

## **“It’s Time to Press ‘Play’ Once Again!”**

**Gerald Epstein’s appeal to restart OTA in the US, with an introduction by Michael Rader<sup>1</sup>**

The Congressional Office of Technology Assessment (OTA) was created in the United States by statute in 1972<sup>2</sup> and closed as the result of denial of funds on September 30, 1996. A major reason for this denial of funds seems to have been the Republican majority’s intention to demonstrate its determination to cut Congress’ own spending. The OTA was the smallest congressional institution, so it was expected that resistance would be minimal. It has never been formally abolished and ever since the Office was put on hold, there have been initiatives to awaken the institution from what is hoped will have been temporary hibernation.

As indicated in the appeal by Gerald Epstein which follows, a complete archive of OTA’s legacy has been maintained by the Federation of American Scientists. This can form a kind of institutional memory to help kick-start a revived OTA into operation. Additionally, an Institute for Technology Assessment was set up by Vary Coates and others as a private initiative doing OTA-like studies immediately after OTA’s demise until about 1998 as an accompanying measure to restoration efforts. A special issue of the international journal “Technological Forecasting and Social Change” published shortly after the OTA closed its doors<sup>3</sup> retraces and analyses the history of the Office and its seminal influence on technology assessment worldwide, particularly in Europe.

This theme was explored further in a reader edited by Norman Vig, an early key figure in attempts to revive the OTA in the US, and Herbert Paschen, then director of ITAS and the TAB.<sup>4</sup> If and when the OTA is revived, ITAS and the other members of EPTA (the European Parliamentary Technology Assessment network) are obviously prepared to share their experience with actors involved in the revival of the OTA.

A noteworthy milestone in the drive to reinstate the OTA was a workshop organised on June 14, 2001 by Granger Morgan, a Carnegie Mellon University engineering professor who had been an OTA consultant in its heyday.

Among the participants along with prominent former members of the OTA staff were a number of members of congress. In particular, Rep. Rush Holt (Democrat, New Jersey), a physicist by training, has undertaken several initiatives to provide a revived OTA with adequate funding. The most visible result of these initiatives until now has been the allocation of \$ 2.5 million to the Government Accountability Office for technology assessment work.<sup>5</sup> Holt is very much a lone figure, due, he feels, to the failure of many Members of Congress to see any scientific component to many policy issues, such as electronic voting.<sup>6</sup> Although the IEEE-USA has endorsed legislative efforts to re-establish technology assessment at US Congress, progress was minimal.<sup>7</sup>

Surprising support for the resuscitation of the OTA came from Hillary Clinton during her election campaign for the presidential candidate nomination by the Democrat party.<sup>8</sup> The president patently does not have the power to set up institutions serving Congress, and Ms. Clinton was not exactly active in initiatives to revive the OTA during her term in the senate. Even so, the specific mention of the OTA during the primaries indicates that the time is ripe for a strong new attempt to enlist Congressional support for a new OTA.

As a beneficiary of the OTA’s pioneering role in parliamentary technology assessment in its own work for both the German and European parliaments, ITAS supports and wholeheartedly endorses the appeal to restart the OTA which we have reprinted below in a marginally reduced version.

### **Documentation of the Appeal**

## **Restart the Congressional Office of Technology Assessment**

By Gerald L. Epstein on March 31, 2009

In 1972, Congress realized that technology’s applications were becoming more “extensive, pervasive, and critical.” However, Congress also recognized that neither its own organizations nor those of the executive branch were producing the information and analysis needed to make competent decisions about technology’s impacts. With the Technology Assessment Act of 1972, Congress created a new

agency – the Congressional Office of Technology Assessment, known as OTA – to provide “unbiased information concerning the physical, biological, economic, social, and political effects” of technological applications.

Over the next 23 years, OTA studied some of the most controversial and technically intensive issues of its time, winning national and international acclaim. Its reports on topics such as climate change, education, energy, environmental protection, food production, health, national defense, telecommunications, terrorism, and transportation, among many others, addressed issues before almost every Congressional committee.

When the Republicans took control of both Houses of Congress in 1994, Congress voted not to fund OTA for the next fiscal year, and the agency ceased operations in September 1995. Yet it was not abolished. The Technology Assessment Act of 1972 remains on the books, so all it would take to restart OTA would be an appropriation. Whatever the reasons for OTA’s defunding during that contentious and volatile transition 15 years ago, it did not constitute a referendum on the agency’s overall value or competence.

Today, Congress still lacks a dedicated capability to analyze scientific and technological issues, even though they undoubtedly play a greater role in public policy than they did forty years ago. As a result, not only is Congress handicapped in its ability to deal with the critical technological components of current policy issues, but it is also poorly suited to anticipate the significance or the implications of emerging technologies.

Simply put, Congress pushed OTA’s “Pause” key in 1995. It’s time to press “Play” once again.

## 1 OTA archive

Over its history, OTA informed members of Congress and their staffs and helped shape legislation. But its reports played a far wider role. Since they explained complicated technical concepts to a non-technical audience, they were widely circulated, attracting considerable public attention.

The Federation of American Scientists maintains a comprehensive archive of OTA reports online at: <http://fas.org/ota>

## 2 A comprehensive record of achievement and integrity

Over its history, OTA informed members of Congress and their staffs and helped shape legislation. But its reports played a far wider role. Since they explained complicated technical concepts to a non-technical audience, they were widely circulated, attracting considerable public attention. “The Office of Technology Assessment does some of the best writing on security-related technical issues in the United States,” said the journal *Foreign Affairs*. OTA has “produced hundreds of policy-related reports, and has developed a reputation for objective, non-partisan, and comprehensive assessments of public policy issues with highly technical aspects,” according to the American Association for the Advancement of Science. Critical review of OTA reports from both public and expert audiences amplified their message and validated their value and quality.

Ironically, the scientific community’s strong support for OTA may have created the false impression that OTA primarily served to support scientists. This is like saying that television weather announcers primarily serve to support professional meteorologists – which is, of course, precisely backwards. Meteorologists already know the weather. The role of television weather announcers is to take meteorological forecasts, turn them into language the rest of us can understand, and enable us all to make better plans. The scientific community supported OTA not because it benefitted scientists directly, but because it enabled members of Congress to make better decisions about policy issues with significant scientific and technological components.

OTA’s unique value derived from its *authoritativeness* and *credibility*.<sup>9</sup> Its position within Congress gave it authority: OTA was overseen by a Congressional Board and worked on studies requested by Congressional committees. This vantage point ensured the relevance of OTA’s work and elicited the cooperation of outside parties. It also came with the recognition that nobody elected OTA to make policy decisions. As a result, OTA made no policy recommendations, but rather offered a range of policy options that were consistent with its technical findings.

OTA won credibility by ensuring that its studies were technically accurate, analytically sound, and balanced with respect to stakeholder interests. All major OTA studies relied on advisory panels of experts who served as sources of information, guidance, and critical review. These panels included top substantive experts, who helped assure the studies' technical and analytic quality, and individuals representing the different interests at stake, who were sensitive to the balance among competing views.

### 3 Objectivity in an intensely political environment

In an environment as intensely political as the U.S. Congress, perhaps OTA's greatest challenges were to insulate itself from political pressure and to minimize any biases in its own operations. These responsibilities fell to its Congressional oversight body, the Technology Assessment Board. TAB's voting members consisted of six senators and six members of the House of Representatives, evenly split among majority and minority parties no matter what the composition of either chamber. This balance made TAB the most bipartisan Congressional committee possible. TAB selected the OTA director and approved the initiation and the release of OTA's major reports. TAB's composition ensured that the agency served as a shared resource, that its workload was not dominated by some committees over others, and that its reports did not advantage certain political parties or interests.

### 4 Restarting OTA

The argument to restart OTA is overwhelming. At a February meeting of the American Association for the Advancement of Science, Harvard Kennedy School Professor Emeritus Lewis Branscomb argued that technical understanding is much more critical to public policy today than it was when OTA was defunded in 1995. He also pointed out that in the light of global competition – and the growing scientific, engineering, and management strength of China, India, and other rapidly growing economies – the American economy is more dependent than ever on innovation. (...)

Moreover, the arguments against restarting OTA are weak:

- *OTA was too slow.* OTA was sometimes criticized for not meeting legislative needs in a timely way. But this accusation was selectively applied and often irrelevant. Reports could be done rapidly when Congressional timelines required it.<sup>10</sup> However, Congress already had the Congressional Research Service and did not need a second agency to do quick turnaround research. OTA's primary mission – looking comprehensively at the consequences of new technologies and synthesizing alternate policy options to deal with them – required a complex, dispassionate analysis not tied to short-term political imperatives. Pathbreaking efforts, particularly when there was little existing work to draw on, took time and yielded commensurate benefits. Such studies built the base from which OTA could respond rapidly to related requests.
- A look back shows that rather than being late, OTA had considered many issues with depth and perception long *before* they came to the general attention of legislators. For example, after the September 11 attacks and the anthrax letters of the following month, members of Congress (and many others) reached for the 1993 OTA reports on "Proliferation of Weapons of Mass Destruction." (...)
- *OTA was politically biased.* Bias is in the eye of the beholder. It would be astounding if, out of the nearly 750 publications OTA produced over its 23-year history, none had ever been challenged on these grounds, particularly given that almost every topic OTA addressed had ardent advocates on all sides. But most external observers found no overall justification for such allegations. OTA's practice of making all its unclassified reports available to the public was the best way to uncover bias, and its oversight by a strictly bipartisan Congressional Board was the best way to defend against it.
- *Members of Congress can just call on scientists directly, or go to the Internet, for scientific advice.* Former Speaker Newt Gingrich criticized OTA for interposing non-expert staff between members of Congress and top scientists. Although members of Congress can certainly reach out to scientific experts, that hardly replaces OTA.

The OTA model, honed over 23-years of serving Congressional and national needs, has been proven.

First of all, interactions with individual experts can be rigged by the politically based selection of experts. More importantly, as George Mason University science policy expert Christopher Hill told the AAAS meeting earlier this year, Internet sources such as Wikipedia can provide information that is rapidly updated and community-vetted, but they cannot perform the type of integrative, multidisciplinary analysis that is necessary to address today's policy concerns. Policy debates don't hinge on the kind of information that any technical expert or web site – no matter how eminent or accurate – can impart in single interchange. As Hill told the AAAS crowd, Congress is not particularly interested in the melting point of bismuth.

OTA's process was far richer. It tapped the nation's expertise in the full range of technical and policy disciplines, placed that information in policy context, evaluated the significance of knowledge gaps and uncertainties, formulated and analyzed policy options, and communicated its results in ways that non-scientists could understand. This process was very much a collaborative and interdisciplinary enterprise, and it added value far beyond any number of one-on-one interactions with experts.

## 5 There's not a moment to lose

The OTA model, honed over 23-years of serving Congressional and national needs, has been proven. Nobody would argue that OTA was perfect. However, the Technology Assessment Act has turned out to be an amazingly flexible document, and any needed improvements can be done within its scope. The agency's structure, as defined in 1972, remains appropriate today.

Conversely, legislatively reauthorizing OTA in order to rename it, redefine its mission, or dramatically change its governance structure is likely to be an extended, multi-year process, as was OTA's creation. Together with the possibility of politically-motivated legislative roadblocks, a reauthorization would be unlikely to succeed, killing any near-term hope of reestablishing a technical advisory mechanism for Congress.

Even winning an appropriation for OTA will not be easy. At a time of economic crisis,

government spending that is not for the purpose of economic recovery faces extraordinary funding pressures. But the costs of making technically inappropriate policy choices vastly exceed the cost of thinking things through.

OTA knew how to provide scientific and technical advice in a way that was directly translatable to Congress. We just need to restart it.

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## Notes

- 1) Gerald L. Epstein is Senior Fellow at the Center for Strategic Research and International Studies (Washington, DC), Michael Rader is Senior Fellow at the Institute of Technology Assessment and Systems Analysis at Karlsruhe Research Centre.
- 2) *US Congress*, 1972: Public Law 92-484, H.R. 10243, October 13, 1972, The Technology Assessment Act of 1972.
- 3) *Bimber, B.; Guston, D.H. (eds.)*, 1997: Technology Assessment: The End of OTA. Technological Forecasting and Social Change, Special Issue 54/2+3 (1997).
- 4) *Vig, N.J.; Paschen, H. (eds.)*, 1999: Parliaments and Technology: The Development of Technology Assessment in Europe. New York.
- 5) *Mooney, C.*, 2008: Science, Delayed. Blindness Is Bipartisan When it Comes to the OTA. [http://www.americanprogress.org/issues/2008/01/science\\_delayed.html](http://www.americanprogress.org/issues/2008/01/science_delayed.html) (download 20.4.09).
- 6) *Ibid.*
- 7) *Reppert, B.*, 2006: Rep. Holt Eying Further Legislative Effort to Create OTA Successor Agency for S&T Assessment, with IEEE-USA Support. Ieee-usa Today's Engineer Online, May 2006; <http://www.todaysengineer.org/2006/May/OTA.asp> (download 20.4.09).
- 8) For Hillary Clinton's support see: [http://www.nytimes.com/2007/10/05/us/politics/05clinton.html?\\_r=2&oref=slogin](http://www.nytimes.com/2007/10/05/us/politics/05clinton.html?_r=2&oref=slogin).
- 9) This section draws on Epstein, Gerald L. and Carter, Ashton B., "A Dedicated Organization in Congress," in M. Granger Morgan and Jon M. Peha, eds., *Science and Technology Advice for Congress* (Washington, DC: Resources for the Future Press, 2003), pp. 157-163.
- 10) For example, in 1995, OTA provided Congress with an analysis of the National Space Transportation Policy within 4 months, from request to delivery.

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