FROM A BASEMENT OFFICE TO THE IMPERIAL PALACE

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Abstract:
This article, which summarizes the author’s positive interactions with Japanese colleagues and institutions, was written to augment the Japanese version of his book “Vanishing Fish: Shifting Baselines and the Future of Global Fisheries. Greystone Books, Vancouver (2019)”, published in February 2021. The emphasis of this article is on the International Cosmos Prize of the Osaka Expo ’90 Foundation, which the author received in 2005, and whose acceptance speech is reproduced here.

Introduction
My first reminiscence of Japan and its culture was when I was 18 years old and working as a lowly nursing assistant in a hospital in Germany. There I became friends with one of the several medical doctors from Japan. I remember being involved in a contest with him to see which of us could write the same text fastest – him in Japanese, me in German: I lost, and I don’t think he cheated.

I recall the next significant encounter was when I wrote to Dr. Yata Haneda, a specialist on the bioluminescence of fish and other marine animals. I was then – in 1976 – working in a fisheries development project in Indonesia, but was also intrigued by fish that shone light. Later, in the acknowledgment section of a paper written on this topic, I thanked Dr. Haneda “for sending copies of even his oldest papers as well as comments on the manuscript.” At that time, with no Internet, reprints such as those Dr. Haneda sent to me were valuable sources of information, and I was delighted that he had been so generous with his time and knowledge to a stranger.

Fast forward 30 years: I am now working on global fisheries, and some of my papers, especially those in Nature and Science on the impact of fishing, received worldwide attention, including in Japan, which is a real heavyweight in global fisheries.

The Cosmos Prize
I was visiting in Sète, in France, in the laboratory, then led by my friend and colleague Philippe Cury, when I was (confidentially) informed that I would be awarded the International Cosmo Prize for 2005. The only thing still needed was that I should be found to be a decent person by two staff members of the Expo ’90 Foundation, which managed the prize.

Thus, two gentlemen came to Vancouver, and they interviewed my colleagues as to my character and assured themselves that my health was such that I could handle the visit to Japan that the prize implied. They must have been satisfied, because a short while after their visit, I was officially informed that yes, I had received the prize. I was now in the company of Richard Dawkins (1998), Jared Diamond (1999), and

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Sir David Attenborough (2000)! More importantly, this was one of the first times that a major international scientific award had gone to a fisheries scientist.

Let me elaborate a little on this last point. Physics deserves its standing as queen of the sciences because of her concern with the structure of the world in which we live. And in biology, nowadays, genomics is the one reaching into the intellectual treasure trove of evolution and completing the revolution initiated by Charles Darwin.

However, similar to agronomy, fisheries research has less prestige, at least in Western countries. It was not until the late 1990s and early 2000s that people began to realize the damage that our globalized fisheries inflict on marine biodiversity. My scientific papers and articles in other media may have helped this realization. Thus, my award of the Cosmos Prize by a foundation in Japan, where fisheries - since the Jōmon Period - have always been taken seriously.

**The Basement and the Imperial Palace**

And so, my wife and I went to Japan to participate a series of events that began with a visit to Kyoto, which included a lecture at Doshisha University. These events had two highlights. On October 18, at Izumi Hall, the first highlight was the award ceremony in Osaka City, which was magnificent, but whose description would require a literary talent that I do not possess. It was here that I gave the speech at the end of this chapter. There was a courtesy visit to the Governor of Osaka Prefecture, who received me in his ornate office, and with whom presents were exchanged – which I mention only because of the contrast with what happened at the Ministry of Agriculture, Forestry and Fisheries, in Tokyo, another sponsor of the Cosmos Prize. There, I was received by a very low-ranking functionary who went through the motions of congratulating me in a small dingy office so dark that it could have been in the building’s basement. Clearly, not everybody was happy with me having received the 2005 International Cosmos Prize.

But then came the second highlight of these events, a visit to the other sponsor of the Cosmos Prize.

My wife and I were instructed, through schematics on small paper sheets, where to put our feet during the time we would be with The Crown Prince and his wife at the Imperial Palace, and so, when we talked with the Crown Prince and his wife, we had our feet at the right place. We stayed 30 to 45 minutes, and I spoke with the Crown Prince and my wife spoke with his wife, ...but no, I won’t say what we talked about. The Crown Prince’s wife, at the time, had not been seen in public for almost three years, and when we left the room where we had been received, there was a large group of journalists who wanted to know what she had said. We said nothing.

**The Acceptance Speech**

What follows is my acceptance speech of October 18, 2005, which states things that I still believe in.

Ladies and Gentlemen,

I would like to express in Japanese my thanks to the International Cosmos Prize committee and the Expo ’90 Foundation for having me here, but I have to do so in English – a foreign language to you, but also to me.
Receiving an award such as the International Cosmos Prize invites serious reflection, and I will share with you some of the thoughts that I have had since that glorious day in early July, I was informed that I would be this year’s prize recipient.

People have good reason to be worried about the fate of life in the ocean, as we now engage our whole industrial might in chasing and catching, for our food, the top predators of marine ecosystems. Increasingly, these predators are being depleted, and we now turn to their prey, smaller fishes and invertebrates, some highly valuable. This phenomenon is now known as ‘fishing down marine food webs’, and it explains a vast number of observations, which before remained unconnected. Fisheries have been able to move easily from larger to smaller targets, aided by high technology – such as echolocation and Global Positioning Systems – and abetted by a processing technology which can turn even the most improbable sea creatures into tasty morsels.

Life in the ocean, though, was not designed to be ground up by a transoceanic food production machine. In fact, it was not designed at all, but evolved over the eons, and its ability to produce a surplus that we can share, year for year, is an emergent property of marine ecosystems, contingent on their continued existence as complex entities. If the species we target are depleted, and the ecosystems in which they are embedded are drastically simplified, this surplus is reduced, and eventually vanishes. This is the situation we have now in many parts of the world ocean. I wish to emphasize this: global catches from marine fisheries are declining, in spite of, or rather because of, increasing fishing effort.

There are those who believe that the problems of fisheries do not justify speaking of a crisis, and that various technological fixes will suffice for solving these problems. Among these fixes are updated versions of our traditional management schemes, jazzed up to include explicit laying out of the costs and benefits of various options on fishing levels, and the presumed risk attached to each. This would enable ‘managers’ to make rational choices under a given set of economic and political constraints. Presently, this approach, which sees this laying out of options as all that scientists can do, and which, therefore, limits our role to that of vending machines, is very popular in fisheries sciences.

However, our inability to tackle another, much bigger problem – global warming – indicates that we are, as a species, usually unable to make rational decisions to avert long-term harm to ourselves, even if the risks can be estimated, especially if these decisions involve short-term sacrifices. The recent tsunami in South and Southeast Asia, and the even more recent flooding of New Orleans, underline this. In both cases, planning for an eventual catastrophe and working with nature, not against her, would have saved thousands of lives, and avoided immense material damage. Yet, the managers had no plans, and the populations concerned, when they could vote, elected politicians who, at best, had other priorities, and, at worst, actively campaigned against such investment for the public good.

This has been similar in all the great collapses of fisheries, where after the catastrophe, in virtually all cases, the voice of prudence - usually that of scientists - was shown to have been ignored by the managers, in favor of the voices of short-term interests. Where does this put me – one single person – amidst a cacophony of voices? I understand the award of this wonderful prize to be a vindication, and an encouragement to raise the stakes. And the stakes must be raised. We scientists working on environment-related issues have been too meek when managers, lobbyists, and politicians have twisted the results of our work to fit their agenda. The main tool they have used to silence us, and to reduce us to vending machines, is the notion that an engagement for the environment would compromise our
scientific objectivity. Yet this argument is never evoked in medicine. Indeed, passionate engagement for the patients, against disease-causing agents is not only the norm, but also an essential element of doctors’ professional ethics.

This is not the case for environmental scientists, probably because many of us work for governments, and can be easily silenced, or even made to serve a short-term political agenda. Universities, however, are less constrained, and we should expect university researchers to make themselves heard when science is not put to use for the public good. And the public good it must be, because science is a collective venture, ultimately funded by the public, our ultimate master.

There is, presently, in a number of Western countries, an intense public debate about the compatibility of science and religion. I believe these to be incompatible, but this a minority view: most people, including many scientists, believe not only that the two can co-exist – both in one’s head, and in the public discourse – but that this co-existence can be mutually enriching. If this is so, why is there so much resistance against the co-existence - in the heads of environmental scientists and in their discourse - of two eminently compatible modes of relating to nature, i.e., a ‘scientific mode’, which describes nature, and a ‘conservation mode’, which strives to maintain it?

We must learn to combine scientific integrity with taking firm positions, not only on the conservation of the plants and animals about which we have expertise, but also for the continued existence of the ecosystems of which they are parts. Humans have become the major ecological force on earth, but we can secure continued services from these plants, animals and ecosystems only if we give them the space they need, and the time they need. Most people don’t know that. It is the job of scientists working on ecosystems, and on wild flora and fauna to remind politicians and the public of that, and being silent when this is not taken into account is unethical.

As the magazine Science sees it, my award of a major scientific prize by one of the most important fishing nations on Earth has put squarely in the mainstream the notion that over-fishing is, regrettably, our dominant mode of interaction with ocean life. What is not yet in the mainstream is that the simplest, and most effective approach to re-establish some semblance of abundances past is for humans to withdraw from parts of the ocean, and to let nature, there at least, heal the wounds we have inflicted. Thus, to be more specific, I will work for the establishment, throughout the world, of more marine protected areas, and similar zones of reduced human impacts. Right now, they cumulatively cover less than 1 % of the world ocean, with about only a tenth of that effectively protected. And not enough new ones are declared for the goals we have set for ourselves to be reached, e.g., protecting 10% of the world ocean by 2010.

I must come to an end. The best way to thank you for this unforgettable afternoon, to thank the International Cosmos Prize committee and the Expo ‘90 Foundation for this wonderful prize, and to thank the many people- foremost His Highness The Crown Prince – who have welcomed me and my wife in your beautiful country is to continue – with renewed vigor, the research, and public speaking for which I was awarded the International Cosmos Prize for 2005.

And so, I will. Thank you.
There is, since the days of Robert Koch and Kitasato Shibasaburō, a tradition of medical cooperation between Germany and Japan, and my friend’s presence in a German’s hospital was an expression of this relationship.


The author, jointly with Yves Miserey, a French science journalist, of the book ‘*Une mer sans poisson*’ available in Japanese translation.


I had suffered a stroke in early 2005, and thus there was reason to the worried, as it was and it was important that I should be able to go through the events connected with the prize.

This vetting of potential winners is understandable; the Cosmos Prize was then relatively new, and its prestige still depended, in part, on the reputation (and behaviour) of the prize winners. Also, the International Cosmos Award is co-sponsored by the Imperial Palace, which is a serious institution in Japan.

My book on Charles Darwin, and, more precisely, the fish that Darwin worked on, was co-translated into Japanese by Mutosan, who also translated it (see Pauly, D. 2012. *Daawinfisshu: Daawin no sakanatachi A~Z* [Japanese edition of Darwin’s Fishes: an encyclopedia of ichthyology, ecology and evolution. Cambridge University Press, 2004]. Translated by N. Nishida and F. Muto. Tokai University Press, Kanagawa, Japan: 444 p.), and this gives me another opportunity to thank him.

Thus, when the ‘Father of the Green Revolution’, Norman Borlaug, was honored, he received the Nobel Prize for Peace – there is no Nobel Prize for Agronomy, even though we would all starve if it were not for the advances in agronomy in the 20th century.

However, I did talk about this conversation with then Emperor Akihito of Japan, especially with Empress Michiko, when they visited UBC on July 13, 2009, and I was selected as UBC representative to have lunch with them, and then president of UBC, Dr. Stephen Toope.

This acceptance speech was part of the bilingual Japanese-English commemorative booklet prepared by the Expo ’90 Foundation.


The news item in *Science* read as follows:

“It took decades for fisheries biologist Daniel Pauly to win broad support for his predictions that overfishing could lead to a collapse of fisheries worldwide. This week, one of the world's biggest fishing nations joined the bandwagon, with Japan's Expo '90 Foundation awarding Pauly its [...] Cosmos Prize. The 59-year-old Pauly, director of the Fisheries Centre at the University of British Columbia in Vancouver, Canada, has focused on the sustainable management of marine resources (Science, 19 April 2002, p. 458). An outspoken critic of modern fishing practices, he once suggested that future generations might be reduced to eating jellyfish. 'I think it's very important that a major Japanese prize would go to someone who has worked fearlessly on the problem of overfishing,' says Nancy Knowlton, a marine biologist at the University of California, San Diego, and a member of the screening committee". (*Science* 22 July 2005. Vol. 309, Issue 5734, page 555. doi: 10.1126/science.309.5734.555b).

These numbers and targets were current at the time (Wood, L., L. Fish, J. Laughren and D. Pauly. 2008. Assessing progress towards global marine protection targets: shortfalls in information and action. *Oryx, the international Journal of Conservation*, 42(3): 340-351), but unfortunately, the 10 % target of effective protection by all countries was reached by only a few, notably Chile. However, the need for marine protected areas and no-take marine reserves is now better understood, and gradually, we will get there.