

2019

Catching Congress Up: Restoring the Office of Technology Assessment

Bruno Youn

Recommended Citation

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Claremont McKenna College

Catching Congress Up: Restoring the Office of
Technology Assessment

submitted to
Professor John J. Pitney, Jr., Ph.D.

by
Bruno Youn

for
Senior Thesis
Spring 2019
April 29, 2019

Acknowledgments

First of all, I could not have asked for a more collaborative and expert thesis supervisor than Professor John J. Pitney, without whom I would never even have conceived of writing about the Office of Technology Assessment. Without his feedback and advice, this thesis would have been laughably underdeveloped. Without his influence on my writing style, exerted over my four years at Claremont McKenna, this thesis would have been much longer than it needs to be.

Another key figure without whom this thesis would not have been possible has been Linh Nguyen, a summer coworker of mine. She played a critical role in my decision to write about the OTA by outlining just how topical the debate over congressional technology expertise is. She also helped guide my research, including by making possible an interview with a congressional staffer whose comments inspired me to look for things that I may not have otherwise looked for.

Of course, my friends and family provided moral support through this project. One friend, Melia Wong, connected me with another interviewee. Others helped my research simply by talking with me about it. Finally, all of my friends and family have supported the life I have lived while writing this thesis.

Abstract

Congress has become infamous for its lack of understanding of technology, particularly with the Facebook and Google hearings in 2018. To improve this understanding, this thesis argues for the return of the Office of Technology Assessment (OTA), a congressional support agency created in 1972 that provided science and technology expertise to Congress until its termination in 1995. It also considers potential changes that might be made to the old OTA model and the political environment in which a new OTA would need to survive.

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Introduction

“The Office of WHAT?” So read the headline of one 1991 column in the *San Diego Union* that profiled the Office of Technology Assessment.¹ The title of this thesis might elicit a similar reaction.

The Office of Technology Assessment (OTA) was a congressional support agency created in 1972 whose basic mandate was to keep Congress informed on technological developments and their possible impacts on public policy and society.² Not recognizing its name is forgivable; its main products were dense academic studies that often exceeded 100 pages. I use the past tense to describe it because Congress cut off its appropriations and laid off all its staff in 1995.³ Its authorizing legislation from 1972 remains on the books, however.⁴ Congress should restore the OTA in some form, perhaps updated from its 1995 incarnation, to keep lawmakers informed on the emerging technologies of our time.

An overview of the OTA’s structure and mission is first necessary to understand why Congress needs it. The OTA was led by a Director, appointed by a governing board called the Technology Assessment Board (TAB).⁵ The TAB was made up of six House members and six senators, evenly divided between the majority and minority parties regardless of party control of Congress, and the Director.⁶ The president pro tempore of

¹ Bruce Bimber, *The Politics of Expertise In Congress: The Rise and Fall of the Office of Technology Assessment*, (Albany, NY: State University of New York Press, 1996), 38.

² Technology Assessment Act of 1972, Public Law 92-484, codified at U.S. Code 2 (1972), § 472, <https://www.law.cornell.edu/uscode/text/2/472>.

³ Bimber 77.

⁴ Technology Assessment Act of 1972, § 472.

⁵ Technology Assessment Act of 1972, § 473.

⁶ Ibid.

the Senate and the Speaker of the House appointed the members for their chambers.⁷ Any committee or subcommittee chair could submit a study request to the OTA.⁸ The TAB would vote to approve each study request and the funding to carry it out, and finally to release the final report to the requesting committees after the assessment had ended.⁹ The OTA also had a peer-review mechanism in the form of the Technology Assessment Advisory Council (TAAC), a 12-member board composed of ten experts from academia or industry, the Comptroller General of the U.S. (head of the GAO), and the Director of the Congressional Research Service.¹⁰

The OTA was the smallest of the legislative support agencies, both in appropriations and in staffing.¹¹ Its budget for its last fiscal year, FY 1995, was \$22 million, or about \$37 million in 2019 dollars.¹² \$37 million would be less than 1% of FY 2019 federal spending on the legislative branch, which accounted for less than 0.5% of federal discretionary spending in that fiscal year.¹³

The OTA's mission was uniquely forward-looking. Its authorizing legislation defines its "basic function" to be "to provide early indications" of the impacts of technology.¹⁴ This early-warning function would not only help Congress understand technology better, but also encourage more proactive policymaking that addresses public

⁷ Ibid.

⁸ Technology Assessment Act of 1972, § 472.

⁹ Peter D. Blair, *Congress's Own Think Tank: Learning From the Legacy of the Office of Technology Assessment (1972–1995)*. (New York: Palgrave Macmillan, 2013), 28.

¹⁰ Technology Assessment Act of 1972, § 476.

¹¹ "Vital Statistics on Congress," The Brookings Institution, May 21, 2018, <https://www.brookings.edu/multi-chapter-report/vital-statistics-on-congress/>.

¹² "Vital Statistics on Congress," Coinnews Media Group, LLC, "US Inflation Calculator," accessed April 24, 2019, <https://www.usinflationcalculator.com/>.

¹³ "Appropriations Watch: FY 2019," Committee for a Responsible Federal Budget, last modified February 15, 2019, accessed April 25, 2019, <http://www.crfb.org/blogs/appropriations-watch-fy-2019>.

¹⁴ Technology Assessment Act of 1972, § 472.

issues before they become more difficult to manage. This thesis contends that Congress sorely needs both knowledge and proactivity.

In the first chapter, I articulate the case for reviving the OTA by describing the problem it would help solve and defending against common arguments against restoring it. In the second, I analyze and compare commonly proposed models for a new OTA. In the third, I survey the changes in the political climate since 1995 and present ways in which they might affect the political feasibility and survivability of a new OTA. In the final chapter, I forecast the indirect consequences of a resurrected OTA on congressional power dynamics, legislative-executive relations, and general political discourse surrounding science and technology issues.

Chapter 1: Why Bring Back the OTA?

1.1. Summary of Argument

The case for reviving the OTA involves two broad arguments. The first is that other potential sources of technical expertise have atrophied over the past several decades, preventing them from filling the gap left by the OTA's absence. The second holds that this shortfall has led to policy blunders and missed opportunities to gather information necessary to make informed policy decisions.

1.2. Other Sources of Expertise Fall Short

Why have other sources of information not filled the gap? Consider the major sources of information that Congress members consume to inform their decisions: staff, legislative support agencies, lobbyists, and think tanks.

Congressional staff and legislative support agencies are institutionally the closest sources of information to Congress members. But both sources have atrophied over the past several decades. As of 2015, the House committee staff headcount has fallen by about 50 percent from its peak in 1991 and the Senate committee staff roster by 14 percent from that time.¹⁵ House members also collectively have 17% fewer personal staff than in 1991, and senators about 9% fewer.¹⁶ Furthermore, a greater percentage of personal staff in both houses now operate out of district and state offices than in the early 1990s, reflecting a greater emphasis on constituent casework and campaign management

¹⁵ "Vital Statistics on Congress," The Brookings Institution, May 21, 2018, <https://www.brookings.edu/multi-chapter-report/vital-statistics-on-congress/>, author's calculation.

¹⁶ Ibid.

at home over policy work in Washington.¹⁷ The average Washington staffer is now responsible for a heavier policy workload, making it difficult for staff to find the time to become informed on highly technical issues, let alone brief their bosses on them.

A similar fate has befallen Congress's support agencies. Since 1995, the OTA's last year of operation, staff rosters have shrunk by 18 percent at the Congressional Research Service and 35 percent at the Government Accountability Office.¹⁸ The 104th and 105th Congresses, led by Newt Gingrich and the forces of the Republican Revolution, oversaw most of the downsizing.¹⁹ At the CRS, these cutbacks have increased the strain on employees. As with its own staff, Congress has been redirecting CRS resources from providing policy expertise to answering constituent questions.²⁰ Aside from this headcount reduction, as argued in Chapter 2, the missions and areas of expertise of the other legislative support agencies differ from those of the OTA such that they cannot collectively fill the role that the OTA played.

The only legislative support agency spared from the staffing cuts has been the Congressional Budget Office.²¹ But even the CBO has been threatened with cuts; two introduced amendments to an appropriations bill for FY 2018 would have cut appropriations in half and eliminated the CBO's Budget Analysis division, which would have reduced staffing by about one third.²² Though both amendments failed by a wide

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Kevin R. Kosar, "Why I Quit the Congressional Research Service," *Washington Monthly* January/February 2015, <https://washingtonmonthly.com/magazine/janfeb-2015/why-i-quit-the-congressional-research-service/>.

²¹ Ibid.

²² "H.Amdt.217 to H.R.3219," U.S. Congress, accessed Feb 23, 2019, <https://www.congress.gov/amendment/115th-congress/house-amendment/217?s=a&r=53>; H.Amdt.216 to

margin, they both received the support of nearly half of the Republican House majority (Democrats voted unanimously against both amendments).²³ One amendment that never received a vote, introduced by Mark Meadows (R-NC), would have replaced the Budget Analysis division's research with an aggregation of research from four think tanks: the Heritage Foundation, the American Enterprise Institute, the Brookings Institution, and the Urban Institute.²⁴

The Meadows amendment demonstrates the common contention made by legislative agency budget cutters that the duties of these agencies can be outsourced to think tanks and other private-sector entities. The OTA's opponents in the mid-1990s made similar arguments. The language of the Appropriations Committee report on the bill that zeroed the OTA's funding provides insight into the rhetoric that those in favor of doing so used to justify their position:

*The Committee has not provided funds for the Office of Technology Assessment. If any functions of OTA must be retained, they shall be assumed by other agencies such as Congressional Research Service or the General Accounting Office. Alternatively, the National Academy of Sciences, university research programs, and a variety of private sector institutions will be available to supplement the needs of Congress for objective, unbiased technology assessment.*²⁵

H.R.3219," U.S. Congress, accessed Feb 23, 2019, <https://www.congress.gov/amendment/115th-congress/house-amendment/216?s=a&r=54>.

²³ "Final Vote Results for Roll Call 417," U.S., Congress, July 26, 2017, <http://clerk.house.gov/evs/2017/roll417.xml>; "Final Vote Results for Roll Call 416," U.S., Congress, July 26, 2017, <http://clerk.house.gov/evs/2017/roll416.xml>.

²⁴ Niv Elis, "Meadows: CBO Should Downsize, Aggregate Think Tank Reports," *The Hill*, July 24, 2017, <https://thehill.com/policy/finance/343470-gop-rep-to-push-cbo-budget-cuts>.

²⁵ "H. Rept. 104-141 - Legislative Branch Appropriations Bill, 1996," U.S. House of Representative Committee on Appropriations, accessed Feb 25, 2019, <https://www.congress.gov/congressional-report/104th-congress/house-report/141>, 21.

The OTA's opponents were right that Congress does not lack non-governmental sources of policy expertise. There exist more than 1,800 active think tanks in the U.S. as of 2018.²⁶ There were also 11,586 federally registered lobbyists as of 2018.²⁷ The effective number is far greater because many avoid registration by not meeting some components of the legal definition of a lobbyist.²⁸

Most of these outside sources of information, however, have a consistent partisan agenda. Industry lobbyists, for example, virtually always advocate the policies that benefit their industry the most, regardless of their effects on the country as a whole. An intuitive problem with aggregating the input of lobbyists is that some interests are inevitably better represented than others because some constituencies are better organized and have greater access to lobbying resources than others.

Think tanks also have partisan slants, usually based on political ideology. The conservative think tank, for instance, usually favors the market-oriented policy over the one requiring heavy government intervention, regardless of the actual merits of the policies being compared. The quality and impartiality of research can vary widely depending on the think tank, which is undesirable for purposes of rational policymaking. Foreign governments, often small countries such as Qatar and the United Arab Emirates, often fund think tanks to produce research to advocate for their interests.²⁹ Furthermore,

²⁶ James G. McGann, "2018 Global Go To Think Tank Index Report," University of Pennsylvania, Jan 2019, https://repository.upenn.edu/think_tanks/16/, 36.

²⁷ Opensecrets.org, "Lobbying Database," accessed Feb 21, 2019, <https://www.opensecrets.org/lobby/>.

²⁸ Tim LaPira, "How Much Lobbying Is There in Washington? It's Double What You Think," The Sunlight Foundation, November 25, 2013, <https://sunlightfoundation.com/2013/11/25/how-much-lobbying-is-there-in-washington-its-double-what-you-think/>.

²⁹ Eric Lipton, Brooke Williams, and Nicholas Confessore, "Foreign Powers Buy Influence at Think Tanks," *The New York Times*, September 6, 2014, <https://www.nytimes.com/2014/09/07/us/politics/foreign-powers-buy-influence-at-think-tanks.html>.

think tanks are not as responsive to the congressional agenda as the OTA was because Congress has no control over their research priorities. The lack of responsiveness can be a problem if a highly technical policy issue is under consideration and there is a dearth of recent high-quality research on the issue.

Information from lobbyists and think tanks is an aggregation of many partisan viewpoints, meaning more reams of reports and policy papers to cover the same issue from different perspectives. All else being equal, a single source of information on a given policy issue would take less time and resources on the part of congressional staff to read and relay to Congress members than two analyses of the same issue from different perspectives. In other words, the OTA may ease the burden on congressional staffers to gather information to brief their bosses.

In sum, the sources of information most responsive to Congress (staff and legislative support agencies) have withered, while external sources such as lobbyists and think tanks have failed to fill the gap created by the OTA's termination. The result: a congressional ignorance on technology that prevents effective legislation from being considered and often spawns dangerously misinformed legislation. Some aptly compare this weakening of congressional expertise to a lobotomy.³⁰

1.3. The Havoc Ignorance Wreaks

In the recent past, one demonstration of Congress's lack of technological knowledge came with the 2018 hearings with Mark Zuckerberg, CEO of Facebook, and

³⁰ Paul Glasris and Haley Sweetland Edwards, "The Big Lobotomy," *Washington Monthly*, June 9, 2014, <https://washingtonmonthly.com/magazine/junejulyaug-2014/the-big-lobotomy/>.

Sundar Pichai, CEO of Google. Many questions asked of both CEOs would have been answerable or shown to be unreasonable with proper briefing beforehand.³¹ Some lawmakers, for example, showed a lack of understanding of Facebook's business model.³² The time spent on basic questions could have been spent on more substantive questions that may have advanced congressional discourse on regulating large technology companies.

Preparation for hearings may seem outside of the OTA's role because the OTA's primary output was deep research that would likely not be timely enough to prepare for a hearing. The Zuckerberg and Pichai hearings more directly indicate a lack of support from staff and from the CRS, the two sources of information that tend to provide quick summaries and briefings. But a revived OTA might produce shorter-term deliverables than its assessments, as some advocates have suggested.³³ The office often produced short summaries and reports that complemented the longer assessments.³⁴ Additionally, a new OTA might ease pressure on staff and the CRS enough to free resources to brief lawmakers more thoroughly.

Missed opportunities are not the only negative consequence of Congress's lack of expertise. Congress members have introduced proposals that exhibit ignorance on the technology they would regulate. Two examples are the Stop Online Piracy Act and PROTECT IP Act, sister bills introduced in 2011 that would have given the Department

³¹ Mallory Locklear, "The Zuckerberg Hearings Were a Wasted Opportunity," *Engadget*, April 11, 2018, <https://www.engadget.com/2018/04/11/zuckerberg-hearings-wasted-opportunity/>; Issie Lapowsky, "The Sundar Pichai Hearing Was a Major Missed Opportunity," *Wired*, December 11, 2018, <https://www.wired.com/story/congress-sundar-pichai-google-ceo-hearing/>.

³² Locklear.

³³ Peter D. Blair, *Congress's Own Think Tank: Learning From the Legacy of the Office of Technology Assessment (1972–1995)*. (New York: Palgrave Macmillan, 2013), 86.

³⁴ *Ibid* 53.

of Justice sweeping authority over internet service providers in an attempt to curb Internet piracy.³⁵ In the original versions of both bills, the Attorney General could order ISPs to block offending websites via DNS (Domain Name Service) blacklisting, which prevents the transfer of information from the website's server to the internet browser.³⁶

Among the many concerns regarding DNS blacklisting was a potential technical problem with forcing ISPs to blacklist. If a user attempts to visit a DNS-blocked site, the browser would search for alternate DNS servers until it finds one outside of U.S. jurisdiction (e.g., in Canada), upon which the user can access the blocked website.³⁷ This process prevents criminals from blocking a hijacked website's real DNS credentials to circumvent the DNS credential system that prevents them from redirecting traffic from their hijacked site to a phishing website.³⁸ The implication, opponents of DNS blocking argued, was that preventing circumvention required creating a security risk.³⁹

It took widespread popular backlash for congressional leadership to agree to exclude the DNS language from the bill.⁴⁰ Though both bills failed because of this backlash, the DNS language in their original versions betrays the lack of expert advice behind the crafting of the bill.⁴¹ The absence of an OTA-like body to provide this advice

³⁵ "H.R.3261 - Stop Online Piracy Act," U.S. Congress, <https://www.congress.gov/bill/112th-congress/house-bill/3261>; "S.968 - PROTECT IP Act of 2011," U.S. Congress, <https://www.congress.gov/bill/112th-congress/senate-bill/968>.

³⁶ Ibid.

³⁷ Stewart Baker, "SOPA-Rope-a-dope," The Volokh Conspiracy, December 14, 2011, http://volokh.com/2011/12/14/sopa-rope-a-dope/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+volokh%2Fmainfeed+%28The+Volokh+Conspiracy%29.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ David Kravets, "Rep. Smith Waters Down SOPA, DNS Redirects Out," *Wired*, Jan 13, 2012, <https://www.wired.com/2012/01/dns-sopa-provision/>.

⁴¹ Jennifer Martinez, "SOPA and PIPA Dead, For Now," *POLITICO*, Jan 20, 2012, <https://www.politico.com/story/2012/01/sopa-and-pipa-dead-for-now-071720>.

particularly shows with SOPA and PIPA because the chief sponsors of both bills, Rep. Lamar Smith (R-TX) and Sen. Patrick Leahy (D-VT), were the chairs of the Judiciary Committees in their chambers.⁴² Had the OTA still existed, they could have requested a study on the subject of Internet copyright infringement before introducing any legislation. It is not even necessary to assume the truth of the DNS blocking concerns to see that key lawmakers attempted to regulate something they did not understand.

The lack of congressional technology expertise can also manifest as a *lack* of action. For example, Congress might defer to the executive bureaucracy by ensuring that the language in proposed legislation is vague enough to allow the bureaucracy to fill in the technical details. Doing so would create a dangerous relationship in which Congress would not have the expertise to exercise their duty of legislative oversight. In such a relationship, Congress depends on the executive bureaucracy's testimony. This dependence creates a bias in favor of funding bureaucratic programs because these experts are also the creators and operators of the programs under scrutiny.

Such relationships already exist in many areas of regulation, contributing to regulatory capture by private industry. For instance, the Federal Aviation Administration has outsourced much of its air safety regulatory authority to aircraft manufacturers since 2005. This delegation might have contributed to the FAA's certification of the flight control system of Boeing's 737 MAX jets, whose malfunctions have killed hundreds in two plane crashes in Indonesia and Ethiopia.⁴³ Similarly, the Food and Drug

⁴² Ibid; U.S. Senate, "Committee and Subcommittee Assignments for the One Hundred Twelfth Congress." https://www.senate.gov/committees/committee_assignments.htm.

⁴³ Dominic Gates, "Flawed Analysis, Failed Oversight: How Boeing, FAA Certified the Suspect 737 MAX Flight Control System," *The Seattle Times*, March 17, 2019, <https://www.seattletimes.com/business/boeing-aerospace/failed-certification-faa-missed-safety-issues-in-the-737-max-system-implicated-in-the-lion-air-crash/>.

Administration has outsourced much of its regulatory capacity to the pharmaceutical companies it is tasked to oversee through user fees, which allow drug manufacturers to pay to hire additional FDA personnel to speed up the approval process.⁴⁴ But reductions in review time have been found to result in the approval of more drugs with marginal-at-best clinical benefit and high rates of adverse side effects.⁴⁵

Key to the persistence of these delegated regulatory systems is the lobbying corps of the regulated industries. Because the OTA would compete with and potentially displace the biased expertise of lobbyists, restoring the OTA may help loosen the regulatory capture of these federal agencies. Additionally, OTA reports might increase congressional awareness of the failures of the federal regulatory apparatus and shape dialogue around the proper ways to address them.

Of course, the causes of regulatory capture and the general undue influence of private interests in the regulatory process are far more complex than a lack of technology expertise. But a revived OTA may help clear an important barrier to resolving these problems.

1.4. The OTA's Policy Impact

The need for greater knowledge of science and technology may be obvious, but some elaboration is necessary on why a revived OTA would provide it. The OTA's influence over the policy process over its 23-year lifespan defies easy detection in part

⁴⁴ Donald W. Light, Joel Lexchin, and Jonathan J. Darrow, "Institutional Corruption of Pharmaceuticals and the Myth of Safe and Effective Drugs," *The Journal of Law, Medicine, & Ethics* 41:3 (Fall 2013), 595.

⁴⁵ *Ibid* 597.

because its reports generally did not give specific policy prescriptions.⁴⁶ Most of it came early in the policymaking process, during which Congress members are evaluating problems that might be addressable via legislation.⁴⁷ The OTA's low visibility makes it an easy target for the argument that its work, academically robust as it may be, does not exert a significant enough influence over congressional policymaking to justify the resources spent on it.

But OTA studies have informed policy debates. In a 1975 study, the OTA evaluated the Counterforce doctrine, which held that the U.S. nuclear arsenal could target strategic military sites instead of population centers.⁴⁸ Proponents of this concept argued that retargeting nuclear weapons in this way would minimize civilian casualties in the event of launch while maintaining an effective deterrent.⁴⁹ John Sparkman (D-AL), then chair of the Senate Foreign Affairs Committee, had requested the study because the Department of Defense had asked for funding to implement the Counterforce concept.⁵⁰ The OTA report, however, found the DoD's assumptions unreasonable.⁵¹ With the report in mind, Sparkman requested that the DoD revise its estimates of civilian casualties with "more realistic" assumptions.⁵² The Counterforce example demonstrates the OTA's usefulness as a source of independent verification of claims made by executive agencies, which hold an advantage in expertise over Congress.

⁴⁶ Blair 51.

⁴⁷ Bruce Bimber, *The Politics of Expertise In Congress: The Rise and Fall of the Office of Technology Assessment*, (Albany, NY: State University of New York Press, 1996), 38.

⁴⁸ *Ibid.* 37.

⁴⁹ *Ibid.*

⁵⁰ *Ibid.*

⁵¹ *Ibid.*

⁵² *Ibid.*

OTA reports have also saved the federal government enough money to cover its annual budget for decades. OTA advocates often offer the example of the proposed Medicare coverage of cholesterol screenings in 1989. An OTA report found little evidence that the screenings would detect any new cardiovascular risk factors, which influenced Congress's rejection of legislation that would have given these screenings a projected annual range of \$1 billion to \$5.4 billion in Medicare coverage.⁵³ A 1994 report examined the Social Security Administration's computer procurement strategy and found flaws that did not necessarily justify rejecting the procurement altogether, but warranted further scrutiny.⁵⁴ This study informed Congress's withholding of over \$360 million in future SSA purchases, granted only on the condition that the SSA prove that it would use the new computers to a capacity great enough to justify the expense.⁵⁵

In both the Counterforce and cholesterol examples, the OTA filled real gaps in Congress's knowledge. To qualify this point, one must remember that Congress members sometimes used OTA reports merely as rhetorical ammunition for preexisting policy preferences. Bruce Bimber cites the example of Senator John Tower of Texas, who, in 1977, used OTA reports in rhetoric criticizing President Carter's energy plan for insufficiently supporting domestic oil production.⁵⁶ Texan oil interests, rather than the OTA reports, determined his policy stance.

I make this qualification to address concerns that lawmakers would exploit a revived OTA in this manner. But most OTA assessments targeted issues well outside the

⁵³ The Office of Technology Assessment, "Costs and Effectiveness of Cholesterol Screening in the Elderly," April 1989, 1–3.

⁵⁴ The Office of Technology Assessment, "The Social Security Administration's Decentralized Computer Strategy: Issues and Options," April 1994, 2.

⁵⁵ Bimber 42.

⁵⁶ *Ibid* 36.

center of public attention, implying that Congress would be less likely to have expertise on it and more likely to use the reports to inform itself rather than rationalize preexisting beliefs. Even when OTA studies are used as rhetorical weapons, their lack of partisan slant could lead to a more informed debate if both sides of a given policy debate used them rhetorically.

1.5. Perceptions of Bias

Some have criticized the OTA for a perceived liberal bias, despite the TAB's bipartisan structure.⁵⁷ Since the OTA's founding in 1972, conservatives saw liberal bias within the OTA. Since its early years, they accused the OTA of serving as a political weapon for Senator Edward Kennedy, who strongly supported the OTA and served as chair of the TAB four times.⁵⁸

These charges of political bias were more plausible in the OTA's early years. Kennedy sought to be the chair of the first TAB, but the OTA's authorizing legislation barred him from the position because it required that the chair be a House member in even-numbered Congresses.⁵⁹ With clever political maneuvering, he ensured his election to the chair position by delaying the TAB's first meeting until the next Congress started and ensuring that Democratic majority leader Mike Mansfield did not nominate any Democrat more senior than him to the TAB.⁶⁰ TAB members also often abused their right to hire new OTA staff by hiring former staffers who had nominally cut ties with them.⁶¹

⁵⁷ Ibid 50.

⁵⁸ Ibid.

⁵⁹ Ibid 52.

⁶⁰ Ibid.

⁶¹ Ibid 54.

Finally, the TAB appointed as the first OTA director ex-Congressman and Democrat Emilio Daddario of Connecticut, whose management style prioritized placating TAB members.⁶²

The departure of Daddario as Director, however, brought reforms and changes of philosophy that made the OTA more closely resemble the neutral authority it was intended to be. The reforms started with Russell Peterson, whose agenda to increase the independence of the OTA from the legislature was so radical that it quickly earned him the ire of much of Congress.⁶³ Peterson's successor, John Gibbons, fired the "favorite sons" who maintained loyalties to their legislators and began the practice of sharing study requests from Democratic committee chairs with Republican legislators.⁶⁴ Gibbons employed what Bimber calls a "strategy of neutrality" to ensure that the OTA could protect its credibility and secure its political survival.⁶⁵ The allegations of bias were not as valid after these reforms.

OTA also faces accusations of a similar bias: a technocratic bias toward government intervention.⁶⁶ One former staffer acknowledged that the OTA's assessment process tended to favor federal intervention over market-based and state-level policies.⁶⁷ To the extent that this pro-government bias colors the OTA's research and reports in a way that causes them to deviate from rational policymaking (as opposed to the wishes of

⁶² Ibid 53.

⁶³ Ibid 54–55.

⁶⁴ Ibid 57.

⁶⁵ Ibid.

⁶⁶ Zach Graves, "Rebuilding a Technology Assessment Office in Congress: Frequently Asked Questions," September 21, 2018, <https://www.rstreet.org/2018/09/25/rebuilding-a-technology-assessment-office-in-congress-frequently-asked-questions/>, 7–8.

⁶⁷ Daryl E. Chubin, "Filling the Policy Vacuum Created by OTA's Demise." *Issues in Science and Technology* 17:2 (Winter 2001), <https://issues.org/stalk-5/>.

those harboring *anti*-government bias), the OTA has access to private-sector expertise in the form of the Technology Assessment Advisory Council and assessment-specific panels of outside experts to ensure that it gets non-government perspectives on what it studies.⁶⁸ Furthermore, the OTA's heavily reliance on contracted researchers brings provides a channel through which those with extensive private-sector experience can create the assessments themselves.⁶⁹

Coloring the background of these arguments concerning bias within the OTA are three facets of its design that would contain any bias:

1. Reports do not make specific policy recommendations. Rather, they articulate policy options and their potential consequences.⁷⁰
2. The TAB must approve all assessments before they begin, as well as the budget authority to carry out assessments and the release of results to the public after they conclude.⁷¹
3. The OTA lacks any policymaking authority. The decision on how to approach the issues falls to Congress and the broader federal government.

Of course, the findings in some reports implied certain policy positions. For instance, in a series of three reports, it questioned the feasibility of the Strategic Defense Initiative.⁷² The final report, completed in May of 1988, concluded that the system would

⁶⁸ James Louis Holt, "View from the Hill: Why the U.S. Congress Established, then Abolished the Office of Technology Assessment," (PhD diss., University of Texas, Dallas, 2005), 169, ProQuest Dissertations & Theses Global.

⁶⁹ Ibid.

⁷⁰ Blair 43.

⁷¹ Ibid 28.

⁷² Adam Keiper, "Science and Congress," *The New Atlantis* no. 7 (Fall 2004/Winter 2005): 36, <https://www.thenewatlantis.com/docLib/TNA07-Keiper.pdf>.

destroy “anywhere from a few to a modest fraction” of incoming Soviet missiles.⁷³

Perceptions of neutrality will virtually always vary, and it is arguably impossible for reports to remain perfectly neutral. Descriptions of the potential ramifications of possible policy choices may not necessarily involve explicit value judgments, but the mere act of describing them is often sufficient to elicit these judgments. Additionally, some discretion on how the consequences of different options are represented is inevitable because it is impossible to predict every potential effect of a policy. It is worth remembering, however, that the OTA’s institutional robustness afforded it a reputation that many private-sector sources of expertise cannot match.

If the OTA were restored, changing the internal operations can help address concerns about bias or the appearance of it. For example, the TAAC took on the narrow role of advising on the overall direction of the OTA rather than advising on individual assessments as the authorizing legislation envisioned.⁷⁴ A new OTA might expand the role of the TAAC to ensure that private-sector input is taken for individual assessments. Using the TAAC to more of its potential is one of many potential modifications to the old OTA model that a future technology assessment office might apply. Others include incorporation of economic analysis into assessments and making greater use of its legislative authority to coordinate with other legislative support agencies.⁷⁵ In the next chapter, I consider these changes and compare my OTA proposal against other technology assessment models.

⁷³ Ibid.

⁷⁴ Blair 44.

⁷⁵ Graves, “Rebuilding a Technology Assessment Office in Congress: Frequently Asked Questions” 7.

Chapter 2: Choosing a Model

2.1. Summary of Argument

I am not alone in my argument to bring back the OTA. Over the years since its closure, scholars and politicians have put forth a variety of forms in which technology assessment might be carried out once again by Congress. This chapter evaluates these models and settles on one that revives the OTA in its original incarnation as a dedicated legislative support agency but makes some modifications to update it for today's political environment.

Some of these models would use other legislative support agencies to fill the gap in expertise. But the OTA's mission was unique among legislative support agencies, and not only because it specifically pertained to science and technology. No comparable agency was tasked with *proactively* evaluating the effects of scientific and technological developments and providing expertise on them to Congress. This aspect distinguishes the OTA from other agencies that initially seem capable of filling in for it, particularly the GAO.

Advocates of using another agency or private entities to fill the gap correctly perceive that these other entities overlap with the OTA in some areas. But these areas do not indicate that the other bodies can *replace* the OTA. Rather, they are areas of synergy in which a resurrected OTA could coordinate with the other entities to produce technology assessment that takes advantage of the strengths of both organizations involved.

2.2. Comparison with the Congressional Research Service

Some proposals would resurrect the OTA in a strictly metaphorical sense by expanding technology assessment capabilities elsewhere. During the appropriations process for FY 1996, Republican Rep. Amo Houghton and Democratic Sen. Ernest Hollings introduced proposals in their chambers of Congress that both would have made the OTA a subsidiary of the CRS.⁷⁶

Having the CRS absorb the OTA's functions, however, would not make for effective technology assessment. Its primary products are short-term projects that focus on gathering and delivering facts. Furthermore, the CRS lacks the scientific and technological expertise that a new OTA would have.⁷⁷ The CRS's researchers tend to be experts in only single domains, making it more difficult to maintain the breadth of expertise required to produce effective technology assessment.⁷⁸

The Technology Assessment Act of 1972 mandates that the Librarian of Congress to make CRS services available to the OTA, implying that it would fit the OTA's design better for CRS to complement it rather than to replace it.⁷⁹ During its existence, it used this partnership in joint efforts such as a 1979 report on satellite communications.⁸⁰ A new OTA might continue to make use of this provision by consulting the CRS for, among

⁷⁶ Bruce Bimber, *The Politics of Expertise In Congress: The Rise and Fall of the Office of Technology Assessment*, (Albany, NY: State University of New York Press, 1996), 74-76.

⁷⁷ Peter D. Blair, *Congress's Own Think Tank: Learning From the Legacy of the Office of Technology Assessment (1972-1995)*. (New York: Palgrave Macmillan, 2013), 73.

⁷⁸ Kim Zetter, "Of Course Congress Is Clueless About Tech—It Killed Its Tutor," *Wired*, April 21, 2016, <https://www.wired.com/2016/04/office-technology-assessment-congress-clueless-tech-killed-tutor/>.

⁷⁹ Technology Assessment Act of 1972, Public Law 92-484, codified at U.S. Code 2 (1972), § 477, <https://www.law.cornell.edu/uscode/text/2/472>.

⁸⁰ "Review of the Office of Technology Assessment and its Organic Act," House Subcommittee on Science, Research and Technology," 95th Congress, 2nd Session (Washington, D.C.: 1978: GPO, 1978), ProQuest Congressional, 37.

other things, quick reviews of the literature to inform its studies and short-term deliverables. It would find this collaboration especially valuable if they are short on expertise on a certain topic but need only a brief overview of it. By taking advantage of the CRS's speed, it would expedite its technology assessment process and perhaps free up resources for the long-term, "early warning" projects for which it is unique among legislative support agencies.

2.3. Comparison with Universities and Private Institutions

Some have suggested a greater emphasis on partnership with universities and nonpartisan NGOs to provide technology assessment.⁸¹ This model might be considered a refined version of the argument commonly made by fiscal conservatives that private organizations are sufficient to inform Congress. It is an improvement on the aggregation-of-think-tanks idea in that it attempts to address the issue of ideological bias. This idea, however, suffers from many of the same flaws as think tanks and lobbyists. Even public universities are not immune to bias. Corporate interests have long backed scientific studies at universities, taking advantage of their search for new sources of revenue as public funding dries up.⁸² There is no guarantee that the biases of the universities and private institutions in this consortium would cancel each other out. Furthermore, the private association would still struggle to stay in sync with the congressional agenda.

⁸¹ Richard Sclove, "Reinventing Technology Assessment: A 21st Century Model," Woodrow Wilson International Center for Scholars, April 2010, <https://www.wilsoncenter.org/publication/reinventing-technology-assessment-21st-century-model>, 38.

⁸² Molly McCluskey, "Public Universities Get an Education in Private Industry," *The Atlantic*, April 3, 2017, <https://www.theatlantic.com/education/archive/2017/04/public-universities-get-an-education-in-private-industry/521379/>

Such an association could exist as a supplement to a second incarnation of the OTA. Its main proponent, Richard Sclove of the Woodrow Wilson Center, suggests that it can adapt itself to complement any government technology assessment office.⁸³ For the OTA, it might provide access to a network of experts to contract for assessments and appoint to the TAAC. But it cannot be a substitute for the OTA because it could not replicate the OTA's defining trait: proximity and responsiveness to Congress.

2.4. Comparison with the Government Accountability Office

Another form of OTA-in-exile has gained traction over the past two decades: the GAO's science and technology arm. The GAO experiment began in 2001, when Congress ordered it to gauge whether it could conduct technology assessment and designated a portion of its appropriations to support it.⁸⁴ Although the GAO has recently opened a dedicated technology arm called the Science, Technology Assessment, and Analytics Team, it still has only a fraction of the former OTA's capacity.⁸⁵ Since 2002, when the GAO released its first assessment, the GAO has produced 18 technology assessments and 64 other reports.⁸⁶ The GAO published all but one of these other reports in 2017 and 2018.⁸⁷ For reference, the OTA produced 750 assessments over its 23 years,

⁸³ Sclove 40.

⁸⁴ Blair 73.

⁸⁵ "Our New Science, Technology Assessment and Analytics Team," Government Accountability Office, Jan 29, 2019, <https://blog.gao.gov/2019/01/29/our-new-science-technology-assessment-and-analytics-team/>.

⁸⁶ "Science and Technology," Government Accountability Office, accessed March 5, 2019, https://www.gao.gov/technology_and_science#t=1.

⁸⁷ Ibid.

before the modern Internet and other computing technology that has streamlined the assessment process since 1995.⁸⁸

The GAO pilot program continues today. Some have proposed expanding the technology assessment arm further to create a full OTA-sized office within the GAO. Indeed, the GAO itself has requested \$58 million in additional appropriations for FY 2020, much of it intended to expand its newly formed Science, Technology, Assessment and Analytics Team.⁸⁹ The idea at first seems promising because the GAO's mission overlaps somewhat with that of the OTA. Some policy decisions informed by assessments, such as the withholding of appropriations from the Social Security Administration in 1994, specifically pertain to cost savings.

But expanding the GAO's science and technology arm would leave structural and cultural differences from the old OTA that would complicate technology assessment. Because the GAO's mission emphasizes analysis of existing government programs with cost reduction in mind, its technology assessment may exhibit a bias toward policy issues on which the federal government has already intervened.⁹⁰ Further, the fundamental differences between technology assessment and the GAO's usual auditing work may give

⁸⁸ James Louis Holt, "View from the Hill: Why the U.S. Congress Established, then Abolished the Office of Technology Assessment," (PhD diss., University of Texas, Dallas, 2005), 243, ProQuest Dissertations & Theses Global.

⁸⁹ Jory Heckman, "GAO Growing Cyber Staff Even if Congress Doesn't Revive Tech Assessment Office," Federal News Network, Feb 28, 2019, <https://federalnewsnetwork.com/hiring-retention/2019/02/gao-growing-cyber-staff-even-if-congress-doesnt-revive-tech-assessment-office/>.

⁹⁰ "GAO's Mission, Responsibilities, Strategies, and Means." Government Accountability Office, accessed April 24, 2019, <http://www.gao.gov/dsp/3mission.html>.

rise to cultural inertia within the GAO that would complicate adaptation to the assessment process.⁹¹

To their credit, GAO reports often concern emerging technologies such as artificial intelligence.⁹² But they are thinner on policy options than those of the OTA, signaling further than they serve fundamentally different purposes. For example, a 2018 GAO assessment on artificial intelligence outlines considerations and general objectives for policymakers but is light on specific policy proposals and their potential consequences.⁹³ The AI report explores multiple applications of AI.⁹⁴ In one section devoted to policy considerations for regulating autonomous vehicles, the report provides expert opinions on what regulation of these vehicles should accomplish and considerations to remember when developing regulations.⁹⁵ But only rarely are specific regulatory approaches evaluated.

Recent GAO technology assessments on the Internet of Things and medical technology show a similar pattern.⁹⁶ The Internet of Things report, at times, is more specific than the AI report on the standards that regulations should enforce. For example, on privacy issues, the report takes as a model the Fair Information Practices (FIPs)

⁹¹ Zach Graves, “Technology Assessment: Can the GAO Fulfill the OTA’s Mission?” Legbranch.org, April 20, 2018, <https://www.legbranch.org/2018-4-20-technology-assessment-can-the-gao-fulfill-the-otas-mission/>.

⁹² Government Accountability Office, “Science and Technology.”

⁹³ Government Accountability Office, “Artificial Intelligence: Emerging Opportunities, Challenges, and Implications,” March 28, 2018, <https://www.gao.gov/products/GAO-18-142SP>.

⁹⁴ Ibid.

⁹⁵ Ibid 68–72.

⁹⁶ Government Accountability Office, “Internet of Things: Status and Implications of an Increasingly Connected World,” May 14, 2017, <https://www.gao.gov/assets/690/684590.pdf>; Government Accountability Office, “Medical Devices: Capabilities and Challenges of Technologies to Enable Rapid Diagnoses of Infectious Diseases,” August 14, 2017, <https://www.gao.gov/products/GAO-17-347>.

developed by the U.S. government and later by the OECD.⁹⁷ These practices include the relevance of collected data to their stated purpose and public availability of information on privacy policies and practices.⁹⁸ But the assessment still lacks the evaluation of different possible regulatory approaches to privacy that an OTA assessment might have. Overall, GAO assessments seem to mostly provide background information on technology issues and outline broad principles for regulation to follow. Though OTA reports also once served this purpose, they also provided a “menu” of specific policy options and described each option’s potential effects with a depth that GAO assessments seem to lack.

Contrast the GAO reports with OTA assessments, which gauge the viability of different specific congressional actions. For instance, the cholesterol screening report I mention in Chapter 1 contains a section that analyzes the implications of cholesterol screenings for Medicare and provides cost estimates for Medicare coverage of the screenings.⁹⁹

The expanded-GAO model has a few advantages. For instance, the GAO’s relative insulation from Congress might protect it from political threats that a second incarnation of the OTA might face. But the OTA’s governance can be adapted to reinforce protections of the independence of technology assessments. After all, it is easier to make changes to an agency that does not yet exist than to one that does. Further, the GAO’s relative insulation from Congress has its downside in that it weakens its

⁹⁷ Government Accountability Office, “Internet of Things: Status and Implications of an Increasingly Connected World,” 31–32.

⁹⁸ *Ibid.*

⁹⁹ The Office of Technology Assessment, “Costs and Effectiveness of Cholesterol Screening in the Elderly,” April 1989, 35–39.

connection with Congress. Without a TAB-like body to direct its resources toward policy issues on the congressional agenda, the influence of the GAO's technology assessment over legislative policymaking weakens.

The absence of a TAB-like structure within the GAO to act as a gatekeeper for technology assessments may also speed up the assessment process.¹⁰⁰ Although speed is important, a new OTA could streamline its old process by taking advantage of technological advancements since 1995 and by producing short-term deliverables and interim reports.

Furthermore, the assessment process at the GAO reflects its fundamentally different mission and structure. Although assessments start with a bipartisan letter from multiple members of Congress, Congress has little control over the process after the assessment is begun.¹⁰¹ The GAO may indeed be quicker with technology assessments and be exposed to less political pressure. But these advantages come at the cost of a defining feature of any legislative support agency: alignment with Congress's needs. Even though the TAB is a layer of bureaucracy, it ensures that the final product fulfills this part of the OTA's mission. This weak connection with Congress illustrates where the missions of the GAO and the OTA diverge.

The breadth of some GAO reports, such as the AI assessment, may be a response to the GAO's looser connection to Congress's desires. If the report covers a wider range

¹⁰⁰ Zach Graves, "Technology Assessment: Can the GAO Fulfill the OTA's Mission?" Legbranch.org, April 20, 2018, <https://www.legbranch.org/2018-4-20-technology-assessment-can-the-gao-fulfill-the-otas-mission/>.

¹⁰¹ House Appropriations Committee Subcommittee on the Legislative Branch, "Legislative Branch Members Days Hearing (EventID=109211)," April 2, 2019, video, 5:16, <https://www.youtube.com/watch?v=4jt18Vo4BSM&feature=youtu.be>.

of technology issues, the probability is higher that Congress will find some part of the report relevant. But with limited resources to conduct assessments, breadth can come at the expense of depth. In contrast, a second OTA could carry out a narrowly focused assessment (e.g., on the use of AI-based facial recognition technology by law enforcement) with confidence that Congress would find it relevant because of its more direct connection with the congressional agenda through the Technology Assessment Board.

Governance is not the only area in which the GAO may need to be restructured to fill the same gap in oversight and expertise that the OTA would. The OTA relied heavily on contracted outside experts who could be retained as expert witnesses for hearings and resources for congressional staff. It commonly assembled assessment-specific advisory panels to critique its research.¹⁰² The GAO has consulted with outside experts for its assessments with the help of the National Academies, but its process is not mature and may not be as conducive to retaining them as resources for congressional staff as the OTA's process was.¹⁰³ The GAO also lacks a TAAC-like body, though it is at this writing in the process of establishing one.¹⁰⁴

The GAO's peer review processes are maturing, but it remains to be seen whether they will play the same role as those of the OTA. Expanding the GAO may, to be sure, help close the gap between the GAO and the OTA in this area by granting it more resources to hire more experts and build deeper relationships with outside experts. But

¹⁰² Holt 169.

¹⁰³ Government Accountability Office, "Artificial Intelligence: Emerging Opportunities, Challenges, and Implications"; Blair 75.

¹⁰⁴ "GAO Science, Technology Assessment, and Analytics Team: Initial Plan and Considerations Moving Forward," Government Accountability Office, April 10, 2019, 23.

this kind of peer review is not part of GAO's typical auditing work; that process involves comments from federal agencies rather than outside experts.¹⁰⁵ Structural and cultural differences, even with expansion, may cause complications.

As with the CRS, the OTA's enabling legislation stipulates that the GAO make its services available to the OTA.¹⁰⁶ Collaboration between the two legislative support agencies on a policy issue that involves both technology and government accounting, such as defense procurement, would likely achieve higher-quality research and better policy than if either agency worked alone.

None of the arguments in this section hold that the GAO cannot provide technology expertise. But they support the contention that an expanded GAO would not fulfill the same role as the OTA once did.

The best argument for replicating the OTA's functions within the GAO is perhaps its relative political feasibility. The GAO's high reputation among both parties in Congress would make it easier to increase the GAO's appropriations than to take out appropriations for a new agency. Namely, the GAO does not face the same perceptions among conservatives of liberal bias as the OTA did.

Though political feasibility weighs on virtually any policy proposal, among its disadvantages as a criterion for judging policies is that it is difficult to project into the future, especially when elected officials whose makeup can change quickly are involved. The general political environment, including the makeup of Congress, could unexpectedly change in a way that favors restoring funds to the OTA.

¹⁰⁵ Ibid 24.

¹⁰⁶ Technology Assessment Act of 1972, § 478.

I might face criticism for skipping a step in getting from where we are now, with no OTA, to a new OTA adapted to today's technical policy issues and political climate. But I am not ignoring the necessity of passing an OTA-funding appropriations bill and an amendment to the Technology Assessment Act of 1972 into law. I choose a model resembling the old OTA over a GAO-based scheme in spite of the relative political feasibility of the latter because I contend that the former would provide more effective technology assessment.

At least one scholar has pondered how the GAO's structure might be changed to accommodate these concerns and capture the strengths of the OTA model.¹⁰⁷ One early effort led by Rep. Rush Holt in 2004 would have recreated the OTA structure, complete with a TAB, within the GAO.¹⁰⁸ But it is easier to make changes to an organizational structure that does not exist than to one that does. Any structural changes to the GAO would encounter institutional and cultural inertia that would complicate their implementation. On the other hand, a resurrected OTA could begin operations under a different model relatively easily. The next section discusses some changes that might be made to the old OTA structure to improve its political robustness.

2.5. Possible Modifications to the Old OTA Model

If the OTA should be brought back in its original structure as a standalone agency, would it be the same as it was in 1995? Advances in technology since then would

¹⁰⁷ Zach Graves, Testimony before the U.S. House of Representatives, Committee on Appropriations, Legislative Branch Subcommittee, April 2, 2019, <http://docs.house.gov/meetings/AP/AP24/20190402/109212/HHRG-116-AP24-Wstate-GravesZ-20190402.pdf>, 3–4.

¹⁰⁸ Ibid 2.

certainly change how a resurrected OTA would operate. The modern Internet would expedite the research process, making it possible to carry out technology assessments more quickly and at a lower cost. What research a new OTA would make public could also reach a wider audience, particularly academics.

But the old OTA's structure contributed to its fall. Its constituency was too small to protect it from closure in part because its services were accessible only by committee leadership. This lack of brand recognition within Congress is part of the OTA's general lack of public visibility, explained in part by its small size. One director joked that among congressional institutions, the OTA was "larger only than the U.S. Botanic Gardens."¹⁰⁹ The OTA's obscurity among rank-and-file Congress members inhibited these members from rallying to its defense when the Republican Revolution's "Cutting Congress First" campaign came for it.¹¹⁰ Its obscurity to the public prevented constituents from pressuring their legislators into doing so.

To improve political survivability, a new OTA would need to retain the support of a broader constituency within Congress. There are many possible changes that might achieve this aim. One discussion draft submitted by Rep. Jason Chaffetz, a Republican, during his last term in Congress proposed allowing any member of Congress to request "information, reports, studies, findings, notes, and background papers, compiled in carrying out technology assessment."¹¹¹

¹⁰⁹ Bimber 8.

¹¹⁰ Ibid 71.

¹¹¹ "Discussion Draft to Amend the Technology Assessment Act of 1972," Zach Graves, September 18, 2018, [https://github.com/zachgraves/futurecongress/blob/master/CHAFFE_124_xml%20\(002\).pdf](https://github.com/zachgraves/futurecongress/blob/master/CHAFFE_124_xml%20(002).pdf).

Consider the logic behind restricting study requests to committee chairs. In 1972, Rep. Charles Mosher introduced and pushed through an amendment to the OTA's enabling legislation that specified that only committee chairs could request studies on the suspicion that junior members might use the OTA's resources to challenge their more senior colleagues.¹¹² This restriction empowered committee leadership at a time when power was gradually moving away from committees toward party leaders.

Allowing all members of Congress to request materials from previous technology assessments strikes a compromise between this protection of committee power and constituency expansion because it would allow wider access to the OTA's work without granting wider control over OTA resources.

Lawmakers might, as previously mentioned, modify the OTA's governance structure to protect the independence of its assessment process. The heightened political polarization of Congress and the country as a whole, especially since 1995, raises the risk of partisan hijacking.

The TAB only withheld one study because of its content over the OTA's 23 years, though it sometimes insisted on rewording conclusions and other changes to language that members found too pointed.¹¹³ In one case, Sen. Ernest Hollings voted to authorize the release of a study on the textile industry, a key economic activity in his state of South Carolina, but issued a press release that criticized the same study's policy options.¹¹⁴ In today's Congress, however, the assumption that TAB members will as easily separate their partisanship from their role is not a safe one. The fixed balanced party

¹¹² Bimber 28.

¹¹³ Ibid 30.

¹¹⁴ Blair 30–31.

representation on the TAB does much to mitigate the threat of partisanship. But the TAB still remains vulnerable to bias, especially if members would still be appointed by the Speaker of the House and the president pro tempore, both majority-party positions. When appointing members of the opposite party to the TAB, there would exist an incentive to appoint the Congress members ideologically closest to their own party. For example, a Republican president pro tempore might appoint the most moderate Democratic senators. Some federal advisory bodies, such as the United States Commission on Civil Rights, have similar appointment processes to that of the TAB.¹¹⁵ A redesign of this procedure would have some other models against which to compare.

We might consider changing the threshold to authorize the release of assessment results to make it more difficult for TAB members to suppress assessments whose findings are unfavorable to their policy preferences. But simply lowering the threshold would reduce Congress's ability to keep the OTA's products close to Congress's needs because it would weaken the TAB's leverage to demand changes to how assessments present findings. Perhaps it may be better to require that any vote to block the release of study results have the backing of at least two members of both parties. This restriction would provide insurance against a scenario where a single member of one party votes with all six members of the opposite party to block the release of study results for partisan reasons. The TAB would retain its leverage over the packaging of findings, but the risk is lower that it would use this power for partisan reasons.

¹¹⁵ Jacob R. Straus, "Congressional Membership and Appointment Authority to Advisory Commissions, Boards, and Groups," Congressional Research Service, Feb 27, 2018, <https://fas.org/sgp/crs/misc/RL33313.pdf> , 76.

A partnership with the CBO might prove especially powerful. Though the OTA had in-house economists, the expertise of the CBO would allow the incorporation of economic analysis into a broader range of studies and strengthen the menu of policy options characteristic of OTA reports by allowing analysis of the budgetary implications of different options.¹¹⁶ The CBO has the expertise to undertake this collaboration, as evidenced by its previous work on areas such as federal tax credits for electric vehicles and energy subsidies.¹¹⁷ Economic analysis would be key to building a constituency around a new OTA because it would further establish its reputation as a facilitator for cost savings opportunities. It could also help the second incarnation of the OTA's political feasibility and survivability by providing a vector through which free-market policy ideas could be fairly considered and added to the menu of options, which would address fears of liberal and pro-government bias.

The TAAC, though originally intended in part to provide external input on assessment findings, reviewed and gave input on the organizational direction of the OTA.¹¹⁸ A new OTA could also use TAAC for purposes more consistent with its original intent by, for example, running over a list of prospective assessment topics to ensure that they are in the broad U.S. social interest. Doing so would ensure that the OTA's research agenda is not only in line with Congress's needs but also with what outside experts perceive as the interest of the U.S. as a whole. As OTA Director, Russell Peterson

¹¹⁶ Zach Graves, "Rebuilding a Technology Assessment Office in Congress: Frequently Asked Questions," R Street Institute, September 25, 2018, <https://www.rstreet.org/2018/09/25/rebuilding-a-technology-assessment-office-in-congress-frequently-asked-questions/>, 7.

¹¹⁷ "Science and Research and Development," Congressional Budget Office, accessed April 7, 2019, <https://www.cbo.gov/topics/science-and-research-and-development>.

¹¹⁸ Blair 32; Holt 163.

attempted to fashion OTA's agenda based on an OTA-generated priorities list presented to TAAC.¹¹⁹ But he made this list without approval from the TAB, which made relations with Congress tense and led to his resignation.¹²⁰ Joint meetings between the TAB and the TAAC could help foster communication on research priorities between the two bodies.

Some changes might especially help the political feasibility of resurrecting the OTA. In the next chapter, I discuss the current political environment on the prospects of creating and maintaining a new OTA and discuss how these changes might be useful in defending such a proposal from political attacks.

¹¹⁹ Blair 46–47.

¹²⁰ *Ibid.*

Chapter 3: Political Strategy

3.1. Failed Attempts to Revive the OTA

Since 1995, OTA advocates have tried and failed multiple times to restore funding. The most recent attempt at this writing came in June of 2018, when a Rep. Mark Takano (D-CA) amendment to an appropriations bill failed on a 195-217 party-line vote.¹²¹ 15 Republicans voted for the amendment, and 6 Democrats against it.¹²² The amendment would have provided only \$2.5 million for the OTA, or less than 10% of its original budget.¹²³ The failure of even these modest appropriations makes the political task of restoring the OTA seem especially daunting. The Takano amendment saw better performance than a similar amendment from Rush Holt (D-NJ) in 2014, which failed 164 to 248.¹²⁴ That amendment also would have provided \$2.5 million.¹²⁵

The rhetoric used in the floor debate on the Takano amendment provides some insight into what arguments are used today in support of or opposition to restoring the OTA. The amendment's opposition relied on the argument that the OTA would be redundant with the GAO.¹²⁶ Though Section 2.4 confronts the substance of this argument, its appearance here points to a deep-rooted difficulty in restoring the OTA. Indeed, the fiscal conservatives who got the OTA defunded in 1995 relied heavily on arguments that

¹²¹ “Final Vote Results for Roll Call 255,” U.S., Congress, June 8, 2018, <http://clerk.house.gov/evs/2018/roll255.xml>.

¹²² Ibid.

¹²³ “H.Amdt.761 to H.R.5895,” Congress.gov, accessed April 8, 2019, <https://www.congress.gov/amendment/115th-congress/house-amendment/761?s=a&r=1>.

¹²⁴ John Bicknell, “House Rejects Attempt to Revive OTA,” *FCW* May 1, 2014, <https://fcw.com/articles/2014/05/01/ota-still-doa.aspx>.

¹²⁵ Ibid.

¹²⁶ “House Session: House Debates Spending Cuts Bill,” *C-SPAN*, June 7, 2018, video, 10:59:18, <https://www.c-span.org/video/?446449-2/us-house-debates-spending-cuts-bill&transcriptSpeaker=62470&start=39616>.

the OTA overlapped too much with other legislative support agencies and private institutions to be worth paying for.¹²⁷

The most tangible examples of Congress benefitting from the OTA often involve cost savings. The Social Security computer procurement example and the cholesterol example from Chapter 1 come to mind. These applications of the OTA's expertise mirror the role of the GAO, making the OTA appear to overlap with the GAO's core mission. This line of reasoning leads to the implication that some supporters of the expanded-GAO model may agree that the GAO cannot replicate the OTA's proactivity. Rather, they may only value the OTA for its potential to produce assessments that lead to cost savings with government programs --- precisely the GAO's domain.

Furthermore, the Takano amendment would have provided barely enough funding to establish a small OTA whose assessment-producing capacity might be closer to that of the GAO. In other words, attempts at revival that would make only modest requests for appropriations may be more vulnerable to the objection that they would be redundant with the GAO's science and technology arm.

The challenge in countering the redundancy argument lies in that what distinguishes the OTA from the GAO is less easily conveyable in political messaging. As articulated in Chapter 1, bad policies and missed opportunities demonstrate the need for greater technological expertise within Congress.

¹²⁷ Bruce Bimber, *The Politics of Expertise In Congress: The Rise and Fall of the Office of Technology Assessment*, (Albany, NY: State University of New York Press, 1996), 72.

But the OTA's unique duty is to inform Congress on, as one former staffer put it, "termites-in-the-basement problems" rather than "wolf-at-the-door problems."¹²⁸ Combined with the limitation of its influence to the early stages of the policy process, the absence of the OTA does not necessarily lead to choosing the wrong policy for a given issue because the OTA does not recommend specific policies. Rather, its absence contributes to more subtle manifestations of bad policy, as with SOPA/PIPA, or to congressional inaction. In the case of SOPA/PIPA, many key lawmakers backed a flawed policy because they were not sufficiently informed of its flaws. But, if examined in a vacuum, this case does not make it clear that a revived OTA would have solved the problem any better than an upgraded CRS or an augmented congressional staff corps.

Rather, it is congressional inaction that the OTA would be in a unique position to prevent. The GAO's structure, culture, and mission, as I argue in Chapter 2, distance it from the foresight required to inform Congress on emerging issues. But the result of congressional inaction is that Congress acts *too late*, not necessarily that it takes the wrong action given the circumstances. It is widely acknowledged and often taken as given that government institutions, particularly democratic deliberative ones such as Congress, are often slow to respond to societal problems as they emerge. For Congress, some (rightly) see slowness as a necessary evil to ensure that deliberation remains democratic. But many policy issues become more severe and difficult to address the longer the government leaves them unaddressed. Climate change comes to mind.

¹²⁸ Adam Keiper, "Science and Congress," *The New Atlantis* no. 7 (Fall 2004/Winter 2005): 39, <https://www.thenewatlantis.com/docLib/TNA07-Keiper.pdf>.

These “termites-in-the-basement problems” inevitably compete for political attention with “wolf-at-the-door problems” that are more urgent but not necessarily more severe. In Congress, where lawmakers have many short-term goals such as reelection, long-term policy issues often remain neglected.

If expertise on long-term problems stops flowing into Congress, nothing immediately goes awry. This lack of immediate downside to the cessation of OTA’s assessments is a key reason that fiscal conservatives consider the OTA expendable. In 1995, many OTA critics’ arguments did not rely on attacking the OTA’s merits; they often praised its work.¹²⁹ Rather, they portrayed the OTA as unaffordable in a time of fiscal crisis.¹³⁰

OTA advocates seem to be making more effort to counter the redundancy argument immediately in their rhetoric. In an April 2019 appropriations hearing, Rep. Takano changed his opening statement from the floor debate on his amendment to emphasize that “no other entity has the capacity or expertise” to fill the OTA’s role.¹³¹

Outside of waiting for a more OTA-friendly government, which the 2018 midterm elections have brought in the form of a Democratic House, how might future attempts at revival be informed by past failures? To fully answer this question, it is necessary to review the attacks on the OTA during its lifespan and some changes in the political climate since 1995.

¹²⁹ Bimber 72.

¹³⁰ Ibid.

¹³¹ House Appropriations Committee Subcommittee on the Legislative Branch, 2:13.

3.2. Background on Attacks on the OTA During its Lifespan

The successful effort to zero the OTA's appropriations came as part of the Republican "Cutting Congress First" campaign outlined by a December 1994 resolution passed by the Senate Republican Conference.¹³² The resolution also called for budget cuts to committees and the other legislative support agencies.¹³³ In the budget process for FY 1996, both budget committees formalized the zeroing of OTA's appropriations in their budget resolutions.¹³⁴

The OTA's small size and constituency made it an easy target. Fiscal conservatives relished the idea of abolishing an entire agency to signal that they were so disciplined that they were willing to completely eliminate one of their resources. Freshmen Republicans elected in 1994, a key part of the coalition that zeroed the OTA's funding, had little prior exposure to the OTA and thus did not have time to warm to it, as some more senior Republicans did. Peter Blair points out that in the 104th Congress, about 32 percent of House Republicans and about 20 percent of Senate Republicans were first-term lawmakers.¹³⁵

The OTA's low profile also meant that debate over its future was drowned out by much larger debates over healthcare, welfare, and other areas of government spending where the new Republican majority sought to cut budgets.¹³⁶ Many of the OTA's backers

¹³² Bimber 70.

¹³³ Ibid.

¹³⁴ Ibid 73.

¹³⁵ Peter D. Blair, *Congress's Own Think Tank: Learning From the Legacy of the Office of Technology Assessment (1972–1995)*. (New York: Palgrave Macmillan, 2013), 68.

¹³⁶ Bimber 73.

scrambled to prevent budget cuts to these other government programs, causing the OTA to fall down their lists of priorities.¹³⁷

Though the OTA fell in 1995, it had survived legislative attacks before. Shortly after the 1980 election, the OTA survived a defunding attempt led by newly elected Senator Mack Mattingly (R-GA), then chair of two key subcommittees: the Legislative Branch subcommittee of Appropriations and the Congressional Operations and Oversight subcommittee of Governmental Affairs.¹³⁸

Three TAB members, including then-Chair Ted Stevens (R-AK), sat on the Appropriations subcommittee.¹³⁹ Stevens rallied senators behind the OTA by soliciting letters of support from the new Republican committee chairs.¹⁴⁰ He and the other two TAB members, Senators Mark Hatfield and Ernest Hollings, managed to preserve two thirds of the OTA's funding in the subcommittee and restored most of the cut funding in the full committee and on the floor.¹⁴¹

Mattingly also tried to deauthorize the OTA in 1982 through the Congressional Operations and Oversight subcommittee by organizing an oversight hearing.¹⁴² But Senator Charles Mathias (R-MD), chair of the Rules Committee and TAB member, preempted Mattingly's hearing with his own in which he brought in pro-OTA witnesses such as Rep. George Brown (D-CA), OTA Director John Gibbons, and representatives

¹³⁷ Ibid.

¹³⁸ Bimber 58.

¹³⁹ Ibid 59.

¹⁴⁰ Ibid 58–59.

¹⁴¹ Ibid 59.

¹⁴² Ibid.

from the National Science Foundation and advocacy groups.¹⁴³ With this oversight hearing on the record, Mattingly abandoned his plans.¹⁴⁴

The “Mattingly affair,” as OTA staff often called it, presents an intuitive but important lesson: a new OTA should have friends in high places to protect it.¹⁴⁵ The key roles of Ted Stevens and Charles Mathias highlight the importance of Republican buy-in.

3.3. Changes in the Political Climate since 1995

In many ways, the political climate has changed since 1995 in ways that would make it more difficult to create and sustain a new OTA. Heightened political polarization has increased the appetite for ideology over truth.

This trend may be the most stubborn obstacle to any return of the OTA. It has made itself especially prominent within the Republican Party, in which a populist distrust of experts has gained dominance over the party’s rhetoric. This undercurrent is what makes it more difficult to assemble a pro-OTA coalition similar to the one that defended it from Mack Mattingly. Any effort at revival would likely require significant Republican support. Advocates for a new OTA might consider arguments for revival that align with political conservatism. For example, OTA assessments might make overregulation less likely by preventing the passage of misinformed policies.¹⁴⁶ Hawkish Republicans might be receptive to the potential of the OTA to improve the national defense.

¹⁴³ Ibid; “Oversight Hearing on the Office of Technology Assessment,” U.S. Senate Committee on Rules and Administration, 97th Congress, 2nd Session, February 5, 1982, ProQuest Congressional.

¹⁴⁴ Bimber 59.

¹⁴⁵ Ibid.

¹⁴⁶ Zach Graves, “Rebuilding a Technology Assessment Office in Congress: Frequently Asked Questions,” September 25, 2018, <https://www.rstreet.org/2018/09/25/rebuilding-a-technology-assessment-office-in-congress-frequently-asked-questions/>, 9.

The specter of partisanship also presents a complication to the comparison of the OTA model against an expanded-GAO model. In that comparison, there seems to be a tradeoff between independence and responsiveness to Congress. As articulated in Section 2.4, the GAO's assessment process seems *too* independent from congressional input to fill the same role that the OTA's work did. But in an environment where the danger of politicization of expertise is so high, might it be wise to err on the side of independence? Perhaps it may. But, once again, the OTA model can be reworked to fortify protections from political intrusion because it does not yet exist. Changes to already-existing institutions encounter resistance that changes to non-existent ones do not.

Power has shifted away from committees toward party leadership, which may give party leaders reason to be concerned that a second incarnation of the OTA would provide a vector through which committees could challenge them. As evidenced by Democratic leadership's support for restoring the OTA, this concern does not seem to be critical.¹⁴⁷ But it may encourage party leaders to shape a new OTA to ensure that they maintain control over the party.

There are some forces that might increase the urgency some might attribute to informing Congress on technology issues. The development of the modern Internet has given a new dimension to technology issues, with wide-ranging debates over net neutrality and cybersecurity coming to the forefront of public political consciousness. These issues provide OTA advocates rhetorical ammunition, especially when they expose Congress's lack of expertise as the Zuckerberg and Pichai hearings did.

¹⁴⁷ "Final Vote Results for Roll Call 255."

Additionally, the geopolitical position of the U.S. may affect the OTA's prospects. In 1995, the U.S. had recently witnessed the disintegration of its chief geopolitical rival, the Soviet Union. Today, however, there is a growing sentiment that the U.S. is in a technological arms race with China. China hawks might become more amenable to bringing back the OTA as a means of ensuring that the U.S. can remain technologically and economically competitive. The heightened attention to cybersecurity in the past several years, particularly around issues of election security, may provide rhetoric with which to promote the OTA.

I outline these helpful forces to point to possible avenues that the political rhetoric of future pro-OTA efforts might follow. Some of them already make regular appearances in expressions of support for rebuilding the OTA.¹⁴⁸

3.4. What Might We Do to Help Bring Back and Maintain the OTA?

Combining what we know about the battles over OTA's funding with what we know about the current political climate, what lessons might OTA advocates learn?

Because OTA support and opposition hews closely to party lines, Republican OTA advocates would be an important part of a successful pro-OTA coalition.

Supportive think tanks, particularly non-liberal ones such as R Street Institute, will likely

¹⁴⁸ Andrew Harnik, "Congress' Facebook Ignorance Triggers Calls to Revive Terminated Technology Agency," *McClatchy*, April 13, 2018, <https://www.mcclatchydc.com/news/nation-world/national/article208843729.html>.

be a key part of any coalition that would get OTA restored.¹⁴⁹ One AEI scholar has come out in favor of revival.¹⁵⁰

Hearings present opportunities to educate members of Congress, particularly newly elected lawmakers, on the role the OTA once played and its importance. In his opening remarks to the 1982 Senate Rules and Administration Committee hearing, Mathias acknowledged this kind of opportunity by stating that “it is important that OTA’s performance be examined and explained to those Members who may not be sufficiently aware of its work.”¹⁵¹

Some of the modifications proposed in Chapter 2 might improve the political prospects of restoring funding to the OTA. For example, a greater emphasis on economic analysis and more collaboration with the CBO might convince some conservatives and libertarians that market-oriented policy ideas would be fairly represented.¹⁵² A greater emphasis on interim reports and other short-term deliverables would address a key criticism of the old OTA: the long delays of its assessments that sometimes resulted in them being completed after relevant legislation had been considered. This issue is especially important for making a revived-OTA proposal competitive with GAO expansion models because timeliness, as I discuss in Section 2.4., is one of the advantages that GAO-expansion advocates claim.

¹⁴⁹ David Bahr, “Bring in the Nerds: Reviving the Office of Technology Assessment,” R Street Institute, January 24, 2018, <https://www.rstreet.org/2018/01/24/bring-in-the-nerds-reviving-the-office-of-technology-assessment/>.

¹⁵⁰ James Pethokoukis, “Congress Should Revive the Office of Technology Assessment,” American Enterprise Institute, December 6, 2018, <https://www.aei.org/publication/congress-should-revive-the-office-of-technology-assessment/>.

¹⁵¹ “Oversight Hearing on the Office of Technology Assessment” 2.

¹⁵² Graves, “Rebuilding a Technology Assessment Office in Congress: Frequently Asked Questions” 7.

The defense of the OTA from the efforts of Mack Mattingly in the early 1980s may be an argument for expanding the TAB to increase the number of potential OTA defenders in positions of high influence within Congress. Even before the OTA would be restored, the proposal to add more TAB members might warm some lawmakers toward restoration because it would counteract the narrative that the OTA would operate only for the benefit of the select few TAB members. More cynically, the possibility or promise of a TAB seat might motivate some to support resurrecting the OTA as a means of expanding their own soft power.

Chapter 4: Far-Reaching Consequences

4.1. The OTA and Congressional Oversight

The founding ethos of the OTA emphasized its utility as a means of verifying claims made by executive agencies. Its creation in the early 1970s took place with a backdrop of tension between Congress and the Nixon administration.¹⁵³ The creation of the OTA was part of a broad expansion of legislative support agencies, which included the creation of the CBO and the expansion of the GAO and the CRS.¹⁵⁴ There had been a growing sense that Congress was falling behind the executive branch in technological expertise, hampering its oversight capacity and making it dependent on the bureaucracy for facts and figures.¹⁵⁵ As Democratic Rep. Vic Fazio put it in 1995 when defending the OTA, “The Department of Energy will tell you [their policy] is the greatest thing since sliced bread. We need someone who will tell you the opposite.”¹⁵⁶

Restoring the OTA would be a key step in restoring Congress’s oversight capacity. Congress has engaged in a well-documented delegation of its authority to the executive branch. This delegation has most famously taken place with Congress’s war power, but there are other examples of it that more directly relate to policy areas that a

¹⁵³ Peter D. Blair, *Congress's Own Think Tank: Learning From the Legacy of the Office of Technology Assessment (1972–1995)*. (New York: Palgrave Macmillan, 2013), 26.

¹⁵⁴ *Ibid.*

¹⁵⁵ *Ibid.*

¹⁵⁶ Jonathan D. Salant, “More Hill Cutbacks Coming; Support Services Eyed,” *Congressional Quarterly*, February 11, 1995, <http://library.cqpress.com/cqweekly/WR407116>.

new OTA might provide expertise on.¹⁵⁷ For example, current law allows the President emergency powers for situations such as public health emergencies.¹⁵⁸ Some types of national threats, such those to security caused by a hostile foreign power, can also be technology-adjacent because science and technology issues can be a key component of the emergency (e.g., cybersecurity threats to the nation's critical infrastructure).

As President Trump's border emergency has demonstrated, Congress plays an important role in overseeing the use of emergency powers to guard against their abuse. To exercise this oversight, Congress needs expertise independent of the executive branch to understand the situation and determine if abuse is occurring. Even in situations where timeliness is critical, the OTA can prove useful for two reasons. First, it would likely provide short-term deliverables and consultations that could be completed at a moment's notice. Second, assessments on topics germane to emergency situations (e.g., cybersecurity) can be carried out and circulated before the situation arises. These circumstances are where the OTA's unique duty as a congressional crow's nest, scanning the horizon for challenges and threats, prove especially pertinent.

There is another sense in which strengthening congressional oversight would improve governance. As discussed in Section 1.3., executive agencies' delegation of regulatory authority to the private interests that they are tasked with regulating has allowed those private interests to capture those agencies. If Congress can conduct oversight hearings armed with OTA research, it will be better able to press executive

¹⁵⁷ Malinowski, Tom, "Congress Has Willfully Abdicated Its Responsibility Over War," *Foreign Policy*, April 20, 2018, <https://foreignpolicy.com/2018/04/20/congress-has-willfully-abdicated-its-responsibility-over-war/>.

¹⁵⁸ The Brennan Center for Justice at the NYU School of Law, "A Guide to Emergency Powers and Their Use," 2019.

agencies on the effects of this delegation. These hearings may also help bring public attention to the regulatory capture, improving the chances of remedy.

4.2. OTA Research as a Contribution to Academic Literature

Not all of the value of OTA assessments would come in the form of more informed congressional actions. They stand as scholarly works in their own right, providing direction and support for future academic research on technology. The OTA and private researchers could gradually build off of each other's research. Additionally, researchers in private industry could treat the overall body of OTA work as a repository to consult for information on what research has been done in their areas of interest. This function would make private research more efficient by preventing overlap between researchers.¹⁵⁹

The OTA's short-term deliverables, which would be more conducive to consumption by congressional staff, would also prove a valuable resource to staffers and other particularly time-starved Capitol Hill professionals. They may help reduce the strain caused by the understaffing of Congress.

4.3. How the OTA Might Empower Committees

A new OTA would also change a different power dynamic: that between congressional committee leadership and party leadership. Since the 1970s, power has been shifting away from committees toward party leadership. This trend accelerated in

¹⁵⁹ House Appropriations Committee Subcommittee on the Legislative Branch, "Legislative Branch Members Days Hearing (EventID=109211)," April 2, 2019, video, 13:03, <https://www.youtube.com/watch?v=4jt18Vo4BSM&feature=youtu.be>.

the 1990s, when Newt Gingrich imposed six-year term limits on House committee chairs in his party.¹⁶⁰ As of 2015, committee staff headcount has fallen by one third from where it was in 1993.¹⁶¹ Committee authorizations peaked during the first two years of the Obama administration, when Congress was under unified Democratic control, but have fallen by 34% in the House and 26% in the Senate since then.¹⁶²

The dwindling presence of committees has shifted the legislative process. Committees meet less frequently than they did as recently as 2006.¹⁶³ An increasing proportion of bills reach the floor without seeing a committee hearing or markup.¹⁶⁴ The Tax Cuts and Jobs Act of 2017 is a prominent example.¹⁶⁵ Party leadership has filled the power vacuum left by the committees, contributing to the rise of a legislative process that increasingly seems to prioritize political messaging over policymaking. The composition of the committee staff corps reflects this shift; an increasing proportion of staffers have titles and duties related to communications and campaigning rather than policy.¹⁶⁶

The OTA would empower committee leaders by giving them expertise that they may be able to use to reassert their agenda-setting power. Through their study requests,

¹⁶⁰ John Bresnahan, “The Demise of One of the Best Gigs in Congress,” *POLITICO*, January 30, 2018, <https://www.politico.com/story/2018/01/30/congress-republican-committee-chairs-377078>.

¹⁶¹ “Vital Statistics on Congress,” The Brookings Institution, May 21, 2018, <https://www.brookings.edu/multi-chapter-report/vital-statistics-on-congress/>, author’s calculation.

¹⁶² Casey Burgat and Ryan Dukeman, “Who’s On The Hill? Staffing and Human Capital in Congress’s Legislative Committees,” R Street Institute, March 14, 2019, <https://2o9ub0417chl2lg6m43em6psi2i-wpengine.netdna-ssl.com/wp-content/uploads/2019/03/March-2019-Final-Committee-Sheet-Report.pdf>, 6.

¹⁶³ Paul Kane and Derek Willis, “Analysis: Congress Has a Job — But Has Largely Stopped Doing It,” *The Morning Call* November 5, 2018, <https://www.mcall.com/opinion/mc-opi-congress-study-weak-midterms-20181105-story.html>.

¹⁶⁴ Donald Wolfensberger, “Weak Committees Empower the Partisans,” The Wilson Center, November 9, 2011, <https://www.wilsoncenter.org/publication/weak-committees-empower-the-partisans>.

¹⁶⁵ *The Hill* Staff, “How the Trump tax law passed: Bipartisanship wasn’t an ingredient,” *The Hill*, September 27, 2018, <https://thehill.com/policy/finance/408631-how-the-trump-tax-cuts-passed-bipartisanship-wasnt-an-ingredient>.

¹⁶⁶ Burgat and Dukeman 10.

they may foster more policymaking in committees by releasing the reports there. Even though OTA assessments make no policy recommendations, they provide the background information necessary to begin considering policies and a menu of options from which to get started. In other words, they would expedite the early stages of the policy process so that policy issues that might have otherwise remained neglected have a chance to be addressed in legislation informed by the OTA analysis.

Furthermore, the committees that a new OTA might serve most frequently also tend to have higher staff turnover, meaning that they are especially pressed for policy expertise. The House Energy and Commerce Committee, which made the most study requests of any committee to the OTA between 1980 and 1995, has the second shortest average committee tenure in the House at 3.6 years.¹⁶⁷ The next two most frequent OTA clients, House Science and what is now Senate HELP (Health, Education, Labor, and Pensions), have average tenures between 4 and 4.5 years but still rank in the bottom half among the committees in their chambers.¹⁶⁸

To be sure, there are many other institutional obstacles to committee power that the OTA would do little to address. For example, it is well-known among House Republicans that term limits on committee chairs have inhibited the development of deep policy expertise.¹⁶⁹ Additionally, the steering committee that appoints new committee leadership in the Republican Party is dominated by party leadership.¹⁷⁰ In both parties,

¹⁶⁷ Bruce Bimber, *The Politics of Expertise In Congress: The Rise and Fall of the Office of Technology Assessment*, (Albany, NY: State University of New York Press, 1996), 34; Burgat and Dukeman 12.

¹⁶⁸ Bimber 34; Burgat and Dukeman 11.

¹⁶⁹ Bresnahan.

¹⁷⁰ Ibid.

committee leadership falls under heavy fundraising pressure from party leadership.¹⁷¹ But the OTA would provide a vector through which policies could pass into committees, opening them to committee processes that could foster more productive policymaking. Other barriers to such productive policymaking would certainly need to be cleared. Perhaps the revival of the OTA might accompany a broader package of congressional reforms.

4.4. Competition of a Revived OTA with Other Sources of Expertise

A second incarnation of the OTA might displace other vectors of science and technology expertise into Congress. The most obvious redundancy would be with the GAO, which might retain some of its experts to collaborate with the new OTA on assessments where the GAO's strength would create synergy. The GAO's new technology team has several stated functions other than technology assessment, such as audits of government technology programs and establishing an audit innovation lab.¹⁷² Its existing resources for technology assessment might be redirected into these activities, which hew more closely to the GAO's mission.

But the OTA would also alleviate pressure on overworked alternative sources of information, particularly the CRS and congressional staff. Admittedly, almost any of the models I compare the OTA against in Chapter 2 would, given more funding and

¹⁷¹ Marian Currinder, "Fundraising Requirements Should Not Be a Part of the Chair/Committee Assignment Process," Legbranch.org, March 27, 2019, <https://www.legbranch.org/fundraising-requirements-should-not-be-a-part-of-the-chair-committee-assignment-process/>.

¹⁷² Zach Graves, Testimony before the U.S. House of Representatives, Committee on Appropriations, Legislative Branch Subcommittee, April 2, 2019, <http://docs.house.gov/meetings/AP/AP24/20190402/109212/HHRG-116-AP24-Wstate-GravesZ-20190402.pdf>, 4.

resources, free up resources elsewhere by overlapping with other sources of expertise. But this effect would partially mitigate the cost of the OTA.

OTA products would compete with those of think tanks and lobbyists. Because OTA assessments lack the partisan agenda of think tank reports and lobbyists' pitches, the information flowing into Congress on science and technology issues might become more objective to the extent that the new OTA would displace think tanks and lobbyists.

As mentioned in Section 1.3., reducing congressional dependence on lobbyists would benefit governance in many ways. While we must remain realistic about the magnitude of these positive effects from OTA revival alone, a less biased flow of information into Congress would be a necessary ingredient to less biased policymaking. Lobbying may become slightly less fruitful for those private interests that engage in it, potentially redirecting lobbying expenditures toward more economically productive activities.

Conclusion

At this writing, the CRS and the National Academy of Public Administration (NAPA) are compiling a report ordered by the FY 2019 legislative branch appropriations bill on the science and technology assessment expertise available to Congress.¹⁷³ The report will reportedly be finished in October 2019.¹⁷⁴

I have laid out a case for reviving the OTA, justifying a second incarnation of the OTA over other models of technology assessment. I have laid out political obstacles that have faced previous efforts to restore the OTA, and how future efforts might be informed by them. I have fortified my case for a new OTA by elaborating on some of the indirect benefits it may bring to the federal government and the U.S. as a whole. The NAPA report may echo some of my arguments.

In making my case, I have taken a somewhat different direction from many others who have pondered the form in which Congress might bulk up its technology expertise. In particular, I have suggested that the OTA model can be improved to address concerns about it, especially those expressed by proponents of expanding the GAO to fill the gap left by the defunding of the OTA.

There will be logistical obstacles in building a new OTA and setting it to work. Science and technology experts are difficult to come by today, especially considering the allure of Silicon Valley.¹⁷⁵ The position of OTA Director is uniquely difficult to fill

¹⁷³ Kevin Kosar, “GAO Versus the Ghost of OTA: Who Will Win the Science and Technology Assessment Race?” Legbranch.org, March 20, 2019, <https://www.legbranch.org/gao-versus-the-ghost-of-ota-who-will-win-the-science-and-technology-assessment-race/>.

¹⁷⁴ Ibid.

¹⁷⁵ Grace Gedye. “How Congress Got Dumb on Tech—and How It Can Get Smart,” *Washington Monthly*, April 7, 2019, <https://washingtonmonthly.com/magazine/april-may-june-2019/how-congress-got-dumb-on-tech-and-how-it-can-get-smart/>.

because it requires a rare combination of technical expertise and political savvy. The new OTA would need to build trust and relationships with members of Congress, meaning that funding and staff would likely start at modest levels and gradually ramp up. Finally, the OTA is only one part of a larger body of reforms needed to restore Congress's brains. Even with a new OTA, Congress would still exhibit some of its ignorance and unhealthy dependence on interest groups without upgrades to its atrophied staff corps.

It may feel surprising to recall that the OTA would have no policymaking power. As a principle, it would not make value judgments. For example, an OTA report might articulate how a government program could expand its operations if granted \$5 million in additional funding. But that report cannot make a judgment on whether that \$5 million might be better spent elsewhere. It falls to Congress to prioritize government spending.

This neutrality may cause fear that Congress might use the OTA to rationalize bad policy decisions just as often as it does to inform good ones. OTA reports cannot prevent all bad policies from being approved by Congress. But they can prevent *misinformed* policies. The value neutrality of OTA products makes them an imperfect but useful separator of facts from opinions.

Further, by including the menu of policy options and articulating their possible consequences, OTA assessments would frame policy debates in a way that nudges Congress toward certain policy options over others. For instance, an OTA report might find that a widely popular policy would likely have previously underacknowledged side effects that are widely viewed as undesirable. The report cannot state that these effects are undesirable. But it has provided information that leads to the value judgment that those outcomes are not desirable. Some have compared the OTA to a tutor, and aptly

so.¹⁷⁶ Like a tutor, the OTA would not be there to supply answers. Its purpose would be to supply the information and conceptual frameworks needed to reach the answers. As pointed out in Section 2.4, GAO technology assessments do not include a menu of options. If anything, they are *more* vulnerable to being used to rationalize bad policy decisions.

Some may have a visceral hostile instinct against the OTA because they may see it as a kind of technocracy. The value-neutrality I outline demonstrates that the OTA would not be a technocratic body in the sense that it causes the will of a small group of elite experts to usurp the democratic will. Instead, it would help the democratically elected Congress make better policy decisions to serve the citizenry. As argued in Chapter 2, the OTA model does more to ensure responsiveness and accountability to Congress than some other alternative technology assessment models. The expanded-GAO model, for example, might be considered more technocratic because of its looser connection with the congressional agenda.

The OTA's bipartisan governance by the TAB not only distinguishes it from other governance models for legislative support agencies but also symbolizes the OTA's role as a source of common factual ground on which to base political discourse. The approval of OTA assessments signals that Congress accepts the facts within the assessments. It will take more than a new OTA to catch Congress up on technological developments, let alone restore the separation between ideology and fact. But the OTA would provide a venue where this separation can happen.

¹⁷⁶ Kim Zetter, "Of Course Congress Is Clueless About Tech—It Killed Its Tutor," *Wired*, April 21, 2016, <https://www.wired.com/2016/04/office-technology-assessment-congress-clueless-tech-killed-tutor/>.

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