A Partnership Strategy for Promoting Science
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Many scientists want to win greater public support and understanding for science. I share this desire and have labored towards it with modest success for more than half a century. I'm writing now to describe an approach I've found effective and to encourage others to test it in situations you deem appropriate.

The essence of the method I'm proposing is a partnership approach, one in which we recharacterize science and scientists more inclusively in conversation, writing, teaching, and public presentations. Albert Einstein led in this direction when he described science as, "a refinement of everyday thinking." In doing so he demystified and democratized science, making its practice a common experience, and inviting even those without formal training to identify as scientists.

I think the "refinement" to which Einstein referred was a set of behaviors by which we make predictions better than we can make by chance. With this outcome-based definition we capture the essence of science, an essence we can observe in the lives of humans around the world. People ask questions, make observations, analyze them for repeating pattern, make predictions, and test these. At its most basic, science is how we put food in our mouths rather than our ears, how we put the right shoe on the right foot.

I perceive three key advantages for individuals and society in the reframing I outline here. First, we make science more broadly understandable and appealing. People act with intention. We want to increase the likelihood of outcomes we prefer. Science is by definition the sole demonstrated way we do this. Second, we enlarge the community of scientists. Someone who admits to practicing science can identify as a scientist. Such people are already a larger—and can be a much larger—fraction of humankind than is
the portion formally trained as scientists. Third, we implicitly invite anyone who acknowledges practicing to join in honing practice and in contributing to a scientific corpus defined broadly as evidence- and reason-based culture.

Of course I acknowledge that the reframing I outline is by its self far from sufficient to realize the gains I describe. We've substantial obstacles to overcome.

Though humans are born curious and eager to learn by experimenting, we're typically packed full of misinformation while still too immature to critically evaluate it. Begun at home, this process continues as we're exposed to schooling, advertising, political propaganda, and other social interactions. As we act privately and publicly for years or decades on the basis of accumulated misrepresentations, we become identified with them to the point where questioning seems a threat to our very selves. Only when we judge the consequences of acknowledging error and changing to be preferable to the comfort of familiar ways can we even begin this frequently difficult process.

Some people have been terrified of science ever since falling behind in a childhood classroom where science was about memorization and theirs was a memory ill-suited to the task. Some are horrified by what we've wrought with weaponry or industrial processes born of scientific expertise. Some have been threatened with ostracism in this life and eternal damnation thereafter for questioning authority and dogma. In any of these circumstances we come to live with antipathy towards science and scientists. A switch to embracing these entails a combination of radical self-redefinition and paradigm shift. Either alone can be gut-wrenching. Both together may seem unbearable.

Yet more and more people are finding the promise of science enticing. By our unprecedented numbers and our technologies more powerful than any prior we've sailed into uncharted waters. With dismaying frequency we're discovering the consequences of our actions to be other than as we intend and so disruptive as to be impossible any longer to ignore. Whatever resistance we feel to re-examining assumptions long and dearly held we're relinquishing as we come to grips with the extraordinary challenges of our predicament. Many who've long been reluctant, and even some who've been bitterly opposed are admitting necessity to reap more fully the benefits of science as we filter the lessons of experience to reshape behavior.

I take heart in growing openness to science I'm experiencing. I've seen enough progress in my own lifetime, and I perceive enough prior on the basis of historical evidence to imagine a future where everyone self-identifies as a scientist to at least some degree, and to assert that we're arriving at that future with accelerating speed.

As we dispense with a divisive "us" vs. "them" we're turning greater attention to reflect upon how each of us practices science and to ask, "How am I doing?" Here we see affirmation of our common humanity. Even those most respected for scientific expertise stumble in one or another aspect of practice. People without formal training contribute
to the scientific corpus, and often practice successfully in diverse situations.

Each of us can take satisfaction in our own and others' successes, and each can improve. Just as we can delight in the performance of a virtuoso musician and still enjoy our own amateur music-making, so can we live better by taking advantage of the achievements of scientists extraordinarily competent in one or another realm, even as we continue to hone our own practices.

I imagine that most who are reading this will concur that science can be means to break the chains of illusion, deconstruct divisive world-views we inherit by accident of birth, and construct in their places a shared world-view that we can make basis for cooperative action for common good. I hope that you'll be willing to consider my argument that by redefining science as "how we make better predictions," and encouraging people to say, "Of course I'm a scientist," may be means to this end.

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