

TWAS Participating in Social Advancement

— An Interview with Prof. Jacob Palis



"We should have the promotion of research and development in the industry, and for that scientists should be hired ... Science not only should be promoted by its intellectual challenges of understanding nature, but also should be towards applications in benefit of Society, without reservations that science would be less noble because of that." Prof. Jacob Palis, President of TWAS and the Brazilian Academy of Sciences, unveiled his vision of scientific activity in a brief interview with BCAS reporter SONG Jianlan in Tianjin, during the session of the 12th General Conference and the 23rd General Meeting of TWAS (later referred to as "Tianjin Meeting"). Let's follow him to have a glance at TWAS's approach to science capacity building and poverty reduction in the developing world.

BCAS: *Thank you very much for taking the time to do a brief interview with BCAS. Yesterday we had a "ministerial session" for the Tianjin Meeting. What are the goals set for the special session?*

Palis: I believe that it is very important for scientists to be close to the industry and more broadly to be close to Society in some sense. Some time in the past there was the idea that we should do science without being involved in applications in general. My view is that we do not necessarily need to go into the commercial aspect of industrial activity, but we should encourage those scientists who wish to be involved in helping create new products useful to common people. This friendly integration of science and industry can promote the advancement of society, to have fewer diseases in the world, to ultimately eliminate poverty, and to have equality of opportunities for young people in pursuing good careers in the future.

Of course, to achieve all of that, we should have the engagement of many elements of society, particularly, in my view, scientists, governments and industries.

BCAS: *How important is it for TWAS to talk with the politicians or set up a conversation between scientists and policy makers?*

Palis: It is very important. Again the dialogue with not only the industry but also the policy makers is important, because scientists can contribute a lot, depending on the subject they are dealing with. If science is involved, we should interact with them, in particular when scientific activities may be geared to the benefit of society, to achieve the advancement of science in our countries. That is a very important issue.

Recently in Brazil there was a review of the law to protect forests. The work of the scientists in this direction



President Palis chairing the session "Lectures on S&T Development in China" held on September 19 during the session of the Tianjin Meeting. (Photo: XIN Ling)

was crucial. A group of scientists have worked for two years in this and their work was quite appreciated in a congress and even more so by the government. The final result may not have been ideal, but certainly was much better than it could have been without the efforts of the scientists.

BCAS: *Is it the first time to set a ministerial session for a TWAS Meeting?*

Palis: No, but we are probably more experienced. It's an evolution process.

BCAS: *How successful do you think is the dialogue so far?*

Palis: I think we are going well. More and more scientists are conscious that a friendly relation with the industry can be achieved keeping the high values of science and at the same time contributing to society. That is after all the main purpose of science itself, not only to dispose of our scientific dreams and achievements. Therefore, I believe that scientists nowadays understand this viewpoint. We now should see more scientists working and leading research and development in the industry.

BCAS: *we also had a forum for academies of sciences on "National Academies and Open Innovation" yesterday at the Meeting. How successful was that session from the perspective of the President of TWAS as well as the President of the Brazilian Academy of Sciences?*

Palis: There are essentially two kinds of academies of sciences. One of them is like the Lincei, the oldest one, founded in Italy in 1603. Of the same kind are the Royal

Society of London and the French Academy of Sciences, founded in the 17th century, 1660 and 1666, respectively. These are honorific societies that recognize the merit of the best scientists in their countries and also from abroad that interact with the local ones. They also promote studies useful to society, but they do not carry on specific research nor do they have research laboratories in-house. Another kind of academy appeared in Russia in the early 18th century. The new structure, also encompassing scientific institutes and thus research in-house, resulted from a suggestion of the great German mathematician Gottfried Wilhelm von Leibniz to the Russian Emperor Peter the Great. The most impressive, successful and unparalleled, academy of this kind is precisely CAS — the Chinese Academy of Sciences, which now has 105 research institutes and two universities. I am always surprised with how come President BAI Chunli got on top of all of that in a very successful way. It has all the nice flavor of the other kind of academies, and at the same time it produces new scientific results and achievements in-house. That is why I have mentioned that President Bai has many lives at the same time.

BCAS: *So how do you think this kind of exchanges of ideas between different kinds of academies will benefit all of them?*



President Palis giving a presentation at the session "National Academies and Open Innovation" on September 18. (Photo: SONG Jianlan)

Palis: To interact is very important. We can share different visions and learn from each other. Academies are to promote the advancement of science. CAS not only promotes; it actually produces in-house new science. On the other hand, we should together address global issues. Health, for instance, is one example. And another important one is environment. We should address these issues collectively. So it is very important to interact with all the academies together, as many as possible. Indeed, TWAS is a symbol for all academies in the sense that we have members from all over the globe and our main goal is to promote good science in all countries.

BCAS: *The Tianjin Meeting is focused on “Science and Sustainable Development”. How important is it for developing countries to deal with this issue, especially in comparison with developed countries?*

Palis: It is absolutely crucial. Not only for the individual countries, but for the whole globe in a coordinated set of actions. Dealing with the environment, we have to think about the future, think about what will be left for our children, our grandchildren... Like in Brazil, if we let the forests go, let it disappear, for a short-sighted economic reason, we can get some profit today, but we will leave the perspective of a miserable environment for the future generations with all sorts of bad consequences for them, as can be scientifically predicted.

BCAS: *Can developing countries do anything special addressing this issue?*

Palis: In the case of developing countries, we need to advance socially. The main goals are to contribute to the decrease of poverty, to improve health and education,



President Palis passes the diploma to a newly elected TWAS Fellow at the induction ceremony. (Photo: SONG Jianlan)

so people can understand the importance of a sustainable social and economic development, encompassing critical environmental issues like global warming, preservation of forests and so on. The developed countries have achieved a higher level of wellbeing of their society than the developing countries, which are still struggling to eradicate poverty, to move the society up. So, in some of these issues, we have to act very urgently. But the responsibility of rich countries is even bigger with respect to the preservation of a good environment for future generations. In fact, this is a responsibility of all people, all countries. Sometimes the rich countries feel that we should do better than them to protect the environment; this is nonsense, they are equally and sometimes even more responsible, at least from the point of view of global human solidarity. Science helps to find the way to develop in the end, and to be sustainable.

BCAS: *What do you think is the most important contribution of TWAS in the past six years to the science capability building of developing countries, particularly of the least developed ones?*

Palis: I like to speak about some of TWAS accomplishments and activities in recent years, not specially in my mandate as president. TWAS is playing a more and more critical role in making the less developed countries conscious of the need to have good science in their own countries. There is no other way for development, if they want to improve the life of their people, to be more at the level of human respectability, for example, to have all children in school, to have good food available to all and a good health system, and, of course, a perspective of good jobs, contributing to a global wellbeing of their society. Also, all that can only be achieved in a given country, if the local science and technology are well or at least reasonably well developed. When we consider countries that are better off in social and economical terms, we find that they are also better off in terms of advancement of science and technology. There is a clear correlation. What TWAS has been doing increasingly more successfully, is to promote the need of good science and technology in all countries. Of course, we always can and should do even better.

BCAS: *So now the link is made very clear. What else TWAS is doing to this end?*



President Palis chairing the awarding lecture of Ernesto Illy Trieste Science Prize. (Photo by: SONG Jianlan)



President Palis talking to BCAS reporter. (Photo by: XIN Ling)

Palis: TWAS is doing a lot. Of course, it can and should do much more, but it is certainly already doing a lot and, indeed, TWAS is probably the major player in promoting good science in the developing world. For instance, TWAS has a program open to qualified students from any developing country to get their doctoral degree in the best institutions in Brazil, China and India and a few other countries that we shall mention later. The program also opens for post-doctoral fellowships. The idea was first exposed at a TWAS meeting in China in 2003. Remarkably, these countries were enthusiastic about it and so it was possible to start it in 2006. Subsequently, Mexico, Pakistan, Iran, Malaysia, Kenya joined the group. Thailand also joined for post-doctoral training. This is a very important mechanism to build up human scientific capacity in developing countries: it can still grow much more to make a big, definite impact. I should also notice that there are special TWAS programs and support for research groups and individual researchers in the least developed countries. Also we have prizes specially designed for them: the Prize for Scientific Research named after C. N. R. Rao, former TWAS president, and the Prize for Chemistry named after



President Palis passes the certificate to a newly elected Young Affiliate at the Induction Ceremony on September 19. (Photo: SONG Jianlan)

Prof. Atta-ur-Rahman, presently a Vice President of TWAS. I wish also to speak about the election of TWAS Young Affiliates since 2007. That is a beautiful story. The idea is to recognize the best young scientists in different regions of the world, namely Latin America and the Caribbean, East and South-East Asia and the Pacific, Arab Region, Central and South Asia and Sub-Saharan Africa. They are elected to TWAS as Affiliate Members for five years. They are a source for the future of good science in these regions and should be very stimulated to pursue their careers. We look forward to welcoming a number of them as full TWAS Members in the future.

BCAS: *How do you view the organization of the Tianjin Meeting? Are you satisfied?*

Palis: Concerning the TWAS Meeting in Tianjin, I would like to say that the organization as well as the scientific level was excellent. It is also to point out the warm welcome offered to all of us by the Chinese Academy of Sciences and in general all Chinese colleagues and staff. In brief, it was a great, unforgettable meeting. We were also very happy to elect Prof. BAI Chunli as our next president of TWAS, as well as the other members of the Council. Our Academy will be in good hands.

BCAS: *You took the office of President of the Brazilian Academy of Sciences in 2007, and since then your academy and CAS have joined hands to promote science and education. Will your academy maintain and further develop S&T cooperation with CAS within and without TWAS framework after you are relieved from the office of TWAS President the beginning of 2013?*

Palis: Of course, the Brazilian Academy of Sciences is committed to continued cooperation very much with TWAS, and the Chinese Academy of Sciences.