Last month in an op-ed in *The New York Times*, I poked a little fun at Michele Bachmann, a member of the US Congress from Minnesota and a potential *Tea Party* candidate for President. The occasion for my commentary was Ms. Bachmann's remark that the government should have no role in influencing consumer decisions on light bulbs.

My rejoinder pointed out that the government has been setting performance and other standards for technologies for over a century, and that such standards have been instrumental in stimulating innovation and economic growth. Ms. Bachmann's comment was as poorly informed as those US citizens who demand that the government keep its hands off of their *Medicare* (a government-run health-care program).

It would be easy to attribute Bachmann's apparent lack of understanding of the government's role in *science*, *technology*, and *innovation* to the anti-government zeal espoused by the *Tea Party*. Surely the idiosyncrasies of the *Tea Party* help to explain its blind spots when it comes to observing the positive roles that government can play. However, there is a deeper issue here that spans political parties across nations: a lack of recognition among policy makers of their dependence on experts in making *wise decisions*. Experts do not, of course, determine how policy decisions ought to be made but they do add considerable value to wise decision making.

The deeper issue at work here is an *open secret in the practice of democracy*, and that is the fact that our elected leaders are chosen from among us, the people. As such, politicians tend to reflect the views of the *general public* on many subjects - not just those subjects governed solely by political passions, but also those that are traditionally the province of experts. Elected officials are not just a lot like us, they are us.

For example, perhaps foreshadowing contemporary US politics, in 1996 a freshman member of the US Congress proposed eliminating the US government's *National Weather Service*, declaring that the agency was not needed because "I get my weather from The Weather Channel." Of course the weather information found on The Weather Channel comes from a sophisticated scientific and technological infrastructure built by the federal government over many decades which supports a wide range of economic activity, from agriculture to airlines, as well as from the private sector weather services.

European politicians have their own blind spots at the interface of *science and policy*. For instance, several years ago
former German environment minister Sigmar Gabriel claimed rather implausibly that: "You can build 100 coal-fired power plants and don't have to have higher CO₂ emissions." His explanation was that Germany participates in emissions trading and this would necessarily limit carbon dioxide no matter how much was produced. Obviously, emissions trading cannot make the impossible possible.

Many people can recall the disturbing spectacle, as the BSE scare was unfolding in 1990, of UK Agriculture Minister John Gummer feeding his daughter a hamburger in an effort to demonstrate to the public the safety of beef. Not only did Gummer's actions circumvent expert advisory processes, they undercut them.

We should expect policy makers to face difficulties when it comes to governance when it involves considerations of science, technology, and innovation for the simple reason that they are just like everyone else -- mostly ignorant about mostly everything. For instance, in 2010, the US NSF reported that 28% of Americans and 34% of Europeans believed that the sun goes around the earth. Similarly, 30% of Americans and 41% of Europeans believe that radioactivity results only from human activities. It should not be so surprising when we learn that policy makers may share such perspectives.

A popular view is that more education about science and technology will lead to better decisions. While education is, of course, important to a healthy democracy, it will never result in a populace (or their representatives) with expertise in everything.

Consider that the issues at the top of public debate today as I write this column include nuclear safety, unrest in numerous Arab countries, increasing food costs, a debt crisis in Portugal, and so on. One could imagine dozens and dozens of policy-relevant PhD dissertations related to each subject. Achieving such heroic levels of expertise is not realistic for anyone. Instead, we must rely on specialized experts to inform decision making. Just as you and I often need to consult with experts when dealing with our health, home repairs, finances, and other tasks, so too do policy makers need to tap into expertise to inform decision making.

So it should be far less worrisome that the public or policy makers do not understand this or that information that experts may know well. What should be of more concern is that policy makers appear to lack an understanding of how they can tap into expertise to inform decision making. This situation is akin to flying blind.

Specialized expertise typically does not compel particular decisions, but it does help to make decisions more informed. This distinction lies behind Winston Churchill's oft-cited advice that science should be "on tap, but not on top." Effective governance does not depend upon philosopher kings in governments or in the populace, but rather on the use of effective mechanisms for bringing expertise into the political process.

It is the responsibility - even the special expertise - of policy makers to know how to use the instruments of government to bring experts into the process of governance. The troubling aspect of the statements and actions by the Gummers, Gabriels, and Bachmanns of the political world lies not in their lack of knowledge about science, but in their lack of
knowledge about government.

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