college. Within the College.

HS: Like a dormitory?

LS: Did anybody take a tour of Yale? Living in a College. Each college has a master and a dean. The master is a sort of, I would say, a senior faculty member or senior professor who is responsible for social activities. They live in the college with the students. The dean lives in the College with the students. The dean is usually younger. They are not necessary faculty or full professors.

Master, you definitely have to be a full professor. You have an assistant, associate professor, and full professor. So, a master is a full professor. They live there with their families. The deans are much younger. They are to help the students with anything. Social problems or anything, and also academics. All the students live together in these colleges and they can study many different things. They live here and eat in colleges. Colleges have many activities for them. They have things like language tables. If you want to learn Russian, for example, Tremble College has a Russian table every Tuesdays and you can go and only speak in Russian at the table.

There may be Chinese. Many activities there. Librarians are in the college. That's also a college, but a residential college.

YM: You are randomly assigned. There are different majors. Someone is from liberal arts major. Someone science...

LS: Yale did want to have everyone study political science in one college. So they want people to meet from across.

YM: Do they have to live in the dormitory?

LS: They have to live in a dormitory first two years and they can live off the campus.

YM: What is the fee for?

LS: They might tell you at the admissions office. I don't know.

Yale also has a very good financial aid, but any student that is high quality, good students get accepted and Yale pays for everything.

YM: We don't do that in the University of Tokyo. Most of Japanese private schools can afford to do that. Before studying benchmark study, I thought Japanese education is very good, reasonable, but it is not, compared to what you do. State university like Berkley, they are supported by government, federal and state. You are supported by your own fund.

LS: You know what it is that Yale has wonderful donors, people who graduated from Yale, remain committed to Yale. This Fox Fellowship mainly funded by Mr. Fox, who graduated from Yale in 1938. He has given us 15 million dollars for this program. Yale does tremendous job in getting the people who graduate from here to remain very much connected to Yale and do things like this. Give 15 million dollars for this program.

YM: Did George w Bush, he is Yale.

LS: I don't know. I don't get the information. That's always secret.

YM: Hilary Clinton She is from Yale.

LS: Bill Clinton and Hilary, they went to law school here. They met at Law School in the library. That's what is distinguished a lot of American university, especially private ones. American these donors who are just. Mr. Fox is, he is 91 years old. He is still alive. He actually moved from NY to be here, close to here. He is very (...?) I took some fellows to his home yesterday, because he meets all his fellows and he is committed to Yale. He sold his house and gave the money to Yale. I think this is the dedication. People come to Yale the time they spent here is just amazing that they have this and maintain the connection to the University forever.

HS: Do you have any formal alumni association?

LS: Yes, there are alumni associations. I know that they organize events. There are different committees. Mr. Fox joins on a presidential advisory committee and international activities he has

done that. He still comes and he has lunch at eating club at Yale. He is a fellow of one of the residential colleges. He is very involved.

YM: Although this is not the area but what you talk about residential college is very interesting. We should have known that. Now, are you talking about shopping period?

LS: Yale students don't choose courses ahead of time.

YM: They do not have to declare but they may indicate what they want to do right?

LS: When I say this, I say when you start the semester, which class, which course you will be sitting on. I don't know how it works in Japan.

YM: In Japan, you have to choose at start. You are given one week or so testing period. Just sit in class and decide if you continue to take it or drop it. But here you are saying you don't have to.

LS: For example, if you are major in history, there is a difference between choosing your major. This is the area you will be concentrating in, your studies in. I think you have to be choose it in your 2nd or 3rd year.

YM: 2nd or 3rd year. you chose.

LS: The courses I'm referring to is come to September, or are you taking Professor XX course, or are you taking Professor XXX, which course you are taking? In some other countries, let's say, if you are in environment science program, there are a number of courses you are supposed to take. Yes, core courses. Here, at Yale what happens is that two-week shopping period. When classes begin in each semester, students shop for classes the first two weeks. They don't have to pre-register. They go from class to class and see how professor teaches and see if they are interested in taking it. Then, only after 2 weeks, do they commit to which classes they will sign up.

YM: This is assigned all Yale 1st year, 2nd year...

LS: Yes, all. Because most universities here in the US, you have to pre-register. If you are taking courses in fall, you would already register. But you would normally get to see the professors teaching or anything you just chose based on the title. But here all students, they actually sit and listen to professors for a week and they see they like it or not.

YM: I don't know about the professors at the University of Tokyo, but I also teach at private, graduate level. They have similar systems with yours. Maybe, one week shopping period.

Let's see if you are firstly you don't have to declare your major yet, so you can do anything. What I learned from George yesterday is, if you are admitted to Yale College, you are admitted to Yale College. Therefore you can do anything after you come, right? Whereas most schools, you come as an engineering major, right. Within engineering, you may not have to declare your concentration, but you are in engineer. At least, science side versus arts side, but in your case.

LS: That's the only for Yale College first four years. But on PhD level, master level, that's not. If you are admitted to African studies, you cannot just switch. People in the US start to specialize only in graduate school.

YM: You said in the US in general, but Yale is specific.

LS: Yale College you can choose your major. You can decide you want to do math. You can change your mind and do English, but if you are accepted into a PhD program in political science, but you cannot start and change to history.

YM: There are 2 different arguments in Japan. One is to support what is (general education?) Undergraduate should be more general education. Without worrying about concentration, you should be train yourself discipline your self as a good person and good thinker, general education. Other people say it's a waste of time. That's to do, let's focus on the concentration on the first year, so that you don't have to waste time do your education quickly. Is this general education orientation, has it been same for many years here?

LS: It's always been the case here. In the US, mainly general education. I think it sometimes also depends on how high school programs are. Because in the US they are not standardized. High schools are not standardized across the country.

YM: Means, high school can be very different in the area.

LS: Some cases, you have high school students who have a very good general knowledge. Maybe with them, they can afford to specialize. But some cases, you have people coming from high school that they may not have had such a good general education.

YM: Therefore you have to give general education.

LS: So that's just in general. I think that's where the debate is.

YM: In Japan, University of Tokyo is somewhere between, hybrid of (...?) versus general. So we do general education for the first two years, and a year and half. And let them move into specialization, very deep and narrow. Probably, this is one thing we are debating at school, at the University of Tokyo. One is A versus B, right our system, general education for the first year and go

to the specialization. And, B is still system many other national universities have decided to take. That's the specialization from the first year. They move to that direction. Now, plan C is what we are learning from American (..?) universities, entire 4 years more general education. But doing this C, the American style, in order to really study something in special field, you have to go to graduate school, PhD. But I don't believe the majority of American College students in general across the nation, go to graduate school

LS: Probably not.

YM: Some high level so called, research University like Yale or Berkley, people may go to graduate school. But more like an education school like state university, they do concentrate into undergraduate without going to graduate school?

LS: I think it's probably also depends on the fields and what career people want to go in. Some people make the argument that general education is good because that teaches people how to think. You have some people who say that who think that the just a basic general liberal arts one that teaches you about literature and this logic. With that, you can do anything. That I think is the debate that you can get someone who has a very general eye's knowledge and you can put them in a job and they will have faculties and they have general knowledge to learn right away. But if you have someone who wants to go into chemistry and work in a lab, maybe for them, it makes sense to specialize. And they learn for the first 4 years, the details of how they work in a laboratory. In my personal feeling, that is depends what career people want to go.

YM: Yale, if you are good at, if you look at all fields, do you have a feeling how much percent of people go to graduate school?

LM: Honestly I couldn't tell you.

YM: As you said, does it differ by area?

LM: Yes. I think in general, Yale students, they tend to be quite amazing and outstanding. Many of them, after they graduate, they have amazing jobs. They go work for Economist Magazine in Africa. We had some people start their own NGO where they help women in Guatemala. They sell the goods that women in Guatemala make on the market. I think they are just exceptional. I don't know if you could look at what they do and take that as overall.

YM: Exceptional in their diversity, their achievement, diversity? (...?) very unusual.

LM: Another thing is very relevant to what we do at MacMillan center is we have fellowships. We also give Yale students money to go and do things during summer to go abroad and to go spend a

year somewhere. We give close to over a million dollars every summer to Yale students to do all sorts of projects abroad. While they are still Yale students maybe in their first or second year, this project that was started at Guatemala was actually started because they got fellowship money from Yale. They spent some time during summer at Guatemala helping these women, after they graduated, it actually became a big business on a profile, Newsweek magazine. So the Yale College students have a lot of opportunities, amazing opportunities while they are here to do many things. We have internships; we send them to Mitsubishi in Japan send two students every year to go have internship there. Many of them once they finish Yale, they have tremendous amount of experience already. Many of them can get very good jobs. A lot of people going to consulting also. A number of them is going to PhD programs too, but I couldn't tell you how many people.

HS: Are those opportunities given to any students including foreign students?

LM: Yes. The fellowships here at MMcMillan Center this is what I do here, we have 36 fellowships. They are usually given funded by donors, someone who graduated from Yale 20 years ago or something like that. They have different kinds of stipulations. Some of them say, "this is money for students who want to work on topic related to Greece." Or they also say "it has to be a project on political economy." In our case, most them, all of them are open to anyone or Americans, doesn't matter. We do have some fellowship that are funded by the US government that can be only given to the US citizens. Almost all of them could be anyone.

YM: Your name Satara, is it Greece?

LM: Actually a former Yugoslavia, it's currently Bosnia.

(Small talk)

YM: And you went to college here? Which college?

LM: I went to a state school for the college, because you know I didn't have much time to plan. If you don't have time to plan which school you are gonna go to, I was thrown into it. I went to graduate school at New York University.

YM: When you went to state school, how is it different from Yale? In terms of specialization?

LS: It was the same thing. It's general across the US.

YM: Which state?

LS: It's here in Connecticut.

YM: You didn't have to declare specialization general? General education four years?

LS: I majored in economics and history, I chose that myself.

YM: You declare, you chose major in the 3rd year?

LS: I can't remember. It was my second year.

YM: Some major you probably you chose in second year. Some school or same major, you chose in the 3rd year. You say it's basically the same system.

LS: In some places, you can actually declare major very very late. If for example, you find that you take a lot of classes, literature, you didn't do this on purpose, but it turns out that you took many classes in literature, I think you can go back and say I am going to declare literature as my minor, because there are a set of requirements in number of credits that you must have taken.

For example I have an assistant and she works for me. She also went to state university in NY. She had two majors and two and minors. I think you may want to look into how schools determine what qualify as majors or minors, because there are a number of credits. One class has usually 3 credits, do you know about that? So, sometimes, they will say you can declare if you had if you have taken 20 credits. When you look, it's possible to have declared any minors, any majors.

YM: Declaration many minors or many majors, does it help? In what way does it help?

LS: You are gonna ask me now, she thinks that it didn't help her much at all.

YM: I don't think so.

LS: It's a personal choice that way. But I can tell you that she has some very good bases. She is very smart. She can probably learn many things. She is not probably an expert on anything, but I think she has a good general base.

HS: It is possible to graduate from Yale College, without declaring major?

LS: I don't think so. That's not something that I could answer. But you could also create your own kinds of special majors. A good friend of mine who is a dean of the one of the colleges, She is actually a director of undergraduate studies for special majors. So students can create their own majors. It has to go thorough an approval process.

YM: As I said, many Japanese private school, some national school, recently asked students to declare their major or let them choose major even before they come to school. In many school here they have to choose major in some cases, departmental, that school level, maybe departmental level. It's very detailed concentration. At the University of Tokyo case, it's hybrid somewhere in between Japanese private school system. Two years in general education and latter two years in specialization. In 3rd year, I was in engineering. So, what do you think about this extreme one, asking students to pick their major concentration even before you come to school?

LS: Honestly, it's obviously subjective. There is no opinion. I actually went to high school at former Yugoslavia. There, high school is specialized. So the high school you choose, high school already choose your major. I went through system like that. And I went to general education system here in the US. Honestly, I think all and all general education is not bad. I think sometimes, forcing people to choose when they are too young what they want to do is not very good. If you really know what you want to do you can choose your major at Yale at first year.

YM: You can do that, it's flexible, someone know who is in engineering, but school is wait.

LS: My personal opinion you are asking me is that giving people flexibility is better because I find that when you are 18 or 19 you may not know. You may think you like engineering, but until you start studying it you really don't know what it is.

YM: After 22 years, after finishing school you still don't know. I changed my major in undergraduate, I was a mechanical engineering major, which I think was even almost mistake. Very boring. I changed a little bit to information engineering in master's degree. After that, I went to consulting and did the investment banking both business and finance strategy. Almost nothing to do with mechanical engineering. There is a forcing people at the age of 18 or 19 to select one area which you want to do for life time is not fare things to do. Only other hand, the point of giving general education is giving thinking power on or habit of continuous learning. So, that you can live with many things in real world.

LS: I don't know how is it in Japan, but here in the US, many older people go to school as well. You can for example finish, you can already have your degree, you can have a master, let's say even in your 50's or late, if you decide that you want to change your careers, people here are no stigma associated with going back to school. There is actually an interesting article, not common in Yale, but 70 year old lady who graduated from Yale. She is 70 years old. She never got the chance to finish school. Yale has this special program called Eli Whitney Scholars, for people who never had a chance to finish school or who finished, but who had interesting lives and now want to go back to school. It's a special program that they could tell you probably in the admissions office. I think, having lived in the former Yugoslavia, which is kind of rigid communist and socialist society where people choose right away what they want to do, I actually think this American system of flexibility

is, people are always believing that they can learn in their 40's and 50's. That keeps economy going too. People are ready to change and people are ready to learn. If you make people choose too early, they can only do this, it's not very good overall.

YM: Japan is not a communist country, but our system is rigid. My almost all my classmates went to engineering career. They say now, age over 50, they say I wish I could have done something different. Like you said. It's nothing late. You can do on your own something different or you can go back to school. We cannot do not as proper as here. Myself, let's say I made in mechanical engineering which is narrow and boring in that field. Information is a little broader. I went to Stanford Business School. Now, I study, self teaching Chinese. I thought that English is a must. It's a global language. It's not your first language either, right? You lived here many years and you picked up? Next step is English with Chinese accent.

LS: We have a lot of students studying Chinese. Actually Mr. Fax started learning Russian when he was 72. He enrolled in Middlebury College. Here in the US, Middlebury College has a very language program. He enrolled in that program when he was 72 and started learning Russian. He speaks Russian with all our Fox fellows from Russia. He goes to the language tables of the college, and he speaks Russian. So, that keeps you alive

YM: Keeps your mind going, from my stand point, I don't think I have time to go to school to learn Chinese, because I want to practice and use it in business, but I continue to teach. So, that's something you should learn.

LS: Mr. Fox has retired. He has time to go back to school.

YM: I cannot afford to retire yet. That's very interesting. I learned all of this is not your expertise. I learned a lot of from you about your system in general in the US and also Yale College system. Now, that's the program. Let's see if someone says it's a faculty driven, and you provide degree's program and most of them probably especially undergraduate, you allow them to take major in programs in center but usually it's second major or something. Master's degree program can be a major-major, it's a single major. Total student involved here is how many? Master in African 10 to 15, if you add up between masters and undergraduates, maybe talking 200 there?

LS: Yes, I would say all the years. International studies major have a lot. We have at least, they might even have close to 100. Just international studies, undergraduate, I would say there is a lot more. The students actually have to apply. They do have to apply to be. It's very competitive in international relations.

YM: Competitive means, there are certain capacities or quota. Some of them may be rejected?

LS: They have to apply. They have to say why they want to study this major, how it's relevant to their career, what they have done in the past and then there is a director of undergraduate studies called DUS. Every program has the director of undergraduate studies and international study and some other faculties, they choose who (gift?) to be in the major.

YM: That leads to a different question about majoring different majors at Yale University. If I come to Yale with a mind that I will be an engineer, maybe EE majors, but I didn't have to declare at start. End of my second year or so, I may declare EE major. Is it capacity or quota for that major?

LS: May vary from major to major.

YM: Like you said, general system may be nation wide, but Berkley, University of California, they come to general education, but I think, in case of engineering school, they come in as with a major in Engineering without specifying sub domain within the engineering. But, their capacity quota for EE, EECS, sometime, they have to reject students who expressed their desire to come to EECS at start, because we have so much capacity, limitation in capacity. In your case?

LS: Honestly, once again, I'm not an expert and don't give you wrong information. Knowing how Yale works, Yale likes to help students as much as possible. Faculty and everyone is very accessible. I can see they are limiting it only if the resources or capacities are there. For example, I know that political science major, the biggest major is now political science. Political science and history are one of the biggest. Political science major has been growing. There hasn't been faculty to teach the courses. They have been hiring a lot more faculties. Even if there is a limit, if there is students interest, Yale will try to do something to make it possible for everyone who wants to do this to be able to do it. This might be something that the admissions office or someone else can answer. I think in some majors there wouldn't be any limit, or others maybe. Like I know, I went to state school, I don't think there is a limit, you could just major. Sometimes, a problem is that if you have certain classes you to take it to major to finish to graduate. Sometimes classes have. What if you cannot take that class? You have to wait extra years, Yale has, in our programs, there are certain classes that seniors have preferences. If you are in the 4th year, you have preference to register. We give them priority. Because we know that they can't take this class again, that is taken into consideration.

YM: The major may not have capacity or limit, but certain classes may have certain capacity. Without taking you certain classes, you cannot declare you would have this major this field. But, this is very different from Japanese system. In mechanical engineering, 120 people EE is 70 people and something I think that

LS: Graduate school may have a limit because of funding. For example, if you are accepted to PhD program, you are automatically funded. Your tuition is free, and you have stipend. This year, it's

about 17,000 a year and free tuition. Plus you are given money during summer.

YM: This is our common misunderstanding we have in Japan or overseas. Yale is a very expensive school. You have to be a kid from a very wealthy family to go to Yale. If you are good students but from poor family, you go to state school.

LS: It may have been the case in the past but that's not true any more at all. Another thing is, Mr. Fox's children did not get into Yale, they applied but they were not accepted. My husband's cousin who is from a former Yugoslavia, she got accepted to Yale with a full financial aid. So, it's not true. I think, what may be true in general, in the society like America, if you are born rich, you have some advantages.

YM: Good primary and secondary education so that you can be accepted to good school like Yale. Whereas, if you are from a poor family even if you may have a good brain, you do not receive good primary or secondary education. You may not be ready to, you will not be accepted to go to school.

LS: Right. But, I think that's also changing. There are some opportunities for people who are in primary and secondary. I think you will talk to someone in the admissions office, they will tell you that they do try and mix. They have different mix of classes because sometimes actually nowadays, going to the best high school, the most private ones, having all these advantages, having all the highest score, many people don't get admitted. Sometimes, some admissions office, they will take people with lower test scores, but maybe students who have shown that they can overcome difficulties in life.

YM: That's very interesting. You like diversity. Then my question is, what is tuition? If my old perception of American school like Yale and Harvard is there, you have to be a kid from a wealthy family, so you can afford to pay tuition. But what I'm hearing from you and George is that, as long as you are accepted by Yale, you don't have to pay tuition, if you cannot afford to do it. What is then tuition?

LS: That's, the admission office can answer that, because there are still people to pay the tuition.

YM: Even if you are from very rich family, you don't have to pay. There is no tuition in PhD, but their tuition is listed, but no one pays.

LS: Do you know what master student pays? Honestly, most schools, they will call this cash cow.

YM: Master has to pay, because that's squeeze in between.

LS: There are some fellowships for some students, but not all of them. A couple of them can get it.

We do have some fellowships that we get.

HS: So, the students who pay tuitions sort of cover the cost of other students who don't pay.

LS: I think tuition also, but like I said, but some of the donors. The donors like to give money for specific things. They don't always like to give money for general use. So, honestly I don't know. That's probably a question. I wouldn't have an access to that information. But, Yale is very intent on making it open and accessible to anyone. Even in the summer, we do have a lot of summer fellowships. There is actually a program that was just started a year ago that makes it possible for any students that's on Yale financial aid or anything to corpora. That's the other thing about financial aid. It can be percentage. It doesn't have to be full. 20% aid, 25% aid or something.

YM: So it is not a true statement that you have to be a kid from a rich family to go to Harvard or Yale. It may have been the case in the past, not any more. In California where I went to school, Stanford, maybe in a professional school, because you will make money after finishing a professional school. You may not get a good financial aid, right? Therefore, business school probably someone who can afford to go to Stanford do go to Stanford. Who can afford may go to UC Berkley. But undergraduate, probably all different state even not see too much difference between going to Stanford versus UC Berkley. If you are a good student, as long as you are accepted, you will be supported either by school or government.

LS: Right. I think there are some very good state schools. I worked in California actually worked, University of California in San Diego In 2.5 years. From 1999 to 2001. I worked at a multi campus research union.

YM: University of California System?

LS: San Diego. But it was an Institution on Global Confrontation and Cooperation, so we worked for all the UC campuses, Berkley ,UCLA, every single one and national laboratory also. I think that California has a wonderful state school. Some schools in Michigan has a good ones. Wisconsin may be. Not all state schools are equal. I think California, there is no difference. Some state schools are not that good. What's the difference? Honestly, I couldn't tell why the difference. Maybe the history, or the way that they were created, but not all is as good as California.

YM: This financial system, even to international students as well ? No discrimination? Same?

LS: Yes.

YM: This is very interesting almost shocking. Our scholarships and financial aid are to international students are very limited as well as domestic students.

LS: It's very interesting, the FOX fellows that I run. We had 3 FOX fellows from Tokyo that were not Japanese. One right now, are current one of them is Japanese, and one is Chinese. She is working on African issues. We had Koreans. We had Koreans and Chinese.

YM: Are they still registered at the University of Tokyo? They decide to go back?

LS: I could have invited them to come and meet with you, the 2 fox fellows from the University of Tokyo.

YM: Because the University of Toyo is going to open an lab on campus here. I don't know the name. It's concentrated on a either Japan study or Asian study.

LS: I know we have 3 faculty members who are coming.

YM: That's it. Three faculty members and one administration person.

LS: We are taking care of them too because we have 100 visiting scholars every year. I will be helping those 3 faculty members.

YM: I think we have one time question is, this is again, not within your expertise but secondary education here is diverse here. Some school may have dual concentration. Some of them may not have.

LS: I think what's diverse about is the quality.

YM: Diverse in terms of quality. Is it between primarily versus public, mainly or location?

LS: Definitely, the private ones are always better. But also different publics ones differ. Even here in Connecticut, in a wealthy area, because they get more tax money, they do more things.

Parents are more involved. The parents are more educated. They are wealthier. They live in a wealthier part. They care more and more involved and make demands. Something like say high school in City of West Port, which is a very rich area. It's a public school but much much better than let's say something like British port, which is a very poor town.

YM: One of the reasons why American university gives general education for 4 years or at least for first two years, the diversity in high school education.

LS: Once again, I'm not an expert, but it's a one possibility.

YM: If that's the case, if the primary and secondary education here is improved, more uniformed in quality, then you may be able to give specialized education early on at college level?

LS: It's possible I don't know I think that in high schools also, students can choose their classes, which when I went to high school in Yugoslavia, you can't choose. Every year, you have 13 subjects. So in my program, I had to have physics for 4 years, math for 4, literature, but here students in high school, they can choose classes, which I think is very different. If high school was more uniformed, should we go on to specialization? Once again, I think giving people the choices better because if the students know what they want to do, they can do it. They are not prevented from doing it. They can start to concentrate more or less. Do they have to take some core subjects? But they can start focusing. Someone comes to Yale knowing that they want to do math. They can start it from day 1 and focusing on that. Some people do, some people don't. I think a general source system gives people the flexibility. If they know what they can do but if they don't... maybe wrong.

YM: We learned a lot and thank you very much for your time. Next time, we will meet your students. Not only from the university of Tokyo. Thank you very much.

(small talk)

D.5 Penelope Laurans

Yale University: Penelope Laurans (Associate Dean of Yale College & Special Assistant to the President)

University of Tokyo: Yoshihisa Murasawa, Hiromi Seki

YM: You involved in university strategy side.

PL: So this is my 34th year at Yale. And so I know the University very well. I was recently very involved in the review of curriculum. I have a copy I can give you. Let me see if I have. Actually I did find. So I can probably be most helpful I can tell you the way I can be helpful. I know a lot about the structure of the University. I know a lot about the undergraduate curriculum. I can probably, I don't know a lot about sustainability.

YM: As a start, I should show this. This is not very well written, but the University of Tokyo decision making structure. Here is the center for research and development of higher education is central here. We have this we have educational planning office, educational steering committee and the board of director is here, this university wide board of director. Under, this one is central to our subject right now, the educational steering committee. We are doing this benchmarking mainly on education as opposed to research. One of the reasons why we are doing it is, when you look at rankings, so called university ranking, most of them are based upon research capability, papers etc, so we are now focusing on educational side. This is a kind of focal point from our study start point. Under this, junior decision of undergraduate study, school of teaching program section and graduate school. Now are you involved in a university wide kind of steering decision making?

PL: Of course, as you know we have 11 graduate professionals. I am not directly involved, but because I am a special assistant to President Levin, I know a lot about it. The President Levin. Also I am an associate dean of Yale College. So, it's a very odd. When it comes from the fact that I have been here so long, so have a big wide view of the University and have been advising him for 13 years. While I cannot talk to you specifically for example, about curricula in the School of Medicine. I know about the big issues that have to do with graduate (...?).

YM: That's very good.

PL: This is something entirely others. All entirely undergraduate education. The report is all undergraduate.

YM: This was in 2003.

PL: We are now implementing it.

YM: Maybe we can start from here. Why did you do this?

PL: That's a very good question. We could probably have not done it, and been ok. The world is changing. Knowledge is increasing. No one can know everything.

YM: That's very interesting point. We are doing, anyway, please keep going.

PL: The last time we did anything like this, forty years ago. So, now we have a president who has been, he has been the president for 11 years when we wrote this. Then the dean, who is now the president of Duke University, had been the dean of the Yale College for a decade. Everything was ready to take a risk and do this. Doing this is very political, because every department, every area wants to think the students should study that. Of course and they feel worried and threatened. So this is a very big committee. I will show you. Students-faculty and faculty and students. It broke into subcommittees. I went to all every subcommittee meetings. I was the person who kept it all and told one committee what the other committee was doing.

YM: One very interesting thing, it could be totally different from the University of Tokyo is the involvement of the students.

PL: Yale has never done that. It turned out to be an excellent move. They told us things that we didn't know that. They pushed us in certain ways. It was very positive.

HS: Did you select the students?

PL: The students applied and we selected from those who had applied.

YM: This is an excellent idea. I don't know I doubt we could do it. The faculty may not be ready to accept it.

PL: Yale is one of the slowest in this. We thought we would never do it, but the President said that's how we are going to do it.

YM: It makes sense because the last time when it was reviewed was 40 year ago. The world is changing, knowledge is deeper.

PL: We had two leaders who are strong. They had consolidated their strengths, so they could take this kind of risk. If you look, I graduate from Harvard. If you look at what has happened in Harvard, not just Summers, why they did their curricular review, they didn't do it right. I can tell you why I

think they didn't do right. They had much noise. Even now, they just got it passed a little bit. You have to set it up very very carefully.

YM: The first question I asked was why you did it and kind of understand. Now, how was it received by faculty and students and different constituencies?

PL: There was some discord. I will you where there was the most. But it was anonymously passed by the faculty. There was some unhappiness and I will explain it to you what. It used to be that Yale required. This is a non issue in Japan, but language teaching is very bad in this country, as you know. It is changing. But here we are, we are speaking English. You speak fluent English and I do not speak a word of Japanese. I do speak some languages. I speak French, and I know Latin, Greek and Italian, but I don't know German and Asian language. In the past, it was a student comes in and cannot pass the language exam. We want them to take four semesters, two full years of a language, because how much you can learn, it cannot do not have at least two years. Today they need to take less. They can fulfill some requirement by going abroad, much better and learning the language there. But it was very controversial to say that they needed to take only 3 semesters rather than 4. That was a small thing. Then, I think to some degree, the humanities felt threatened, because science and engineering are the subjects of our age. Humanities are afraid that the university would be tilt too much. Their point is that a broad liberal arts education will help you anything you do. They were concerned.

It's not that humanities are not required. There is, but that was a little bit of controversial issue. But in general in the end, it was very well received.

In these political things, when everything is quiet, it is a success and it was a success. We started most of the importance of the report is not in the report but implementation. You can write anybody can write a report, but to make it to happen, you need money. You need commitment. You need a leadership. You need to make it happen. Here there are a number of things that Mr. Levin has raised a lot of money to do. I can tell you what they are. For example, every student should have the opportunity to go abroad for a semester and the university will pay for that. For summer or semester.

YM: Summer of semester, it can be as long as one year.

PL: Yes, absolutely. We've always had that. We've always allowed them go to abroad. They can use our tuition money somewhere else. But now they can also study summer go abroad and they can get money to do that. Generally, people who do that, they want to go back. It is an initial step so as that. We have many initiatives in science.

YM: One thing you said is very interesting. The essence is not what's written here but implementation. In a way, it is what happened in Japan. I don't know if you really meant to this or not. Sometimes, this could be written in a general term. Implementation, you determined to give (..?). Is it case here? Or the detail is written?

PL: We try very hard, well not to be stopped, because we are worried about the details .In another words, at the beginning we thought oh, this is so much money, how we will ever get this. But we decided to write what we believed and then not to just say now it is all over. To make sure that there were committees involved in move forward. That takes leadership.

YM: The committee will continue to be involved in implementation phase.

There is a new committee. Here is something else, very important. This is very smartest thing that President Levin ever did. Who were the faculty who were asked to be on this. A lot of them were a little bit younger that the President could see would be importance in the institution future. Not the old many men and women who are distinguished and established. A few of those, but mostly young leaders, because it would fall to them to implement it. As it turned out almost everyone of the young faculty here now have been in the position in the University or in other universities. People come and take them away. For whatever reason, Yale seems to be the place it is producing a lot of leaders. So, a lot of educated, Alison Richard in Cambridge. She was the provost here. Dick Brodhead at Duke, Richard brought it to Duke. He was the dean here. Susan Hockfield, the president of MIT, she was here. Kim Bottomly who is now going to be a president of Wellesley. She is still here. Many people on this who are young who the President could see. Now they become leaders around the University, and they know this report very well, because they helped to create it, and therefore they can help implement it. They believe in it and worked on it. It created a very good community of people who had shared internal community of people who had shared visions of what should be here. That's why it could be implemented.

YM: I asked why and how it was received here. Then, what is the essence?

PL: It will tell you here.

YM: Sorry for not reading it.

PL: No, of course you didn't. It spells out what is required for undergraduate education and it is as follows. Two courses in quantitative reasoning, two courses in writing, and those courses and writing can be individual courses or they can be attached to other courses. A certain level in a language. Those are the skills and then two courses in humanities, meaning history or music. Two courses in social sciences, political science, economics, sociology, two courses in hard science, meaning biology, chemistry,

YM: Even for a liberal art major?

PL: Absolutely. Liberal art, by the way, includes the sciences. This is people don't understand.

Liberal art includes the sciences. The word, liberal means free, The idea is the education needed by free men and women. It concentrates on two things. The discipline of the mind and the discipline of the mind means leaning to think in different ways. In different areas you learn to think in different ways.

YM: So, even liberal arts major, someone in humanities major, quantitative hard science.

HS: It is all compulsory?

PL: I'll talk about that in a minute. The discipline of the mind and they say the furniture of the mind. The furniture of the mind is a subject you actually learn. But the discipline of the mind has always been thought to be very important to. Then after all of that you choose a major. You choose, so a scientist might choose chemistry. Humanity person would choose history or history of art or music. Then you take about 13 courses or 14 courses in that area. Then there is still room so then you may take a few more of these. Not compulsory, but a few more, also art, music theater, they would be included in that. Now, one further thing. You say, are the sciences courses are compulsory for the literature major. They are, but there is a certain number of science courses taught in a different way. Because you cannot, it is impossible in a hierarchical subject like that to teach the same way to everybody.

YM: Science to science major, versus science to humanities major.

PL: So the effort we have put much much, that's one of the initiatives of the report. We have a science center. The science center tries very hard to make students who are not science majors productive knowledgeable and able to think like scientists. They may not know as much, but they have an approach that for example, in statistics, in quantitative reasoning, whatever areas they go into, they may be journalist they need to know statistically and quantitatively. Our effort has been making the liberal arts education better. So the some of it is in requirements and much of it is how we are going to make these things really work. So it's very different. I know it's very very different, because your students chose majors much and much earlier.

YM: That's one of the major subjects in this benchmarking study. We went to back and forth, but all national universities in Japan used to do this way; The first two years general undergraduate education, latter 2 years is specialized education. In my case, it was engineering, Even for the first two years was the general education I went something like this. I was required to take some social sciences, languages, English and German humanities and social. And at the end of the second year, I chose engineering mechanical engineering went to like this. Now, many national universities except University of Tokyo, abandoned this system. They started teaching specialized courses early on. Although they still require to take special from start. In extreme case, they have to department of Engineering School at a day one.

PL: That's of course true in England. Now comes to the question, which we have asked ourselves many times. Because you see in many ways, our students are behind your students, because they do not start right away. Specialization, you know better than anyone in engineering. You need to start early.

YM: If it's science, it's even more. You have to start earlier.

PL: A little bit, it's a tag of war. So there are scientists here who wish, don't care about the humanities but many many graduates have told us many graduates who are scientists and engineers tell us that when they hire people, or even when they look back on their experience, from a long grass, not a short grass, but a long perspective, people who have liberal arts, those first years, are better workers, more imaginative, able to think about problems in different ways. Better in generally educated, less specifically educated. For our students, they get in graduate school, but within the ability to think, that may be is worth this slower start. Now who knows the real answer? When I did the Chinese leadership program, we talked about this with the Chinese presidents a great deal. But that case, Chinese students who come here have a terrible time. They can memorize anything. They can learn anything. They can do any mathematical problem you give them. They cannot think themselves. That is a huge disadvantage.

YM: That's probably unique to China, Japan, Korea type of learning.

PL: I don't know if it's true about Japan and Korea. I don't know as many students, I keep saying to those presidents, if you create a system which has the best of yours and the best of ours, your students, because our students are not as good learners, they are not as good learners, but they can think out of the box. They can think and approach things in different ways and that's an advantage. But we have many disadvantages.

YM: They can apply to same thinking skill, apply it to different things, because they learn basic thinking skill whereas we do it more specific way.

PL: **They learn** thinking skill, but there is one more thing. They have as many small classes as we can give them. Their participation in the class is important. In another words, they have in China, you are not supposed to challenge authorities. Whatever the teacher says. Here I teach a class and students go "why?" We don't agree with that. Why can't you do it this way? We should think it should be done that way. The part of the report makes for freshmen many more small classes. From the very beginning they are given a tension and also encourage to not just repeat but to think the things for themselves.

YM: The question is, before this report, what happened? They are not required to take two courses

about politics, reasoning, they are not required to take the writing...

PL: The skills are new. Except for language. There was a little bit of it, but you know it was a thought that some students were working hard. They did have some science requirements. They didn't have any quantitative reasoning requirements, but now they do.

Some of them are new and some of them are old in a different fashion. So, one of the things, one of the good ways we talked about this report is we said we have something pretty good here. We are not going to try to turn it all over. We are going to try to get the weak spots and make them better. So we didn't present this as a revolutionary document.

YM: The question is do you think that this is a kind of unique to Yale or is this something kind of similar to what Harvard did?

PL: Every school has done one of these in the past 10 years. We and Harvard are very very late in doing it. There is a big problem in all of these. That is exactly what we started with the beginning. The burgeoning of the knowledge and what exactly liberal arts education means. How much at the end do you have to know? Because you can only know a tiny bit of what there is to know. First of all, what is the best way to help people think and what is the best thing for them to know. About the second thing, there is much disagreement. I would say something else. It almost doesn't matter so much what your curriculum is in the liberal arts, but it does matter the way you implement it, the way you teach it, what the culture of teaching is. One of the things about Yale, that is a little different from some other schools. It has a big culture. It has been a research university, but it has a culture of teaching. I come from Harvard. I have 3 degrees from Harvard. My husband was a Harvard professor. So, I know a lot about both institutions. I always thought they are the same. Harvard is much bigger. There is about the same, but there is the way there is difference in culture in different countries. There is a different culture in institution. Yale is more teaching center. I would say it is not thought good to be a bad teacher here. I think people don't if I say if you are not a good teacher, you are brilliant wonderful researcher, very famous but terrible teacher, you don't like that. You do want to be a great researcher but you also want to be thought of a good teacher. Just for some reason, it is the way here. Our effort was to nurture that to continue to make that important to draw on that fact of culture and try to make it. Because the way you teach students is so important to how they develop.

YM: Emphasis on good teaching spelled out here.

PL: More small courses which is of course why I said that they laughed at me, because it's impossible. But there are tricks to making a big class smaller. You have them in Japan where you make the class participate, you make it active. You make big science course, you have those buttons where they pressed the answers then they talk to the neighbors. Engagement, not passive learning, as

much as possible, not passive learning.

YM: So, this report says, advocates the transition from more specialized education to general education?

PL: No. It wasn't more specialized. It's just a different form of. It's not radical. It builds on our philosophy and theory. I would say it is very hard to write a radical report now. Harvard tried. It has not worked out. It has been pushed more and more, these are more and more quite similar. All over the countries, there are more or less similar.

YM: Not only nation wide, but UK vice chancellor Foot, he tried to make a radical change and he is in trouble. He has to solve that.

PL: Of course, Alison Richard, who has spent so many years here. She is a wonderful leader. When she left, we were crying. We knew that Cambridge was getting the top. We also knew that Cambridge need to change and she was a perfect person to help that change. But, the radical change in this world of ours is very different because then the issue becomes what are you going to replace with what and how is my field of knowledge is going to. So that people are agreed about developing the disciplines of the mind. They are agreed more or less agreed. Some scientists no, but mostly they agree that liberal arts study is an advantage. There is no way of approving it, because you cannot approve it until people are 50 or 60 years old. But there are many people who think it is the most advantageous to build and create people who will be able to move from one job to another and who will be able to think in different ways. But, they are not agreed about what you should study, the furniture of the mind. I say more chemistry. This one says more political science. This one says more this. It becomes, somebody says do you need to study religion?

YM: Is it required to take religious courses?

PL: No, Harvard has just had a big fight about. I think they decided no. But I will say we do not require it but our students are very interested in. That is the right way to do it. They should take courses in religious studies. They should be interested in it but they should not be required. It's why one thing is privileged over another. When Yale began in 1701, people only took Greek and Latin. That's why they took it. And Hebrew. Then, they took some mathematics and philosophy, but they are all very structured. If you look at the history of American education, you can see exactly where it changed and when. One of the big changes in the 19th century was at Harvard with the president Elliot. He introduced the system where you could select with what courses you wanted to take after some preliminary courses.

YM: I have read about it.

PL: You seem to know a lot.

YM: Not exactly. I did some studies your American system and British system. Now we may do something like this after this benchmark study. I doubt that we will be ready to do something with this yet. By the way, our work is funded by the government right now for this benchmarking study. It is not quantitative comparison between the University of Tokyo and Yale, more qualitative assessment comparison and try to learn from friends not to imitate you. But hopefully you could learn from us.

PL: Oh yes, we think we have. We are very aware that Asian countries students are ahead of our students.

YM: In some ways, we are

PL: That's why we say. The best of two worlds would be very good.

YM: We will study this. Let's see, what else do you do, you teach yourself. You want to be a good teacher.

PL: I do. Remember, I'm only teaching only once course a semester because I have so much else to do. To tell you the truth, it was a very hard this hard this year, because I have so many different things. I do a lot of different things. For some reason, all became very important this year.

YM: Unfortunately, President of Komiyama of the University of Tokyo keeps saying the same thing. There are so many things and some people who do not know the University management says, "Mr.Komiyama, you should prioritize, but he says "no I have to do this and all.

PL: One thing we have had excellent leadership for 13 years. President Levin, he is not a great speaker you know. Not charismatic but visionary.

YM: We see him a lot at least once in Davos at a time of World Economic Forum. He is a leader of global university where President Komiyama is a member I accompanied him. Also he visited Japan about two years ago, a year and half ago. I also visited him this time of last year. He is a great leader. He is not a charisma. But maybe, different kind of charisma.

PL: Yes. He took Yale from a time of very weak leadership. Now for 13 years, step by step, he has a vision where he wants to take the university. Step by step, it has been very impressive. I guess my point is that there different kinds of leadership.

YM: Summers is trying to do a different way.

PL: Summer was a good friend of Levin's. Very very smart man. But you cannot take in organization and lift it up and put it down where you wanted it to be. It just doesn't work.

YM: Probably you can do it in business corporation, because it's more single major, share holder value, money, You can make 999, 998 people are happy.

Or maybe if you did work poorly in 998 measures, but one single major is money. Shareholder value is fine.

PL: This is why I think your benchmarking study is right, because Statistics only take you so far in these issues. The issue of quality of experience, texture of the experience.

YM: For example, some of the rankings just look at the number of faculty to student's ratio, citation, number of papers, how many foreign students you have they are very important too. We learned that we are not very international. We have a very small number of international faculty in the University of Tokyo.

PL: You know what. I would be a fan of eliminating the rankings entirely. I think they are ridiculous. I'm speaking for myself. But there are some people who shared my views. You know why. They drive the wrong things they are the wrong measures. Just exactly what you said. Not every institution can or should be the same. It's non sensical. I will say one thing. When our president drives international vision, it isn't to move up in the rankings, because he believes that students should look globally they must look at globally because that's the way the world is going to be. I think the ranking thing is way out of hand. It's driving some people to do things that are really wrong.

YM: That's the rational way of thinking about ranking. At the same time, however people like Linda Lorimer said in the email saying I'm pleased to announce that Yale has been ranked in number 2 in some scores.

PL: Linda Lorimer is a very good friend of mine. I know she is very pleased by it. But I disagree with that.

YM: The MIT, if you visit their website, the ranking it said it can lead to all kinds of rankings.

PL: It's really bad. You are going to see the discussions about it next years. It's really bad.

YM: That's why we decided to do this kind of benchmark study. Can I get back to teaching? So you teach English writing?

PL: I teach poetry. I teach both reading it critically and I teach all of the technical aspects you need to write it. So, I teach in different ways and different levels. Whenever I teach it, my main purpose is to teach an appreciation and sophisticated understanding of it. Because I know the very few people this room are ever going to become poets or are going to make their lives but I believe that the (citizen?) that is the educated about the arts of which poetry is one.

YM: Have you written a book about your poetry?

PL: But not my poetry but about another.

YM: Do you make your own poetry?

PL: Not any more publication. I used to. My main work now is administrate. I'm not held to the same publishing standard with other faculties, because it's different. Of course, that's my PhD is in that. My publications are in that. That's one thing about Yale. Not all of our administrators, a group of administrators do teach. Most of the administrators here work for faculty members here. I was once a faculty member. President Levin was in the Economics department. Dean (Sallibey?) was in psychology department. Charles Long was within the English department. That's a little different from some other universities. Our administrative structure all comes from the teaching faculty.

YM: Are you involved in international activities? Exchange or admission teaching like curriculum for international students? Promotion of international studies or something?

PL: Of course, at Yale College, all the international students we admit take the regular curriculum. I'm not directly involved with the initiatives that are going on at the globalization center or at Roth(?) I know about them but I'm not directly involved.

YM: In that case, I will address the question differently. Are there more language requirements after this?

PL: No, there are not more, but there are more urging people who go abroad and practice the language there. Many people are going abroad. Because you know the language is, people have been studying dramatically changed. The Asian, Chinese of course, moved up to number 2 after Spanish. But all Arabic number 3, but even Japanese and Korean have moved up. French moved a way down. Italian moved down.

YM: Something happening in the University of Tokyo. In our general education, College of Arts and Sciences there is much more demand in Chinese language teachers than French. But it's very hard to decrease the number of French teachers.

PL: This is always a very big problem here.

YM: Especially if they are tenured.

PL: This issue is actually, I was the person, staff person on the new tenured board. How people get tenured at this university. One important part is that how you change the size and composition of the faculty. In other words, at a moment, French is much less important. Over represented. In the rankings, Yale has the number 1 French department in the world. Now you go to the French department and say you don't have many enrollments. So we think you need to decrease in size. Then they go "where is the number 1 French department in the world? Do you want to make us the number 20 French department in the world?" How you adjust the size of the faculty, that is hard if we have the ways to do it, we do it. For example, when somebody retires in the English department, what happens to that slot? It just doesn't go back to the French department. It goes to a committee where there is a pool.

YM: Dean of the French department would insist on hiring a new person.

PL: He cannot.

YM: He may but he is not allowed to do that.

PL: He has to submit that slot to the big committee. It's called for French, it would be Humanities Committee. It will decide where that slot will go.

YM: I think we do similar ways. To Eliminate and fire someone are very impossible. Very difficult. So wait him to retire and do not hire new. So it takes a long time.

PL: At Yale, you cannot insist someone retire. The federal government has laws. We have teachers here teaching 74.75,76.

YM: Fortunately, we have a mandatory time. It's very interesting, used to be 50 something, and keeps going up. This year, it is at the University of Tokyo, 62 to 63. It will be 64 in two years down the road. Every 3 years, it will be increase until we hit 65, but not any more. After that you have to retire, but you can get a new job at private school where mandatory retirement is 70, but not after 70.

PL: That's interesting because there is, you can retire from Yale, somebody else may hire you to teach a few courses, but we cannot make anybody retire unless they are inept. The truth of the matter is here that by the 70 between 65 and 70 most people retire. But, there are a few people who stay and the worst is when they are scientists, because they have labs, because they are sitting on their lab spaces. Sometimes, they are very famous scientists. There are the last ones who are Nobel

Prize winners. They don't want to give up their labs. But they don't have grants. That's definitely an issue in American education but we have no choice because of the Federal government. We have programs that make it attractive to retire.

But that's not your problem.

YM: We have a problem in different way. You talked about a lab. Here at the University of Tokyo, this is what happens in Japan. If you are engineering major like I was, as I said, the first year and second year, you are general school, college of general education. In the 3rd and 4th year, you belong to specific department, mechanical engineering, for example, within the College of Engineering. Then, more than that, I belong to the specific lab. The size of students may be two from the class, two more in senior. When I was senior, two of my class, two in senior, master students are maybe 2 or 3, belong to one lab. Does it happen to here? The students here like engineering major or science major?

PL: An engineering major here may very well work in a faculty member's lab. A part of the team, scientists too. Not so important. Graduate students, definitely. Their identity is formed by the lab at graduate students.

YM: Undergraduate students could be part of the lab but you don't have to be.

PL: I'm a undergraduate, I go to you a lab 3 afternoons a week. I work there. I work with graduate students and (PI?), a big person. I do work in your lab and I'm glad to work in your lab. It's important but it's not the most important thing.

YM: How about the difference between sciences/engineering majors versus humanities/ social science majors? In Japan, even humanities and social science studies majors do belong to certain labs or office.

PL: No, maybe we should have that. We don't. I want to write my senior project. I choose a faculty member and I go and say "may I work with you on that?" You say yes. You work with me. But I'm still taking four other courses and they can be very different from where I am working with you. So, it's not so important because I'm doing other things at the same time. I'm a major, it's my principal area, I may be working on my thesis, but I am also taking music, history, art and other very different things.

YM: This might be a minor detail. In a case of University of Tokyo, engineering student, like me had my own desk at a certain lab so I belong there. Of course, I go to other teachers and take courses because it's required. I'll spend more time in this lab with my own desk toward my graduate thesis. Does it happen here?

PL: It might. But it does not definitely. We have had many discussions about how to assure that undergraduates working in labs get an important experience. The faculty member is too busy. Then, the faculty member has the person running the lab. The person running the lab is graduate students. The very very bottom is the undergraduate. As we all know, undergraduate could be just washing test tubes all afternoon. That's not what we want it to happen. We work hard to set standards for the way that undergraduate is treated in the lab. That undergraduate must be a part of the group when the group meets with the faculty members every week. I still think there are more, they don't shape their identities in the same way that they do as undergraduates. There is one big issue we haven't talked about. That is, even though I know in China and Japan, you have an extracurricular life at school. It is so important here. Some people think that one of the reasons that Yale students have run a big organization, big business people is, because experience. I don't know how to explain it but some students make their studies secondary, and they spend all of their life writing for the Yale newspaper.

YM: It can happen to many Japanese schools. Talking about extracurricular work, does it include athletics? My question is to say if someone is very good at baseball or something, do you have any special program which admits these students who may not be qualified academically.

PL: Unfortunately yes,

YM: This happened in a case of American football. You have a strong crew. I used to row. This year is going to be our 130th anniversary.

PL: You row light weight?

YM: Today I would be light weight, a little stronger. We tried to invite some people from famous schools. Yale is one of the top lists. Look at your record; you are too strong, very strong.

PL: You know why? We started crew in this country in 1852 at Harvard.

YM: You have a history and are they admitted because of rowing skill?

PL: Let me explain. We do not do the way a lot of other schools in American do. At the big football schools, the big athletic factories, the divide between students and athletes is complete. Here, you have put your finger on greatest tension in admissions that there is. Here, Harvard, Princeton, we have many versatile sports. We have 35. Harvard has 41. Every one of those sports gets a certain number of admissions slots. Now let's say you are a crew coach. And you want a student. You come to me in admissions department and you show me. I can say yes or no. I say plenty of times "no". And the coach goes "why you say no? we need this. We say no a lot, so we are not like other schools but it is a preferential slot. It's a very big issue and President Levin has been very active in

trying to reduce the number of slots. At the same time, we have opportunities to play sports that are not varsity. So, you can because our residential college set up is very important to the nature of the university. When you talk about Yale education, you have to talk about holistically. It's not one thing or the other. It's package. At colleges, you can play a sport and you can play against the other colleges and you don't have to even be well to play. There are two levels, which you can play sports, anybody, Intramural.

YM: The question is that probably this athlete may receive, enjoy preferential slot, but once they are admitted, do they have to go through the same requirements. They could be admitted but they could be franked?

HS: Fail?

YM: Do they fail?

PL: They could fail. Sure.

YM: Do you see more failures among athletes than the students who are admitted normal procedure.

PL: Our graduate rate is 96%. That means two things. Probably, the people we admitted are capable of doing the work. For example, there are some very great schools, Stanford is one, Duke is another where the athletes in Michigan, the athletes could not compete with regular students. There are special courses. We don't have any of that.

But I would say that the biggest problem with the athletes is not that they aren't smart but they are not intellectual. They are not as interested. They are almost all interested in making money. They go to Wall Street. They go to business. They go to finance. They are not interested in a lot of the same things that other Yale students are interested in, but one thing to remember is that, I'm sure that Peter Chemery told you this in admissions. We have many many different kinds of people. They all passed a certain academic bar, but if you think we are taking a great number of people from bad schools, where they were at the very top but poor education. We are admitting them here. And they are going up against people who from the very best schools in this country. One of the greatest problems we have for undergraduates is how you teach a tremendous diversity of students, if you give me all the students who all take those tests and get into the University of Tokyo or whatever, score very high on the test, we could do that tomorrow. You know what. It would be much easier. Sometimes, I think, let's do it. It would be much much easier.

YM: We stay with easier way right now, but now we are smart enough to know that it is not a right thing. Quantitative test only scores, if the difference of one point you are in, I'm out.

PL: Well, what we were engaged in has to be turned social engineering. By the way, many of our faculty don't like it, because they want your way. Just give me the people who, don't give me people I need to (educate?). I go, maybe this person can do it, but he or she has not had the advantages.

YM: Maybe He is not prepared for this.

PL: That is the biggest single issue for us in education, because our faculty will say I am the top very top person in my field. I don't know how to teach that person, I can teach only that person. Yet, the mission of the University is both to be global research place and also education, very hard. We have more problems than you do. But I think yours are a longer term problem.

YM: We have to go. Thank you very much for your time. One thing, at a start we talked about this, fragmentation of research too much specialization. So if you continue to give specialized education, somebody will be specialized in narrow field without knowing other things. Some schools emphasize in general education. We do approach a little differently. Still we didn't (send?) area even in the same area, material science, for example, it is subdivided in detail. So, what we do is within one domain, we are trying to give kind of integration lecture. This is called academic overview lecture. This describes 2 ways. Our President Komiyama describes as a structuring of knowledge. It's not like an interdisciplinary from humanities to social science to natural science. It is still within the narrow area, however he says, even in (...?) subdivided very very minute sub domain. So, when you have time,

PL: Thank you. I would love to.

YM: I will study this very carefully, from this paper.

PL: My email is here. Should you have any question, please come back to me.

D.6 Peter Chemery

Yale University: Peter Chemery (Associate Director of Undergraduate Admissions Office of Undergraduate Admissions)

University of Tokyo: Yoshihisa Murasawa, Hiromi Seki

YM: This is the offices for general undergraduate admission, but you are in charge of specific regions, countries.

PC: Meaning that I travel there and I read applications from abroad, (...?) committee there are lots of other things that a senior office admissions officer would do, but is one of the ways is (...?) not a single position here, even a new staff members, they have geographical assignments.

YM: China, India, Africa but not Japan?

PC: I cover Japan. There was a time when I covered all of Asia and Africa. But, the applications coming from Chinese and India are growing. So many that we have over time had to subdivide the area. We have a young officer who is from the UK and it makes sense for her to take some of the parts of the Asia which use British patter education system.

YM: Patter means?

PC: Meaning, all level and A levels has the structure of the general curriculum. Or, some variation of that. So, it make sense for her to take Singapore, HK, Malaysia, where the national education systems are fairly uniform and general pattern of the education, that is a set of national exams at the end of the year 10 followed by 2 more years of pre-university schooling is the norm of that base. I still travel to the other areas.

YM: You travel to China?

PC: Yes.

YM: This is all undergraduate. You don't cover graduate. Let's see, applications from China is growing, Is it ok for you to tell me about how many applications you receive every year and how many you admit?

PC: This year, we admitted, we got about 400 applications from China and about 200 from India. It's useful to understand that we see students from China applying not only from mainland China, but from overseas. There are some government scholars from Singapore. There are Chinese citizens

studying at American boarding schools. There are Chinese citizens studying at UK. We might see them coming from other places and in a sense that their exposure to English is much greater than students studying in mainland schools. We may feel that some of those students are better prepared for the kind of curriculum at Yale.

YM: At least, language and educational system. 400 Chinese citizens including some from mainland mostly from other parts.

PC: There are actually 400 applications from mainland China,

YM: Plus overseas. 200 from India.

PC: There are Indian citizens in the US and at many parts of the world. One of the students we admitted from Japan this year came from Thailand because her father has been in diplomatic service. It's little hard if you are talking about international students that are the students do not hold the US passports. It's a little difficult given the world we live, to link them geographically to their home countries.

YM: I just went to MacMillan center before coming here. The lady said that they have an exchange program with University of Tokyo. 2 or 3 out of 4 are non-Japanese coming from the UT but in terms of nationally they are not Japanese.

It's very interesting. Could you tell me out of 400 Chinese and 200 Indians, how many you accepted actually?

PC: Our admit rate outside of the US is between 4-5%. And generally without looking at specific numbers, the rates for admissions would be at least (...?) were admitted.

YM: Is it because of the (...?) or the quality?

PC: The rate of admission for the students here in the US is only about 9%, if you take a sample of all the students applying from the outside US and factored into the just language component, are they fluent in English, are they able to participate in year 1 this level of schooling in English, the admit rate is similar. The language preparation is the big issue for students. Yale is also one of the few? college in the US is need blind for international students. Any students admitted to Yale are eligible for the same need based financial aid, as we offered to the UC citizens. Because that is widely known to applicants from all over the world, some of them are not terribly qualified. But they know that Yale has this funding. This is probably responsible for someone lower admit rate internationally as well. We also get applications from developing companies; some from enormously well qualified students or some from students who are simply trying to escape from undesirable circumstances.

YM: To your knowledge is it unique to Yale that you give the same kind of need-based financial aid to international students?

PC: It's not unique. There are a few universities, Harvard, Princeton, I believe MIT. There are a couple of others. Those are ones that I'm sure about. I should add that it's very expensive.

YM: For domestic students, I have a feeling that you probably asked them to proof the need based. Probably you tried to do the same thing to international students; but maybe it's a little tougher. If it's American domestic students, you may ask parents tax return or tax account or something.

PC: There is actually an international system here in the US for determining financial aid. The college scholar of service is just like the Educational Testing Service (ETS) which administrates SAT here in the US. There is a central agency which services clearing (...?) for financial aid forms. The students can apply and they fill out the standard financial form on line and they submit their information electronically to the college scholarship service. The service then (...?) official copies of that form to whatever college a student designates as recipients. Of course, the fee is involved. This is the form that all colleges in the US would use. So they should be getting the same information about families finances, taken out of this form. You can go to this site and download the copy of the form if you wanted to do and look at by yourselves.

YM: Basically the same between the international and domestic students.

PC: There is a similar form. The International student's financial aid form which is produced by the same organization, the College Scholars of Service. There is a briefer form, but cannot homogenize all of the information. So the families are asked to submit copies of their tax return and bank statements.

In time, financial aid offices will have more data which to calculate for example, the cost of living for different parts of the world. I'm sure it's imprecise calculation, now computer to the calculation we can do in the US. Because here we can see what the value of home is. Families report their home equity is part of the calculation. Some schools use home equity to determine financial but other do not. So, there is a local difference in a way schools perform their calculation. But that information is available.

YM: Home equity in theory because you can borrow against home equity.

PC: It's difficult to, we try to be fare to students. But it's also difficult to evaluate debt. We have a separate financial aid office with officers here who are experts in this kind of in this area. I usually I'm happy to speak in general way of financial policy, but I don't have that kind of background to give you.

YM: That's fine. We may come back to that. Before that, you said that Chinese applications 400, Indian 200. Do you remember how many from Japan?

PC: Not at least many. We might get 40 or 50.

YM: The rate of admission may be 4% as well?

PC: This year, we took 2 or 3 from Japanese schools. I think there is a difference of somebody applying from an American School in Japan and Tokyo those are not. The students who are attending international schools tend not to be a Japanese citizen. St. Mary's or international school. But this year we have 2 or 3 from Japanese schools. We have started to see students from the Japanese schools who have better access to English. One school I read for the first time this year that seems to have an English division. I don't know if it was the school connected with Tsukuba or Shibuya but one of the high schools had an English division which curriculum is decided. So, suddenly, you can see students with the traditional Japanese schooling but also very good preparation of English.

YM: If students at the UT who have finished two years of university education, can they apply to here at junior level? Because they say they have finished first 2 years.

PC: We don't speak of levels within a four-year curriculum here. But I would also say that we have a very few transfer slots to offer. There might be 20 to 25 a year. We probably have 7 or 800 applicants each year for those slots. It's possible if a student from the UT were to apply, if his or her English was excellent, if everything checked up, we might be able to admit them. But it would be rare. It's even more difficult to get in as transfer than as a freshman, because of the very low availability of slots.

YM: so transfer, if transfer is allowed, then he or she can carry the credits over from Japanese school to Yale?

PC: We would have to do someone in the College Deans Office would have to do formal evaluation of transfer credits. And the courses taken would have to match up with the ones? offered here. There is (not?) an automatic transfer of credits. For example, this is liberal arts college. so we don't offer business or accounting, or anything of the technical nature. On the other hand, we do have engineering; so there are some fields which course content might be comparable while others which is simply not.

YM: Standard ways to enter is as freshman or come to graduate school. I have a strange question. At the UT, one big issue is education in English. Our primary language is in Japanese. The UT and

many other Japanese schools are notorious for not giving courses in English. Not many courses in English. Naturally, here in Yale, you only give courses in English. Is there any possibility for any foreigners who come here to earn a degree without speaking English? You don't think it will happen really. You don't have a need. Whereas in Japan there is a pressing need in the UT, Keio or other school, to have system or program in which you can come to Japan and earn a degree without speaking Japanese. In some schools, you can do it. She went to school where

HS: All the classes is taught in English.

YM: Without speaking a word of Japanese, you can earn a degree. At University of Tokyo, in theory, we can do it in graduate school and some certain concentration you can do it. Undergraduate, you can not do this at this time, but there is a strong argument that we should install a program which allows you to do that. In the US schools, you don't even think about it.

PC: We don't think about it. It's partly, simply a question of geography. Japan has a very different rule visa vie the rest of the Asia and US does. I do know some Chinese schools that routinely send students to Japan. There is one I don't know its name in Chinese, but English name would be the North East Side High school which is a couple of hours outside of Beijing. They have a very fine Japanese division where students can take the Japanese proficiency exams and a fare number seem to go to Japan for their college educations. I never asked them whether they will offer in Japanese or whether they will operate in Chinese. I understand what you are saying. It strikes me as a perfectly logical possibility for Japan but no for the U.S.

YM: For Japan and Korean school, for example, Korean is not a big language, neither is Japanese. Therefore if you ask what a global language is, they say English today. Therefore, Japanese schools are talking about installing a program which will allow you to complete degree only in English. Korean university does too. Korean University called Korean University. They say about 30% of courses are in English. There are several programs which you can do only in English. I have a feeling that many Chinese universities would start doing it. American universities do not do it partly because of geography, mainly because English is the global language today. But in the future, China will be a major factor economy; there are some predictions that Chinese economy will surpass the US in 15-20 years. In the future would it be possible for major American University to install a program which students can learn Chinese or something?

PC: I'm not able to even respond to that, because I'm just an undergraduate admissions officer. So I don't know if anyone over drinks in the evening talk about this. So, I just say as a parent of two small children and as someone who travels that part of the world, I am disappointed how difficult it is to find Chinese language instructions for my children as part of school curriculum. There are some schools in New Haven offered for a while, but they cannot sustain the program. It's different in California. I used to travel Alaska. We'll see what people do here is that there is a Chinese school.

These are chiefly for ethnic Chinese whose parents would like their children to understand the culture from which they come. These are not programs that would be easy for like children who are (not?) anticipated. But one of my colleagues who works in the office right below me, she adopted a little girl from China. She herself is Chinese. She and her husband adopted a girl from China and (send?) Chinese school, in addition to public school here. In the East Coast, that's the only viable option. Because it's one day a week, it's difficult for me to believe that this is producing children with kinds of language skills they would need to later on. They have to go to college.

YM: It would be quite sometime if any American major schools like Yale will install program like.

PC: It's safe to say so.

YM: It may not happen. However, you may put more effort in language education or international education so that American students can learn foreign culture and language.

PC: There is also, again some of the other people you are meeting today, tell you more about this. In the last 5 to 10 years, the University has very deliberately trying to explore exchange possibilities with other universities. Not in the traditional sense of educational exchange, but simply trying to explore new relations with universities abroad. Because scientific research seems to require more international collaboration than it is before. For example Yale operates a major research laboratory on a campus of Fudan University in Shanghai. Another is Beijing University. One in Shanghai is health science and one in Beijing is agro-bio technology related to agriculture. But also on campus, at the Beijing University, we began a program for undergraduates in which, there is a joint faculty made up of faculty members from Beijing University and faculty members from Yale. Teaching a group of undergraduate who are half Beijing University students and half Yale undergraduate living together in a dormitory setting and taking same classes together. That's a different from any kind of exchange program we had before and suggests a possibility of actually sharing space with other universities. So, if you were to turn a clock ahead in 10 years, it could be possible to think about educating Yale students in Chinese or Beijing, rather than here.

YM: Ok, that is exactly right. It make a little hard to image that you are educating American or Chinese students here in Chinese language, but in China.

PC: There are a number of American universities that lay the groundwork for things that no one can quite think about it yet. For example, Johns Hopkins opened a large campus in Nanjing. That has been works for years and years. And they finally opened the campus. The University of Michigan now has campus in Shanghai. It's actually on a campus of Shanghai Jiao tong. Those are three major universities with significant presences at Asian universities

YM: You don't have overseas satellite campus yet.

PC: We do not.

YM: As you said, in 10 years down road, you may be, but you have no specific plan now?

PC: I'm not part of those kinds of discussion. I couldn't tell you. George Joseph actually may have better information on that. The Office of International Affairs is the places where those things are talked about.

YM: We met him and he was generous enough to spend entire afternoon. We will meet him right after this for lunch. We are going to Japanese restaurant. How often you go to China?

PC: Once a year

YM: Do you have like a Yale fair at high school or is it a joint recruiting fare for multiple high schools?

PC: We have different possibilities. One it's only the last 4 or 6 years, Yale University in general has been traveling regularly to China. Now there is, for example, President Levin had a delegation from Yale have been to China last 2 week. I'm not sure if they are still there. That is the business not directly related to undergraduate admissions. That's general.

Talking to 2 people who can make possible some of the things that Yale would like to (operate?), As you may know, we have a center for Chinese law here on campus at Yale. And probably, Yale more than any American university has a history of engagement in China. There are lots of reasons agendas that are being worked out and (...) like that. But, if you are talking only about admissions office at the undergraduate level, going to china, we are, we have traditionally travel to china with a group of anywhere from 3 to 5 colleges and we visited both international schools and national schools. During the school day, we would make school visits, and in evening we might offer public information sessions at international schools. It's very difficult to state a public information session to which everyone is invited. We simply can not do it. When we hold an evening information session, we tend to invite the students who are enrolled in international schools only.

YM: International college or international high school?

PC: International high schools. This spring we travel with Stanford, Dartmouth, Duke, Wellesley and University of Chicago. We are trying this trip to introduce students to a variety of top schools in the US as I sometimes tell audiences the Ivy League is an athletic arrangement. It's not proxy for the best colleges in the US. This is the time of year when counselors in the international schools are beginning to advise 11 graders on the college choices. Many of those families will be visiting

American colleges or universities summer before year 12. So, we would like to address them early in the admissions cycles so that they can have better information of before they begin to plan their trips and applications. We are on a trip like this, we would like to fill in days with visits to national schools. National high schools. Now these are very difficult to arrange, because Chinese high schools don't know always what we are trying to do. I would say maybe what they are trying to do is not universally welcomed. These are sometimes Chinese schools are they prefer best students go to Chinese universities. I never, you can never tell how schools feel about the visits from representatives of American universities and colleges. This changed, recently much easier. Even so, for example, one school in Beijing, we arrived and the school's chefs prepared a huge banquet for us. It was very nice. What we are trying when we visit a school is to speak teachers if we can with students. When we visit many of the national schools here, the time you have with students is very limited, if you get to talk to them at all, because They are not used to interrupting the school. They don't understand what we would really like is class room of interested students to speak with for about one class period.

YM: When was your last of your trip to China?

PC: In April, we started in Singapore, Bangkok, Hong Kong, Shanghai, Seoul, Beijing,

HS: Not to Japan?

PC: A group went to Japan last year, and generally we try to go to Japan every other year. The international school in Tokyo is relatively small. We haven't found a good way of visiting Japanese schools. There are not enough English speakers who make our visit worthwhile. We haven't, plus, it's also very expensive. To add plain fare onto Tokyo into like the trip like this, it's prohibitively expensive. Just one visit plus, it's expensive to rent hotel space and so forth. The market right now that American colleges see for themselves in Japan is relatively small.

I'm interested in the students in Japan who are good enough to get into Tokyo University and that's probably where most of students in that category with that good prefer to be still. There are some interest in going abroad but not yet huge interest partly because this is where those students expect to come back and have careers in business or education if they can get into your university. I usually assume that this is going to be their preference. Because, we don't see very many of them in our applicant pool.

HS: How do you select those schools you visit?

PC: We look at where we are getting applications I guess. We have possibilities of successful visits and sometimes I meet someone who says "Can you come to school?" It could be as casual as that. In Beijing, we simply choose what we think are the best schools. High school affiliated with (..?) University is probably the best of the public high schools in Beijing and has probably the longest

history of sending students abroad. The head of school there is receptive in a way that maybe heads of schools at other universities are not. Even Beijing number 4 is a different school than this one.

YM: You typically go to Beijing?

PC: This is very. We go to Shanghai and Fudan. Again, a long history of sending over exchange program with American private schools, so there are a lot of students there who had a year of schooling in the US. Shanghai Foreign Language School always seems to have students who are interested in studying abroad because of the foreign language curriculum. That's what they are preparing for. We are in the very early stages of visiting high schools and figuring out which ones will be productive for these visits and which ones will not. But just as a basic rule of thumb, we have to look at our prior year's (...?) of applications and see first with where the applications are coming from. If we see a significant number of applications, we have indications at least that the parents of those kids are interested in us. The parents are interested in, then the schools would be.

YM: You mostly way go to China, you mostly talk to high schools. Do you also talk to universities for exchange student's purpose?

PC: We don't have. That's no within my sphere and different operations. I think the numbers of exchange students we could accommodate is fairly limited. It's not something that you would necessarily go out and recruit for. It's something you might arrange in a formal way.

YM: So you do just visit high schools

PC: High school students are my.

YM: Probably in Japan for several reasons, the best students still want to go to the University of Tokyo or Keio, because of their ultimate objective is to continue to work in Japan and government and big bank. Another is international high schools may not be the best high schools in Japan. That's another reason. We, at the University of Tokyo, the number of international students are very small. If we include graduate school not as small but I believe it's 8% or something of total student's body, which is probably smaller than yours. 90% of them are in graduate school. So, in undergraduate international student is very small as percentage of a total student's body. We are very interested in increase the number of students in undergraduate. Again, one barrier is the language, so we will mainly increasing programs in which you can you only use English. We don't have accumulated know-how or recruiting foreign students from foreign high schools. Maybe we should go to high school and visit them, explain what giving information to them without what we should start sometime.

PC: This is what you might do is hand some of the conferences at admissions people, professional

conferences, just so that you could get an idea of what the industry, because it is a global industry of seeking students who are trying to place in appropriate schools.

YM: Is it conference of admissions people?

PC: The professional organization is the National Association of College Admissions Counselors (NACAC) That's going to be the organization as a whole largely the US. There are small subdivisions called OACAC, Overseas Association which has its own summer conference. For example, this summer, it's usually in July and this year in Vancouver, I'm not sure if it's still possible to register for that conference, but I can send you the link to the website. That would be attended by counselors, at mostly counselors at international schools and by people like me, admissions officers at universities. In recent years, that has included more counselors from UK and Canada. There are some foreign universities for representatives. You would be the only people from Japan. Some Korean universities began to. You'll see also counselors from Korean high schools. They are very eager to get their students into American colleges and universities. That's one place to look. The other is European Counselors of International Schools. The European part of the title is residual from a time when this was chiefly European schools. Right now, it includes about 600 or 700 international schools around the world. These are members' institution for secondary level. I'm sure we looked at Japan. Sacred International Osaka, Hiroshima, Canadian academy. This organization is basically the organization that administer international baccalaureate curriculum. They have a big conference ever year part of which is devoted to curriculum review and teacher training. It's the annual professional conference for anybody operating Ivy schools or teaching at. There is a sub group of this organization Counselors of International Schools which is largely made up of college admissions officers around the world. We need every year in November. This year, the meeting is taking place outside of Madrid. Those are the two professional conferences that take place every year. If you are just trying to understand how the process of recruiting students works here in the US and around the world, you could look at the conference proceedings for each of those conferences and kind of get away with pretty decent ideas. There are probably regional conferences taking place. Australian university has their own professional organization because they are pretty well traveled around the Pacific Rim trying to recruit students to come to Australia. But, I'm not saying you would necessary want to go every year if you just want to learn.

YM: Just once would be. You said you go to also India, you said.

PC: I read all of the Indian applications. There is someone else here who travels to India. We have been only traveling to India the last 2 or 3 years. We have been able to do that because a donor has put out some money to underwrite the cost of the travel. But he is also interested in Pakistan and some parts of the Middle East. So essentially, we use his resources and my colleague Diana Cook, who covers Pakistan and Middle East and does the Indian travel and the group moves on to the other parts of the world.

YM: Whereas you cover Far East. Singapore, Beijing.

HS: I'd like to ask more about undergrad admissions at Yale. Let's say there are two students from Japan and China. They have equally the same performance in their SAT, exactly the same performance. You have too many applicants from China and a very small number of applicants from Japan. Do you give priority to Japanese students in that case?

PC: A number of students we can take from Japan and China is very small anyway. So, it's, I don't think that the position that situation has a reason or would a reason. First of all, students are never identical. You offered a hypothesis but it has just never happened.

HS: Similarly identical or similarly same level but different background.

PC: Students from China is interesting to us and important to us because Yale engagement with China. China is a very country for everyone unless we are admitted to doing the certain amount of business there. We would open ourselves up to too much criticism. You cannot engage in initiatives with the Chinese Ministry of Education and with Universities there and schools and say we are not going to, we have to. We are interested in students from China. We are interested in students from Japan partly because we see so few of them. Japan is so important as an economic force in the world. So we are interested in Japan because students from Japanese schools are hugely underrepresented in our student body. We are interested in student from China because we have lots going on there. So, two totally sets of reasons. If you walk around the campus, you will see that Asian Americans are not underrepresented at all here in our undergraduate student's body, but Japan and China are two very different cases and those students would never be put side by side and say in such a way as to make forces to pick one.

YM: Do you see the international admissions increasing? Right now, it may not be a rigid role, but 4 to 5% admitted rate, but if the applications increase, this suggests at the total intake of students from these countries will increase. Is it the case?

PC: You have to ask president Levin.

YM: If you get a trend, has it been increasing?

PC: It has been between, it's hovered around 9 % for a while now, I don't think we have been making committee decisions with any particular percentage of class in mind. But I agree that admissions, if applications were to double in the next 5 years, you would wonder how that very low admit rate would play out in the world. I don't know the answer.

YM: We heard from someone which I haven't proved or confirmed, after 9.11 the application from China or India decreased sharply. But it's coming back. Is it the case?

PC: In that year after 911, kids were worried about whether they can get a visa to study but the normal increase as we come to expect to resume right after that

YM: Even in Japan, I see a longer line visa application at American embassy in Tokyo. They complain it is taking much much longer time. It happens in China to get a visa in Chinese at US embassy or consulate in China, in which kind of discourage them to thinking about studying in the US.

PC: That seems to be great eagerness studying abroad. We haven't had no one from China has ever been denied a visa. If there have been, for one thing, we have alumni in Beijing and Shanghai. Both prepare students for visa interviews and whom we can contact if we see there are going to be problems in the embassy. Usually prominent Yale alumni help with these things.

YM: Without going to detail precise number, do you recall the number of applications from China has declined after 911? Today, you said, 400. I'm feeling before 911 it was a certain number it went down and coming back to up to 400. Is it?

PC: I don't think it decreased by very much. Not enough so that I felt less work for me.

YM: You don't recall. One statistics says that the number of Chinese students studying in the US versus Japan US flip-flopped. There used to be more graduates including in the US than Japan. The number is higher in Japan. At Yale, you don't recall sharp decline.

PC: There was a decline across board in international applications. But I don't recall China being unusual.

YM: So, across board decline, but China was not conspicuous.

PC: But I also think that Japan has been very prominent in China's economic boom recently and it could be that people learn about how much investment took hand has made in new China that Japan may be a more likely destination for study. There was a story kicking around the new airport in Beijing that the airport is financed by a low interest loan from Japan. There is apparently a (prack?) that was Japan complained that it was not being acknowledged for the (prack?) woods made, but there was a (Hang?) the administrator part of the airport, I don't know if it's true but this is the story circulating around when I was there. Travelers' couldn't see it. I think if that the story suggests of anything else of boarder applicability into this question, there could be a time when suddenly Chinese population becomes aware of how much Japan things helped alone.

YM: It's happening. Definitely, if you get the other direction, Japanese interest in China has increasing. More Japanese is willing to study Chinese. Actually, the number of Chinese students in Japan increase dramatically. One problem which we are kind of speculating is that the top students come to the US and only the second class come to Japan. That's one issue we have to deal with. Definitely the Japan –China relationship will be important as well as US-China relationship.

PC: It's very interesting to watch these changes. Just if I map gets this what I'm doing this for 28 years now and it's funny to compare what it was like that.

YM: We are living in a very interesting period. We will see dramatic rise in china followed by India. Today, according, just based upon nominal exchange rate, Japan is still number 2 in economy, but if you apply purchasing power parity, china would be No.2 already, they will exceed us in a few years. They will even bigger than US economy in 10 years or so. In 20- 30 years, China, US, India will be the super economy of the world followed by distance numbers for which is Japan. It's not a scientific fiction. It will happen before I die and you die. So back to what you do, it is an undergraduate admission. And, you are not in charge of domestic.

PC: All of us, because of the size of the office and nature of the work, we are doing certain amount of US work. Only senior people consider on it admissions committees. I'm a voting member of committee that's making decisions on candidates from US schools in US. Of course, there was a time when I covered different parts of the US in my admissions career. Training a new staff is a phase of the admissions cycle. We are just entering into that now. We have 5 new staff which is a quarter of our full time staff coming in summer and they all have to be trained. I am, someone like me is doing is a lot time has to speaking engagements here and there. I'm happy to do that. So, my audience is not always international, though that is my formal travel assignment.

YM: Within Asia.

HS: How many people get involved in admissions process, you, and faculty members?

PC: Applications are read by admission staff. We hire outside readers that we trained. There could be a former admissions officer or people who are in higher education. It's an extremely labor intensive process. We have just under 20,000 applications last year. You can read an application and maybe 3 and (hour?) are going top speed. The most of the applications are read twice, so do the math, we are working 70 days a week December through March. Good part of fall, shorter or early admissions takes place between November 1st to December.

HS: How do you reach an agreement when you decide the students to let in?

PC: Sometimes, we don't. Candidates are read. There is a primary reader for each application. So we were talking about a candidate from China. I would do initial written summary of the application. This summary, I read aloud on a committee day. In the committee day, we might be able to do 450-500 candidates. We present them aloud people around the table who could be faculty members or deans or senior admissions people. I have a chance to ask questions and we vote. It's a voting process. That's very important for students to understand. We don't have, this is not a system based on test scores, or some calculations or formula. It's the result of the honest exercise of references. We try to reach a consensus but we cannot sometimes. Someone the reason is that someone denies because the adults are (...?) agree on. So, we simply go through the whole process.

YM: Many Japanese universities only depend on quantitative test for admissions. University of Tokyo is one of them. What do you think about it? Do you see any merit for that? If you talk to President Komiyama of the University of Tokyo, and ask him for your opinion of admissions, what would you advise?

PC: Some of these admissions process go back in century that is cultural values imbedded. In American wouldn't know much about. I think it's very it sounds easy to simply stop doing what you have been doing for so long, it starts something new, without realizing how much it would lose in translation. I think it would be a very long conversation. I have to find out what the process meant to him and then try to think about what the process means to us. It has meant different things overtime just in the last century.

YM: The cultural background is different, heritage different, so if you want to do serious conversation, it would be a really long conversation. But what is your intuition, when you learn about Japanese system which is based on one-time quantitative testing?

PC: Most of I think it produces a huge inefficiency in education. And you can see it in Chinese schools right now and Korean schools where so much time is spent in test preparation. It's overkill. There is a huge industry arising in Korea as students try to prepare both for international matriculation exams and fulfill traditional requirements of curriculum and take on what they believe is to prepare for competitive American colleges. For example, we gave an information session at a foreign language school in Seoul, a girl school. It was an evening session. We took, I'm speaking (...?) with 6 colleges. We filled the auditorium at the school but mostly with their parents, because the kids are studying. They are in school all day from 7:30 in the morning until 4:35 at night break for dinner from 7 to 10:30, they are night preparing for their SAT and (ATs?). They adopt the same strategies toward preparing for the SATs as they do with the classes during the day, which is just to memorize everything. What happens when you ask one of those students who has been widely successful in that scheme of things to actually solve a problem using what he or she might know.

Unless they have a memory system built up they cannot even retrieve the information and apply it.

They get actually a little disoriented because so much they can regurgitate the information in a certain way but they cannot draw any other way. And it's one of the reasons why they are sometimes disastrous story of the students who have done well in those schools who come to college here in the US. They get their first B and Cs then suddenly they need psychological counseling because it's not just a culture shock but they have been taking out of the system that rewards memory skills only. So if you think of that problem alone, the fact that these young people do not have a chance to develop socially because they have no time to do that. They have no time to be with their families. They have no time to enjoy music, activities, and develop in the ways that human beings have to develop. You can build enormous case, but this is a tragic. Sometimes when I leave these schools, even counselors and even a head of school get a little teary in describing how hard the students work. "This is what they have to do but I'm sad about her because I see." That's the way a lot of us feel about the system. But, I'm always a little weary about passing judgment that easily, because I don't know what it looks on their side. From their point of view, they are doing what's needed to honor expectations of families and parents doing what they are forebears have done to achieve meaningful positions in life as well. In many countries, if you introduce what's happening capitalism market economy right now, you've got that scale of values or non-values of pressuring them too. I'm not sure if you change the way of educating high school students that you can in any way protect them from the way the world is going.

YM: That's one thinking and probably that system (..?) Probably used to work very well. When we were catching up western civilization, without very thinking, probably sometimes they can say "don't think do it." Because we have an American European models, Just learn it memorize it, and do it.

Now, we have to make our own decisions and people who are educated by Japanese and Korean way are not trained to do that. They may be very good at memorizing and answering to some questions in formulated way. Then it worked probably some time. Now we have to change.

The University of Tokyo, we are talking about possible change from Japanese selection system to the system which is more like American. Actually some private universities have still doing it, because we are not still used to it, the transition, even these advanced private schools. We don't see the total succeeding transition from old rigid system to more flexible system. The University of Tokyo, we just started talking about changing our system. When we have better prepared, we come back to you and ask your advice again.

PC: Our system is not perfect either. I think probably the two have a lot to learn from each other. I'm actually American colleges are sometimes parade abroad though this is general education answer to everybody's problem. It's one suited to this particular social setting. I'm always trying to imagine what would be like somewhat different world. We have to change.

YM: You are much more diverse in terms of demographic, ethnic mix.

PC: And if we look for the kind of student body we would like to have here, Yale is very much interested in training leaders. If you look at the demographics in the US right now. It's the Sun Belt States where lots of immigrants and people different racial and ethnic backgrounds. That's where the new leadership will come from. So you have to think about how you honor your educational missions, It's not going to come by rewarding students who have had early access to educational opportunities. You have to make an talent evenly distributed around the population and try to figure out what looks like even in a school setting that is not very good. Then, try to give students a kind of you have address you end up having address educational needs here. There is probably if you took all of our students together, maybe there is a two year skill differences, especially math and science. The students who attended in public schools in low income bands, and the students who have attended public schools in affluent community or whose parents could afford private schools. There is no difference in intelligence. Within a couple of years, you won't see very many differences. But at start, you have to be willing to work with those differences. Interestingly, I think that makes us somewhat easier for us to be open to international students who come from very many different. They may be good at one thing but not good at some other things. But in Japan, where a school like yours, has for generations drawn on products of the best Japanese secondary schools that would be pretty difficult.

YM: In my generation, it used to be higher in standard, and more uniform. But we are much more like you now. Some area, private schools are much better than public. Among public schools, depending upon the area, it's high standard. So, it's much more diverse. What you said really makes sense. Two kids equally talented potentially, may have different skill set, math, and science when they enter the college. We may have to take into consideration those factors now. In the past, we didn't have to. Good students have good education. Today's achievement maybe you (can?) see the potential as well. But it's not the case. Peter, thank you very much for your time. We don't have time to cover this. This is not also directly related to what we talked today. This is our university system, decision making system, our basic policies on education and admissions and we will be happy to if you come back to us.

E. 国際ワークショップ

E.1 四大学の特徴の解説

(1) ベンチマークについて

これから4つの大学について詳細なベンチマークによる比較検討がなされるわけですが、その前にこれらの大学がどのような大学であるかを簡単にご紹介したいと思います。そのため、できるだけ4つの大学について共通の指標を用いて比較することにしたいと思っています。これがいわゆるベンチマークといわれる手法です。

これはもともと製品などを比較する性能を比較するために用いられるものであります。その性格上、数量化する機会が多いわけですがけれども、定性的な比較も非常に重要な意味を持っています。こうしたベンチマークによりまして、大学の強み、弱みというものを明らかにして、それに基づいて大学改善をしていくことが非常に重要な問題だと思っています。

ただし、今日お話しするデータは国際比較という観点上、国によって非常にデータが異なります。従って厳密な比較が非常に難しいわけで、今までベンチマークがあまりなされなかった大きな理由でもあります。ですから、あくまで非常に大ざっぱな比較であるということをあらかじめお断りしておきたいと思っています。それゆえ、誤りもあるかもしれませんが、もしございましたら後ほど指摘していただければ幸いです。

(2) 四大学の共通の特徴について

まず4つの大学について、共通の特徴を挙げたいと思います。この4つの大学はいずれも研究大学でありまして、ワールドクラスの大学、あるいはセンター・オブ・エクセレンスであるということについてはそれほど異論がないと思います。

最近の傾向として国際化しており、グローバル化しているという点においても4つの大学は共通の特徴を持っています。さらに最近の傾向といたしまして、いわゆる「象牙の塔」であるというところから、社会あるいは産業との連携を非常に強力にしているという点についても、4つの大学は共通の特徴を持っています。

こうした特徴は、最近の急速な高等教育の改革の流れの中で行うというものです。それは何よりも、公的な財政がひっ迫しておりまして、公的な補助金が減少しているというのが4つの大学がそれぞれ共通に持っている問題です。

またいわゆる高等教育の「市場化」という問題が非常に大きな関心を集めています。具体的に申しますと、学生を獲得する競争でありますとか、外部資金を得るために、4つの大学は激しく、それぞれがほかの大学と競争しているということを意味しています。

(3) 四大学の比較

(a) 歴史、設置者、財政等について

(歴史、設置者)

まず創設ですが、ケンブリッジ大学は創設が13世紀でありまして、800年の歴史を持っているということになります。それに次いで古いのはイエール大学で、約300年近い歴史を持っております。それに比べますと、カリフォルニア大学バークレー校と東京大学は比較的新しい大学であるということが出来ます。

設置者はケンブリッジ大学とイエール大学は私立大学です。それに対し、カリフォルニア大学バークレー校と東京大学は公立大学（州立大学、国立大学）ということ出来ます。

(ミッション)

創設時にいかなるミッションを持っていたのか、いかなる使命を持って大学がつくられたのかということですが、これはケンブリッジ大学の場合にはもともと非常にコスモポリタンの性格を持っていたということが出来るのではないかと思います。一国だけではなく、国際的な性格をそもそも持っていたということが出来ます。

それに対してイエール大学は基本的にはやはりアメリカ合衆国内、アメリカ市民をつくる目的につくられたと考えられます。カリフォルニア大学バークレー校はもともと州立大学でありますので、何よりもカリフォルニア州というものに貢献するということが大きな使命として掲げられています。

これに対し、東京大学は国家の主要な人材をつくるということがあり、帝国大学の目的であったように、何よりも日本という国家のためにつくられた大学であるということがいえます。ただし、これはいずれも創設時の使命であります。

(財政)

これは後ほど詳しく申し上げますが、基本的にはケンブリッジ大学は私立大学ですが、財政的には公的な補助を受けております。その点では、東京大学も非常に大きな公的な補助を受けているという点では共通しています。

それに対してイエール大学とカリフォルニア大学バークレー校の場合、財源の多様化ということが進行しており、私的な財源だけではなくて、公的補助も受けているという両方を持っているということが出来ます。

このようにして見ますと、4つの大学はかなり性格が似ているようで、違う点があるということがお分かりだと思います。

(b) 大学の規模について

(教員数)

ここでは、まずコアになる大学の教員数の差を見てみたいと思います。いずれも2000人から3000人の間ぐらいの大きさだということです。

ただし、最近の特徴としてコアになるスタッフ以外に、さまざまな種類のスタッフを有することが大学の大きな特徴になっています。

これを見ていただくとお分かりのように、カリフォルニア大学バークレー校の場合には、コアになるスタッフ以外にも非常に多くのスタッフがあります。それに対してイエール大学はコア以外のアカデミックスタッフの数が比較的少ないということがあります。

(学生数)

学生に関して言いますとかなり差があります。学部学生ですが、最も多いのがカリフォルニア大学バークレー校で2万5000人ぐらい。それに次ぐのが東京大学、ケンブリッジ大学で、これが中規模サイズということになっています。それに対してイエール大学はかなり小さく5000人程度の学部生しかいません。

ただし、大学院生に関して見ますとまた違う特徴が見られます。カリフォルニア大学バークレー校は、大学院生は相対的には学部生に関してかなり少ないということが分かります。

それに対してイエール大学の場合には、学部学生よりも大学院生の方が多いという特徴がありまして、非常に大学院大学になっているということが見てとれます。

これに対して、東京大学の場合には今大学院生と学部学生数はほぼ等しいということがあります。

このように、単なる学生数ではなく、学生の構成自体も相当違ってくるということがあります。

(国際的なスタッフ、学生数)

国際的なスタッフあるいは学生の数ですが、残念ながらこれに関しては正確な数字がわたしのところではつかむことができませんでした。ここだけ高等教育のいわゆる大学ランキングの国際化指標を見えます。

これについては、わたしもさまざまに批判はありますが参考程度に見てみます。数字が非常に高いのはケンブリッジ大学でありまして、東京大学は国際化においては非常に低いスコアになっていることが分かります。

実際の数字を調べてみますと、かなりスコアが異なってくるがありますが、実際に東京大学の国際化がほかの大学に比べてそれほど進んでいないということも事実であると思います。

イエール大学とカリフォルニア大学バークレー校はその中間にあります。

(c) 組織について

次に組織の問題に移りたいと思います。組織に関しては大学院、学部、学科、付置研究所などが主なものになるかと思えます。大学院に関して見ますと、ケンブリッジ大学は大学院は6つです。それに対して残る3つの大学はいずれも10~20とほぼ同じような構成を取っているということが分かります。ただし、ただ単に数を比べることにはあまり意味がありません。というのは、中身が相当違っているからです。

特にカリフォルニア大学バークレー校の場合には、ほかの大学と違い、メディカルスクールがない、医学部がないということが大きな特徴です。

学部学科と研究施設ですが、数を数えようとしたのですけれども、あまり意味がないということが分かりましたので、詳細な数値は出していません。そもそもこういったものが非常に固定化しないで、流動化しており、新設・廃止が頻繁に行われていることが最近の特徴です。

研究センターに関しましては、小規模なセンターあるいは時限的なセンターというのがたくさんできているというのが現在の大きな特徴であるかと思えます。

(d) 財政規模について

財政規模についても数字の取り方でかなり違いますので、数字はあくまでも仮のものだとお考えください。これを見ますと、イエール大学と東京大学はだいたい同じぐらいの規模であるということが分かります。収入規模で言えば同じぐらいですが、ケンブリッジ大学は若干少なくなっています。ただしこれも過小評価ではないかという気がしています。

問題はいわゆる基準、エンドーメント（基本財産）に当たる分ですが、イエール大学が抜群に大きなエンドーメントを持っています。これに対して、負債の場合には、**=基準=**は多く見積もっても5億ちょっとぐらいですので、それほど大きいとはとても言えないということになります。

こうしたと財源の中身ですが、大学によってかなり性格がかなり異なっています。図で言いますと、赤というか茶色というか、そういった色で書かれているのが公的な補助金で、東京大学が48%で最も多くシェアを占めています。次いでケンブリッジ大学、カリフォルニア大学バークレー校も3割近くを占めています。イエール大学については公的な補助金はありません。これが大きな違いです。

それに続いて研究補助金で、紫の色で示したものです。イエール大学が、研究補助金が非常に多いわけですが、ただし研究補助金の中には公的な補助金もありますので、正確な割合は分かりませんが、こういう形でイエール大学の場合には公的な補助を受けているということがあります。

(e) 授業料、学生援助について

授業料収入です。一番下の部分です。カリフォルニア大学バークレー校が最も多く、収入のほぼ4分の1を占めているのに対して、イエール大学は私立大学ですが2割を切っています。ケンブリッジ大学と東京大学の場合は1割ぐらいというように少なくなっ

ています。

このようにして見ますと、非常に財源の多様化が進行しているということが分かります。さまざまな形で大学は資金を獲得しようと一喜一憂している——これが収入の構造に出ているということが言えます。

授業料と学生に対する財政的な援助ですが、授業料は最も高いのはイエール大学で、3万5000ドル程度です。次いでカリフォルニア大学バークレー校が2万6000ドル程度です。カリフォルニア大学バークレー校の場合には、州外学生あるいは留学生に対する授業料です。ただし、実際には学生に対する援助がありますので、授業料はさらに割引されているわけです。その割合が下に書いてありますが、イエール大学の場合、約4割、カリフォルニア大学バークレー校ですと6割の学生が何らかの形で財政援助を得ているということが分かります。ケンブリッジ大学の場合には、「100%」と書きましたけれども、もともと授業料自体が最高で3000ポンドですけれども、これは大学独自の奨学金によって割引かれていますので、そこにありますように2000ドルから6000ドルの間で、実際の授業料は変わらないというのが特徴です。

それに比べ東京大学の場合には、だいたいここが5000ドル程度ですので、授業料は相対的に低いということが言えます。

また推計値ですが、だいたい4割の学生が何らかの形で財政的な援助を受け、奨学金が授業料免除を受けているということが見て取れます。

(f) 教育についての比較（主な特徴）

以上、駆け足で見てきましたけれども、今日のテーマであります教育を比較する場合、一つの大きな課題は教育の幅の広さと深さをどのように組み合わせるかという問題があります。そのために各大学はさまざまな特徴を凝らしているわけで、これについてはこの後詳細に報告があると思います。

大きな特徴だけを申し上げますと、ケンブリッジ大学は何といてもカレッジシステム、学寮と呼ばれるものがあります。寮で生活することによって少人数教育、スーパービジョンと呼ばれますが、それを受けるということがケンブリッジ大学の教育の大きな特徴になっています。

イエール大学の場合には、イエール・カレッジという一般教養を担当するカレッジがありまして、ここが一般教養教育を担当するというアメリカの大学の教育の形を取っております。

カリフォルニア大学バークレー校の場合には、カリフォルニア・マスタープランという有名なプランがあり、3つのタイプの高等教育機関、カリフォルニア大学、カリフォルニア州立大学、それからコミュニティー・カレッジという3層構造を取っております。その中でカリフォルニア大学バークレー校は研究大学、大学院大学ということの位置付けを明確にしているという点で特徴があります。

東京大学の場合には、2年間の一般教育、つまり教養教育の後に、専門教育を行うという形で教育を行っています。これは日本の大学の中でもかなりユニークなものであるかと思えます。

E.2 ベンチマーチングの結果報告

(1) 経済学

発表者： 松井彰彦（東京大学大学院経済学研究科教授）

(a) 組織

- ◇ ケンブリッジ大学は学部とカレッジという2本立て、イエール大学は社会科学系で学部がカレッジ、東京大学は、経済学研究科が5専攻に分かれており、ビジネススクールに若干似ている。東京大学の経済学研究科の60人ほどの教員の中で、30人弱の近代経済学のグループが、イエール大学の経済学部で50人、ケンブリッジ大学大学院の40人に、研究内容、教育、カリキュラム等の観点から対応している。

(b) 学部教育

① 選抜方法

- ケンブリッジ大学はカレッジ単位でAO方式と面接を行っている。経済学部には所属するのは1学年150人程度。イエール大学は大学単位、AO方式で、200人ぐらい。東京大学は入学試験を行って最終的に経済学部に進むのは370人程度。

② 経済学部を選ぶ時期

- ケンブリッジ大学は入学時に決めるが、その後変更も可能。イエール大学は1、2年時にメジャーという形になる。東京大学は、2年時に進学振分というのがあり、ここで学生が志望を出し行き先を決める。

③ 教育内容：ミクロ経済学とマクロ経済学

- 入学時に分野を決めるケンブリッジ大学、イエール大学は、1年次から基礎レベル、イントロダクトリー・マクロを提供しているが、東京大学では2年次に初めて体系的な基礎の講義を行う。1年目にいろいろと工夫はしているが、そこで若干後れを取っている。その分やや中間レベルが若干欠落していて、ケンブリッジ、イエールともに中間レベルの講義が提供されている。東京大学はそこがなく、応用の諸分野で補完的に教えて対処しているが、今後の課題と認識されている。

④ 教育形態

- 教室で行う数十人から場合によっては数百人になる大講義は、大学によって大差が

ない。特徴的なところは少人数教育にある。ケンブリッジ大学はスーパービジョンという形で、カレッジがオファーして、講義の補完的な復習ないし予習をやっている。1クラス3～5人。イエール大学にはオナーコースという少人数講義を行っている。東京大学では、ゼミというものがあり、3年生4年生が一体になって輪読を行ったりする。先輩と後輩のつながりができていく。スーパービジョンやオナーコースの場合には、そういうものが見られず、大きな違いとなっている。ゼミ制度というのは非常にいい制度だと認識されている。

(c) 大学院教育

① 選抜方法

- ケンブリッジ大学、イエール大学は書類審査を行っている。東京大学は、入学試験と院試論文を書かせて提出させ、それを基に個人面接を行う。受験生に来てもらって行うところが大きな違いであり、海外から人を集める時に今の体制では若干難しく、変更を検討する必要がある。

② 教育内容・形態

- 標準化されたコアコース、ミクロ経済学、マクロ経済学、さらに計量経済学と、補完的な数学がある。教える内容等がほとんど同じである。
- 例えば、東京大学で使われているミクロ経済学の教科書は、イエール大学、ケンブリッジ大学でも同様に使われている。TAをつけて毎週宿題を出すという形で進めている点もほかの大学と同じになっている。
- その後、応用の各分野、例えば国際経済学、に分かれていく。
- 論文指導も各大学とも行っている。論文指導は教員間のバラつきの方が、各大学間のバラつきよりも大きい。
- 大学院では、いわゆる大学院の課程に入った後、博士号を取るためのクオリフィケーションというものがあります。それぞれ若干異なったシステムを取っているが、基本的にはミクロ、マクロでいい成績をきちんと取るのが非常に重要な要素になっている。それプラス修士論文ないしタームペーパーなどで評価がなされる。
- 若干の違いはレイト・オブ・クオリフィケーション、博士課程に進めない比率にある。ケンブリッジ大学では、各学年50人ほどいて、そのうち20人ぐらいが博士課程に進む。イエール大学の場合30人中ほとんどが博士課程に進む。東京大学の場合は半分ぐらいで、30人中15人が博士課程に進む。イエール大学はアメリカの大学の特徴というよりはIBリーグの特徴で、この辺りは国というよりは大学間の違いと考えられる。
- このように、教育内容には大きな違いはない。

(d) 相違点

① 入学、留学生

- ある意味で多様性を求めていくケンブリッジ大学、イエール大学の AO 方式と、東京大学の基礎を見る入試という違いがある。それと若干関連して、ケンブリッジ大学、イエール大学では留学生が非常に多いのに対して、東京大学では留学生は多くない。

② 奨学金の原資

- ケンブリッジ大学、イエール大学はともにエンドーメントがあるが、東京大学の場合は基金があまりないため、原資を競争的資金に頼り、大学院生を EA、RA など雇う形で払っている。競争的資金が取れなければ学生の面倒も見られないというところに、学生を安心して学ばせるという意味では若干不安定な状況にある。

③ 英語による教育

- 東京大学では、英語による教育は対処できていない。大学院で英語によるプログラムが必要で、特にアジアから優秀な学生を集めてくる時に、「日本語ができないと駄目だ」「受かるかどうか分からない入試を日本に来て受けないと駄目だ」というのでは困る。大学院の入試の運用改革と併せて、英語によるプログラムをどう組み立てていくかという検討を開始したところである。

④ 数学等の教育

- イエール大学や他のアメリカの大学と東京大学を比べると、数学に関しては東京大学の学生はかなりできる。微積分も気にしないで使える。
- 英語力、日本人が弱いとされている説得力、構成力などが劣っているが、その半面数学力に優れた学生がいるため、若干応用分野よりも特に優秀な層が理論に流れるという傾向が東京大学にはある。

(2) 物理学

発表者： 山本智（東京大学大学院理学系研究科教授）

(a) 基礎データ

① 学科のサイズ

- 学部で、東京大学が 70 人、カリフォルニア大学バークレー校が 50 人、イエール大学が 37 人。大学院は東京大学が 130、カリフォルニア大学バークレー校が 40、イエール大学が 20 となっている。

② 教員学生比率

- 教員 1 人が指導する大学院生は、東京大学の場合だいたい 5 人ないし 10 人、カリフォルニア大学バークレー校、イエール大学ではだいたい 3、4 人ぐらいとなっている。

③ 教育方針

- 教育方針は共通しており、いずれも物理学の研究者を養成することを最も大きな目標としている。次世代の物理学を背負って立つような人材の養成が重要になっている。

④ 就職先

- 大学、教育機関あるいは企業、公共機関等、どの大学も多様である。しかし学生に対する社会の認識ということになると、欧米と日本では幾分の差があり、それが就職に影響を与えている。

(b) 教育内容、進度

- ◇ 教育レベルと内容については大学院まで全体を通して見た時には、大きな差はない。しかし進度については、例えばカリフォルニア大学バークレー校、イエール大学がマスターコース、大学院の 1 年、2 年ぐらいまでかけて教えていることを、東京大学では学部の 4 年前期までで教えてしまう。学部レベルを比較すると、東京大学の場合そのレベルは、カリフォルニア大学バークレー校、イエール大学に比べて非常に高い。
- ◇ これは、さまざまな環境条件に支配されている。教養課程や大学院入試の時期、あるいは高校のレベルなどに影響されている。日本の高校のレベルはかなり高い。

- ◇ 東京大学の場合は最初の1年半の中で、いわゆる教養課程があり、その後で理学部物理に進むということが決まる。4年生の夏に大学院への入試があり、この時に大学院で何を学ぶか、どういう専門分野で研究していくかということを決める。指導教員も決まる。従ってわずか2年ぐらいの間に、基礎を学生に勉強してもらわなくてはならない。
- ◇ 学術振興会の博士課程の研究員のが、修士2年の時にあるが、この時までにある程度研究成果を出しておかなくてはならない。
- ◇ 東京大学は進度が非常に速いが、その分、メリットが非常に大きいところもある。

(c) 特色ある教育

- ◇ イェール大学では、2つにプログラムを分けて、研究者などを狙うインテンシブなコース14人と、通常の物理教育23人とに分けて教育している。これは非常にいい方法ではないかと思われる。

(d) 教育形態

- ◇ 1回の講義時間は、アメリカの大学ではだいたい3時間であるが、日本ではだいたい1.5時間である。
- ◇ アメリカの大学では毎週宿題が出て、学生はかなりハードに勉強する。日本の場合も実際は演習などがあり、実際かなりそこで鍛えられるが、その仕組みが違う。
- ◇ アメリカの大学では、授業評価というもの非常に重要視され、真剣にやられている。カリフォルニア大学バークレー校、イェール大学では1人1人の先生の評価、コースのカリキュラムの評価に分けてきちんとやっている。それが昇進や給与に影響を与えることもある。
- ◇ 東京大学もこれを参考にしながらやっているが、今後こういうことを強めていく必要がある。
- ◇ イェール大学ではだいたい20%ぐらいの学部生が研究に携わる機会を持っていて、学会で発表するような成果を出しているケースもある。
- ◇ アメリカの大学では、TAは大学院コースのプログラムとしてやっている。
- ◇ 3つの大学でいずれも物理実験を、理論的なコースワークとともに重視しているということが確認された。

(e) 相違点

① 大学院教育

- 指導教員の決定時期、研究分野の決定時期が東京大学の場合早い。学部生の4年の時に行われる大学院入試でそれが決まる。
- それに対して、カリフォルニア大学バークレー校、イェール大学では、だいたいマ

スターコース、1年から2年してから最終的に研究分野を決める。そうすることによって、指導教員と学生との関係を強めることができる。アメリカでは、大学院生に対して経済的なサポート与えることになっているので、そういう信頼関係が大事であるということも反映して差が生まれている。

- その結果として、マスターコースの研究スタイルが若干違う。東京大学の場合は研究中心のスタイルであるが、カリフォルニア大学バークレー校、イェール大学ではコースワーク中心である。

② TA

- TA がプログラムとして組み込まれているということが非常に重要なポイントである。日本でも TA というのはかなり充実してきたが、アメリカの大学ではもっと大規模にやっており、それが TA 自身の教育経験にもなるし、自分自身の勉強にもなり、非常に効果を上げている。

③ 東京大学の物理学教室の取組、課題

- 東京大学の物理学教室では、大学院教育の強化に現在取り組んでいる。学部レベルでは世界の大学に引けを取らない力を持っており、それをいかに伸ばしていくかという視点で大学院強化を進めてきた。コア科目あるいは重視・必修科目を設定したり、授業評価を始めたり、また英語の会話の教育も実施したりしている。中間層を底上げすることで全体のレベルアップを図ろうとしている。
- 130人という学生数、しかも、それがさまざまなキャンパスに分散しており、教員側はどちらかというとコースワークよりも研究志向にあるという状況の下で、コースワークの充実には困難もあるが、いいところを伸ばしてゆくことが課題である。
- 女子学生比率が非常に低く、物理の場合だいたい数%である。70人いて2、3人いるかどうかという程度である。米国の場合は15%ぐらいである。今後、女性の学生が来てくれる環境と制度にする必要がある。

(3) 材料工学

発表者： 小関敏彦（東京大学大学院工学系研究科教授）

(a) 背景

- ◇ マテリアル・サイエンス・アンド・エンジニアリングは非常にはば広く重要であるが、高校生や大学に入りたての学生にとってはあまりなじみのない。若い世代がこの学問分野に入ってくるようにいろいろな PR をしなくてはならない。普段使っている様々な構造体あるいは構造物、エレクトロニクスをはじめとしますさまざまなデバイスに使われているすべての材料がマテリアルであり、そのマイクロ、ナノの構造から材料の特性、性質、さらにそれを作るプロセッシング、それをデバイスや構造に使う場合のアプリケーションすべてをインテグレートするところがこの学問の根幹である。力学的な特性、化学的な特性、物理的な特性、電子的な特性、あるいは光学的な特性、さらに最近ですとバイオロジカルな特性と非常に幅広い特性をカバーする。

(b) 基礎データ

① カリフォルニア大学バークレー校

- 常勤の教員が 13 人と非常勤の教員が 2 人、一学年の学生数は、学部生が 70～80 人、マスターが 18～20 人、ドクターが 15～18 人である。学部生はいろいろなルートがあるが、多くは 2 年生の途中でマテリアルを志望する。マテリアルだけをシングルメジャーで来る学生が 30 人ぐらいで、そのほかダブルメジャーの一つとしてマテリアルを選ぶ学生、あるいは他のジュニアカレッジから来る学生など合わせて 70～80 人である。
- Thermodynamics, Phase Transformation and Kinetics, Crystallography and Defects, Electronic Materials, Materials Characterization, Corrosion, Mechanical Behavior, Polymer Science コア科目となっている。特にシリコンバレーを背景にエレクトロニクスのマテリアルに相対的に重点が置かれているのが一つの特徴である。
- 卒論はないが、30～40%の学生が undergraduate research を行う。
- 大学院は Ph.D とマスターがあるが、基本的にはマスターを取ってから Ph.D コースに進むことになっている。大学院のコースワークも、アメリカの多くの大学と同様にしっかり要求されている。コア科目に関しては学部と同じような科目群が並んでならんでいて、アドバンスで深いところまで学ばせている。

② ケンブリッジ大学

- 教員は 25 人で、ケンブリッジ大学の特徴はスクール・オブ・エンジニアリングではなく、自然科学の中に存在しているところにある。学部は、3 年と 4 年のコースがあり、一学年 20~25 人。4 年で修士が授与される。それとは独立して修士 (Master of Philosophy) が 20~30 人、それから Ph.D が 30~35 人。
- 学部の場合は、多くは 3 年生の段階でマテリアルを選択する。1、2 年でマテリアルの基礎を選択科目として履修し、3 年以降に本格的に履修する。
- カリフォルニア大学バークレー校と東京大学は Semester 制、ケンブリッジ大学はターム制で、常に 3 タームあって、それぞれ 8 週間。
- ケンブリッジ大学の特色は講義のほかにスーパービジョンと言われる小人数の教育をしているところにある。卒論はないが、Ph.D に進む学生では必ずインデビデュアル・リサーチ教育を受ける。

③ 東京大学

- コアの教員が 25 人。それから生産技術研究所等の教員と大学院教育を進めている。一学年の学生数は、学部が 60~70、マスターが 50~60、マスターが非常に多いのが日本の工学系の特色で、ドクターが 15~20。
- バイオ・マテリアルとナノマテリアル、さらに基盤の材料・環境の 3 つのコースに分かれており、選択科目がそれぞれのコースに対応するように提供されている。コア科目については、3 大学とも同じである。
- ほかの大学との大きな違いは、学部生の卒業論文研究にある。

(c) 共通点

- ◇ この分野は高校生や大学に入ってきた 1 年生になかなか直観的に理解できない。3 学科とも導入講義が非常に多く提供されている。マテリアルが非常に多様なため、それぞれの意義や広がりというものを、導入講義の中では伝えるようにしている。
- ◇ この分野は非常に広いので、選択科目として非常に多くのものを用意しているのも 3 学科に共通する特色である。また実験室でのマテリアルの分析や解析などのために、演習の時間を多く用意している。
- ◇ 産業界の方を招いた講演、あるいは現場見学等、講義を補完するためのさまざまな工夫を 3 学科とも行っている。

(d) 相違点

- ◇ 学部の大きな違いは、カリフォルニア大学バークレー校、東京大学はマテリアル・サイエンスは工学系に所属する。一方でケンブリッジ大学の場合は *natural science* の中にあり、若い人たちにアピールする時の競争相手が少し違っている。
- ◇ 1回の講義時間は、ケンブリッジ大学の場合ですと週3時間、1時間ずつ3回あるのに対して、東京大学の場合週1.5時間、ケンブリッジ大学も週に1時間から1.5時間。カリフォルニア大学バークレー校では、週に5~6の講義を取るのに対して、東京大学の場合、その倍の数の講義を取っている。
- ◇ 東京大学の場合、2学期を通して卒論の研究をやって、途中でその進捗についてプレゼンテーションが要求されている。
- ◇ ケンブリッジ大学では8週間のプロジェクト、カリフォルニア大学バークレー校の場合はオプションではあるが、インディペンデント・リサーチを取ることができる。
- ◇ 大学院の違いは、修学年数にある。ケンブリッジ大学の場合は学部は3年間または4年間で、4年やるとマスターが与えられる。その後、博士の期間は3年から4年。カリフォルニア大学バークレー校、東京大学は修士と博士併せて5~5.5年。

(e) 3学科が抱える共通課題

- ◇ 身に覚えのあるような分野でないために、様々なイントロダクティブのコース、あるいは材料がキーになっていることを紹介するイベントなど、いろいろな施策を一貫して提供している。
- ◇ マテリアル・サイエンス・アンド・エンジニアリングのフィールドがどんどん広がっているため、例えば医学系と連携して新しい医療を工学系とともにやっていくというように、研究分野もどんどん広がっている。一方それだけどんどん広がっていくと、ある限られた時間数や教育の中で、それをうまくカバーするためにはどこかで時間数を減らさざるを得ない。長い目で見ると、コア・コンピテンシーがだんだん相対的に薄くなる可能性があるという懸念がある。

E.3 パネルディスカッション：教育力の総合的比較

(1) 導入教育、教育システムの違い

○司会：先ほどの3グループのご報告にもありましたけれども、やはり導入講義というものにある程度どこも苦労されているということだと思います。日本でもそうですけれども、大学に入ってくる学生がいろいろと多様化しています。学力にもバラつきが大きくなったり、あるいは学生の志向も多様であったりしています。そういう中でどうやって優秀な学生を確保するのか、そのためにどういう工夫をするのかについてはどこもご苦労されていると伺いました。

既に幾つか試み等ご紹介になっていますが、もう少し具体的な進め方、実態などについてまず議論したいと思います。

○松井：経済学は物理学などとは異なり、高校までに基礎がない、経済学を学ばずに大学に入ってくるケースが多いということがあります。学生の評価は恐らく違うと思いますが、経済学になじんでいただくという点については工夫しているつもりです。

その試みとして最近始めたものとして、1年時に駒場キャンパスの方ですが、オムニバス形式の紹介講義みたいのものを出して、有志の経済学研究科の教員が集まって週に1度週替わりで講義をしています。

例えば、わたしはゲーム理論を担当したりしていますが、できれば身近なことを（取り上げるとのこと）。この中で、北海道出身の方がおられたらご存じかと思いますが、エア・ドゥ、一時期参入して、その後破たんしてまだ名前は残っていますが、そういう事例を引いて参入の効果、参入阻止の経済理論と。非常にし烈な、えげつない戦いが繰り広げられましたが、そういう事例を使いながら経済ないしは経済学に親しんでもらう試みがあります。

○山本：教養学部がございますが、東京大学の場合は物理の場合ですと、教養の方で物理の勉強をやってもらっているというか教育を担当していただいています。それだけではなく、実はわれわれ本郷の教官も出かけていき、それほどコマ数は多くありませんが、わたしも担当させていただいています。その中で、微妙に駒場の学生の方の雰囲気をつかみながらいろいろと工夫しているところです。

実際に高校でやっている物理と実際の物理の間ではかなり違うところがあります。ぜひ優秀な方、また女性にもたくさん来ていただきたいということで、講演会や、場合によってはサイエンス・カフェのような取り組みを今後とも続けていきたいと考えています。

これは最初にお答えしておいた方がいいと思いますが、わたしは学科や学部を背負ったりしていません。あくまでも、パーソナル・ビューといえますか、個人的な見解であるということをお最後に付け加えておきます。

○司会：全体を通じてそうだと思います。皆さんもそうだとご理解いただければと思いま

す。

○村山： 今回比較になっている4つの大学の中で恐らくカリフォルニア大学バークレー校がいちばん学生の中の能力の格差が大きいところではないかと思います。州立大学ですので、各公立高校のいちばん上の人は必ずカリフォルニア大学でなければならないなど、さまざまな制約があるために学生のレベルは非常に幅広いものがあります。理系で入ってくる学生の中でも微積分を勉強していないとか、本当に非常に大きな幅があります。それをどうやって標準化していくのかということが学部の最初のころの非常に大きな課題になっています。

日本でいえばどちらかというと、高校に近いような雰囲気です。授業を受け、宿題を毎週解き、それを提出して、宿題と中間・期末試験の点数を加算することで講義をパスするという形で徐々に追い付いていこうということです。カリキュラムについてもいろいろな順番で取ることができたり、違うクラスで、普通だったら、こう取るべきだが、このように取ってみるなどいろいろな柔軟性を持たせて、いずれ最低限のレベルに持っていくことについて努力しています。

○原： わたしはケンブリッジ大学で7年間ほど教べんを取っていましたが、経済学は文系の科目として分類されていますが、実際のところ近年は数学的な方法として対応されてきたので、事前に数学の準備の高校時に18歳までの段かですっかりしていただかないと後で困ってしまうということが極めてよくあります。

今まで実際どういうことをしていたかということ、高校レベルの数学を復習するというコースを与えていたのですが、教員の数に限りがあるものですから、どうしても負担になってしまいます。そのため、入学段階である一定レベルの数学試験に合格することを課すようにしました。

これは先ほどのカリフォルニア大学バークレー校のケースのように、大学の中で平準化を図るというよりも、入り口段階で平準化を図っているということになっています。ですから、大学の中での教育の多様性の発展という点ではあまり望ましくないかもしれませんが、一つの対処の仕方の例として挙げておきます。

○北村： わたしはイェール大学で計量経済学という講義を担当していましたが、経済学専攻の学生全員が取らなければいけないコースですので、やはり能力にずいぶんバラつきがあります。

イェール大学では、授業に追い付くのに非常に苦労している学生の場合には、例えばプライベート休暇を公式に申請し、チューターを雇って1対1で教えてもらうことができます。

また、大人数講義ですので、教員1人で、100人の学生全員を細かく教えていくことは不可能です。その代わりにTAが3人付いていることによって、少しきめ濃やかな対応をしていくということです。

○小関： マテリアルの場合ですと、東京大学の場合、2年生から3年生の時に教養から

専門に移りますが、まず来る前に関して言えば、マテリアルが使われている実際の電気のイメージがはっきり分かるようなイントロダクティブの講義を幾つか設けています。例えば、極限的な環境な状況で使われるジェットエンジンやスペースシャトルの耐熱管理、生体の中で使われる人工心臓のようなバイオコンパティブル、生体適合性のようなものと材料がどのようにかわるかということ、実際に学生が出口のイメージを持つことで、材料の重要性が分かるということがまず入り口としては重要ではないかと思っています。

最近、われわれは教養から専門への遷移をいかにスムーズにするかということでカリキュラムを変更しました。教養でやっている基礎の物理、化学の中でマテリアルの基盤となるような物理、化学は専門に移った直後にコア科目として設け、そこからセメスターごとにステップアップするようにカリキュラムを変更しています。具体的には、まず基礎をやり、次のセメスターではアドバンス、さらに次のセメスターでいろいろな材料に実際に適用する各論に移るというオーダーをきちんと組み、カリキュラムをつくり直しました。

○司会： 小関先生が言われた、だんだん関心を持って次第に専門に導いていくというのは、学生に対して知識を付けていくステップであると同時に、一方でいい学生を獲得することにも関連すると思います。東京大学の場合は進学振分けでの競争、特に工学系は進学振分けでいい学生が希望してくれるかどうかはかなり決定的なので、カリキュラムをつくる上では、そのことはどうしても頭から離れないことです。

○小関： 全くその通りだと思います。われわれは工学系ですので、実際に使われて、出口がどういうところで、自分がかかわるものが役に立つか、先端的にところで使われているかの認識がまず重要です。そこを見てもらって関心を持ってもらうところから、学問としてはきちんと積み上げていく形にしたいと思います。

○司会： だが、カリフォルニア大学バークレー校の場合も最初からその学科に入る学生もいますが、最初は専門が決まらずに2年ぐらいかけて専門を決めていくこともあります。報告の中では、そういう学生をどうやって引き付けるかは結構大きな課題だとあつたと思います。その辺りのご紹介あるいはどんな工夫がなされているかについてご紹介をいただきたいと思います。

○Glaeser： Last year, as was said, the challenge in material science is very different than the challenge I think in physics and chemistry and in mathematics. Most high school students have had experience, or at least some exposure, to physics, chemistry and mathematics before they come to Berkeley; very few have any experience at all, any exposure to material science.

They hear many things about the materials. They hear about nanomaterials, they hear about electronic materials, they hear about biomaterials, but they're not aware that a field exists whose primary function is to design and improve materials.

So it's a field of engineering that most high school students do not know about, and our challenge at

Berkeley in terms of making them aware of the field is quite severe, because in our curriculum, students do not really, in general, take a course in material science until they are in their sophomore year.

And by the time they are in their sophomore year, many have already decided what field they want to go into, perhaps the wrong choice, perhaps not something that they would enjoy as much as material science, but they have already made up their mind.

So we have tried to introduce freshmen seminars that have very small groups of students, typically 12 students or less in each seminar, focusing on applications to materials in various areas, and quite often, using common materials and common applications as the theme of these courses, and we are trying now to introduce a freshman-level course that would be taken by all, we hope, engineering students that would be a more engineering and material-oriented chemistry course, so that students are exposed to material science very early on in the curriculum.

○発言者不明： I'd like to comment on the ability of incoming students in physics, because I think this accounts for some of the differences between educational system here and in the States. Maybe I should stop and let you translate and then.

While many students in high school take physics and some math, our high school educational system in the US is really quite bad and way behind – well it's the truth. Way behind many other countries, I'm sure Japan and Europe; and therefore, in our physics classes, the undergraduate level, we have to go much more slowly and gradually in the US than here.

And as Professor Yamamoto [ph] said, by the end of graduate school, the content of the course the students received is about the same; the time distribution is very different. Your students are much more advanced by the end of undergraduate level and our students are – and this has implications for choosing research fields, which I'll comment on briefly after the translation.

There's an interesting difference in the way incoming graduate students are prepared for choosing their field of research and it has plusses and minuses on both sides. In your system, students have a much deeper knowledge of physics in the course content and they choose their field specialization from the beginning of graduate school based on that knowledge.

In our case, the students choose their field of specialization a year or two later, but there's a flipside, a corresponding difference in another direction. As I understand that your undergraduates do not do research, per se, it's somewhat separate. Whereas, in our case, about 50% or so of our undergraduate students do real research with faculty members and so they have some experience with research and the methods of research when they're choosing their field, and this can be important from standpoint of things other than the physics itself.

In physics, different fields of research are very, very different. In some fields, an individual researcher works alone. In other field, he works with five or six other people, in some cases, with 1000 other people. And some people are suited for one type of work and some people are suited for another. So the experience of research is also useful for our students in judging what kind of environment they want to work in.

○Elliott : So the first is, that in UK, we have noticed in the last ten years, there has been changed in the type of students we're receiving into our natural science course. So Cambridge has just a single science subject, which leads into many different submodules, and we call it a natural sciences [ph].

We've noticed that students coming from the high school have much lower levels of math skills than they used to. This is leading to nearly all the science subjects having four-year course leading to master's degree.

So the second is related to the concept of the natural sciences, which is I think a good system, which allows the students to take a range of science subjects for their first two years and specialize in their third and fourth years.

We've practiced the system for a very long time since 1960s – the natural science course in its modern form was developed. And the difficulty from material science is that we're often taking students to come to Cambridge to be physicist or chemist, and we have to inspire them to become material scientists, as well as teaching them about material science, and this leads to a conflict between popularity of the course and the scientific content. So there's a difficulty as well as a benefit.

○村山 : 人気ということに関して、カリフォルニア大学バークレー校のシステムで東京大学の場合とはっきり違うのは、学科の定員という概念がないことです。過去 10 年ほど、物理学科志望の学生が倍増しましたが、定員がないため、かつて 30 人ぐらいだった学生を 60 人なっても受け入れることができました。ですからその時々の学生にニーズに応じて、行きたい学生には勉強する機会が与えられるのは非常にありがたかったと思っています。

○司会 : そういう場合、継続的に少ないとどうなるのでしょうか。

○村山 : 先ほど「学科の存続にかかわるのではないか」という話がありましたが、物理学科の場合はよその部の工学系の学生や医学の学生などにも物理を教えることをやっているため、大学全体のサービスをしているということで学科の存続を制度化しているシステムになっています。

(2) 学生や社会的なニーズへの対応

司会： そうした厳しい学生の獲得競争のために、当然カリキュラム上の工夫もして、学生にとってはその魅力が分かりやすく、非常に魅力的な講義が提供されるわけですが、一方で専門として教えないといけないこともあります。伝統的にこういう順番で、こういうことを教えていかなければいけないことがあります。知識の伝達はある程度苦勞を伴うものであり、苦勞して初めて身に付くものもあります。その時に両者のバランスをどう考えたらいいかはなかなか難しい問題だと思います。その辺りについて、何かご苦勞されている点、ご意見等ございますか。

○小関： 学生の人気取りだけをしているわけにはいきません。先ほどの説明にもありましたように、東京大学では週に1回の講義で1.5単位になっていますが、マテリアルとして「これは必ずやらしてもらわないといけない」ものに関しては、われわれは週2回(3単位)の講義をつくり、それをコア・サブジェクトとして配置しています。学生にマテリアルの魅力を知ってもらおう講義とパラレルで肝心なところは単位数を増やし必修としてやらしてもらっています。

○発言者不明： ケンブリッジ大学の場合は入学段階で専攻を決めていることが多いのですが、3年間かかるうち、上の学年に進学する際に専攻を変えることは十分可能です。特に経済学部として非常に頭を悩ませたのは、2年から3年に移る時に経済学部からビジネス・スタディーズやマネジメント・サイエンスといわれているところに移る人が多いことです。なぜかといいますと、経済学というのは社会科学系の中では非常に理論的な色彩が強いため、理論的、抽象的な話に嫌気がさしてしまい、ほかのところに行ってしまうということがあります。

こういう時に先ほどのお話ではありませんが、構造的、理論的にしっかりしたコアの内容の部分を若干削り、ある意味でジャーナリスティックで、学生が飛びつきやすいトピックスを強調して学生を引きとめるようにしました。そういうことは若干ではありますが実施したこともあります。

○北村： やはり似たようなことなのですけどもイェール大学の場合にも、いろいろな経済学の科目を付加しているわけですが、学生の人気が高い科目が、例えば金融という科目にどうしても偏ってしまいます。学生の方も将来的なことを考えると、金融というと、金儲(もう)けができるじゃないかということで、そちらの方にいきがちです。僕などの場合、計量経済学ということをお金を儲かるかということ、そんなことは言えないわけですから、その辺のバランスは本当に難しいことです。

ただ、そういう基本的なマイクロ、マクロ、それからエコノメトリックスなどというようなところで教えずにはならないことはどうしても教えずにはいけません。それをカットしてもっと面白おかしいことだけにするわけにはいきません。わたしの場合は、データの例を、例えば金融データから取ってくるということで、それを授業中にコンピューターを使い、金融のリサーチなどでやっていることを実際に教室でやってみるといような

ことで、難しいところと、学生の興味のあるところについてバランスを取るようになっています。しかし永遠の課題というか、そう簡単にはいかないことだと思います。

○松井： わたしは必ずしも相反するものだとは思っていません。やはりきちんとした足腰を鍛えるということです。つまり大学時代にきちんとした知識を身に付け、きちんと考える力を身に付けたいという学生に、いいものをするということが基本だと思っています。それをいかに学生に理解してもらおうかというところに意を砕いているといってもいいかもしれません。

例えば、わたしが専攻しているゲーム理論などですと、最近経済実験というものがあります。実験は物理、生物だけという話もあったかもしれませんが昔のことです。今は人が被験者になって、実験をするという経済学実験というものがあります。それをクラスで模擬実験みたいなことでやり、生徒さんが実際に物を売ったり、買ったり、税金を払ったり、どこかに参入したりするなど、そういうことを通じてやってみると意外に成功したり、失敗したりします。

成功する理由は何なのか、失敗する理由は何なのか、そこを理論的にきちんと解明してやることで興味をつなぎとめると同時に、きちんとした理論を教えていく工夫が必要だと思います。

○発言者不明： 物理の分野でも流行りのトピックのコースと、嫌だけれども取らなければいけないコースというものがあるわけで、そういう場合にどうしているかといいますと、嫌だけれども取らなければいけないコースの場合には、できるだけいい教官をつけます。教官の中にもかなりバリエーションがあり、いい先生であるほど教育効果が高まるものですから、まずティーチング・バリエーションを基にしてかなり工夫して教員の配置を決めます。

ティーチング・バリエーションはもちろん学生のアンケートによりますが、その結果は壁に張り出されており、どの先生が何点ということが壁に出ています。学生もそれを見て「この先生だったら、こんな難しい科目でも教えてくれる」と思って意欲が上がるということで、アメとムチといいますか、何としてもコアの科目は取ってくれるような工夫をしています。

○発言者不明： I want to comment on the same topic you did about the variability of teaching abilities, different professors and course evaluations.

○発言者不明： I think one of the real – one of the major problems facing education at Yale, and my guess is at many other universities, is that some professors are excellent at teaching and others are simply terrible. And...

○発言者不明： And student evaluations play a role in helping to fix this, but not big enough role. I don't know the answer, but I think it's a very serious problem. For one reason, the assignments of professors to teach different courses, at least at Yale, changes from year to year. So it's a little bit a

question of pure luck or chance whether a given student gets an excellent or a terrible professor for a given course, and this can affect their interest in research, their interest in going on to graduate school or whatever. And I don't have an answer to this, but I think it's a real serious problem.

(3) 女子学生比率の向上策について

司会：ほかにもいろいろあると思いますが、時間の関係もあるので少し話を変えたいと思います。学生を引きつけるということと関連して女性を増やすということも社会的要請、学内の要請として強く、どのようにして女子学生の比率を高めるかというのはご苦労があると思います。いい教員をリクルーターに充てればいいというのが先ほどのストーリーからいくとあるかもしれませんが。どのようなご苦労されているのでしょうか。

○Casten： This is something that we are very concerned about at Yale. There have been a number of studies of the difference between the number of women and men who are interested in physics. At the age of less than 10, the numbers are about equal. By the time they get to 14, there's about a 10 to 1 reference of physics or other scientist by men compared to women.

So something is happening in that time period. There's some biological things happening. There are other social things happening that is causing a tremendous loss of women to the field. Go ahead and I'll continue.

This is a serious problem, I'm sorry – that was loud. This is a serious problem because women represent a gene pool of roughly 50% in the population and it's a terrible loss to not have them in the field. The question is how to get them in the field.

One of the best ways is having women faculty members as parade examples, as advertising, how you can be a successful scientist as a woman. The problem is, of course, without women coming up from the beginning, how do you build up this set of faculty members who are women? And so it's a cycle that has a problem.

At our lab at Yale, my particular lab, the [Unclear] construction lab, a majority – an absolute majority of our graduate students have been are the women, and in fact, personally, I've only had one male graduate student ever. But women graduate students are still only about 10% or 15% of our graduate students and faculty members are smaller, and it's a cycle.

I think the best way to increase the number of women coming into the field, one of the ways, is for them to see successful women in the field, but it's a little bit of chicken and egg issue, if you can translate that.

○Glaeser： Well, I can put some additional numbers that reinforce the severity of this problem at

Berkeley in a broad sense. At Berkeley, the undergraduate population is about 55% women. So there are more women than men on the Berkeley campus, which is very nice.

And I, for the last five or six years, have chaired our graduate admissions for material science. And in a typical year, only 10% of the applicants to the graduate program are women, and so there's a very substantial attrition, decrease in interest. And it is a talent to try to counter this and there are several ways that seem to work.

○発言者不明： One of the ways, as already stated, is to have a larger fraction of women faculty members in a department, and we have a very small faculty. We only have 14 faculty members, but we have 3 who are women, which is rather high for a College of Engineering Department.

The other thing that one can do, and I try to do, is as an instructor, I think if you want to solve this problem or change these statistics, you have to make a special effort to encourage women to pursue graduate school. You cannot simply go about teaching your classes and treating them like one of the boys. You have to encourage the talented ones, the very good ones to, in fact, go to graduate school and to apply to graduate school.

And finally, the – not finally, I'm sure there are other things that one can do as well, but the admissions process for graduate school can have a very significant impact. And in the five years that I was doing admissions, we went from 20% women to 35% women and had 1 year where we actually had more women incoming than men incoming to the graduate program. So if there is mentoring and encouragement in the admissions process, anything is possible.

○発言者不明： The experience from these colleges is they are very good at providing the kind of support that Professors Guston [ph] and Galzer [ph] indicated already that their support and support from the role models and it leads to many more women in these colleges studying science, engineering and mathematics.

Unfortunately, I don't think they are the answer to the problem. If you look at the performance of the undergraduates in those colleges relative to the other colleges in the university, they almost always ranked near bottom of the academic tables. And to me, this suggests that they are limited by the intake, and just as if we restrict our opportunities to all males, we reduce the pool of candidates similarly if we restrict entrance to all females that has the same effect. So there's colleges, female – all female colleges, are not able to select the most able applicants if they restrict the choice to only one gender.

So I think in conclusion, the thing to focus on, as well as encouraging and mentoring female students, is to encourage all students, no matter what the gender is, to reach the highest levels of attainment and always make sure that we are selecting the best students irrespective of their

background or gender.

○山本： 理学系研究科でも決して手をこまねいて見ているわけではなくて、かなり真剣に考え始めています。例えば、女子高生を対象にしたサイエンス・カフェなどというものをやりました。わたしは広報の仕事をしていましたので、周囲のいろいろなこともありましたけれども、そういうものをやっていました。非常に盛況でした。ですから僕は日本においても、女性の理科、物理に対する興味というのは決してないわけではないと思っています。

一方で、わたしはその時に衝撃的な意見を聞きました。最後にみんなであいさつをしたわけですが、その時に1人の女子高生が「わたしは4月から、都内の文化系の大学に進みます。今日はサイエンスの話が聞ける最後の機会だと思ってきました」と言うわけです。

わたしはこれが直視しなければいけない現実だと思います。やはり社会全体が少し考えた方がいいかもしれないと思います。もちろん大学が魅力を一生懸命伝えるということも非常に重要だと思いますが、やはりサイエンスというか、「理科は男性のもの」というイメージがどうしても強いと思います。「資格も取れないようなところには行くな」と親から言われることが非常に強くあることも事実です。ですから、わたしはここについては時間をかけてもぜひ少しずつ増やしていきたいと思っています。そういう努力を続けたいと思っています。

○北村： ちょっと補足ですけれども、物理について「女性がいなくても当然だ」という気持ちの人が結構多いと思いますが、イタリアの場合には物理学者の半数が女性です。ですから可能なことです。

(4) 研究指導を通じた教育の実態と効果

○司会： それでは、少し話題を変えて、研究指導を通じた教育の実態と効果に進みたいと思います。今日の報告にもあった通り、主に大学院でコースワークを重視すべきだという意見と、教育と研究は一体に行うべきである、研究を通じた教育の効果が非常にあるという考え方があります。また、もう一方では、あまり早いうちに高度に専門化することによって起こる弊害もあるだろうという意見もあるかと思っています。

ここは分野によってもいろいろと差があるでしょうし、先生方によってもずいぶん考え方が違うところがあると思います。ここにお集まりの先生方はどのように考えていらっしゃるのでしょうか、その辺りについてお聞きしたいと思います。

○発言者不明： I'd like to bring up an issue here, and I don't know if everybody will agree with me. But I've noticed, and I think others have noticed, that the correlation between grades and course work and ability and success in research is often a very weak correlation and even sometimes inverse.

This is so much the case for us that when a student comes to us and asks if they can do their research

with us, we don't even look at what their grades are.

○発言者不明： And I think there's a reason for this. I don't think it's accidental, most course work teaches solving problems, learning various techniques to solve problems, mathematical approaches to different physical situations, methods to solve problems and things like that.

Now, in contrast, research, at least in physics, of course it involves doing – if you're a theorist doing mathematics, if you're an experimentalist doing experiments, but my feeling is that real advances in research, real breakthroughs don't come from either of those but they come from the creative and intuitive flash that suddenly occurs to you, that leads to some new insight and then you can go into an experiment or do some calculations to back it up. But the basic breakthrough is almost always intuitive and we don't teach that. The courses teach mechanical methods for doing things and they don't somehow address the real things if you need to have to succeed in research.

Personally, my two best ideas that I ever had, one was at a concert and the other was in the shower, so I would like to find out if other people agree with me that the correlation is weak, and secondly, what we can do to the courses to inculcate and develop the kind of intuitive, creative thinking that's necessary for research.

○発言者不明： 全くその通りだと、わたしも思います。分からないことということがあります。分からないということが面白いと思えるかどうかです。普通、今まで勉強というものは逆です。分かっていることを一生懸命理解するプロセスです。研究は全くちがいます。分からないことを見いだして、分からないことが面白くならないと研究になりません。そこのところだと思います。

それについては、僕はどうやっても教えられるものではないではないのではないかとというのがパーソナルな意見です。やはりそういうことこそ、その人がずっと——（音声中断）

○発言者不明： Some very interesting philosophical questions coming up. Maybe if I just restrict myself to responding briefly to Professor Guston.

○発言者不明： So I think the correlation between a good student at the undergraduate level and a research student is – I guess is not strong, but I wouldn't say that it is weak in my experience, either, that he made a good point that you need inspirational, some creative flash but you need to have analytical abilities or experimental abilities to prove or demonstrate your new idea to make it convincing to the others.

The second point is maybe similar to Yamamoto-sensei was trying to say that if we knew how to teach scientific creativity, I guess we wouldn't be teaching or we would be – we'd somehow have an algorithm to do to research. So I think it's very difficult to design a class that can teach someone to be a good research student apart from teaching them the analytical or experimental skills that they

need to turn their inspiration into a rigorous scientific paper or some kind of – to communicate that idea to others.

○発言者不明： Correct. Just a quick comment here. I'm not trying to say that what I do is better than anybody else but I do one thing, which I think helps. In the homework's and in the exams that I give, the questions can be divided into two categories, more or less straightforward methodology of doing the same kinds of things we discussed in class. And in the set of questions, which are completely different, I mean, nothing that we've discussed at all, totally different situation in the same subject, totally different situation where the students are basically asked to think about it and bring, to bear [ph] different ideas in ways that are not just simply repeating what they've learned.

And what I've discovered is that, if I have ten students, nine of the ten will do more or less equally well on the – what I'll call the mechanical questions, or methodology approach, but there'll be tremendous differences in how the students do on the questions that are off the wall, that are far out in left field, none of this is going to be translated right, but – that are just sort of surprised questions, if you want, in a way. And the students who do well in those, in fact, are the ones who do well in research. That's just one tiny example.

○発言者不明： 教育と研究の関係を考えるときに、ひとつ大事なファクターだと思っているのは、研究をしてきた人を社会がどういう目で見るとかということがあると思います。アメリカの場合ですと、物理の博士号を取った人というのは企業に非常に歓迎されています。どういうことかといいますと、例えば宇宙の構造形成の研究をして、その知識を持っているということをももちろん大事に思っているわけではなく、問題が何であるかはっきりしないところから、何らかのアプローチを自分で見つけ、それを解いていくというプロセスを積んだ人であるということの評価し、企業が採用してくれます。

ですから業界でよく出てくるジョークは「ウォール街に行って石を投げると理論物理学者に当たる」というぐらい、研究をしてきた人が実は金融であるとか、全く関係のないところの分野で役に立つという例が実際にたくさんあります。社会自身がそういう目を持って、研究をしてきた学生を見るようになれば、教育と研究の関係についての考え方も非常に変わってくると思います。

○司会： その違いというものは、何によって生じているのでしょうか。

○発言者不明： おそらくほとんど偏見などではないかと思います。わたしの理解では日本の企業の、例えば、雇用担当者から見た時に、博士号を持っている人というのは、何か非常に特化したことをやってきていて、狭い人間で使いものにならないという認識があると聞いています。しかし実際にはそうではなく、アメリカの例を見ると、特別な分野で研究をしてきた人が全く違うところで非常にいいことをしている例がたくさんあるわけです。そういう認識が行き渡るかどうかだけでずいぶん違うのではないのでしょうか。

○発言者不明：話をさせていただく前にフロアの皆さんにお聞きしたいのですが、お仕事を楽しんでやっている方は手を挙げていただけますか。

ありがとうございます。結構手が挙がって素晴らしいと思います。わたしも楽しいと思ってやっています。

やはりこれをどう伝えるかというのがいちばん重要だと思います。自分が楽しいのはいいのですが、しばしばわれわれが陥りがちなことは、自分が楽しいから、それをそのまま楽しいと思って授業をやると、学生がぼかんとして「？」という顔をするということだと思います。

そこで重要になってくるのが、おそらく研究指導を通じた教育です。卒論でもかまいません。修論、博論でもそうですが、本人に楽しいことを見つけさせ、それまでと違って、研究というものは自分で探し出すということ。今までは問題を解いていたわけで、例えば東京大学の学生であれば問題を解くのは得意です。しかし今度はそうではなく、自分で問題を探してこなければいけない、つくらなければならないということです。

この能力は、おそらく企業に入っても、どういう場面でも必要になってくる能力だと思います。それを楽しみながらやらなければ、24時間考え続けることはとてもできません。そのワクワク感を伝えるには、やはり卒論を書かせて、テーマは何でもいいから自分で好きなことをやりなさいということです。ただ自分で打ち込めるものを探しなさいということです。

わたしは実はその時指導らしい指導はしませんが、その時に学生が持ってきたものに対して、別の視点で見たらどうかや、質問をしながら学生自身が考えていくようにしていきます。それが研究指導を通じた指導で大切なことではないかと考えています。

○発言者不明：Casten先生がいろいろとおっしゃられて、わたしも同意することが多いのですが、最も同意するのはシャワーがいちばん効くということで、私自身の経験からいえることです。

それはともかく、われわれ経済学部でもいちばん問題になるのはコースワークからレリサテーションへの移行がスムーズにいくかどうかです。そこでつまずいてしまう学生が多く、そこをシステムチックに解決することができればいいわけですが、実際「クリエイティブになれ」といってなれるものでもないわけですから、難しいわけです。

松井先生がおっしゃった「まず卒論のようなものを書いてみる」ということと似ているかもしれませんが、われわれは学生に対するワークショップをやっている、そこでどんどん発表させます。何でもいいから興味があるようなことを見つけ、それについていくつかの論文をデビューし、そこからまた問題点を見つけ、それをわれわれの前で発表することを無理矢理やらせてしまうわけです。そこから何とかリサテーションの軌道に乗せていくということを試しています。

(5) 少人数教育のあり方について

○司会： 折り返し点ということで用意した論点以外に、こういう点を議論すべきだとい

うところをお持ちだと思います。ここでもしそういうことがあれば、論点をレールしていただきたいと思います。先生方で何かこういうことを議論したいということがございますか。

○松井： わたしはやはり教育は本来、小人数で対話式で行う部分が必要なのではないかと思います。それにもう少し時間が欲しいという気がしています。小人数教育のあり方について、皆さんがどのように考えていらっしゃるのか、少し議論してみたいと思います。

○司会： 大変いいテーマをありがとうございます。それではいかがでしょうか。「わたしはこう考えている」「このようにやっている」というご意見は。

○小関： それに対しては、おそらく今の研究と教育の関係についての議論の延長上にあるような感じがしています。基本的な知識はもちろんコースワークでやりますが、自ら考えたり、自分で課題を設定してそれにどうやってアプローチするのかということについていろいろ試行錯誤するが大学の高等教育の一つの特徴だと思います。そこがまさに小人数で、ある場合にはマンツーマンでやるということではないかと、わたしは思っています。

○発言者不明 I can just relate two things about how we do things in my laboratory relating to interactions between professors and students. First of all, from the first shade that they come in to the laboratory, we repeat to them again and again and again an acronym, which is TINSTAASQ, T-I-N-S-T-A-A-S-Q, which means, 'There is no such thing as a stupid question'. And or maybe I'll stop there and have you say that.

There is no such thing as a thing and...

[Multiple Speakers]

○発言者不明： And it takes them a while to realize this, if they get over the fear of asking questions. But eventually, they do it, and it helps them.

The other thing we do is that we have a policy that students have absolute priority. What that means is that, if two faculty members, let's say three or four, are having a meeting in some office, first of all, the door is always open, and secondly, if a student comes to the door and wants to ask a question, they have the right to interrupt that meeting, and the faculty stops what it's doing and answers the student's question. And we encourage the students to also tell us that they don't like our answer or that they disagree with it.

But the two points I wanted to make was encouraging them to ask questions and giving them the priority over everything else.

○発言者不明： イギリスのケンブリッジ大学、オックスフォード大学というのは、スーパービジョンやチュートリアルといわれている小人数教育が売り物です。これは非常に労働集約的で、インテンシブななかなか大変な作業ではあります。

その一つの理由は、通常ミーティングを持つ前に宿題を提出してもらい、教員はそれを採点しなければいけないわけですから、そういう部分が大変です。ただ、月並みな言い方ですが、その分だけ非常にきめ濃やかな教育ができるようになるので、学生の理解は非常に確実なものになっていく傾向が強いと思います。

そのほかに、もう一つ、議論の中でお互いの話を遮っていいわけ。「今言っていることはどういう意味なのか」など、ほかにいろいろなタイプの質問をすることができます。それにきちんと呼応して答えられるようにするためには、一つの現象や一つの事実をいろいろな角度を眺められていなければいけないわけです。当たり前のことですが、実際にそのような理解を深めるための最も有効な方法が、この対話をするということです。一方的に文章を読んだり、人の話を聞いていくことも一つの理解の方法ですが、多面的な物の見方を身に付けるためには、対話が向いているように思います。

さらにもう一步踏み込んで考えると、ものを説明する時に「こういう言い方をすれば誤解されやすいのではないか」「こういう言い方をすればもっと分かりやすいのではないか」というところまで予想して話をする癖が付くようになると思います。

従って「こういうものが見方ができるようにならなければいけない」「こちらから見方からみると分かっているのだから、あちらの見方からは分かっているということが今分かった」など、そういう利点、物の見方の多様性は小人数教育ならではの、獲得できる利点ではないかと思います。

(6) 教育理念、教育目標、達成度

司会： それでは次のテーマということで、教育理念、教育目標、達成度というところに入っていきたいと思います。

結局どういう教育をするのかということは、どういう教育理念を持っているのか、教育目標を持っているのかということにかなり依存するわけです。ですから評価する時も、どういう教育理念に対して教育活動ができていくかどうかということが決まってくるわけです。そもそも違った目標を持っている教育を、違った評価軸で評価してしまうと、必ずしも評価になるかという話があるわけです。

大学としての理念、学部としての理念あるいは学科専攻としての理念、個人としての理念があるのかもしれませんが、ないのかもしれませんが、わたしはその点については個人に依存する部分がかかなり大きいのではないかと思います。

例えば、世界のリーディング・ユニバーシティなのだから、研究者を育て、自分の後継者を育て、学問分野を発展させる人たちを育てていく——これは極めて重要だというのは当然だと思いますが、一方で多くの方は社会に出ていくわけですから、社会に出て活躍する人を育てるためにどういう研究・指導をすればいいのかを考え、例えば研究テーマであるとか、研究指導のやりことを考えている先生もおられると思います。

「順番に当てるようなことはしません」と、最初に言いましたが、このテーマだけにつ

いては、皆さんそれぞれ一言お持ちのはずですので、順番に聞いてみたいと思います。

また、自分がよしと思う教育がどの程度達成されているのか、その結果として社会に送り出した教え子が本当に教育効果を、アウトカムをきちんと示しているかどうかについてもお願いしたいと思います。こんなことを聞かれると聞いていなかったと思いますけれども、順番に聞いていきたいと思います。

○松井： 完全に個人ベースの話ですけれども、先ほど言いましたように、自分が大切だと思っていること、自分が楽しめること、それをやっていくべきだと思っています。研究の場合は特にそれがないと仕方がありませんし、仕事だとそうは言っていられないといっても、やはり企業に入ってもおそらく自分で仕事を見つけ、作りだしていく能力は非常に必要なものではないかと思っています。

そこで学部教育で、わたしが気づいてほしいと思っていることです。マテリアルをわたしの場合はゲーム理論とか、経済理論とか、そういった話にもなりますけれども、何か自分が表現したいものがあるはずです。それを表現する場を提供するのが卒論です。卒論は経済学部では選択制ですが、うちは必修にしています。ゼミを取る要件にしております。

その中でだいたい書いてみると、中間発表などをやらせると最初お粗末なものが出来上がります。そこで初めて自分は人に伝える能力がこれほどなかったとか、もう少し経済学のしっかりした論理的な思考を身に付けておけばよかったと、本人たちが気づくわけです。それで初めて教育の効果がスタートするといいますか、そういうところもあります。別の言い方をすれば、わたしは何もやらずに（笑い）、笛を吹いているという感じで、いかにわたしが何もやらないで、学生に気づいてもらうか、考えてもらうかということが一つの理念としてあります。

また後で思い出せば、もう少し話したいというかもしれませんがとりあえず、以上のことです。

○原： 経済学というのは非常にユニークで、いろいろなたくさんの方がやっているごくごく当たり前の日常生活の一部である経済活動のある種理論的に解明していくということですが、それを通じて物事を見る時に批判的に自分の考えであればどうなるかとか、自分のものの見方だったらどういうふうに関承転結、因果関係をとるかということです。そういう批判精神を養えるような教育をしていきたいと思っています。

○北村： わたしもこれについてはいろいろたくさん点があると思うので、1点だけに絞らせていただきたいと思います。

特に学部の教育でどういうことを学んでいてもらいたいかということだと、やはり経済学の場合、学生の皆さんが社会に出られて、例えばニュースを見てこういうことがあるということ、ただそのまま鵜呑みにしないということです。特に経済現象というのはすべての因果関係がそれほど簡単にはつきりできません。経済学自体が非実験科学という面があり、われわれがちょっと実験をして、ラウンド・マインド・コントロール・エクスペリメントして、それで結果を見ることができません。ですから、あるジョブ・トレーニング・プログラムがあって、その効果を見る時に、そのままジョブ・トレーニングのあつ

た人とない人を比べるだけでは、ミスリディングの結果が出てしまうということがあります。そういう単にデータの中の「コリネーション」を因果関係ととらえるのではなく、もう少し深く突っ込んでいくというようなことは、経済学をやっている人だけではなく、いろいろな社会の生活の中でも、こういうことは有用ではないでしょうか。そういうことを学部で、経済学をやらない人も学んでほしいというのが最終的な目標です。

○山本： 私は物理に所属していますが、元は化学の出身で学位も取っています。そういう経歴の物理学者もいるということです。要するに私の感じていることは「面白いことはどこにでもある」ことです。ですから、学生たちには、ぜひ面白いものを見つけることができる基本的な力というか、そういうものを身に付けてもらいたいのが私の理想です。

○村山： 今まで聞いたことにほとんど同意するのですが、一つ付け加えたいのは、学生を指導している時に非常に強調する点として、自分の言いたいことをきっちり、しかも相手に分かるようにきちんと伝えるプレゼン、コミュニケーション能力を培うということを非常に心がけています。学生も後々それが非常に役に立ったとっています。

○Casten： If the goal of our educational system is to prepare students for whatever they want to do in life afterwards, I think, at least at Yale, we largely fail in this, at least in the physics department. The reason is that, about 90% of the incoming students have in their minds – they imagine that they want to follow academic careers, but only about 40% of them actually do, either at universities or in national labs. And some of the rest go in the governmental work and about 1/3 go into industry and non-academic jobs.

And I don't think we pay enough attention to preparing the students with these alternatives or even for making them aware that the majority of them will not have academic positions. And, well, we should do better and I don't know quite how.

○小関： 工学系のマテリアルということで、学部生の多くは修士課程に進み、その修士課程の8割は実際に産業界にエンジニアとして出ていきます。エンジニアの観点から言うと、教育的には非常に広いマテリアルのさまざまな性質を学んだ上で、なおかつ自分自身である深い知識を持っているというようなところで、俯瞰（ふかん）的に見る力と、個別のこういうものをきちんと知っているということは重要だと思います。

一方で、修士課程を出て産業界に入っていくと当然ながらルーティンワークですとか、答えが分かっているような仕事をやるわけではなく、研究と同じで自分で仕事を見つける、あるいは自分で答えのないものにチャレンジするというケースが期待されます。それはまさしく研究のプロセスと同じで、過去にどういうことがやられていて、自分はそれと違う何をやるか、どのようにアプローチするか、出た結果をどのようにアナリシスして、もう一度戻ってくるか——そのような思考がきちんとできるような経験を積ませることが重要です。

もちろん研究の中身そのものも非常に重要ですがけれども、そのような考え方の流れを身

に付けさせるということも、せっかく学部生卒業論文をやり、なおかつ修士で2年間かけて研究をやるわけですから、実際のビジネスの中でも使えるようなものの考え方をきちんと付けさせるということです。

同時に専門的には深い知識を付けていくわけですが、プロセスをきちんと身に付けることが、いろいろなビジネスの中でもものを考える上で重要ではないかと思っていて、そのようにしてほしいと常々考えています。

○Glaser : Well, I have different objectives for undergraduates and graduate students. Material science is a field that has a number of core ideas. They are somewhat like threads in a fabric that you can look at them individually, but the beauty of the subject really comes when you see how those threads are connected.

So I think the goal of the undergraduate level was to do the best job that I can to make them appreciate those threads and to appreciate to the extent that I can, how they fit together and how large this fabric is, how much it covers, how many things around them are described by and impacted by these ideas, and to try to instill in them a desire to continue learning and to continue analyzing and to continue thinking in this framework.

And at the graduate level, I think if you get graduate students, you've already succeeded in instilling that. And then I think at the graduate level, the goal for a PhD is to not simply produce a competent researcher but to produce a scholar – someone who appreciates and wants to know the history of a problem, the various contributions to it and who can look beyond the obvious for answers to really be an academic, to be a scholar and not just a researcher.

○Elliott : So like the other leading university's representative, this [Unclear] students arriving in Cambridge think that they are the best, but very soon, they realize that they're not, and my personal educational goal is to take them beyond there and help them come to a more mature conception of what an education is and that you can have a sense of achievement not just by passing exams and doing the problem sheets, but by getting a better understanding of world around you.

○Casten : I just wanted to clarify that when I said, refer to the graduate, work at Yale when I was talking about our failure for future lives. And just a quick comment here. We did some surveys and 70% of our graduate students leave there in the 10%.

(7) 評価、ランキング

○司会： カリキュラムの責任主体、教育観の議論ということが書いてありますけれども、要はこのベンチマーキングもそうですけれども、ランキングあり、授業評価があり、いろいろなところで評価されます。そういうことを踏まえて、教育の質を高めるということはやらなければいけないことで、どうやったら本当に教育の質が高まるのかということがいちばん重要なことだと思います。ア krediteーションなど、いろいろなものがある中で、どういうものが本当にカリキュラムの質の向上につながっているのか、あるいは社会から質を向上させるためにということで、いろいろなプレッシャーを受けているわけですが、それが悪影響を及ぼしている部分もあるのだらうと思います。この辺りについて実態や、先生方の考えをお聞かせいただきたいと思います。

いちばん答えやすいのはおそらくア krediteーションのいい面、悪い面ということだらうと思いますが、いかがでしょうか。

○Glaeser : At Berkeley, I can't speak for every department at Berkeley. But the curriculum, the courses, the faculty are under a constant state of review and assessment. For example, in material science, every course is subject to three separate review processes by each student taking the course.

○発言者不明 : So one review is at the departmental level, which provides a input data on how successfully you have taught the course and how successful students think you were in communicating the key ideas of the course to them.

And the ABET accreditation process – [Unclear] does not – and review campus [ph] not simply at the end, but it creates a bureaucracy that is absolutely overwhelming, stifling, and in my view, totally contrary to improving education and I would encourage anyone who has the choice to reject accreditation to do it, because it has created a workload that actually detracts from your ability to teach. You spend more time filling out forms than you do teaching. It has, in my view, been totally counterproductive. It should be done away.

So imagine a situation where every single question that you asked on every problem set, on every exam, has to be linked to a particular desired outcome and you need statistics for every single problem on how well you have achieved your outcome. It's like a political election.

So the acronym for this accreditation board is ABET, A-B-E-T. We have several unofficial translations of this. The only one that is polite enough to say here is 'Anything But Enhancing Teaching'.

○発言者不明 : To be specific, I think the major changes that we had to make for achieving accreditation was to introduce the language – foreign language option and management course option.

○発言者不明： So I think that you shouldn't look to the accreditation process to improve the curriculum. But to make a positive comment on the professional bodies for the material scientists in the UK has made some very helpful recommendation for us, in terms of general strategy. For example, they did a survey of companies in the UK that showed there were not enough trained metallurgist for current generations of companies. That can be very useful, but I think the detail impositions [ph] on the course curriculum is not appropriate.

○発言者不明： At Yale accreditation is an issue, and in fact, we have almost zero oversight in the quality of teaching. It's exactly the opposite. Okay, I'll leave that at that.

I want to make a comment about ranking. Someone said earlier, if I understood the translation, that ranking is not so important that it's more a symptom and that the goal is quality education, and that's of course true. Ranking is just one of many means of evaluating quality of the education. But I just want to make – well, okay, I'll stop there and you can translate that.

And that has to do with the competition for the best students. When we admit a student to the graduate school or the undergraduate, well, I'll give you an example for physics for the graduate school. For every four students that we tell they're admitted, we get about one of them. And the reason is they were also admitted to Berkeley, Harvard, Caltech, Stanford, Princeton and so on. So we're in competition with all these schools.

And one thing the students look at are the rankings. So whether that's good or bad, I don't know. But it's a fact to – for that reason, we are concerned about rankings.

○発言者不明： 今の大学院生を獲得することについてですけれども、アメリカの大学の中では、優秀な大学院生を獲得するための競争が非常にし烈です。まず大学院生に対して「あなたをぜひここに、大学に来てほしい」という手紙を送った後、教員全員が手分けをして電話をかけ、場合によっては会いに行き説得工作をします。さらに、その人たちに大学からお金を出して来てもらってプレゼンをし、もてなして最終的に説得して来てもらうという非常に大変な作業をすることになります。

そのためにランキングがいいか悪いかというのはもちろん重要な問題になりますし、それだけでなく、応募してくる学生の方も非常によく調べています。「どこどこの大学に行くと何々先生が良い指導をするからそこに行きたい」と、そこまで考えた上で大学を選択する文化になっています。

日本では、例えば東京大学の学生はおそらく皆、東京大学の大学院に行くと思いますので、そのような事情は生じていないと思いますが、そこまで学生の方も教官の方も真剣勝負をしていい教育機関をつくっていくという文化はものすごいと思いました。

○原： まだあるかもしれませんが、わたしがいたころイギリスにはクオリティー・アセ

スメント・エージェンシーという政府の外郭団体がありました。これは日本で言いますと、大学評価・学位授与機構に非常に近いものだと思います。わたしが在職している時に、それによる授業の内容の査察が入りました。査察そのものは4日間とか5日間ぐらいしか続かないのですが、事前莫（ばく）大な量の資料を用意しておかなければいけません。例えばコースの講義要綱やシラバス、リーディングリストです。そのほかには、スチューデント・エバリエーション、学生が先生に対してどのような評価をしたかなどです。まずそこでものすごい労力がかかります。

ケンブリッジ大学でも、その担当の責任者に聞いたところ、もしかすると、直接、間接の費用を含めると2000万円ぐらいかかっているのではないかと思います。もちろん直接費用といった場合余計にコピーを取るなどありますが、間接費用としては、ある1人の先生はその査察の準備をするために1年間かかりきりでしたので、その人の分のサラリーなども飛んでいってしまいます。それでは、それが果たして効果的であったのかといいますと、あまり効果的ではありませんでした。

ただ、イギリスの制度で、講義の質を高めるために良かったと思うのは何かというと、期末試験をつくる人と採点する人が違うことが非常に多いということです。どういう効果を生むかということ、採点する人というのは、ある程度きちんと問題と解答を理解しなければいけないわけですから、「これはどういう意図なのか」とつくった先生、授業を担当した先生に聞くわけです。突拍子もない、誤った質問をするとつくった方が恥をかくわけですから、非常にいい効果になっています。

ケンブリッジ大学の場合には、さらにスーパービジョンもありまして、それは大講義で先生が講義をして、それに付随するスーパービジョンを複数の先生が小さいグループで担当しますが、その大教室で教えられたことがスーパービジョンのスーパーバイザーにも伝えられることになります。ここでやはり変なことを教えると、チェックが入ってよろしくないわけです。

日本ですと、ある先生の授業内容のことをほかの先生があれこれ言うのは干渉と見なされ、非常によろしくないわけですが、イギリスでは割と頻繁に行われています。わたしは日本国内でももっとあってしかるべきことだと思っています。

○司会： 日本で実際に実現できるかどうか分かりませんが、ヒントにはなる話だと思いました。

今回のベンチマークの作業をしている中で、Webで情報がどのくらい公開されているのかということ調べてみました。やはり試験問題がかなり公開されています。特にカリフォルニア大学バークレー校はそうだったと思います。試験問題が公開されているというケースがずいぶん多く、おそらく試験問題を公開するというのは、先生がおっしゃった誰かほかの人に採点してもらうことと同じような効果があるような気がしますので、それはそういう方向で少し模索してみるのもいいのではないかと思います。

○発言者不明： I'm always a little delayed because I'm waiting for the finishing of the translation. I feel very strange making this comment because it's a comment about ranking in the UK. And so the others here should probably be making it, but since they didn't, I will.

In the UK, they have, every five years, a process called the Research Assessment Exercise where every university is ranked on the scale – each department to rank on a scale from 1 to 5 and then the super best get a five-star ranking. And that's a very complex, informal process, which it turns out as extraordinarily important because the amount of funding that those departments get for research – there's a formula, a rigorous formula, which says what funding they get based on that ranking.

○発言者不明： Thank you for bringing up the topic of the RAE. I guess one reason perhaps we didn't mention it is there was initially a lot of resistance to this program when it first came in and the latest exercise is being held this year in 2008.

○発言者不明： So, the difference in attitude to the exercise this year is very noticeable compared to previous exercises. Now, I think most academics in the UK, although they resent the extra burden of paperwork that comes with the RAE they recognize that this private ranking system has some value and obviously it is crucially important for a department to come top. For a leading university, you have to have a top-rated department; otherwise that department is under a lot of pressure. So, I think the RAE has become more and more accepted with time and for the top-ranking universities and departments it produces good results but not for everyone.

○発言者不明： RAE についての捕捉ですが、これは回を重ねていくごとに予算に対するインパクトがどんどん大きくなってきています。例えば星の付け方の 1、2、3、4、5——と、ほかに =5 スター= と 6 段階あります。以前ですと、5 と =5 スター= の間は予算の違いが 20—30%ほどでしたが、現在では 2—3 倍になってきています。

その帰結は、結局高い値段でほかから人を雇ってくるということです。インターナルに内部で若い人を育て、いい研究結果に結び付けるというより、とりあえず予算を高く獲得したいために既にいい研究業績のある人をほかから引っ張ってくるということです。そういう意味では、わたしにはどうしてもひずみが出てきているように思えます。

○司会： ランキングに関連して世界の大学を見ていただくと、上海交通大学のランキング、さらにニューズウィークランキングということで、今回お集まりいただいている 4 大学でランクがどのようになっているかを表したものです。

この中でタイムズ社の World University Rankings の総合評価を構成する評価項目は Peer review、Employers review、Staff/student ratio、教員 1 人当たりの citation の数、International staff と International student の比率などを項目ごとに、スコアと順位を出したものがこれです。

この中で Employers review (リクルーターズ・レビュー) と staff と student の比率が教育にかかわる 2 つの項目です。ランキングの中で教育はこうした項目でしか評価していません。そのランキングはこのようになっています。

東京大学は Employers review では 48 位で、日本の企業からあまり評価されていないというを表しているようです。

(ランキングの比較)

	University of Tokyo	UC Berkeley	Yale University	University of Cambridge
THES: World University Rankings 2007	17 (score: 91.1)	22 (score: 89.7)	2 (score: 97.6)	2 (score: 97.6)
Shanghai Jiao Tong University: Academic Ranking of World Universities 2007	20 (score: 45.9)	3 (score: 71.9)	11 (score: 55.9)	4 (score: 71.6)
Newsweek: Top 100 Global Universities 2006	16	5	3	6

(タイムズ社 World University Rankings 2007)

	University of Tokyo	UC Berkeley	Yale University	University of Cambridge
Peer review	1 (score: 100)	1 (score: 100)	1 (score: 100)	1 (score: 100)
Employer review	48 (score: 92)	10 (score: 98)	10 (score: 98)	1 (score: 100)
Staff/student	28 (score: 96)	116 (score: 59)	1 (score: 100)	17 (score: 99)
Citations/staff	41 (score: 88)	16 (score: 92)	22 (score: 91)	66 (score: 83)
International staff	169 (score: 25)	79 (score: 73)	48 (score: 84)	19 (score: 98)
International students	138 (score: 44)	47 (score: 88)	76 (score: 75)	35 (score: 91)

* : Education

こうした数値が実際に出ています。今回ベンチマーキングを教育について行って見て、こうしたものと比較してみて、果たしてこうしたランキングに意味があるのか、あるいはこれをどのように理解すればいいかを少しお聞かせいただきたいと思います。

ベンチマーキングという活動をこのように教育で行うのは世界で初めての試みだと思いますが、実際にやってみての感想、あるいは教育の質の向上につながるのか、改善すべき

ところがあるとなればどういうところなのかなどについて少しお聞かせいただければと思います。いかがでしょうか。

○北村： 堀井先生が質問されていることとやや異なるかもしれません。

先ほどランキングと、例えば graduate student を獲得する競争の関連などがありました。これについて非常に面白いと思うことがあります。わたしが graduate school にアプライした時と今の学生の行動とはずいぶん異なるものがあります。僕がアプライしたのは 1989 年で、当時は情報が非常に少なく、雑誌などに出てくるランキングにしてもほとんど唯一の手がかりという感じでした。しかし、今ではインターネットを見て決める学生が多いわけです。

例えばイェール大学で言えば、われわれのところは「実証産業組織論」が結構強く、中国から産業組織論をやりたいというアプリケーションがたくさん来ます。ですから、インターネットの影響は結構大きく、このように発表されているランキングとわれわれがインターネットで発信できる情報との兼ね合いは今後もっと重要になってくるのではないかと思います。

○発言者不明： アメリカには、日本の学術会議に当たるナショナル・リサーチ・カウンスルというところがあります。10 年間に 1 度大学院教育について調査、レポートを作成して中に出ているいろいろなランキングの基になるデータを提供しています。

今回もそれは続けていますが手法が変わりました。大学の間で順に 1、2、3 という番号を付けることは意味がないとしてとりやめました。例えば 1、2、3、4、5 と来た時に、5 が 4 つぐらいある場合、3 から 7 ぐらいはみんな同じ程度で、本当に問題なのはもっと細かい特定の分野に行きたい人はそれについて気にするということがあります。順番を付けることには意味がないという考え方に変わってきています。

最終的にどのようなレポートを出すかという、1 から順番に付けるランキングも一応作りますが、それ以上にどの観点から見た時にはどういう順番になっていて、その基になっているデータは何かをすべてウェブ上で公表する方向に動いていると理解しています。

実際に = 大学を選ぶ大学院生に応募している (左記文脈が不明です) = 学生に対しても、もっと多角的な情報が提供されるようになってきており、それを基に判断していくと思います。そういう意味では、順番を付けたランキングはますます意味を失っていくのではないかと思います。

(8) 今回のベンチマーキングの感想

○山本： 評価の時にいつも思うことですが、何のために評価するのかとよく考えます。授業評価にしてもそうです。その時いつも思うことですが、「ここがまずかった」「ここは良くない」ということを、学生にズバリ言ってもらうことがいちばん良かったと、逆に思います。

今回のベンチマーキングでは、物理分野では他大学の先生にいろいろとお話を伺うことができました。もちろん東京大学の理念もありますが、物理分野でわれわれが学ばなければ

ならないことはたくさんあります。そういうことを知ることができるのが最も重要だと思います。私は、順位そのものはいろいろなことに使われるという側面はあるものの、やはり本質部分ではないような気がしています。

むしろ、われわれが評価をすることは自分を知るためであり、自分がどうよくできるのか、どのように変わっていくべきかを知る一つの術（すべ）だと思います。それなしには評価はないのではないのでしょうか。

きれいな報告書はいくらでも作ることができますし、指標の取り方によって順位はいくらでも変えることができます。そういうことではなく、われわれは何を学ぶことができるかという中身が大事な気がしてやっています。そういう意味では、今回のチャンスは非常に勉強になったと考えています。

○松井： 東京大学経済研究科もさまざまな問題を抱えていると思います。いろいろといい面もあると思いますが、こうしたベンチマーキングの形でほかのリーディング・ユニバーシティの方々と議論することで、いい点、悪い点を洗い出し、いいところは伸ばし、改善すべきところは改善していくことです。地道な試みでできる分野も限られているかもしれませんが、できるところからこうした試みを進め、まず踏み出すことが重要だと思います。

今回の試みがこの1回限りで終わることなく、むしろさらに拡大していく方向で進めていければと思っています。

○小関： おそらく終わりだと思いますので、最後にマテリアル分野として、Glaeser 教授と Elliott 先生に協力していただいたことにまず感謝したいと思います。

今回、この2人とメールをやりとりしたり、ディスカッションしたりする時間の中で、ほかの先生方もおっしゃっていたように、それぞれの学科が抱える問題やそれぞれ力を入れているところがよく分かって非常に良かったのではないかと思います。

ケンブリッジ大学もカリフォルニア大学バークレー校もマテリアルの分野でトップの大学です。そうした中で自分たちのカリキュラムを互いに比べ合うのは重要だと思いますし、今後とも続けていく必要があります。

本日はプロフェッサーGlaeser はそうした話はしませんでした。彼がグラデュエート・スクールのアドミッションの担当を続けていて、カリフォルニア大学バークレー校に入る数がぐっと増えてきたそうです。それは時間がかかる話で、一朝一夕に変わるものではありません。

結局ランキングももちろん、何をやればすぐに上がるという話ではありません。教育の話ですから時間がかかります。数字に一喜一憂することなく、時間をかけて研究も含め自分たちの教育レベルを上げていくことに取り組んでいかないとはいけません。その結果として数字が出てくるわけで、数字で一喜一憂するものではないと考えています。

ただし、こうしたベンチマークの試みは非常に有効な手段ではないかと考えています。

(9) まとめ

○司会： 長時間にわたりご協力をいただき、ありがとうございます。

このベンチマーキングは、わたしがずっとやってきましたが、お話を聞いて大学や分野の違いはいろいろとあることがよく分かりました。しかし、本質的なものは違いの中よりもむしろ共通性の中にあると思いました。社会が変化しているということがあります。社会経済状況の変化に伴い、一方で大学に対する財政を削減する圧力があり、反対側にはイノベーションや人材面で大学に期待するところが大きいということがあります。

学生にも変化が見られ、多様化や学生のニーズの変化もあります。学生獲得競争の中で大学が闘っていかねばならない面があり、資金と学生の獲得競争の両方を迫られているところもあります。社会の変化に大学が対応を迫られているわけです。しかし一方で大学が守っていかねばならないところがあって、その折り合いをどうつけるかをめぐってどの大学も苦しんでいることがよく分かりました。

ベンチマーキングはできるだけ労力をかけないようにとやってみたわけですが、ベンチマーキングを具体的に一体どうやればいいのか、どの程度の効果を持つかについて試したのが今回の試みです。先生方にお集まりいただいたのはこれが最初で最後ですが、事前にウェブで調べられるもので、どれだけ調べられるか——やってみると結構下準備ができるものです。

ですから、教員の方にご負担をかけなくても、何らかの仕組みでやればできると思えます。出来た資料からお送りして議論を始め、こうしたいい雰囲気うまくできて、そこに集まっていただければ非常に有益な議論ができると思えます。それが教育の質を高めるために非常に有効で、それ以上やると負担だけが大きくなりコスト・パフォーマンスが合わなくなると思えます。

もう少し分析する必要がありますが、今回試したこの方法が本当にいいのであれば、これをさらに改善し、少ない労力で多くの大学がこれを比べてみてはどうでしょうか。まず、自分と比べたいところを選び比べてみることです。外部に評価されたり、自分で自分を評価し反省することは、特に日本人の精神構造にはなじまない部分もあるのではないかと思います。

ところが、ベンチマーキングであればそれほど自尊心を傷つけることなく（笑）自分たちが改善すべき点を見つめることができます。そういうメリットもあるのではないかと思います。

ですから、多くの分野、多くの大学で比べたいところと比べ、その結果をウェブなどで公表していくことです。その数が増えていくことによって大学の評価も違った側面から測ることができるということもあるでしょう。そのことが、それぞれの大学の教育・研究の質の向上につながっていくのではないかと思います。

「(これを) 1回で終わらせることなく」との話がありました。わたしもできればこれを広める方向で少し動いてみたいと思います。しかし、こうした活動が実を結ぶのは社会からのサポートがあって初めて可能になると思います。社会、学生と大学の実態の乖離(かいり)をどう埋めていくか考える際、最も大切なことは実態をきちんと理解してもらうこ

とです。社会とともに解決策を探していくことが大学の課題であり、その一つのツールとしてこうしたベンチマーキングがあるのではないかと考えた次第です。

今回、遠く海外からも先生方にご参加いただきました。通常自分の研究のためであれば、時間を割いて国際会議に参加するそれなりのベネフィットが得られるわけですが、今回は教育がテーマで、自分の研究業績には一切つながらない場に集まっていた先生方は、まさに教育に対する熱意を持った素晴らしい先生でいらっしゃると思います。こうした先生が増えていくことで大学も良くなっていくことだと思いますが、主催者としてこうした活動にご協力いただきましたパネリストの先生方に心から感謝を述べたいと思います。

また本日、年度末のお忙しい中長時間にわたりご参加いただいた聴衆の皆さんにも心から感謝を申し上げたいと思います。

フロアからの質問の時間を取ることができず大変申し訳ありませんでした。参加登録いただいたメールアドレスに質問やご要望、ご意見を送っていただければ、可能は範囲でできるだけ対応したいと思います。何か反応をいただければ幸いです。

司会の不手際で時間がややオーバーしましたが、これをもちまして「大学教育の国際規格に関する国際ワークショップ」をお開きとさせていただきます。

ありがとうございました。