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The fate of whales provided a hook for helping policymakers to understand how science works in practice.

POLICY TALES AND THE SECRET LIFE OF WHALES

Palaeontologist finds a way to convey science to business leaders at the World Economic Forum. **By Nick Pyenson**

As a palaeontologist who works with fossils of large, extinct ocean predators, I tend to think that the story of our future has already been written in the geological past. The same rocks that preserve the remains of ancient whales tell us about dramatic sea-level rises that might be matched in our future, if global warming continues. As we begin to encounter geological-scale global changes in our own lifetimes, the past of this planet is a guide to what might happen. It's hard for me to accept that scientists can explain how whale bones end up on mountain tops but we can't find leadership to forestall glacial melting.

Leadership was definitely on my mind when I attended the World Economic Forum (WEF) Annual Meeting of the New Champions 2019 this past July in Dalian, China, to talk about

"Many elected leaders pay little attention to scientific evidence."

the secret life of whales to non-scientists from the business and policy fields. I thought the narrative of where whales originated, and how their fate today is inextricably linked with ours, would have traction at the WEF. I planned to use the fate of whales not just as a hook for amazing facts, but as a vehicle for understanding how science works in practice. I was unsure about how my presentation would land; after all, many elected leaders pay little attention to scientific evidence, often wilfully undermining it or happily ignoring it.

I knew that the WEF was important: much

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The Annual Meeting of the New Champions 2019, held by the World Economic Forum in Dalian, China.

of its influence comes not from the named attendees, but from using its platform and network to affect change across many areas of governance. I had also joined the WEF's Young Scientists community, which drew together a select group of early-career scientists from around the world for a two-year 'journey' (now three years). I was reassured by the other young scientists, who shared my hope for science at the WEF; their presence in the audience gave me much-needed support. Fortunately, my talk went down well.

So, what business do scientists have at a meeting such as the WEF? And what are the lessons for scientists who want to communicate their relevance and the overall importance of science to global leaders?

Your expertise matters. Scientists at the cutting edge of their fields have credibility that is hard-won and long-lasting. Use the opportunity granted by credibility to share information with people outside your normal scientific network.

Scientific findings have value. They don't necessarily show up in investor reports, but have ways of being durable and surprising. Scientists should speak about the value of scientific knowledge so that it isn't opaque or discounted as irrelevant.

Stories of discovery are exciting. Whether it involves pandemics or neutrinos, don't underestimate the thrill of discoveries. Scientists are experts at pursuing knowledge, and we should speak clearly about how we work things out. Part of the excitement is not always knowing the answers to our questions, together with the unexpected challenges and insights along the way. Told correctly, these testimonies can inspire and motivate a range of audiences for a long time.

> **"Scientists should speak about the value of scientific knowledge."**

Facts need narrative. It's clear that facts aren't always enough to capture interest or sway public opinion. Scientists can use the first-person narrative in unique ways. Combining subject expertise and storytelling savvy can give scientists influence in these multi-stakeholder meetings. The best presentations by scientists in Dalian did a lot more than merely translate jargon — the scientists used their subject knowledge and the power of narrative to captivate and connect with their audience. Giving entertaining, engaging talks requires knowing the facts, but also recognizing what details to omit.

Scientists, of course, aren't great at everything. Although science has a part to play in nearly all of the 17 United Nations Sustainable Development Goals, scientists alone would have a hard time writing them. For scientists who want to step up to the multi-stakeholder table, they need to understand the priorities of political and business leaders — after all, we can't expect world leaders to become scientific experts in their spare time.

The big decisions of our time, including how we respond to future sea-level rise, need to be made by people who understand the complexity of the world, and who possess both confidence with creative problem-solving and the patience needed to play the long game. Scientists have these traits in abundance, along with the credibility and competence to make a difference at the table of global leadership, which the world certainly needs.

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