Eventually, I tried applying a similar thought process to my scientific interests. I found that approach to science much more appealing—and also useful. I took it with me as I became a scientist.

Brushes with waterborne illness and professional experiences with water filtration inspired me to pursue a Ph.D. in public health, focusing on the waterborne transmission of *Helicobacter pylori* in Lima. I chose it because it's a big-picture project, a collaboration between public health officials, scientists, and doctors with the shared goal of providing data-driven advice to policymakers.

I rapidly discovered that new data, or a new technical approach, won't solve access to clean water. After all, the technology to improve water quality is already available, and water-treatment infrastructure is known to be cost-effective. The problem persists because the challenge of clean water ties into complex political and social issues: culture, economics, science, emotion, ideology. You can't solve such problems without accounting for the bigger picture. Narrow thinking can even lead to strategies that do harm, like privatization efforts in Peru that modestly improved water infrastructure but priced the poor out of the market. As our challenges become more complex, even strictly scientific problems require a broader perspective, akin to that embraced by historians, philosophers, and other humanist scholars.

I have benefited from studying history in other ways. I learned to think critically and to write rigorous, compelling qualitative arguments. Slashed research budgets make writing about broader impacts more crucial than ever. Academic scientists must defend their work against competing political and economic priorities, not just in grant proposals but also in public and political spheres. Scientists are increasingly involved with governments and policymakers: Every year, we've had to justify our research project to a new Peruvian minister of health in order to legally continue.

As stable academic science positions stagnate, a growing proportion of scientists seek employment outside academia. Private-sector and governmental careers usually require thinking that encompasses regulatory and cultural concerns—and pragmatic concerns like profits. The ability to consider and weigh diverse arguments and to communicate clearly with various stakeholders is essential.

Science's inherently reductive approach and its acute attention to the finest details have yielded great benefits. But the scope of science is changing. In addition to practicing the traditional craft, today's scientists need to be prepared to tackle complex challenges in a globalized (and multidisciplinary) world, to think critically about how we solve problems, and to communicate persuasively with diverse audiences. More than my science classes did, studying history taught me these skills. Scientists can be too eager to write off other disciplines as “soft,” subjective, and therefore inferior to science and its rigorous approach. Those other fields, though, can enhance the practice and understanding of science, among scientists and the public. I encourage my peers to think about science in this larger context, as a liberal art intrinsically tied to its cousins and aimed at illuminating, improving, and adding meaning to the human experience.

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Oh the humanities!
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