Of Science Communicators, the Fish, and the Elephant: PCST-10 Reveals the Connection

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The 10th Public Communication of Science and Technology (PCST-10) conference, "Bridges to the Future", took place in Malmo, Lund (Sweden), and Copenhagen (Denmark) on 25–27 June 2008. The main conference took place in Sweden. However, participants crossed the spectacular Oresund bridge, which connects Sweden and Denmark, to take part in a novel science-communication experiment known as the Copenhagen Challenge. The conference was attended by about 550 science communicators from 42 countries.

The conference prided itself on being environmentally sustainable. "All the conference material, such as the programme, has been produced with minimum environmental impact. The conference bags are made from 100 per cent [sic] organically grown cotton, and the pens are made from maize and are 90 per cent [sic] degradable," says the conference material. Indeed, Malmo has been rated by the environmental magazine *Grist* as the fourth-greenest city in the world. However, the conference was friendly to all living things in the environment except the fish. That had nothing to do with the meals, though.

Fish, we all know, live in water. Bridges are usually constructed over bodies of water. Under the bridge, many a fish would take shelter. So for a conference themed "Bridges to the Future" to be unfriendly to the fish is ironic.

From the welcoming remarks by the director-general of the Swedish Research Council, Par Omling, participants had no idea how the fish would figure in the conference deliberations. Omling acknowledged the vitality of research communication, especially in an era when the effects of global warming might exceed the worst catastrophic movies filmmakers have ever produced. "Cross-fertilization through research communication can make both research and society grow and develop. Turning trends toward a sustainable society is probably the greatest challenge humanity has ever faced," said Omling. "Building bridges between researchers, science communicators, and society is one of the overarching objectives of this conference."

In fact, the four main subthemes of the conference—"Emerging Issues in Science and Society", "Engaging Scientists and the Public", "Assessing Impact and Outcomes and Developing Media", and "Methods and Meeting Places"—probably had no place for the fish.

A Swedish professor of cognitive science, Peter Gärdenfors, of Lund University, had other ideas. In a brief but profound speech at dinner the first night, he took everyone by surprise when he began comparing the fish and the elephant.

He described how a female fish moves around with numerous eggs in her ovaries and lays her eggs in the water. The male fish releases sperm onto the eggs. Many young fish, or larvae, hatch after a few days. The numerous baby fish are usually not properly cared for by the mother fish. The result is that many die along the way.

He contrasted that with the elephant, which takes great care with its offspring. The mother elephant performs motherly care duties, including helping the calf to its feet by using one foot and her trunk, crooking her trunk around its rump to help it up steep places, lifting it over obstacles or out of a wallow, pushing it under her to protect it from danger or the hot sun, bathing it by spraying water over it and scrubbing it gently with her trunk, and steering it by holding its tail.

Still, the ever-attentive science communicators were lost as to where the professor would eventually land.

"Some science communicators behave like the fish. They write or produce numerous articles that are not properly written, edited, and researched. The result is that readers often throw such articles into bins," said Professor Gärdenfors. "Science communicators should behave like the elephant. You should carefully write well-researched articles and edit them before delivering them to the public. Such articles could last longer as readers keep them for future reference," he continued. "We need 'elephant' communicators, not 'fish' communicators," he concluded. Thunderous applause ensued.

The conference continued with the participants striving to become "elephant" science communicators.

In the Copenhagen Challenge, the "elephant" science communicators were divided into 73 groups. Each group was assigned one of 14 topics related to climate change and asked to offer up to three recommendations. The challenges included communicating conflicting views on climate change, communicating to children, dealing with regional differences in climate change, and communicating to persuade people to change their behavior.

One group recommended that communicators ensure public access to peer-reviewed knowledge on climate change that would allow people to form their own views. Another recommendation was to identify the local problems and needs of the community related to climate change and focus on them to design strategies. And another was to empower children and adolescents through communication and education programs to promote sustainable lifestyles in themselves and those around them.

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