Learning to Think: Knowledge Management and the Policy Process

Let me paint a picture in broad strokes of how scientific knowledge is being used in the policymaking process today. We have seen plenty of evidence, both in the lectures of the past two months and in our own lives prior to this program, of the so-called politicization of science. Science often speaks in probabilities, and the inherent uncertainty (particularly in matters of prediction) leaves plenty of wiggle room for advocates, analysts, and politicians on all sides of a policy issue to hold fast to their original positions while claiming that only they are being objective and rational, that the scientific evidence is on their side. This confusion is further fueled by scientists’ perpetual calls for more research, which often clouds the matter by creating the appearance of even more uncertainty than actually exists. In short, science is invoked to legitimate all sorts of positions that were shaped largely by non-scientific forms of knowledge. Politicians can quibble about the merits of different scientific facts and findings for a long time without losing any credibility, and they can hide behind arguments of objectivity without getting into the more difficult and delicate issues of the value systems and experiences that form the true basis of their positions. As Roger asked us, how much scientific evidence will it take for someone to change their mind? Often no amount will do; the decision has already been made.

The unfortunate result is gridlock in the policy arena. For example, although a consensus is forming among policymakers and private citizens alike about the reality of the greenhouse effect and the onset of global climate change, it has taken us 30 years to reach that point. And even so, most national governments aren’t doing anything substantial about it yet, as disagreements about regional outcomes of climate change and economic impacts of mitigation
continue. Our current mode of handling knowledge doesn’t seem up to the task of creating climate change policy.

This leads me to the central question of this paper: can we somehow develop a better system of knowledge management which in turn brings about more efficient and effective policymaking? Or, to put it in terms that I prefer to think in, can better knowledge management in the policy realm somehow contribute to making the world a better place?

Before I go further, I want to briefly explain how I think about knowledge. I divide it into three broad classes, somewhat similar to Aristotle’s classification scheme: logical, experiential, and intuitive. I place modern science under the rubric of logical knowledge, that which is established and demonstrated through clear, rational steps starting from an accepted premise. It is knowledge you can transmit on paper, a system of concepts you can read about and connect together and understand even if you can’t experience them directly. I have some basic grasp on the way atoms and molecules behave even though I have never seen an atom under a microscope; thanks to my high school chemistry textbook, I have some logical knowledge of the subject. Experiential knowledge, of course, is that which you gain from your own experiences, from the simple act of living. I know which roads I need to take to get from home to work. I know that if I want to be comfortable when I go to sleep for the night, I need to turn on the air conditioner an hour or so beforehand to cool my bedroom. I know that if I’m playing ultimate frisbee, nine times out of ten Brendan is going to school me on a straight-up vertical jump, but I’ve got better odds taking on someone closer to my own height. All of these are bits of knowledge I acquired experientially. I also believe that you can learn from someone else’s experiences, if they can communicate them effectively to you. Finally, intuitive knowledge is that which is not readily explainable, that comes to us unbidden, perhaps, or through some half-understood means. The noetic understanding that Bruce Foltz described is intuitive knowledge. For example, the moral systems that most of us guide our lives by are understood intuitively. Perhaps I cannot explain logically why I should value someone else’s life as much as my own,
and certainly I have never experienced anyone else’s life and cannot identify with them completely, but that doesn’t stop me from asserting that every human being has fundamental rights that should not be violated. I intuit this fact without being able to refer back to something else; it seems to be a self-evident truism, a first principle from which others are derived.

I’m not going to try to show that one form of knowledge is superior to another, or even to explain the different roles of each in any detail. I’ll suffice to say that each category plays an important part in our understanding of the world, and deserves to be acknowledged. Now, to relate all of this back to the policy world: in my opinion it is experiential knowledge that has the most power to change people’s minds, and hence has the potential to break gridlock. Science, as I mentioned before, frequently relies on probabilities more than out-and-out truths, particularly in predictive areas such as global climate change. Moreover, the presence of uncertainty by definition means that more than one course of action is logically consistent with the information at hand. Logic, therefore, will be unable in many cases to persuade someone to alter their position. And while everyone may have some sort of intuition guiding them, it certainly isn’t the same universally, and it is difficult if not impossible to trust someone else’s instincts over our own. For one senator to try to convince another to pass a bill simply because he had a gut feeling about it would be ineffectual and probably ridiculous. That leaves experiential knowledge. It is by living and learning, by seeing and recognizing problems and solutions and possibilities and consequences and influences and practical considerations and unpredictable outcomes that were not immediately apparent, that people change their minds.

Unfortunately, relying on the accumulation of experience simply just isn’t a serious option for dealing with global climate change. It will be decades or centuries from now before we will have enough collective experience to understand how the climate is changing, and even then it will continue to change and undermine whatever experiential knowledge we may have gathered. For the issue of global climate change we must therefore use other forms of knowledge to drive the policy cycle. So, as I have asked once already, how can we get the system to work
under such difficult conditions if it isn’t working now? Does knowledge management have anything to offer us to improve the policy process?

The too-obvious answer after a series of lectures such as what we’ve had is that we need to limit the role of science and logical knowledge. We’ve done a lot to criticize the scientific enterprise’s domination of modernity, and rightly so in that many people no longer trust, acknowledge or are even consciously aware of non-scientific forms of knowledge (like policymakers who justify an experientially or intuitively formed opinion by appealing only to science and rationality). Nevertheless, logical knowledge hasn’t replaced the other types of discernment; would anyone argue that we no longer have any intuition, or that we no longer learn from our experiences? Perhaps these capacities aren’t as fully developed or applied as they once were, but experiential and intuitive knowledge are still with us, and stopping or slowing the pursuit of logical knowledge won’t do anything to bring them back to their former strength. This brings us to another obvious answer, which is to place a greater educational emphasis on the humanities. I think this would be helpful up to a certain point, in that the humanities help us get in touch with our intuition. It is in art and literature and history that we find people and stories and ideas that resonate with us. The humanities help us learn to articulate the little half-formed embryos of thoughts that we might not even have realized we had, present us with new and exciting perspectives, and ultimately give us insight into the human condition. Because of this, I would recommend that our educational system give the humanities more time on the stage. Perhaps literature courses should be required for natural and social scientists as well as for English majors, but then again, I think it is equally important that philosophers and anthropologists have some greater degree of familiarity with the sciences.

But broadening education isn’t a solution in and of itself; it is an important step perhaps, but ultimately tangential to what I think really needs to happen. Rather, I believe we need primarily to address not our kinds of knowledge, but our modes of thinking. As Brad Byerly pointed out, a B.A. or a PhD may teach someone a lot about their field, but it doesn’t necessarily
teach them how to think critically in or outside of their specialty. This is what is needed: we need to learn to think. We need to train people sufficiently in both the sciences and the humanities that they feel confident thinking and talking about important issues and asking questions about them without being intimidated, and more importantly, we need to train them to think critically and creatively, observantly and forcefully and clearly about unfamiliar and challenging issues. While we can’t magically make people smarter, the right education can go a long ways.

Assume for a minute that, through the efforts of a sufficiently broad-based, rigorous and thought-inspiring educational system, the next generation of policymakers and their support staff – as well as a sizable chunk of the general populace – emerge competent to think critically, observantly and intelligently about a wide range of topics outside of their own realm of experience or training. Couple this with the wealth of information available to them, both through the information explosion brought about by the internet and through the forceful efforts of policy advocates and analysts, and we would have policy actors with the thinking skills and the knowledge requisite for good decisionmaking. The only remaining ingredient is trust: politicians must trust their staffs to effectively gather, filter, and synthesize the available information to create the most coherent recommendation, and the public must trust their politicians to do the same. Ultimately, the public must hope for one of two outcomes: that their representatives will place the greatest good before their own self-interest, or that Adam Smith’s ‘invisible hand’ will somehow create public virtue out of private vice. Ideally, either one of these two paths will lead to the best policymaking possible.

Of course, even if this kind of universal trust and altruism were possible, it wouldn’t result in perfect policy. This is for two reasons: first, because the existence of uncertainty dictates that no single option is guaranteed to lead to desired outcomes; and second, because the pluralism of modern society precludes universal agreement on what outcomes are desirable in the first place. As a result, advocates – the people motivated enough about a particular cause to spend their lives defending it – will still form their positions based at least in part on their value
systems, which are in turn formed predominantly through intuitive knowledge. Once their
decision is made, policymaking becomes a zero-sum game for them, and they will use any means
available to them to promote their own position. They will provide politicians with information
that supports their cause, and dispute or ignore evidence to the contrary. We will be plagued by
the politicization of science, just as we are today.

But there is a critical difference in the hypothetical world of better-educated politicians
and advisors, in that those policymakers being fed this politicized science will be able to see
through the subterfuge. They will recognize how values and intuitive knowledge have shaped the
supposedly objective information that is being provided to them, and they will be able to raise
important questions that reveal the complexities and difficulties advocates would rather gloss
over. And, going a step further, policymakers will be able to engage in this process this with one
another as well. I am not trying to recommend that politicians turn into complete skeptics, point
out every flaw of every argument, and reject anything that smacks of value judgments. Rather, I
believe that an educational system with a greater weight on critical thinking and broad enough to
build up some intellectual confidence will lead to more intelligent questioning in the policy arena,
and that more intelligent questioning will in turn lead to more intellectual, ethical and political
honesty. People will be forced to talk about values, intuitive and experiential knowledge, and
how these forces have informed their opinions. And hopefully, through greater training in the
humanities, they will be better able to examine and articulate this side of human thought, and we
will be able to enter a more constructive philosophical dialog on climate change and other
’scientific’ issues.

Of course, we won’t reach complete agreement just by discussing values. We may not
even achieve a greater degree of consensus than we have now. But I cannot help but believe that
if are able to discuss openly and honestly all of the factors that we are basing decisions on, we
will have better policymaking. Sure, politicians won’t always be able to hide behind claims of
objectivity, but only their supporters believe those claims now. Just think of a recent election
campaign, and how you perceived your candidate’s version of the facts as opposed to his opponent’s. We will have new and different expectations for our elected representatives, and accept the very real, very important role that non-scientific forms of knowledge can and should play in the policy process. By learning to think, we can use our knowledge more effectively and create a better way to shape public policy.