

BOOKS

The Science-Politics Power Struggle

HELEN PEARSON

Politicians often assume that “following the science” will help make choices more straightforward, public policy expert Geoff Mulgan writes in his book *When Science Meets Power*. “Yet my experience is that this is rarely the case,” he says. Inevitably, delving into a body of scientific research reveals it to be complicated, conflicting, and incomplete.

Mulgan, a professor at University College London (where I also teach), describes a “science-politics paradox”: breathtaking advances in science require governance to ensure those advances benefit society, but politics is unable to govern something so complex. The result is an uneasy power dynamic that Mulgan thinks should be better channeled.

Mulgan argues that science and politics need closer integration, which will require reinvention on both sides. As I understand his vision, national governments and the international community would be supported by a stronger knowledge infrastructure—a collection of bodies expert at providing the world with the right knowledge at the right time. Scientists also need to acknowledge their role in serving society, and politicians need to more systematically integrate research and other knowledge into governance.

Mulgan became interested in



When Science Meets Power

by Geoff Mulgan. Cambridge, UK: Polity Press, 2024, 261 pp.

the “clashing logics of science and politics” during his years working in government, which included heading policy for UK prime minister Tony Blair. The Blair government was an early proponent of grounding policy in research, and Mulgan was tasked with developing evidence-based policy on issues such as climate change, crime, and drug addiction. But when his team brought in scientists to rapidly review

the relevant evidence, they became so paralyzed by how much they didn’t know that they couldn’t advocate for a particular action. Meanwhile, policymakers just forged ahead, worryingly blasé about making decisions with limited knowledge. “This contrast between the ways of thinking stayed with me,” Mulgan writes.

Mulgan marches briskly through several thousand years of science history to show how the relationship between rulers and research has evolved. Governments began directing science to meet their goals—for engineering bridges and winning wars—and have continued to fund research on the basis that it fuels economic growth and promotes the national interest. The power balance had shifted by the mid-1900s as it became clear that science and technology led

to risks as well as transformative discoveries. Yes, there were benefits, such as vaccines and cars, but also dangers—pollution and nuclear war, for instance. Such concerns spurred international treaties as well as greater regulation and procedures to weigh these impacts, including risk assessments and ethical reviews.

And, as nations have become more dependent on scientific knowledge to solve problems like climate change, they have also found research harder to understand and manage. (Mulgan compares it to “steering a trolley

with ever more items piled on top.”) The relationship keeps evolving. During the COVID-19 pandemic, some politicians looked to scientists to guide their response, while others confidently rejected what science showed. Scientists struggled to convey the uncertainties of research and to know where to draw the line between providing research findings and expressing an opinion on policy.

There are many signs that governments are increasingly turning to research evidence to guide policies. In 2018, US lawmakers passed the Evidence Act, which requires federal agencies to improve their efforts to evaluate whether and where policies work. The last couple of decades have seen a mushrooming of science advice systems for governments as well as other “knowledge brokers,” or bodies working to improve the use of research in policy. The field of international development policy, meanwhile, is being transformed by economists who use randomized trials to show experimentally which policies work to address poverty. And yet Mulgan says that there is more work to be done: science can no longer be seen as a simple pipeline of information into politics—“instead we need to interweave and synthesize the two.”

As a science journalist, some of my reporting over the last few years has focused on evidence synthesis—the important and often overlooked process by which researchers systematically assess entire landscapes of conflicting knowledge. This prevents people being misled by a single study and knits different types of information together so it can be seen as a whole. For example, the United Nations’ Intergovernmental Panel on Climate Change (IPCC) attempts to synthesize studies on climate change, and the Cochrane Collaboration conducts systematic reviews of clinical trials to determine whether a treatment helps or harms.

Mulgan calls for more people and institutions with the relevant expertise to join knowledge synthesis efforts. One of his central arguments is that governments should apply metacognition, or thinking about how to think. A schoolchild who realizes that she learns spelling better with a mnemonic device rather than rote memorization is practicing metacognition. A government practicing metacognition would consciously recognize the best way to find knowledge needed to solve a particular problem and draw on a network of institutions to provide it—by synthesizing research evidence, say, or collecting the lived experiences of citizens.

On the flip side, Mulgan also highlights how surprising it is that society has not developed more efficient systems to reap the considerable benefits of scientific research while avoiding the harms. There are “remarkably few proposals for how to govern, shape and guide powerful new fields,” he writes.

Researchers often argue that they are best placed to direct, judge, and govern their own work, but that only works up to a point. “It’s not obvious that [scientists] can be trusted to govern science, any more than the military can be put in charge of wars,” Mulgan writes. Serious discussions about how to regulate a new technology tend to occur only after it is racing around the world. A lot of talk from researchers about regulating gene editing didn’t stop the Chinese scientist He Jiankui from revealing in 2018 that he had edited babies’ genomes. And although AI leaders have talked about existential threats posed by AI and called for regulation, they’ve been short on concrete proposals—and some tech groups have protested the European Union’s Artificial Intelligence Act. So it makes sense for governments

rather than researchers to govern science for the good of society, Mulgan argues. Governance is, after all, governments’ job.

One part of the book that I particularly liked highlighted the wide and seldom discussed disconnect between the research that is done (usually what interests researchers) and the research that societies want. This divide becomes obvious when, for example, groups undergo priority-setting partnerships, collaborative exercises in which patients and health professionals devise a list of questions they want answered. One such exercise on knee osteoarthritis showed that patients wanted research on physiotherapy and coping strategies, whereas 80% of clinical trials were on drugs. A vast amount of medical research is wasted because of this mismatch, and Mulgan rightly argues that scientists should engage more openly in democratic debate about research priorities. Scientists “will only be fully trusted if they are seen to care about the interests of the public,” he says.

One solution could lie in better integrating science advice and governance into global policymaking. (The United Nations announced the creation of a scientific advisory board in 2023.) Mulgan suggests a “global observatory for science and technology” that would assess where the world’s research and development budgets are going and whether they align with the global disease burden and the sustainable development goals. Such bodies would counter “the secrecy that surrounds R&D for military and intelligence purposes.” If the United Nations were invented today rather than the 1940s, he suggests, then alongside the World Bank and related finance institutions, it would have bodies to help “mobilize knowledge of all kinds.” He points to the IPCC, established in 1988,

as the most visible example of an international body designed to synthesize scientific research that the world needs in order to tackle a shared problem—although some researchers now feel that assessing the vast global climate literature requires more rapid and systematic methods of evidence synthesis.

Mulgan's book is itself a knowledge synthesis, and sometimes I wished he'd made it more like a pithy policy brief—with bullet points—than an academic tome that crams in the very impressive extent of his knowledge. A more concise summary would help further debate about his good ideas and how to put them into practice—which is a big task. None of it will happen if scientists, the public, and policymakers fail to challenge those who seek to undermine science entirely or twist it to support their purported truth. "In the face of these attacks it's essential to be clear-headed and willing to fight," he says.

Helen Pearson is a senior editor for *Nature*. She lectures in science journalism at University College London and is writing a book about the use of research evidence.