

# **Presidential Address**

*IUPAP General Assembly*

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## **Introduction**

*Over this year, I have written three times about IUPAP in various different ways. In historical order I wrote the article “what does IUPAP do for physicists” in the June Newsletter, which was a kind of update to the article that Jan Nilsson published at the end of 1996, shortly after he became president of IUPAP, in Physics World with a similar title. Then in the September Newsletter, I published an article “Three years as President of IUPAP” reminiscing about the three years that I have been president. In the current October issue of Physics Today, there is, at the invitation of the editor, a commentary item “International Union of Pure and Applied Physics and you” The first one and the last one try to tell people who are not in IUPAP a little bit about what it is doing for them. My reminiscences are a warm up for the presidential address you are about to hear. If you want to find out more I encourage you to read those articles.*

*In this address I wish to address the themes of*

- Sustainability*
- Visibility*
- Harmony*
- Gratitude*

## **Sustainability - Finances**

*Shortly after I became president designate of IUPAP, at one conference I met an old friend, and he said, “you have become president designate of IUPAP, I need to congratulate you and I need to ask you for money”. I replied “Thank you for the congratulations but you got the other one wrong, I need to ask you for money”. IUPAP is not a rich organisation, and all of IUPAP's income comes from the dues of its members, so*

we are in the position of always asking our members for money. When I think about some general assemblies that I have sat through, the attitude towards money in IUPAP sometimes it is a little bit like people's attitude to taxes. They would like to pay less but they would like that the government or in our case, IUPAP, to do more for them. That just does not balance out. For many years IUPAP actually did more for physicists than it could sustain under the annual income that was coming in. In the early days of this century IUPAP had a very significant amount of financial reserves, and it decided that it should not put up its dues in line with inflation, simply keeping the dues constant. It then compensated by budgeting for a deficit. It did not carefully control its expenses, so often the deficit was more than it is budgeted for. That is one way to cure the problem of having a large reserve, but it is no way to have a sustainable organisation.

Our Past President, Cecilia Jarlskog, when she became president insisted that we have to live within our means, making sure that our annual expenditure does not exceed our annual income. We have to control our expenditure, and we have to ensure that that we kept our income rising with the rising cost of doing business. Those are two important steps on which our present not very good but reasonable financial situation is based. This is a sustainable situation for our Union, but it is not optimal because members would like to have more support from us.

We are a rather unusual union, in that all our income comes from our membership. Many other unions have larger total income than we do, but they managed to persuade ICSU that only subscription income should be counted in determining their membership fee. We pay a quite high ICSU subscription compared to some other unions, who are richer than us. Ideally we need other sources of income and we have not made much progress on finding those sources of income.

## **Sustainability - Membership**

Without our members IUPAP would not exist. Maintaining and expanding our membership base is essential for our sustainability. For a long time, IUPAP has been trying to find new members. It recruited a lot of new members from 2005 to 2010. Some of them have remained members, and some of them were not able to remain members. We are still campaigning to recruit new members, but with little success.

Keeping existing members paying their dues is equally important. Maitri in the office has been very good at reminding people to keep their payments up, asking them "when are we going to get your money?" She has managed to collect a much greater proportion of the income that we bill than had been possible in the recent past.

It is even better to persuade existing members that we are doing a good job, good enough that they want more shares. Between 2014 and now, 5 of our members have asked to increase their shares by a total of 15. This increased our income by much more than we lost from members who have found it difficult to continue their payments.

## **Sustainability — An IUPAP Office**

*It may be a surprise to you that towards the end of last year, for the first time in the history, IUPAP acquired an office at the Nanyang Technological University (NTU) with its name on the door, and we also have a full time staff member working in that office for us. These are wonderful advances for which we thank the working relationship between two Swedes, our then President Cecilia Jarlskog and the President of NTU, Bertil Andersson. Our Secretary General, KK Phua, was also instrumental in making them happen. The original agreement between the Presidents was informal, and we have now concluded a formal MOU with NTU under which we will continue at NTU at least until 2020.*

*I believe that you will have found your communications with IUPAP rather more efficient than they were in the past. Those communications which involve me are an exception because I am not so good at answering my email, certainly not as good as Maitri is.*

## **Sustainability — Volunteers**

*Organisations like IUPAP depend on all of the volunteers work for them — all of you sitting in this room, and many many more. I have estimated that we have at least 700 physicists working for us in a voluntary capacity. More than any other international union we rely on our volunteers — we have less staff, and less money to employ staff. All organisations that I know of that depend on volunteers are finding it more and more difficult to get their work done. At a meeting of various unions in Paris about a month ago, I was asked to make a presentation on problems facing the unions in the physical, mathematical, and chemical sciences. I said that one of the big problems is finding people who have the time to do our work as volunteers. Most universities, and most research institutes are under pressure to behave as businesses. If you are behaving as a business you increase your income, by any case of universities you get more students who pay, and you decrease your expenses by reducing the number of staff that you use to teach these students, and put more staff on money saving short term contracts. All of these scientists are under much greater pressure from their employers to keep producing research papers, and keep producing grants, as well as teaching more students, and they have less and less time to work for organisations like IUPAP. I suspect they have less and less time to work for your physical societies as well. It is essential that IUPAP find exciting things to do for physics, for physicists and for humanity to maintain the enthusiastic support of our volunteers.*

## **Visibility**

*When we moved to Singapore our new Secretary General, K K Phua, who was also a founder of World Scientific Publishing, was very keen to have us publish a regular newsletter. Now we put out four issues of the newsletter each year. The most recent*

one (September 2017) was in your conference bag, and some of the earlier ones are outside. You probably got them in the mail, or you were emailed a URL to connect you to the copy on the web.

I think our newsletter and our website could both be done better. We are still learning and trying to do what we can with the resources that we have. Both will improve, and your feedback will help us do that.

I do not think we do enough to find opportunities to say something about IUPAP during our conferences. Some conferences do it, others do not. Similarly there is sometimes an opportunity for somebody connected to IUPAP to say something about our work at the national physics meetings, and sometimes there is not. I urge you to make sure that when your physical society is having a meeting, that the organisers arrange for someone to give a brief presentation to the meeting about the work that IUPAP is doing. I first gave such a talk in 1996, at the conference of the Australian Institute of Physics, soon after attending the 1996 IUPAP GA

I hope that we will persuade physicists that IUPAP is doing something useful for them. In this day and age, contact through social media is important. I am from an earlier age — I do not use Facebook, I do have a twitter account, but I have not inclined to wake up at 2am and start twitting about something. I seldom use it. We do need to make more use of social media, in trying to get word around to the new generations of physicists. My recent former students tell me that that is the way they learn about their subject, they do not look at journals any more, they learn about new developments in their speciality from social media. I understand that, as well as counting citations, there is a trend now to count references to your work in blogs, in facebook and in tweets. As we move into social media we need to remember that they are soundly based in our native languages. We should not forget non-US based social media. After all there are now more physics papers being published by physicists in China than physicists in any other country.

## **Harmony.**

IUPAP is working well when our relations with other organisations are harmonious. Our interactions with IUPAC, the International Union of Pure and Applied Chemistry, have been somewhat turbulent in recent years. Over the last 18 months I have developed a good personal relationship with Natalia Tarasova, the president of IUPAC, and this is led to an improvement in the relations between unions. IUPAC recently had its General Assembly in São Paulo, in the Convention Centre. Initially we worked to developing a better defined way of collaborating on evaluating claims for the discovery of new elements, and subsequently naming them. An indication of our present good relationships with IUPAC is in the results of the ICSU grants. When ICSU put out a call for grant applications, IUPAP produced two very good grant applications, but could put only one forward as a lead applicant. It was a difficult decision but the Executive Council decided

to put forward the light source application as the lead applicant. Natalia rang me up and said "we have been talking about this gender survey application, are you going to put it as your application?" I said "no we have decided to go with the light source application", she said "well, we have been trying tossing up between two possible applications as well, and since you are not going with the gender in science application, we will put that forward, and you can still play a good part in it in it."

The light source grant application was put in collaboration with International Union of Crystallography, with whom we also have very good relations. Other Unions with which we have generally good relationships are the International Mathematical Unions, IMU, and the International Astronomical Union, IAU.

Harmony inside IUPAP is very important for us to be able to work effectively for physicists. We are structured in a way that could encourage Commissions and Working Groups to become silos, taking internally but not with each other. We have to work against this because physics does not fall into segregated parts, and often progress depends on bringing parts of physics together which are seen to "belong" to different commissions. When our Commissions and Working Groups recognise this and work together IUPAP is a much stronger organisation. In our meeting of Council and the Commission Chairs which preceded this meeting it was proposed that three commissions and three working groups come together to create a panel to facilitate work on neutrino physics. This is an example of the harmonious working relationships I hope will develop further.

Two other aspects of harmony were mentioned in the articles that I wrote, which I refer you to some more details. We will always be heavily reliant on harmony between our members to guarantee on the freedom of movement of scientists. Council put out two statements recently on freedom of movement of scientists, one about situation in Turkey, the other about the situation in the US. In both countries physicists are finding difficulties in freely moving to do physics. We need to maintain our vigilance on this very important aspect of our work.

Even more important is harmony in our work place, both our home institutions and in conferences. In particular respect for women and respect for junior people by their mentors are vital. We have some leverage over conferences and last year introduced a statement on harassment that IUPAP conferences must include on their web site and their other conference material. Respect for each other is now more openly discussed, and I hope it is improving, but it will need to be worked on for some time yet.

## **Gratitude**

I am going to come to a conclusion by saying my "thank you's".

I have already mentioned that Cecilia did a great deal of work for IUPAP. She did much to bring IUPAP into the 21<sup>st</sup> century. I thank her for our budget stability, for moving the office to Singapore, increasing our emphasis on improving the number and experience of women physicists. She had some frustrating work with IUPAC, on new elements, but it

was valuable work nonetheless. At the last general assembly she worked very hard to make the general assembly more interactive. Now I am I am talking too much, which make it less interactive. I thank her profusely, personally and on your behalf for her work for IUPAP.

I am very grateful to Bertil Andersson, the president of Nanyang Technological University, who hosts us, for his sponsorship. Our Secretary-General K K Phua has enthusiastically supported IUPAP and greatly assisted the establishment of the office in Singapore. Our Deputy Secretary General, Kwek Leong Chuan, has been instrumental in making sure that all is working in Singapore. I sincerely thank them both.

I express my personal thanks and your thanks to Sun Han and Maitri Bobba, for the work they do in Singapore keeping the office running, and for the work they are doing here to make sure our General Assembly is running well. I am sure you all appreciate their work, My work for IUPAP has been greatly assisted by my home institution. Although I had retired long before I became part of IUPAP, the vice chancellor of University of Melbourne, Glyn Davis, found a way to support my activities, for which I am very grateful. I also received assistance from the Australian Research Council Centre of Excellence for Elementary Particle Physics, and I thank its Director Geoff Taylor, for maintaining me as one of its associate members. My work for IUPAP would have been much harder without their help.

My greatest thanks are to my wife Loris. When I retired I made the statement that she had spent 40 years following me around the world, it was now my turn to follow her, and she had some good ideas about where to go. But as she points out, on current indications December will be the only month of this year that I will be in Melbourne for the whole month, only for three of those months was I following her around the world. Without her understanding and encouragement it would have been impossible for me to have served you as your President.

Finally I thank IUPAP for according me the honour and privilege of being your President for the last three years.