
PART 2

Technological Challenges to Governance

Four timely chapters make up Part 2, which deals with technological challenges to governance—the new issues that governments face based on advances in science and technology. While science and technology innovations continue to improve the lives of many, the speed of new developments has also created novel challenges for policymakers.

In Chapter 5, David W. Rejeski, of the Woodrow Wilson International Center for Scholars, discusses the lack of predictability in natural and economic systems, and the challenges that change presents for policymaking. Some phenomena change too slowly to be noticed at first, such as the increase in adult obesity in the United States, while other things change almost too rapidly, such as computational performance. Discontinuities in the systems demand more foresight and a greater sensitivity to change from current policymakers.

Robert H. Blank, from Brunel University in England, examines the blossoming field of neuroscience in Chapter 6. He summarizes the developments in the field and the political issues associated with them, and then delves into cognitive neuroscience and what we now know about violence, addiction, expression of emotion, and other behaviors. The chapter concludes with an examination of our policy-making institutions' abilities to keep up with these rapid advances in knowledge.

In Chapter 7, Deborah G. Johnson of the University of Virginia provides her perspective on the new challenges being created by information technology. She offers answers to such questions as: How will technology make governance more difficult, or will it just make governance different? Will it create the need for new attitudes, frameworks, structures, or policies? Will information technology make governance harder or easier? Will it change the very nature of governance?

Concluding Part 2, Steven W. Popper, a senior economist at RAND, discusses in Chapter 8 a variety of technological challenges for government. The past 25 years have seen a breathtaking degree of political, social, and technological change. Popper underscores the risk of utilizing rapidly emerging technologies without continuing support for the system of basic research that made such technologies possible.