

## Vietnam Trip Report — March 2010

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### Contents:

Trip Report

Appendix 1. Summary of my views on higher education reform in Vietnam

Appendix 2. A brief proposal to improve university education

Appendix 3. A proposal (with the assistance of C. V. Ramakrishnan) for peer review of grants

### Introduction

When Ann and I left Seattle for Vietnam on March 5, I felt a mixture of excitement and apprehension. On the one hand, there were some very pleasant things to look forward to. We would be with old friends — mathematicians and women’s activists — whom we had not seen in over two years. We knew that “Women’s Week 2010” would end with a big celebration of the 25th anniversary of the Vietnam Kovalevskaia Prizes for women scientists, and that in this connection the government of Vietnam had decided to give Ann and me Friendship Medals. And my colleagues at the Hanoi Math Institute had arranged for the Vietnam Academy of Science and Technology (VAST) to grant me a Doctorate Honoris Causa.

On the other hand, for the first time in the 32 years that we have been visiting Vietnam, I had recently taken a very public stand on a range of sensitive issues. I had written an article opposing most of the recommendations for higher education in Vietnam that had been made by a group of self-styled “leading American experts” sent for a brief visit to Vietnam by the U.S. National Academies. Then I had written an article — which I called a “second opinion by an American” — that sharply and angrily refuted a paper written by the Vietnam representatives of Harvard’s Ash Institute and the U.S. State Department’s Fulbright Program. And finally, I had ridiculed the proposal of the U.S.-Vietnam Education Task Force (of which U.S. Ambassador Michalak is an *ex officio* member) that the government of Vietnam pay a consortium of U.S. colleges to construct and administer an “American-style university” in the south of Vietnam. Although I knew that our friends in Vietnam generally agreed with my viewpoint, I also knew that there was a possibility that some people in the government leadership would think that I had gone too far. After all, the Vietnamese members of the Task Force were high officials of the Ministry of Education and Training (MOET).<sup>1</sup>

To be constructive, someone who sharply criticizes other people’s proposals is obliged to suggest something better. For this reason I had also made several suggestions and

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<sup>1</sup> Although the Executive Summary of the Task Force’s *Final Report* is signed by Ambassador Michalak, on the Vietnamese side it is signed only by a vice-minister. When I saw this, I found it significant, since I think that the normal protocol would have been for a minister’s signature to appear opposite the Ambassador’s. However, the name of the minister, Nguyễn Thiện Nhân, does not appear anywhere on the document.

proposals about higher education and scientific research (see the Appendices). But I was aware that my proposals — especially if I lobbied for them in meetings with officials in Hanoi — might undercut some other proposals that my Vietnamese colleagues had made to the government. In short, what I was apprehensive about on the eve of our arrival was that all my activities over the previous few months would make me seem like a bull in a china shop — like an “ugly American” who was almost as arrogant as the U.S. officials he was criticizing.

Sunday March 7

A few hours after we landed in Hanoi, the Math Institute Director, Ngô Việt Trung, took us to meet with Deputy Prime Minister Nguyễn Thiện Nhân, who heads MOET, and three other MOET officials. They had set up the Sunday afternoon meeting because DPM Nhân was leaving for an extended trip to the U.K. and Russia on Monday.

Ann and I had been afraid that the meeting would be brief and ceremonial, but it was not. It lasted over an hour-and-a-half, and some of what DPM Nhân said was not expected. When I brought up the U.S.-Vietnam Task Force *Final Report* (which prominently displays the insignias of the U.S. State Department and of MOET), he said simply, “We have not accepted that,” and he invited me to make the case against the “American-style university,” which I did. Later in the meeting he referred to the plan to construct four new universities with different international partners — which at one point had been regarded as the centerpiece of MOET’s plans to improve higher education — dismissively as “just four out of 300 public universities in Vietnam.” He was keenly aware that many people were disappointed in what the French and German partnerships (which were the farthest along) were producing. Ann and I got the distinct impression that DPM Nhân had already concluded that the “American-style university” was not worth the money and should not be built, and that the French and German ones were not going to be “apex” universities either.

The meeting left many questions unanswered. Will Vietnam still take out a World Bank loan of USD 400 million? What will replace the “American-style university” as the centerpiece of MOET’s plans for higher education? What will their new strategy be for having “world-class universities” by the year 2020?

In the meeting I kept coming back to the central point that to get top-notch universities it is more cost-effective to improve existing universities than to build new ones. And I repeatedly asked that something be done to greatly improve salaries and working conditions at Vietnam National University (VNU) and other government universities. I talked about the importance of contact between faculty and students outside of lectures,<sup>2</sup> and I urged him to build a new building at each university for faculty offices and meeting rooms. He listened, but was noncommittal in his response.

I also explained why I oppose MOET’s “Advance Program” (where MOET pays to bring over American professors for a few weeks to teach a short undergraduate course that will supposedly be a model for Vietnamese professors to emulate). I told him about

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<sup>2</sup> In order to supplement their low salaries, most professors need a second source of income. Because of this and the lack of offices, they rarely see students outside of lectures.

an associate professor of economics at a U.S. community college who had participated in the program (and who had sent me an email criticizing my “second opinion” article and belittling and ridiculing MOET). DPM Nhân said that such a person was not qualified to participate in the Advance Program. Nhân agreed that in some assistance programs the foreign “experts” have sometimes turned out to be less qualified than their Vietnamese counterparts — and he told of some such cases he had encountered — but before our meeting he had been unaware that people from bottom-tier U.S. institutions were coming over in the Advance Program.

Moreover, I explained that besides the waste of money, such a program can further damage the morale of Vietnamese professors. I said that it’s one thing to bring in visitors to explain their research, but it’s quite another thing to bring in outsiders to tell people how to teach. I told about the angry reaction of professors at a college where Ann used to teach when the administration paid USD 10000 to bring in an outside consultant to lead a one-day mandatory workshop on how to teach. One can imagine a similar reaction if a lot of money were spent to bring in someone from another country who didn’t even speak English but was supposed to show us how to do a better job teaching our American undergraduates. The same applies to a program to bring non-Vietnamese-speaking Americans to teach briefly in Vietnam. And, of course, the Advance Program comes in the context of MOET’s failure thus far to do much to improve salaries and working conditions for Vietnamese professors. Thus, it could be perceived as adding insult to injury. The DPM understood and seemed troubled by the point I was making. But he thought that the solution to any morale problem would be to better explain the rationale for the Advance Program.

At the end of the meeting the DPM again thanked me for writing the “second opinion” article, which was a “rocket fired in time,” as he put it (he was referring to the fact that at that time he was about to face questioning in the National Assembly concerning the allegations about MOET that had been made by Valley and others).

I later gathered together a packet of material (including the proposals in Appendix 2 and 3) that I asked Ngô Việt Trung to give to the DPM.

Monday March 8

I spent all Monday afternoon talking with Lê Tuấn Hoa, who is Deputy Director of the Math Institute and President of the Math Society. He gave me an overview of the mathematicians’ proposals to the government for improving mathematical research and training over the next decade. He showed me a book-length report to the government that contains a detailed statistical analysis of the current situation along with several recommendations. Deputy Prime Minister Nguyễn Thiện Nhân had examined the proposals and seemed to be generally supporting them; in fact, he had made a positive comment about them to us at the meeting the previous day.

In my earlier email correspondence with Dr. Hoa and other mathematicians, I had said that I was not going to lobby for those proposals with DPM Nhân. In the first place, I had only a superficial understanding of what was in the proposals (although I have a better idea now after the 3-hour discussion with Hoa). In the second place, those proposals relate only to mathematics, they emphasize research and doctoral training (rather than secondary and tertiary education), and they do not directly address the underfunding and other problems

in the universities. My priority in meeting with DPM Nhân was to argue against the U.S.-Vietnam Task Force proposal to construct an “American-style university” and to discuss alternative approaches aimed at improving VNU and other government universities. My focus was not on mathematics or on post-graduate education.

Although Hoa was skeptical about my proposals — he said that similar ones had been made in the past, but broad proposals for things like across-the-board salary increases were unlikely to be accepted — he agreed that they were compatible with the mathematicians’ proposals and in no sense in conflict with them.

Tuesday March 9

On Tuesday afternoon Ann and I visited the Vietnam Women’s Museum. The Museum is undergoing major renovations and is mostly closed; it will reopen in October for the occasion of the 1000th anniversary of the moving of the capital to Hanoi. In the meantime two exhibits are open to the public: one that’s devoted to memories of the American War (this exhibit is similar to one that we saw during our last visit in December 2007) and a new one about street vendors in Hanoi. Both exhibits are excellent, but the second one is radically different in both content and style from anything that was in the Museum before.

The street vendors, most of whom are women, have a hard life. They usually commute from a home many kilometers away, and they rarely earn more than a couple of dollars a day. In addition, regulations bar them from many parts of the city — it is often unclear to them which parts — and they frequently face police harassment.

The exhibit chronicles the lives of some of the street vendors, includes many passages taken from interviews with them, and also quotes the conflicting opinions of passers-by in favor of and against the vendors. The new museum director, Nguyễn Thị Bích Vân, is a historian by training and strongly favors a cultural anthropology approach. In some cases, such as the street vendor exhibit, she also takes pride in the Museum’s ongoing relations with the subjects of the exhibit, whom the Museum staff has tried to help in various ways (for example, drawing maps for the vendors showing where it is permitted and forbidden to set up stalls).

After our visit to the Museum, we had a long “working dinner” with the Vietnam Women’s Union (VWU). We told them how much we liked both exhibits at the Museum. They were glad to hear this, since after our previous visit we had sharply criticized one of the two exhibits that they had had in 2007 because it glorified a Confucian notion of women subordinating their own lives and sacrificing everything for their husbands and children. Fortunately, that exhibit is apparently gone for good (and, probably not coincidentally, there has been a change in leadership of the Museum).

The main purpose of the working dinner was to agree upon a set of changes in the Kovalevskaja Prize. They asked if we could increase the funding of the prize, and we said we’d raise it from USD 4000 per year total for both prizes to USD 6000 per year. We also asked for some changes, the most important of which were (1) to broaden the Prize Committee by bringing in representatives from the Ministry of Science and Technology and the Vietnam Academy of Science and Technology, and (2) to insist on each prizewinner — no matter where she worked — having a plan for outreach to undergraduate and secondary school students. For example, she might make regular visits to nearby schools and colleges,

might host a program of youngsters' visits to her institute, or might arrange student internships there. The purpose would be for her to act as a mentor and role model for the next generation. The Women's Union agreed to all of our requests.

After the main work of the meeting was over, we all went to a different room in the Women's Union headquarters building in order to continue our discussions over dinner. We were at a table with some VWU activists whom we had known for many years, including the Kovalevskaia Prize Committee chair, Nguyễn Thị Bình. (She was best known in the West as the lead negotiator for the Provisional Revolutionary Government of South Vietnam at the Paris peace talks — journalists at the time were surprised that a woman had been chosen to sit opposite Kissinger; since that time she has been the Minister of Education and the Vice-President of Vietnam.)

Soon after we started eating, Nguyễn Thị Bình reached her hand across the table, shook my hand, and thanked me (in English) “for writing that article about the Harvard people.” She said that some former top government officials had recently urged her to read the article, and she told them she already had (she read the Vietnamese translation that is posted on the MOET website). She also commented that many government officials agreed with my article.

To say I was extremely pleased would be an understatement. I couldn't resist thinking ironically of the email message I had received in October from Thomas Vallely's protégé, Ben Wilkinson:

Happily your words will fall on deaf ears here in Vietnam, where Tom's [Vallely's] peerless record of service in the promotion of education and scientific exchange — and stronger bilateral relations in general — is well known.

Wednesday March 10

In the morning Ann and I went to the Math Institute for the Doctor Honoris Causa ceremony. Former Institute director Hà Huy Khoái, who is our oldest friend in Vietnam (we met him when he was a beginning graduate student in Moscow in 1974), gave a talk about my mathematical work and my relations with the Institute over the years. I was very pleased that Hoàng Tụy, who is Vietnam's most famous living mathematician, came to the event despite some recent health problems. My interview with him 20 years ago (published in the *Mathematical Intelligencer*) probably did more than any other one source to publicize Vietnamese mathematics in the West. After my “second opinion” article appeared, Hoàng Tụy was very bothered because he thought that I had misrepresented his views and had wrongly associated him with a pro-privatization viewpoint. We had some email correspondence, and I think patched up the misunderstanding. He was certainly warm and friendly toward me, and in my acceptance speech I thanked him for coming.

I gave two short talks at the Institute: one was an overview of how mathematics is applied in cryptography (illustrated by an example from the theory of isogenies between elliptic curves), and the other was a summary of my viewpoint on the higher education controversy.

One of the officials attending the ceremony and my talks was a former mathematician named Đào Trọng Thi, whom we had met almost thirty years ago in Moscow, where he was finishing doctoral studies. Later he entered politics, and now he occupies a key position

in the National Assembly as chair of the committee on science and education. Over lunch he told me that he and many other people in the government agreed with my “second opinion” article, and we talked about some of the issues. He said that the French and German partnerships make sense because those governments are paying 40% of the costs of the new universities, but that this doesn’t apply to the “American-style university,” for which 100% of the cost would have to be borne by the Vietnamese.

Đào Trọng Thi said he would be attending the anniversary ceremony for the Kovalevskaja Prize on Friday. I prepared a packet of materials for him on the controversy over higher education reform (similar to the packet that I had asked Ngô Việt Trung to give to Nguyễn Thiện Nhân), and gave it to him during the anniversary event on the 12th.

Thursday March 11

In the morning Ann and I met with a group of 20 talented women science students from universities in different parts of Vietnam. Although there was supposed to be time for informal questions and discussions, in practice the event was quite formal, and the young women obviously were not going to say what was really on their minds. (I later suggested to Nguyễn Thị Bình that it would be preferable to have long informal discussions in small groups, where the young women would be more likely to speak frankly; she agreed that that would be better.) I also accompanied the group to visit two institutes of VAST concerned with applied biochemistry and microbiology. One encouraging bit of information I learned was that both institutes are now heavily involved in post-graduate education and have close relations with several universities, which send their students to the better-funded and better-equipped institutes for extended periods. This wasn’t the case in earlier years.

I spent the afternoon with the mathematicians at Vietnam National University. My host and translator during most of my two talks was Lê Minh Hà, who has spent several months at the University of Washington, where he has active research collaboration. He was also the translator of my “second opinion” article.

I again gave two talks (this time with translations, which made them much longer). One was about ways to bring the teaching of calculus and linear algebra closer to applications (the usual approach in Vietnam, as in many countries, is quite dry and theoretical). As at the Math Institute, my second talk was about the higher education controversy. We then went to dinner with some VNU mathematicians.

They told me that in theory they might get much more office space when/if the University moves to a new location about 25 miles from Hanoi — this was supposed to take place in 2010, but clearly won’t happen for several years if at all. It turns out that the main obstacle is construction of a modern highway out to the new university district. They said that the problem is that it would be the most expensive highway in the world, costing the government USD 50 million per kilometer. The main reason for the exorbitant cost, they said, is that Hanoi is in the midst of a real-estate frenzy, and land has become ferociously expensive. The government is required to pay for the land at the horrendously inflated market prices if it wants to build a highway.

This was a reminder that the economic boom in Vietnam, which makes a strong impression on any visitor who remembers what Vietnam was like in the years of impoverishment, has features that are not sustainable. I had read in the *Business* section of the

*New York Times* that there's a huge real estate bubble in several cities in China and that some economists are worried that when the bubble bursts, the ensuing recession in China will do great damage to the U.S. and world economies. But I had not heard that there is a similar bubble in Vietnam. As in other countries, the effects will be the creation of a small number of obscenely rich speculators, and hardship for everyone else when the boom turns to bust.

Friday March 12

Receiving the Friendship Medals was an emotional experience for both of us — more than we had expected it to be. What touched us most about the citation read by the Vice-President of Vietnam, Nguyễn Thị Doan, was that she dated our friendship not to the initiation of the Kovalevskaja Prizes or even to our first visit to Vietnam, but rather to our anti-war activities when we were students. She highlighted some biographical information that only a few people in Vietnam had known about — such as the fact that in May 1972, at the age of 19, Ann was a leader of a group of Princeton students who blockaded the Institute for Defense Analysis and then chose to go to jail rather than pay the fine. In my case Vice-President Doan went back to 1970, when I was drafted and spent three months in an Army prison for political activity.

Because of the presence of the media and of influential political figures, I wanted to use the opportunity of my short speech to say something substantive. I said:

At present the Vietnamese people and government are immersed in a lively debate about the direction of higher education. The stakes in this debate are very large, because university education is a crucial part of the formation of the next generation of leaders and thinkers. Unfortunately, almost all of the participants in this debate have been men, and almost all of the participants — including the foreign so-called “experts” who offer advice to the government — have ignored the fundamental issue of gender equity. But it is essential that the reform of higher education include an increased commitment to women's equality in all areas of science, technology, and other fields. The 2007 Law on Gender Equality calls for this, and it is well known that a country cannot meet its full potential unless it has the equal participation of women, who make up 52% of the population of Vietnam.

For example, a new policy allows universities to admit applicants who do not receive the highest scores on the entrance examinations and charge them much higher tuition fees. I wonder if it is true in Vietnam — as in many other countries — that this type of policy favors males because families are more likely to pay the high fees for a son than for a daughter. Of course, the government officials who agreed to the new policy had no desire to discriminate against young women. However, policies often have unintended consequences. If the new tuition fee policy has the effect of favoring male university applicants, the government should have a second policy that counterbalances it by favoring female applicants. That is, universities must give female applicants a preference in the form of a certain number of extra points. This would restore gender equity to university admissions and support the goals of the Law on Gender Equality.

The presentation of the Friendship Medals was followed by a half-hour break before the awarding of the Kovalevskaja Prizes, during which Nguyễn Thị Bình invited us to join her, Đào Trọng Thi, and some Women’s Union officials and translators in a private room. She knew that we had known Đào Trọng Thi since his days as a young mathematician in Moscow — we had met him in the home of our friend Tolya Fomenko, who had been Đào Trọng Thi’s doctoral thesis advisor. Fomenko and his star pupil jointly wrote a monograph that was published in 1991 by the American Mathematical Society (in his mathematical publications, Đào Trọng Thi changed the spelling of his middle name to Chong, because the Vietnamese “Tr” is actually a “Ch” sound).

I talked with Đào Trọng Thi about my suggestion of a preference for female university applicants to counterbalance the new government policy on tuition fees that probably favors males. He said that this sounds reasonable to him, especially since they already have a bonus-points system for disadvantaged minority groups. He seemed much more ready to support the idea than the current president of the Women’s Union, who appeared to be worried about a backlash (and in any case she’s one of the most cautious and conservative of the VWU leaders we have known).

After the break the Kovalevskaja Prizes for 2008 and 2009 were awarded, amidst a veritable stampede of photographers pushing each other aside to get the best angles. The morning’s ceremonies were well attended — the audience of over 300 included journalists, the university students we had met on Thursday, Kovalevskaja prizewinners from earlier years (we were pleased that the two prizewinners from the very first year it was given were able to come), leaders of the VWU, and several members of the Politburo.

At lunch after the Kovalevskaja Prize ceremonies the discussion of university admissions led to some interesting comments about women’s hiring and treatment in the workforce, which the VWU leaders said is a much greater problem than discrimination in university admission. Nguyễn Thị Bình said that because of reduced government support for daycare centers, good childcare has become expensive. That creates pressure on mothers to stay home with the children rather than pursue a career. In addition, despite being illegal, discrimination against women in hiring and promotion is endemic in many companies. I suggested that if the VWU encounters problems of mistreatment or discrimination in American companies and is unable to persuade those companies to follow international standards in their conduct toward women, then the VWU should inform their American friends about the situation, since I thought it would not be hard to organize considerable public pressure against such companies in the U.S.

In the evening we bid farewell to our old friends Khoái and his wife Cúc. Among other things, Khoái had an interesting comment on the reaction in Vietnam to my “second opinion” article. He said that when it was circulated among intellectuals, most agreed with it. Generally, he thought that people who had traveled to the U.S. and other countries harbored few illusions about the West. But when news of my article reached the Vietnamese blogosphere, most of the reactions (generally by people who had never been outside Vietnam) were angry and negative. In fact, at one point Ngô Việt Trung had commented that it was fortunate that I didn’t read Vietnamese, so that I didn’t have to endure the unpleasantness of reading those comments about my article.

## Appendix 1. Summary of my views on higher education reform in Vietnam

- (1) Vietnam has a long scholarly tradition, as well as a long tradition of great sacrifice to preserve national sovereignty and avoid domination by any colonial or neocolonial superpower. Both of these are great strengths of Vietnam.
- (2) Any reform of higher education must be carried out in a financially responsible manner. It is irresponsible to waste large sums of money on projects that appear exciting and dramatic but are poorly thought out.
- (3) World Bank loans — especially large ones — should be avoided. In the words of prominent American journalist Anne Williamson, World Bank loans are “the most expensive money on the planet.”
- (4) In general, it is much more cost-effective to improve existing universities than to build entirely new universities.
- (5) Any “apex” university must emphasize
  - (a) basic sciences, including mathematics;
  - (b) humanities, such as Vietnamese culture and history; and
  - (c) post-graduate education.
- (6) If Vietnam wishes to have partnerships with foreign institutions, it must be careful to choose partners who are well qualified and worthy of trust.
- (7) The group of so-called “experts” which includes Thomas Vallely and Ben Wilkinson (Fulbright and the Ash Institute), Bob Kerrey (U.S.–Vietnam Education Task Force), and Jeffrey Waite (World Bank) do not have the requisite levels of competence or trustworthiness.
- (8) The “American-style university” that they propose creating would have no focus on basic science, on the humanities, or on post-graduate education. Its main purposes would be low-level vocational training and also ideological indoctrination by American or American-trained social “scientists.” The aim of the indoctrination will be to undermine Vietnamese socialism and eventually make Vietnam subservient to U.S. economic interests.
- (9) American universities have an extremely high level of bureaucracy compared to those in most other countries. If Vietnam imports American-style university governance and administration, the inevitable result will be a major increase in bureaucracy, inefficiency, and cost.

My alternative proposals:

- (1) Over the next five years the government should increase salaries at universities and institutes by a factor of at least 2.0 or 2.5.
- (2) In return for the salary increases, university professors should be required to hold extensive office hours and take time for informal contact with young people, and institute

researchers should be required from time to time to spend a year teaching at a university (during this year their institute post would be occupied by a university professor on sabbatical).

(3) The government should construct buildings at the public universities that are devoted to office space for faculty and meeting and study rooms for students.

(4) The government should give stipends to Master's-level students in science and math.

Note: For students who intend to go to the U.S., Australia, etc. for Ph.D. studies, it is better if they first get a Master's degree in Vietnam, because (1) they will be more competitive, since the strongest foreign applicants to Ph.D. programs in the West already have a Master's degree from their own country, and (2) they are more likely to return to Vietnam if they leave at a later age.

(5) The government should support special programs for young people who do well on the math and science Olympiads, for girls, and for ethnic minorities.

(6) The government should demand that foreign corporations pay a special fee or tax to support education.

(7) The government at every opportunity should urge foreign corporations to start research and development operations — not just manufacturing, testing, and marketing — that employ Vietnam's best-educated graduates.

(8) The government should work with the government of India to establish an advisory committee made up of Indian scientists for the purpose of peer review of Vietnamese scientists' grant proposals.

## Appendix 2. A brief proposal to improve university education

This proposal is designed to help solve two outstanding problems in higher education in Vietnam, one material and the other cultural:

(A) The low salaries of professors and institute researchers, which cause them to “moonlight” in extra jobs, has sometimes been called the “salary/income paradox.” This results in low morale, lack of time and energy for high-quality teaching and research, and an image of the profession that is unattractive to young people.

(B) The scientific and scholarly community in Vietnam devotes relatively little time and energy to mentoring and informal interaction with young people. Vietnamese youth are increasingly influenced by the Internet, imported movies, and the consumerism of the capitalist countries. Now more than ever it is important for the older generation of scientists and scholars to improve their ties with young people and through direct interaction convey the joy and satisfaction of scientific and scholarly work. Otherwise, the intellectual community will be abandoning the younger generation to the corrupting influences of imported youth culture.

My suggestions:

1. Before the next Party Congress the government should increase the salaries of professors at government universities and researchers at institutes by 50%, provided that they agree to the conditions below. Then every year for the next five years those who agree to the conditions should receive a further 10% increase.
2. All professors who wish to receive these increases must sign a contract agreeing to spend at least 5 hours per week in informal contact with students during the first year, then 6 hours per week during the second year, and so on, until after the end of the fifth year (after receiving all the salary increases) they will be spending a total of 10 hours per week with young people. The informal contact with students can take the form of office hours for their students, consultation with thesis students, work with academic clubs or teams, or visits to secondary and primary schools to help enrich pre-university education.
3. All institute researchers who wish to receive these salary increases must sign a contract agreeing at least once every four years to teach in a university. During that year a university professor would have a sabbatical at the institute and the institute researcher would teach the professor’s courses. The sabbaticals would be awarded competitively based on the applicant’s research plan.
4. In order to provide a suitable environment for student-faculty interaction, each government university should construct an “academic student center” with office space, meeting rooms, and computer facilities. (This should not be confused with the “student centers” at U.S. universities, whose main purposes are not academic, but rather recreational and commercial.)

## **QUALITY CONTROL OF SCIENTIFIC RESEARCH IN VIETNAM**

(With the assistance of Professor C. V. Ramakrishnan, formerly of the University of Baroda and the Madras Medical Mission Hospital)

### **Introduction**

The question of quality control for scientific research is a difficult one. How does a granting agency determine which project proposals deserve funding (and at what level)? How can they best make mid-course evaluations in order to decide whether to continue (or increase) funding? What criteria should be used, and how can unbiased expert evaluations be obtained? No one has found entirely satisfactory answers to these questions.

Some kind of regularized mechanism is clearly needed. The alternatives — funding all proposals equally, or allowing seniority or cronyism to determine funding — are unacceptable. The purpose of this memorandum is to suggest an approach that I believe would be most likely to work well for Vietnam.

### **Peer Review**

This means that specialists in closely related fields are asked to give written evaluations of the proposals. This method of proposal and merit evaluation is commonly used by universities, institutes, and science foundations throughout the world. But it must be used with care so as to avoid some possible pitfalls.

There are three difficulties that commonly arise. First is “letter inflation” — the tendency of many scientists to want to help colleagues and friends by writing extremely positive evaluations with exaggerated praise. Second is the opposite danger, that of unfairly negative comments arising because of scientific or institutional rivalries, personal animosity, or differing opinions on methodology. The U.S. National Science Foundation (NSF) uses the term “conflict of interest” for both of these types of sources of bias, and the NSF asks reviewers to tell them if they have any conflict of interest with the authors of the proposal. However, there is no way to enforce this request, and the system sometimes works badly.

The problem with peer review inside Vietnam is that the scientific community is much smaller than in the U.S., and hence conflicts of interest would arise with much greater frequency. In practice, in most cases it would be hard to find a Vietnamese reviewer who is an expert in the field of the proposal and who has no close relation with the authors. Thus, if peer review is to be central to the evaluation process, it will be necessary to find a large and reliable pool of reviewers from outside Vietnam.

But the third difficulty with peer review is that it is often very difficult to find unbiased expert reviewers who are willing to devote the time needed to write a detailed, in-depth evaluation. The main purpose of this memorandum is to propose a solution to this dilemma for Vietnam.

## A Proposal

The first step in developing a system of quality control and evaluation is to decide which areas of science should be given special attention. These “targeted areas” should include the fields of basic science where Vietnam already has a strong tradition that can be built upon (such as mathematics), as well as the fields of applied science that promise to bring the greatest immediate and long-range benefits to the economy and wellbeing of the Vietnamese people (such as public health, agricultural science, and ecology/sustainability).

The following proposal was suggested to me by Professor C. V. Ramakrishnan, a retired biochemist specializing in nutrition and neurophysiology who has extensive ties with the Indian scientific community. His son Venkatraman Ramakrishnan is a winner of the 2009 Nobel Prize in Chemistry; although V. Ramakrishnan works in Great Britain, he visits India frequently and has close connections with research institutes in India.

We propose that Vietnam ask the government of India to form a Scientific Advisory Board that will help the government of Vietnam make decisions about financial support for scientific research. In forming this Board, the Indian government would make use of the well-developed informal networks of scientists working both in India and abroad, and would draw especially from the fields of science designated as “target areas” by Vietnam. The members of the Board would be prominent Indian scientists who agree to read and comment on written project proposals and mid-course reports, and when necessary make site visits to Vietnam. Since the Board members cannot cover all possible subspecialties of the targeted fields, they will feel free to consult with colleagues who are not on the Board and encourage such experts to make site visits to Vietnam.

There would be three main purposes of this Board:

- to advise the Vietnamese government on which projects should be funded (and how generously) and which should not;
- to make suggestions for improvements in proposed projects; and
- to increase ties between Indian and Vietnamese scientists working on similar problems, leading to possible future collaborations.

The financing of the work of this Board should not be difficult. In the first place, according to international scientific tradition, scientists do not generally expect to be paid for reading and evaluating proposals by their colleagues. For example, the U.S. National Science Foundation does not pay reviewers. Thus, the only major expense would be for site visits to Vietnam — mainly, the airfare. To pay for this, Vietnam and India can apply for support from the Academy of Sciences of the Developing World (TWAS, formerly called the Third World Academy of Sciences). One of the central objectives of the TWAS is to encourage South-South collaboration, and this proposal would have a strong case for TWAS support. Thus, we expect that there will be no significant cost to either the Vietnamese or Indian governments of implementing this proposal.

Why India? There are many reasons:

- India has world-class scientists in most areas of basic and applied science;
- India’s scientific establishment is well-integrated into international scientific life (unlike Vietnamese scientists, they never went through a period of isolation from the West);
- with the help of Prof. C. V. Ramakrishnan and others, it will be relatively easy to find a number of leading Indian scientists who agree to participate;

- most Indian scientists have positive views of Vietnam and great admiration for the Vietnamese people, although in most cases they know very little about science in Vietnam and do not have contact with Vietnamese researchers;

- Indian scientists generally do not have personal or professional ties in Vietnam, so there is nothing to interfere with an objective report from them that is free of bias or favoritism;

- certain problems that would arise in working with U.S. officials — such as neo-colonialist attitudes and inappropriate ideas about Third World scientific development — would not be problems when working with India;

- for many decades India has had excellent bilateral relations with Vietnam. Indeed, India and Vietnam share a common historical legacy: just as India's independence marked the beginning of the end of British imperialism, similarly Vietnam's anti-colonial struggle led to the defeat of French and American imperialism.