

CONGRESSIONAL COMMENTARIES

EDITORS' INTRODUCTION

The interaction of law and technology is often shaped by statutory mandates in diverse fields. Technological development has historically followed the economic incentives created by patent, copyright, and other federal laws. For this reason, the Harvard Journal of Law & Technology believes that it is important to gain a perspective on the viewpoint of the current leaders of the House Committee on Science. These leaders will attempt to apply the principles of the Republican Contract with America to science and technology policy. The importance of the first Republican House of Representatives in recent history should be recognized.

The two Congressional Commentaries provide a flavor of how science and technology policy will be developed in the near future. The first Commentary explains the views of the House Committee on Science Chairman Robert Walker. Congressman Walker broadly discusses how the principles of the Contract with America will affect science and technology policy. The second Commentary presents the position of Congressman Dana Rohrabacher on the recent amendment of the United States patent laws to conform with the General Agreement on Tariffs and Trade ("GATT"). Congressman Rohrabacher argues that basing the patent term on the time that an application is filed will inadequately protect American inventors and investors. Together, the two pieces provide a nice contrast of the Republican vision as it applies broadly and narrowly to science and technology policy.

UNDER NEW MANAGEMENT: SCIENCE POLICY IN A REPUBLICAN HOUSE OF REPRESENTATIVES

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As the events of the November elections demonstrate, we are experiencing one of the most exciting times in history. The message the American people sent to their government leaders was simple: we want our government to be accountable to us. We want the over-regulation and over-taxation, which has burdened us too long, to end. In return, we are willing and able to take responsibility for our own lives.

The election results were a surprise to most political observers.¹ Even many of us who had been working for years toward the goal we have now achieved cannot quite believe it has really happened. It is a sea change. Now the hard work of translating an election message into policy implementation has begun.

Since government policies are nurtured in the Congressional committee structure,² each committee chairman in the 104th Congress must be ready to accept and implement the mandate of the American people. As Chairman of the House Science Committee, I must assume responsibility for not just the immediate realities, such as fiscal responsibility, but for the opportunities that must be developed for the future.

In some important ways, the end of the Twentieth Century parallels the close of the Eighteenth Century. By the late 1700s, the rise of democracies began to replace the divine right of kings as the dominant political system. Economics was being transformed as humankind went from feudal to national economies and agrarian to industrial livelihoods. Technology drove much of the economic change, and cultural life reflected that transition as people moved from rural areas to the cities.³

Today, we also see four great revolutions—political, economic, cultural, and technological—taking place simultaneously and influencing

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1. See, e.g., John F. Persinos, *The GOP Farm Team*, CAMPAIGNS & ELECTIONS, Mar., 1995, Feature, at 1.

2. See MARY ROSE MUSCA, *THE ROLE OF COMMITTEES AND SUBCOMMITTEES IN CONGRESSIONAL POLICY-MAKING* (1986).

3. See Langdon Winner, *Artifact/Ideas and Political Culture; Technology*, *WHOLE EARTH REV.*, Dec. 22, 1991, at 18.

one another.⁴ In each of the four, the changes taking place are so enormous that the shape of history is being remolded. Even more significantly, the revolutions are interactive, with each influencing the others. The implications of such near universal change are immense, and must be acknowledged by any political movement that seeks to dominate thinking in the next century.

The most important aspect of these four revolutions is that they interact in ways that make the sum of the changes achieved even greater.⁵ No one of the revolutions is exclusive. Each gains strength from the others, and modern technological advances have fueled the other revolutions. The communications revolution brought the values of the outside world behind the Iron Curtain and assisted the rise of democracy in Eastern Europe. Broadcasts of the Cable News Network ("CNN"), portraying life in the Western World, made citizens and even Communist policy-makers of Eastern European countries dissatisfied with their own economic progress, causing them to doubt the vitality of their own system.⁶ In the Soviet Union, an inability to compete economically, let alone militarily, led to political reform and the development of closer ties with the West.⁷ Religious fundamentalism has led to significant governmental change all across the Middle East, and has fueled heated political debate on issues such as abortion in this country.⁸ These technological advances, which have resulted in the instantaneous dissemination of information, require policy-makers to react more quickly to changing events and be more responsive to the needs of their constituents. Thus, technology has made political decisions even tougher.

The major challenge facing members of the 104th Congress, and, in particular, committee chairmen, is to understand the nature of the four revolutions so that we can establish a framework for addressing the future, tailor a message that presents an optimistic analysis of the future, build a consensus around policies that make sense in the midst of a revolution, and begin the process of rejecting policies that tie us to the outmoded status quo.

4. *id.*

5. *Id.*

6. See Thomas B. Rosenstiel, *TV, VCRs Fan Fire of Revolution; Technology Served the Cause of Liberation in East Europe*, L.A. TIMES, Jan. 18, 1990, at A1.

7. See Mikhail Gorbachev, *I Am an Optimist*, TIME, June 4, 1990, at 27.

8. See Michael Hirsley, *Fundamentally, It's a Global Issue*, CHI. TRIB., Feb. 14, 1992, Chicagoland, at 8.

Some of these forward-looking policies are obvious; others are not. In order for the technological revolution to continue, a strong fundamental science base is needed. The Science Committee must be the leader in promoting basic science policies in support of the technological revolution. Budget realities dictate that basic research be reemphasized in the next two years. Basic science must be the mantra of the technological revolution. We have neither the luxury nor the resources to continue steering taxpayer dollars in the direction of applied research. To guarantee a wise allocation of scarce resources, the private sector, influenced by market forces, should conduct applied research.

Another budget issue which will be closely examined by the Science Committee is academic earmarking.⁹ Under a new Congress, every federal program except Social Security may be subject to budget reductions.¹⁰ The science community, along with the rest of the nation, must share the increased responsibility for setting priorities. Politically driven decisions about the utilization of scarce research dollars are not the best route to quality.

Some concern has been cited by the scientific community that the fiscal priorities outlined in the Republican Contract with America¹¹ will come at the expense of science, or that federal support for science will be regarded as expendable. This is simply not true. The Contract with America is very much in line with a robust federal science policy.¹² While budgetary pressures will affect every area of the federal government, Congress will not abandon science and technology research. Faced with budget challenges, we will pursue new approaches that will enhance space policy, science policy, and technology development. Science must be regarded as an area which impacts every aspect of the United States economy instead of just a line item in the federal budget.

The results of the technological revolution are obvious, yet also so diverse as to be invisible. The ability to watch the Persian Gulf War and the arrival of American troops in Somalia and Haiti on live television has come about gradually enough that it seems almost normal, but is, in fact,

9. Academic earmarking is appropriating funds which have not been requested by the executive or approved by legislation for a select group of academic institutions. *House Committee Blasts Academic Earmarking*, FED. CONF. REP., Aug. 23, 1993, at d9.

10. Glenn Kessler, *Big Cuts in Eyes of Newt: Speaker-to-be Throws Down the Gauntlet*, NEWSDAY, Nov. 12, 1994, at A5.

11. See, e.g., Federal R&D Funding Projected to Decline, CONG. PRESS RELEASES, Mar. 1, 1995, at 1.

12. Liz Szabo, *Congressman Walker Takes Over as Chair of House Science Committee*, STATES NEWS SERVICE, Jan. 6, 1995, at 1.

a major leap forward from the Vietnam War-era coverage of only thirty years ago. Computers are no longer just for scientists, but now are essential tools in everything from management to education to medicine. We have just begun to scratch the surface of computing potential in fields such as communications and robotics.¹³

The electronics world changes so fast that every product brought to the consumer electronics marketplace is obsolete after its introduction.¹⁴ Just as we are now able to span the globe in fractions of seconds with our communications tools, we are able to transport ourselves anywhere on Earth in a matter of hours. In a few short years, that time could fall to minutes. Even today, the space shuttle carries astronauts around the world in ninety minutes. Biotechnology promises imaginative solutions in health care and amazing new ways to deal with environmental accidents such as oil spills. As our research tools become even more powerful, we can only speculate what remarkable new discoveries lie ahead that will have the potential of completely transforming the way our children live and work.

Continuing leadership in the development of new technologies is vital to the strength of a nation. "Competitiveness" became the political buzzword of the late 1980s and early 1990s, and heated debates over how the United States could best remain competitive have raged through the halls of Congress and in public policy forums across the country.¹⁵ There is a school of thought that subscribes to the "Government as Oz" theory, that the bureaucracy knows all and sees all, including the future. Proponents of this theory believe that if enough dollars were available, a government agency would be best able to determine which "critical technologies" to fund and how to properly allocate society's resources in high-risk technological development.¹⁶ I categorically reject that approach. Unfortunately, government moves much too slowly to accurately perceive and adjust to the direction of state-of-the-art technological advances. The private sector makes these decisions most efficiently, and government should focus on providing an economic

13. See *White House Science Advisor Gibbons Testimony on Information Infrastructure*, U.S. NEWSWIRE, Apr. 27, 1993.

14. See Donald M. Harting, *A Round Table: Technology in the Workplace*, CENTRAL N.Y. BUS. J., Oct. 17, 1994, at B2.

15. See Paul Krugman, *Competitiveness: A Dangerous Obsession*, FOREIGN AFFAIRS, Mar./Apr. 1994, at 28.

16. Szabo, *supra* note 12, at 1.

climate which creates a level playing field and encourages technological risk-taking by private investment of capital.

The government should continue to play an active role in certain areas, such as uniform standards development and mega-risk fields, where risk is a prohibitive cost to private investment. Space exploration is one such area, and agencies such as the National Aeronautics and Space Administration ("NASA") have made great technical strides with public funds.¹⁷ Still, even in space, Congress should advocate policies which encourage faster development of technology by the private sector as risk becomes better understood and more controllable.

During my tenure as Science Committee Chairman, I want to see space activity recognized as not just another governmental program, not merely the domain of NASA, but as a new economic frontier that must be developed. Space is a place to explore and do business. Finding ways to involve private industry in space activities will be a major priority of mine as Science Chairman.

In the past, Congress tended to focus on the small picture. Indeed, Washington's love affair with micromanagement undoubtedly has caused much of the massive regulation and bureaucratic structure which hinder our ability to move forward. I am a Chairman who believes we must solve our national problems by applying macroeconomic principles to a macrotechnological approach. Science and technology policy must be considered in a much greater context than the federal government. Instead, we must look at our programs, current and anticipated, and decide whether they can be more effectively accomplished by other means in the private sector. Real science, not politically-oriented science, must become an integral part of society.

Observers of the new team at the House Science Committee will see us holding future-oriented hearings about exciting initiatives such as the development of alternative fuel sources, like hydrogen. The Committee will also hold non-traditional hearings in areas such as tax policy and how it affects science, research, and development. Such efforts will not be aimed at legislating tax policy, but as a way of defining what the Science Committee believes to be good for science, good for space, good for energy, good for the environment, and, in short, good for all Americans.

17. See *Testimony October 20, 1993 John B. Higginbotham Chairman SpaceVest House Science/Space NASA's Commercial Space Program*, FED. DOCUMENT CLEARING HOUSE CONG. TESTIMONY, Oct. 20, 1993, at 2.

If we define what good policy can do, we will be better able to help achieve reforms in jurisdictional arenas beyond our own.

In so many ways, the scientific revolution can be viewed as the engine driving political, economic, and cultural reform in the United States. In the 104th Congress, science and technology policy will be considered in a larger context than the programs of the federal government. Science policy must be guided by a commitment to the major role science and technology play in shaping our destiny and in understanding that our destiny is being shaped in a revolutionary era.