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## When Science and the Media Mix

AS THE DEVASTATING IMPACTS OF JAPAN'S EARTHQUAKE AND TSUNAMI CONTINUE TO UNFOLD, AND concern over the Fukushima nuclear power plant grows, communication between scientists and the media has never been more vital. Fourteen years ago, journalist Jim Hartz and physicist Rick Chappell warned in their book *Worlds Apart: How the Distance Between Science and Journalism Threatens America's Future* that people are dangerously unenlightened about science's role in many aspects of life and society, in part because of the inability of scientists and journalists to understand each other. Today's relentless 24-hour media news cycle and blogosphere offer ample opportunities for both parties to provide politicians, policy-makers, and the public with scientific knowledge needed to inform their opinions and decisions. Yet the communication gap continues.

As a marine scientist who studies oil spills, I was in the fray after the Deepwater Horizon oil spill in the Gulf of Mexico last year. Journalists and scientists tried hard to communicate with each other, but I saw messages that were not delivered well to the media and/or misinterpreted by the media. In interviews, I made reference to my research on a 1969 oil spill in Falmouth, Massachusetts, which showed that oil continues to affect a small coastal marsh area, but did not anticipate many journalists' response: They extrapolated these remarks to infer potential dire, long-lasting impacts of the Gulf spill on marshes. I tried to restore perspective and reinforce that many oiled marshes have rebounded in the past, and that not all oil spills or coastal marshes are alike, but it was too late. That critical point was either missed or overlooked.

Such mistakes caused emotional damage to those living in the Gulf area, leaving people with more stress than knowledge. The research and impacts of the spill are still unfolding, and despite people's yearnings, there probably won't be quick or clear-cut answers. Nevertheless, this is no time for scientists to run back into the ivory tower and pull up the drawbridge. Scientists have to do a better job of communicating not just what they know, but also what they don't know, and what is uncertain. At their best, science and journalism both research exhaustively, discover knowledge, and communicate it accurately and objectively. For years, I have invited journalists to my laboratory to learn about field work and chemical analysis. We have defined terms, traded metaphors, and explained the perils and protocols of scholarly publishing and publishing for the public. Both parties have benefited. Journalists have come away with a greater appreciation of the research world and an increased ability to responsibly report to the public, and I have a better idea of the questions people want answers to.

How can scientists start to engage the media? Universities and colleges have press offices, but most scientists only interact with them when they have a high-profile manuscript or an inquiry from the press. However, the press office can be an invaluable conduit for explaining research to the media. In addition, scientists can reach out to general reporters and invite them into a conversation about the challenges that both parties face on a daily basis. Scientists also can encourage their institutional leaders to invest, even modestly, in outreach to the journalism community in the form of briefings, Web sites, and workshops. Fellowship programs such as those at the Woods Hole Oceanographic Institution, Marine Biological Laboratory, and the University of Rhode Island get journalists into laboratories and in the field alongside scientists for a week or more, experiences that are well worth the investment.

Communicating is risky, but not doing so is riskier. If scientists and journalists don't try harder and make continual efforts to learn each other's languages and gain confidence, knowledge will remain locked in laboratories, misunderstood, unused, or even worse, misused. When this happens, those who thirst for information are shortchanged, and the work of scientists becomes more of an interesting hobby than a critical endeavor of fundamental value to society.

– Christopher Reddy

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