The Republic of Federal Scientific Publication: The Not-So-Public Domain

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Rise of Scientific Community in American Politics

World War II served to rehabilitate the business community in the public mind, which perceived the entrepreneur as performing admirably well on behalf of the war effort. By war’s end the commercial class recaptured its position of dominance in American politics, along with a new player, who, like the entrepreneur, had received blame for The Great Depression, but who also found redemption in war related activity.

As war approached government desperately required assistance in developing modern weaponry. The government courted scientists, enlisted them to occupy confidential positions in the federal scientific establishment, and accommodated, even adopted their folkways.

Vannevar Bush, a leading purveyor of what came to be known as “elitist science,” exercised the greatest influence on policy makers. The government publishing pattern that emerged largely bore his stamp. Bush fashioned an ideology of science compatible with the American business creed and the gospel of the negative state. He believed that the scientific process demanded extraordinary freedom for its practitioners; that scientists were best qualified to manage their own affairs; and that science flourishes when it seeks its own objectives and pursues its own uninhibited ways [1]. In effect, Bush advocated the kind of autonomy for scientists that the private sector always had sought for itself.

Despite his elitism and disdain for the New Deal, Bush managed to endear himself to President Franklin Roosevelt who appointed Bush to administer war-related research and development in the Office of Scientific Research and Development (OSRD).
Like other influential members of the scientific community, Bush marginalized the role of government in science. He welcomed governmental activity (and plenty of it) only from the Treasury Department. As Director of OSRD, Bush chose not to develop the government’s capacity for research but to rely instead on contracting with private institutions. Practiced on a modest scale by the National Advisory Commission on Aeronautics in 1915 and by the National Research Council during World War I, the contractual system constituted a public-private arrangement by which the federal government provided the funds on the one hand and universities and corporate scientists conducted the publicly sponsored research on the other [2]. Though practiced sporadically and applied even to the nineteenth geological surveys of John Wesley Powell, the contractual system pervaded the federal scientific establishment during WWII and became ensconced thereafter [3].

As the Bureau of the Budget’s chief expert in science policy, Don Price witnessed the unfolding of the contractual system and its shaping of the scientific establishment. Price observed that it allowed scientists to keep one foot in government, while the other marched in step with the professional societies to which they were devoted, and whose aims, purposes, and above all processes often were contrary to those of government [4]. Scientists penetrated government, then retreated to academic and corporate sanctuaries. In sum, while scientists as contractors received the benefits of public service, they paid none of the costs typically associated with it, such as low pay, red tape, and poor working conditions [5].

Even in war the federal government chose to decentralize, indeed privatize, activities surrounding federal research and development. Traditional theories of
administrative practice suggested that governments moved irresistibly toward consolidating authority in times of national emergency, but the U.S. government demonstrated just how impervious American political institutions can be to the forces of centralization. “To those who expect wartime crises and military authority to produce a centralization of authority,” Don Price observed, “this approach must have been as surprising as if the army had used the war as an excuse to increase, rather than decrease, its reliance on the state militia” [6].

The OSRD’s founding documents, which Bush himself authored and which Roosevelt approved, sanctioned the use of contracts for military research, just as NACA used the contract for federally sponsored aeronautical research [7]. By 1942, Bush’s agency had authorized 126 research contracts to 32 academic institutions and 19 industrial corporations [8]. Thus, the OSRD’s contract system constituted the legal mechanism that provided the scientific community’s desideratum, government support on the one hand, autonomy on the other [9].

Meanwhile, Bush extended the power of the university. At Johns Hopkins, he established a center for research on proximity fuses for shells; at the Massachusetts Institute of Technology, Bush created a center for research on radiation; at Harvard he developed a center for radio research; and at the California Institute of Technology, Bush erected a center for rocket research [10].

By relying so heavily on university scientists, Bush introduced a strong, largely undisciplined, element of academic self-government in the federal scientific effort [11]. To get the best scientists, the government “took them on their own terms” [12]. One such term, which met little resistance, involved the method of publishing scientific results.
Considering the lay and government press beneath the dignity of science, the scientific community demanded that established professional journals, which applied the quality control device of peer review, should serve as the medium for publication [13]. Rather than succumb to the regimentation of government service, scientists, particularly university scientists, shaped political institutions, which often were willing to embrace the folkways of the scientific community. The science agencies and their university collaborators set in motion an irreversible publishing paradigm, one that virtually spurned government publication altogether.

THE OSRD’S COMMITTEE ON PUBLICATIONS

The OSRD constructed this publishing model on the basis of yet another statute that competed with and trumped the printing and publishing laws as codified in Title 44 of the U.S. Code. The First War Powers Act of December 18, 1941 (55 Stat. 838) empowered the President “to authorize any department to enter in contracts without regard to the provisions of laws relating to the making, performance, or amendment of contracts whenever the President deemed that such action would facilitate the prosecution of the war.” [14]. In Executive Order 9219 of August 11, 1942, President Roosevelt specifically provided the OSRD with this special authority, including the authority to enter into agreements of all kinds “for all types and kinds of things and services necessary, appropriate or convenient for the prosecution of war, or for the invention, development or production of or research concerning any such thing” [15].
On this foundation the OSRD turned over wholesale to professional society and commercial publishers the results of federally conducted and publicly funded research that it had coordinated during the war. The Bureau of the Budget’s (BOB) 1943 directive reinforced the ensuing transfer of intellectual property. BOB Circular A-16, which purported to achieve economies, directed agencies as follows: “Information developed through research and investigations should be made available, whenever possible, to nongovernmental publications, especially to technical journals, to avoid the expense of printing and distributing a government publication” [16]

Concerns for national security inhibited the publication of most OSRD contractor research reports during the war. Once the war concluded, however, the OSRD and its university authors prepared to release this mass of accumulated documents through prominent book publishers and through the established journals of professional societies. In December 1945, when hostilities ceased, the question arose as to whether these non-governmental avenues of publication remained available to the OSRD and its contractors. Legal Counsel to the OSRD Oscar Ruebhausen assured the Committee that the war powers extended six months beyond the war’s conclusion. Furthermore, and what may be interpreted as the legal authority for the publishing pattern that continues to this day, Reubhausen contended that the authority conferred “gave power to take steps necessary, appropriate, or convenient for the prosecution of war,” and that “the power was not confined to the prosecution of this war” [17]. Thus, according to Ruebhausen, the OSRD (and its successor agencies) could continue to avail themselves of private publishing facilities so long as the practice “facilitated the prosecution of war against some potential future enemy” [18]. For agencies working on military related projects the
First War Powers Act of 1941, as Ruebhausen interpreted it, would have exempted them from the printing statutes, if not in perpetuity, then certainly during the prolonged Cold War period that followed. If interpreted as such today, the First War Powers Act would enable government departments to flout the printing statutes so long as the United States prosecuted the War on Terror.

Chair of OSRD’s Committee on Publications and Director of MIT Libraries John Burchard embraced the BOB’s 1943 directive and made full use of the publishing arrangements that the First War Powers Act had sanctioned. Burchard believed that private publishers afforded greater economy and effected the most widespread distribution. The notion that non-governmental publishers provided a cheaper and superior product would stand unchallenged for many years [19].

Meanwhile, OSRD contractors produced several different kinds of publications, including summary technical reports (STRs), journal length articles, technical monographs, histories, official governmental popular scientific releases, and contractor reports. Of these, Burchard had earmarked only two for government publication, the STRs and official governmental popular scientific releases [20].

Issued by every OSRD division and panel, the STRs, according to Burchard, “constituted the largest and most important part of the OSRD publication program,” because they summarized technical advancement and suggested possibilities for further research, field by field [21]. Burchard may have considered the STR’s important but apparently not significant enough to be spared from what he regarded as the inferior publishing services of government [22]. Burchard approached the GPO about producing the STR’s but the GPO declined, thereby removing even these from the public domain.
As for journal length articles, Burchard gave no pause as to the method of publication. These belonged to the domain of the professional scholarly periodical. Once the military branches cleared their manuscripts, OSRD contractors were then free to submit them to their professional journal of choice. As the war concluded, Burchard credited his committee with having facilitated the “flow of properly publishable material, both in the popular and the scientific press” [23]. Burchard’s committee further assisted commercial publishers by providing them with a list of potential referees for reviewing OSRD manuscripts [24]. By February 1946, Burchard asserted, “the peacetime journal system of publication had been restored save as military security might prevent, smoothly, simply, and with negligible friction” [25].

Technical monographs included all important OSRD books except for the STRs and histories. Burchard directed OSRD administrators to have these published commercially. Invoking Reubhausen’s legal reasoning, Burchard argued that the important material presented in the technical monographs served to “facilitate the prosecution of war” and, therefore, required the superior services of private publishers [26]. Burchard further directed OSRD administrators to choose publishers on the basis of quality, price, royalties, speed, and editorial services. [27]. He stressed the need for exacting royalties on behalf of the government and for limiting copyright to a period “reasonably necessary to insure the initial edition. Apart from these modest proposed restrictions, Burchard was not averse to surrendering all other publication rights to the private sector. He considered but finally rejected a more restrictive arrangement in which the government secured the printing and distributing by contract but retained full publication rights. [28].
These policies resulted in the commercial publication of 36 technical monographs. MIT’s Radiation Laboratory (RADLAB), a significant OSRD contractor, produced 21 of them, forming what came to be known as the *Radiation Laboratory Series*. It engaged the publishing services of McGraw-Hill, which surpassed all other firms in publishing publicly financed books [29]. The RADLAB exacted no royalties, fixed the copyright period at 10 years yet provided for extending copyright an additional 10 years, at which point the monographs would reside in the public domain [30]. The question arose if such an arrangement gave McGraw-Hill “a virtual monopoly” in the field of radiation, for as many as 20 years. To this potential problem, the Committee on Publications saw “no direct solution,” not even the obvious one of keeping these technical monographs in the public domain [31]. Twenty years later, McGraw Hill executive Curtis Benjamin hailed the *Radiation Laboratory Series* as “probably the most important technical work on a single subject ever produced in the United States” [32].

Another question arose as to whether the OSRD should distribute these monographs free of charge to depository libraries. Though Burchard presided over a depository library at MIT, he denounced the national depository library system as “a federal subsidy.” He expressly requested that no copies be distributed to depositories, even as he deposited 125 copies with the Library of Congress [33]. Like any other library, Burchard asserted, the depositories could buy the monographs on the open market [34].

Under the editorship of James Baxter, whom Bush appointed official OSRD historian, the OSRD prepared both a short and a long history. Only a “capable and suitably equipped private publisher,” Burchard declared, could print and distribute the
histories widely and expeditiously, implying that the government was capable of neither [35]. Burchard solicited proposals from many prominent commercial publishers, including Doubleday, Random House, Houghton Mifflin, and Little, Brown. Some failed to reply; others expressed interest in the short but not the long history. Burchard eventually selected the Boston-based company Little, Brown to publish the official OSRD histories [36].

The OSRD experience demonstrates how easily an Executive Order, combined with an imaginatively conceived legal interpretation, can undermine legislative statutes related to government publication. Additional imaginatively construed interpretations would further surround and debilitate government publication.

**POST-WAR GLORY**

Publicly funded, even publicly employed, scientists continued to spurn government publication into the post-war era, as they gained even greater autonomy in their publicly funded endeavors, distancing themselves even further from traditional governmental controls. Why did government continue to grant science and scientists such extraordinary latitude?

Their stunning war-related achievements, particularly the development of the atomic bomb, generated considerable political capital for the scientific community. This generation of scientists had become stars. According to a *Life* reporter, they wore “the tunic of superman,” and “stood in the light of a thousand suns” [37]. In effect, Congress endorsed the unregimented ways of the scientific community and the favored relationship that scientists enjoyed with the federal government. Had it not been for the contractual
system as the OSRD had administered it, the House of Representatives declared in 1945, “victory still would wait achievement” [38].

Scientists expended some of this accumulated capital in the sphere of publishing. In addition to maintaining their freedom to publish publicly funded manuscripts in professional journals, they persuaded the government to subsidize page charges that commercial publishers exacted from authors. Even the Comptroller General, whom legal scholar Arthur Miller described as having a “penchant for strict construction of the statutes,” capitulated to the wishes of the scientific community [39].

Indeed, the Comptroller General of the United States perpetrated one of the earliest compromises of the government publishing statutes. In 1924 Comptroller General J. R. McCarl decided that publicly financed works required printing and distributing through the GPO only when “the entire cost of printing was to be borne by the government” [40]. In effect, McCarl’s decision made all publicly financed manuscripts available to any private sector organization willing to incur costs associated with publishing. Yet unlike the government, which had to bear the entire cost to keep documents in the public domain, commercial publishers could claim ownership by covering only a portion of the costs. Owing largely to the decisions of the Comptroller General, the U.S. government subsidized the remainder. In 1954 Comptroller General Lindsey Warren approved the expenditure of public funds to cover the cost of page charges that many professional journals exacted from contributing authors, including those holding positions in the U.S. government [41]. They also received assistance from the NSF, which limited its role in the field of scientific publication to dispensing grants, most generously to private sector publishing ventures.
In 1949 the Interdepartmental Committee on Scientific and Research Development (ICSRD), which drew its membership from the scientific agencies of government, found much wisdom in departments refraining from making publication demands on contractors, even as this policy allowed the private sector to hold copyright to publicly funded works [42]. The ICSRD urged government to subsidize page charges and asserted that neither statutes nor administrative regulations but each individual agency should determine the mode of publication. Narrowing the sphere of government publication even further, the ICRSD recommended that only those publicly funded works belonging to a “series of long-standing and wide reputation” should be sustained as government documents. “Where such a series does not exist,” the ICRSD stated, “publication in the available technical press is to be encouraged [43].

This guideline, which refined BOB Circular A-16, did not augur well for government publication. Unlike the relatively static disciplines of the humanities, the dynamic fields of science and technology engendered new disciplines built upon emerging bodies of literature not generally attached to “long-standing” series.

Thus, the science agencies and their university collaborators, as represented in the ICSRD, demonstrated little regard for traditional governmental controls. They preferred to develop policies of their own, grounded not in administrative law and legislative statutes but in what they considered a higher authority, the mores of the scientific community. Don Price observed a particularly strong propensity to flout democratic practices among agencies that operated highly advanced programs [44]. Price further noted that in developing policy scientists “are likely to be influenced by the opinion of
their fellow scientists, especially as it may develop through many advisory networks that now link public with private interest” [45].

John Dewey addressed the challenges that scientists brought to bear on traditional democratic methods. As the United States became increasingly urban, and as society increasingly associated technical advancement with material well being, compelling issues of public policy, such as sanitation, public health, and transportation, increasingly became, as Dewey described them, “technical matters…they are to be settled by inquiry into facts; and as the inquiry can be carried on only by those especially equipped, so the results of inquiry can be utilized only by trained technicians. What has counting heads, decision by majority and the whole apparatus of traditional government to do with such things” [46]. When the directing centers of society lie beyond the understanding of the average citizen, Professor Kenneth Prewitt asserts, “public affairs cease to be public and thus slip out from under lay control” [47]. Senator E. L. Bartlett (Alaska-D) warned of “faceless technocrats in long, white coats…making decisions today which rightfully and by law should be made by the Congress” [48]. Science had wrought changes in the political process, making it less public and participatory and more private. At the same time it moved government documents from the public to the private domain, perceived no longer as a national resource but as private property.

**OPPONENTS**

Senator Harley Kilgore (West Virginia-D) challenged Bush’s penchant for awarding contracts to the larger scientific community. Kilgore believed that this practice
removed federal science policy from the instruments of political accountability and culminated in the wholesale transfer of public property to private and consolidated interests [49]. The decidedly uneven way in which the OSRD had expended funds tended to support Kilgore’s criticisms. The OSRD distributed 90 percent of its research funds to only eight institutions, 35 percent to MIT alone. Of the publicly funded war-related research that resulted in patentable inventions, the OSRD and the military, in more than 90 percent of all such contracts, granted ownership not to the public but to the contractor [50].

Maury Maverick joined Kilgore in trying to mitigate the heavy influence that the private sector exerted on federal science policy. Maverick developed an antipathy for the ideology of elitist science, which drew strength from the dominant political culture that favored limited government and private enterprise, and which made scientists not only on tap but also on top of the federal scientific establishment. He particularly disliked industrial contractors who, in an effort to gain competitive advantages, suppressed the publication of publicly funded research. Before Kilgore’s Committee on War Mobilization, Maverick’s ire spilled over:

I get a little tired of these hired hands of the monopolies and some of the professors, some of these bulldozing scientists…I get tired of their superior attitude. Their superior attitude at least becomes obnoxious to me if not to other people…the moral character of politicians is just as high as the moral character of the American scientist I’m sure that the office holder has been, and is more conscious of the public welfare than many scientists are. Indeed, our Presidents, from George Washington down, have not hidden from view any scientific truth or
political truths that might be beneficial to the public. Have the great scientists who have worked for monopolies done the same: the *Congressional Record* is public. Let the scientists make certain that the scientific record can be the same [51].

The idea that politicians had achieved moral parity with scientists (or with any other occupational group), as Maverick asserted, may have been difficult for the public or even Congress to accept. The public had not associated scientists, as they had politicians, with “big business, shabby practices, sharp tricks, unpopular court decisions, and unsettled convictions” [52]. Compared with these shopworn images of politicians, scientists, according to Robert Wood, offered “the welcome contrast of prescient men concerned only explaining and using the powers of nature” [53].

Furthermore, Maverick failed to recognize that the *Congressional Record* and federal scientific publication shared nothing in common, apart from their being publicly funded. The political theatre staged on the floors of Congress and revealed to the public in the *Congressional Record* is largely comprehensible to the general citizen. Quite unlike most congressional documents, which are intended for and understandable to the ordinary citizen, federal scientific publications generally are earmarked for specialized audiences working in narrow technical fields. Political truths, which can be arrived at democratically by counting heads, are quite unlike scientific truths that tend not to be counted but weighed. Thus, scientific publication, which is aimed only at those with special skills, is essentially undemocratic, much like the processes of science itself.

The thrust of Maverick’s remarks, however, remains indisputable. Non-governmental publishers of scientific journals arrogated the intellectual property of an
ungovernable federal scientific establishment, while the federal scientific establishment assisted them in the process.

**Harvey Kilgore and the National Science Foundation**

The extent to which private interests laid claim to publicly financed research alarmed Senator Harvey Kilgore. To arrest this development, Kilgore offered the first proposed National Science Foundation (NSF). As Kilgore conceived it, the NSF would establish the government’s claim to publicly funded inventions. Even more significantly, Kilgore’s NSF would have made government’s scientific enterprise amenable to political controls and public accountability. It would have existed not as a foundation but as a regular part of the executive branch; no advisory panel of academic scientists but the President of the United States would have exercised direct control over it. Furthermore, Kilgore’s proposed NSF would have orchestrated government’s publishing activities in the basic sciences.

Kilgore’s efforts to assert government’s patent rights did not extend to copyright. Kilgore would have permitted the NSF director to “utilize private publishing facilities whenever he deemed necessary,” thereby exempting his proposed coordinating agency from the printing statutes. In favoring this exemption, Kilgore invoked what had become the mantra of the OSRD and its private sector collaborators, “the quickest and widest circulation of scientific information may be obtained by using private facilities already established” [54].
From 1942 Kilgore introduced and sponsored many bills aimed at creating a National Science Foundation. A poised scientific community repelled his efforts. Perceiving all government-directed programs as a threat, the scientific community vigorously opposed Kilgore’s initiative, as did many business organizations. The National Association of Manufactures denounced it as a “comprehensive plan for the most ambitious project to socialize industrial research and technical resources that has ever been proposed in the U.S. Congress” [55]. The OSRD refused to cooperate with Kilgore and his subcommittee on War Mobilization. Having examined the legislative authority of Kilgore’s Subcommittee and finding that it did not extend to post-war research policy, OSRD staff advised the military scientific agencies not to reveal their postwar research plans to the Subcommittee on War Mobilization. [56].

Personality further undermined Kilgore’s efforts. FDR did not particularly like him, despite their ideological compatibility, while Vannevar Bush, the unbridled elitist, had managed to win Roosevelt’s respect, which grew with each OSRD success [57]. Roosevelt asked Bush to develop his own competing vision of postwar research. Demonstrating his preference for Bush’s views, Roosevelt even tried to schedule hearings on science policy to coincide with the issuance of Bush’s report [58].

In his 1946 report, *Science, the Endless Frontier*, Bush, like Kilgore, favored a coordinating agency but proposed relegating it to “providing encouragement and financial aid, without at the same time introducing centralized control of research” [59]. The agency that Bush envisioned would serve primarily as a bank. Following his predilection to remove science from political control, Bush recommended that a board composed of 24 prominent scientists, and not the President, appoint the foundation’s
director. The director answered to the board; the board answered to nobody. Bush’s scheme, according to an OSRD staff aide, represented “a new social invention of government sanction and support but professional guidance and administration” [60]. Senator Warren Magnuson (Washington-D) shepherded Bush’s scheme through both houses of Congress in 1947. Unlike Roosevelt, President Truman disliked Vannevar Bush. He liked even less this proposal aimed at giving private citizens, largely unaccountable, the authority to expend huge public sums. Truman promptly vetoed the measure [61].

Not until 1950 did Congress finally establish a National Science Foundation. Though its originating statute provided for some measure of political accountability and gave the NSF the kind of coordinating authority that Kilgore had favored, it really did not matter. The first NSF Director Alan Waterman, who embraced the elitist ideology of Bush, preferred the banking function that Bush had advocated and refused to assert the NSF as a central coordinating agency [62]. Composed mostly of scientists working in prominent academic and corporate institutions, to whom Waterman deferred on all major issues, the NSF’s first board decided at its inaugural meeting that “the principle function of the Foundation was to advance basic scientific research and training, and that alone” [63]. Waterman chose not only to ignore legislative directives, such as those contained in the NSF’s originating statute, but also BOB directives, such as Executive Order 10521, that directed him to assert the NSF as coordinator and evaluator of agency science programs [64].

Waterman’s weak leadership greatly appealed to the Office of Naval Research (ONR), the National Institutes of Health (NIH), the Atomic Energy Commission (AEC),
and other science agencies that had exploited Congress’s dilatoriness in establishing the NSF to build research empires that obscured the efforts of the NSF. Thus, the absence of initiative combined with the kind of principality building that Humphrey decried to render Kilgore’s proposed giant, the NSF, a “puny partner” in the federal scientific establishment [65].

**THE CONTRACTUAL SYSTEM SOLIDIFIED**

Following the OSRD model, science agencies in the 1950s often abandoned developing an in-house capacity to conduct research in favor of relying heavily on the contractual system. For applied research projects, they tended to award contracts to industrial contractors; for projects involving basic research, they awarded contracts to universities [66]. The following figures demonstrate federal reliance on academic and industrial technical experts. In 1961-62, the government supplied 57 percent of all money expended on basic research but used only 16 percent of it internally within the government. For the same period, the government provided 65 percent of all money expended in the United States on applied research but devoted only 14 percent of it to governmental use [67]. Furthermore, in 1965, non-government contractors received 80 percent of the 15 billion dollars that the federal government expended on research and development (R&D) [68].

While socially oriented departments, such as Commerce and Labor, performed as much as 90 percent of their research internally, such stars in the federal scientific constellation as the National Aeronautic and Space Administration (NASA) expended
only 10 percent of its research budget on in-house investigations [69]. The Atomic
Energy Commission (AEC) supported a program in which “nine-tenths of the employees
worked for private corporations” [70]. Professor David Shea Teeple contended that in the
AEC no federal employee had ever conducted a research project, nor produced one gram
of fissionable material, nor fabricated even part of a weapon. According to Teeple, the
AEC “was from its inception, and is today (1955), a private enterprise project” [71].

Only days after its establishment the Office of Naval Research (ONR) already had
entered into 177 contracts with 81 universities and industrial laboratories valued at $24
million dollars. Moreover, it supported 602 academic research projects, involving more
than 4,000 scientists, whom the ONR permitted “virtually complete freedom in the
publication of their research” [72]. In 1948, the ONR subsidized 80 percent of the
projects reported in the proceedings of the American Physical Society [73].

Operating a budget of 850 million dollars in 1965, the NIH employed 2,500
scientists in its own laboratories; but either under grant or contract the NIH subsidized the
research of an additional 25,000 scientists who conducted research in universities,
medical schools, hospitals, research institutions, and state agencies [74].

In the late 1950s the Air Force chose not to develop its own capacity to conduct
research but to entrust the development of its missile system to a contract center, Space
Technology Laboratories, which later became the Aerospace Corporation [75]. As a
whole, the Department of Defense (DOD) expended 75 percent of its research budget on
non-governmental contractors. The government, particularly the science agencies, in the
words of journalist Richard Rovere, “purchased ideas, analyses, and specialized
knowledge pretty much as they might buy office furniture, typewriters or food for the
departmental cafeteria” [76]. What did government institutions gain by entrusting publicly funded activities to professional groups? Why not hire additional technical experts as federal employees and conduct more research intramurally?

Constrained by inferior civil service pay-scales, the executive departments simply could not compete with the private sector for the best scientific talent. While Congress bristled at requests for additional civil servants, it often acquiesced to requests for additional contractor personnel, even though, as Arthur Miller noted, “the latter cost more in salary and perquisites” [77]. Furthermore, as the field of government publication has so abundantly borne out, public administration, privately administered, receives less scrutiny not only from Congress but also from the Courts [78].

Contractual administration also served the political purposes of Congress, as well as the gospel of the negative state. By keeping government smaller with respect to civil service employment, Congress kept faith with the prevailing political culture. Furthermore, the contractual method inhibited the rise of a career bureaucracy and the development of an accompanying body of administrative doctrine that could have resulted in executive hegemony [79].

Copyright

As with their inability to inhibit the development of agency printing plants, the printing statutes proved no match for the publishing practices that the contractual system solidified. Indeed, the printing statutes failed to arrest any serious transgression in government publishing. There remained only one possible barrier to preclude publicly
financed works from becoming the intellectual property of non-governmental publishers, Title 17 of the Copyright Code.

In the late nineteenth century, near the dawn of the Progressive Era, the American business creed and the gospel of the negative state gave way (at least temporarily) to notions of affirmative government. Copyright law began to take shape in what became a rather benign period for public enterprise. In *Banks v. Manchester* the Supreme Court decided that neither judges, legislators, nor government employees can have a “pecuniary interest or proprietorship, as against the public at large, in the fruits of their labors” [80].

A few years later Congress tied copyright provisions to the printing statutes (which by association may have condemned them to a permanent state of ineffectuality). The Printing Act of 1895 (28 Stat 601) prohibited copyrighting U.S. government documents, and it also centralized all printing and distributing functions in the GPO [81]. The Senate report associated with this statute declared that publicly financed authors were entitled only to their salaries, “frankly and properly appropriated for that purpose,” and that “the resulting book or other publication should be always at the free use of the people” [82].

The Copyright Law of 1909 further demonstrated congressional intent to prohibit the practices of suppressing and profiting from public documents. Section seven stated unequivocally “that no copyright shall subsist in any publication of the U.S. government, or any reprint, in whole, or in part thereof [83]. Derived from the “work made for hire” concept, the courts had even developed a body of precedent that made commissioned work the intellectual property not of the contractor but of the contracting agency [84].
During this period the courts and Congress made government publication a decidedly public enterprise.

Yet the executive agencies were no more fettered by copyright laws than by printing statutes. After all, their originating statutes gave many of them extraordinary flexibility regarding the mode of publication, while their private sector collaborators, various advisory panels, and BOB directives deflected them from government publication.

Despite the judicial doctrine surrounding the “work made for hire” concept, the standard agency practice was to cede publication rights to the contractor, even when conceding very little else. Attorney Harry Rosenfield spoke of a client who had negotiated a lucrative contract to prepare a report for the Department of Health, Education, and Welfare (HEW). In nearly all aspects, the contract had so bridled Rosenfield’s client that he could not, according to Rosenfield, “blow his nose without consulting the bureau involved” [85]. For all its constraints, the contract permitted the client to copyright the report. Rosenfield considered this “disgraceful” [86].

What Rosenfield and professor of law Melville Nimmer found particularly shameful was that even contract centers, think tanks such as the Rand Corporation and the Aerospace Corporation, which received substantial federal subsidies and which existed only to do business with the federal government, sought and received copyright protection for their publicly financed writings [87]. That such creatures of the federal government received copyright and patent protection prompted the following from Horace Gray, professor of economics: “we socialize the financing of research, but permit private monopolization of its output the end product of this system is an institutional
monstrosity--a bastard form of socialism crossbred with a bastard form of capitalism” [88].

In the early 1960s, the House Committee on the Judiciary held hearings and issued reports preparatory to revising the Copyright Code. It scarcely noticed the issue of contractors holding copyright to publicly financed works. Rosenfield considered this neglect “something of a mockery of dealing with this problem, in view of the tremendous proportion of government materials that are being prepared in that particular way” [89].

Apart from a few notable exceptions, Congress made no effort to contend for the intellectual property for which it paid, even though taxpayer subsidized commissioned work conveyed information by and about the government no less effectively than the work of government employees [90]. For their part executive agencies wished to palliate the best scientific talent, which they could only rent. A 1962 Presidential task force reported that agencies failed to assert publication rights for fear of “risking contractor disfavor” [91]. Yet agencies were not simply pandering to their private sector collaborators. Commercial publishers had convinced most agencies of the superiority of their services. Few agencies would have challenged Association of American University Presses representative Mark Carroll who declared, “experience has shown that the government itself is an ineffective publisher; it can release a book or pamphlet, but it cannot advertise, sell, and promote it” [92].

In 1966, McGraw Hill executive Curtis Benjamin contended that such critics as Rosenfield failed to acknowledge that the art of publishing entailed considerably more than the limited services that GPO provided. Unlike the GPO, commercial publishers brought to bear the kind of editorial expertise capable of rendering “a literary silk purse
from sow’s ears,” according to Benjamin [93]. Furthermore, their superior sales force promoted books through carefully selected media, thus ensuring the widest distribution, and that the specially interested public paid no more than a fair market price.

The majority of publicly financed books, Benjamin contended, were of such specialized and transitory value, “that only one edition could be published with profit” [94]. If copyright protection were unavailable for such works, and if every publisher were free to publish such works, Benjamin continued, “no one actually would” [95]. The absence of copyright protection would reduce the choices to two, either a GPO printing or nothing, and “if a GPO printing is forced, public funds are needlessly spent” [96].

To demonstrate the superiority of commercial publishers, Benjamin held up an AEC funded manuscript, *Atomic Energy for Military Purposes*, which in 1946 Princeton University Press published and which the GPO simultaneously printed [97]. As of 1965, the GPO edition was out of print, while the Princeton edition was “still in print and in steady demand at $4.00 a copy” [98]. According to Benjamin, the commercial success of this book prompted the AEC to engage the services of private publishers for “many of its most important technical works” [99].

Of the few government officials to take up the cause of government publication and challenge the assertions of the commercial publishing industry, Senator Russell Long (Louisiana-D), son of the legendary Huey Long, exerted the greatest force. Like Maverick and his close friend and Louisiana State University classmate Hubert Humphrey, Long sought to make federal scientific publication freely available to the public. As Long’s biographer Russell Mann has noted, Long and Humphrey “shared an
abiding, almost quixotic sympathy for lost causes and underdogs” [100]. There were few causes more deprived of official support than government publication.

Long branded publisher arguments as “self-serving misrepresentations” [101]. If markets for publicly financed manuscripts were, indeed, as exceedingly small as commercial publishers contended, would not, Long asked, “the very fact of a limited market protect the initial publisher of government research” [102]? On the other hand, Long mused, if the market for government documents were as limited as detractors contended, then how had at least five publishers successfully reprinted the *Warren Report* and the *Surgeon General’s Report on Smoking* [103]?

If, as commercial publishers repeatedly charged and clung to as the chief justification for using their services, the GPO was incapable of promoting and distributing widely, then, Long suggested, commercial publishers simply had no reason to fear government competition. If this alleged GPO inability were untrue, then Long insisted that “the private copyrighting of government publications was completely unjustified” [104]. Of this purported GPO failing, Long presented such evidence to the contrary as *Infant Care* and *Prenatal Care*, two GPO issued publications that, taken together, sold over 20 million copies [105]. Furthermore, Public Printer James Harrison reported that newspapers and periodicals, including *U.S. News and World Report*, reviewed GPO publications “to a greater extent than ever before” [106].

As for cost, Long contended that commercial publication ultimately proved not less but more burdensome to the taxpayer. He reported that the Superintendent of Documents frequently operated a budget surplus that resulted in many self-supported publications [107]. Furthermore, Milton B. Schnapper, a tireless crusader opposed to the
practice of copyrighting government publications, pointed out that the chief purchasers of such works were schools, libraries, even government agencies themselves, as well as other public institutions dependent on public appropriations [108].

For Russell Long, the government practice of financing research on the one hand, and protecting private profit through copyright on the other, was “tantamount to saying that the government should finance building highways and then permit private companies to charge tolls” [109].

Though most government departments ignored Long’s entreaties, one non-scientific agency responded in dramatic fashion. On July 28, 1965 Secretary of Education Francis Keppel issued the following policy statement:

Material produced as a result of any research activity undertaken with any financial assistance through contract with or project grant from the office of education will be placed in the public domain. Materials so released will be available to conventional outlets of the private sector for their use [110].

By including grants in this restrictive policy, the Department of Education went beyond what even the strident critics had proposed. While Nimmer favored prohibiting contract centers from receiving copyright protection, he opposed denying this right to “private scholars...who want to make serious studies but who want to be able to own and command the rights in what they do” [111]. This bold policy survived only a few years. By 1971, the Department of Education had reverted to standard agency practices [112].

In the 1960s Congress, with the help of various interest groups, took up the thorny issue of defining “government publication” as it related to copyright. On one side stood newspaper and library associations, in addition to Senator Long, Schnapper, and Rosenfield [113]. They favored a definition broad enough to include not only commissioned work, but also work sponsored by grants. For the American Newspaper
Publishers Association, a government publication constituted “any material where a substantial part thereof is created by government employees or with government funds” [114].

The other side drew heavily from representatives of the book publishing industry, particularly Dan Lacy and Mark Carroll [115]. They joined forces with such governmental agencies as the Air Force, the AEC, and the U.S. Information Agency [116]. This faction favored government publication narrowly defined, to sustain the permissive practices of the past. They defined government publication as “work prepared by a government officer or employee as part of his official duties” [117].

This definition accomplished two purposes. As neither officers nor employees of the U.S. government prepared contractor reports, this definition removed commissioned work altogether from the sphere of government publication [118]. Furthermore, and perhaps most significantly, it also removed a large percentage of works prepared by federal employees. In effect, this definition circumscribed government publication to works of the few federal employees working mostly in information offices, hired expressly to write press releases and other such promotional materials [119]. Schnapper and Rosenfield pointed out that nearly all federally employed technical experts generated “an enormous amount of writing even though this wasn’t spelled out in their job sheets” [120].

The executive agencies and their private sector collaborators prevailed. Congress eventually included their narrow definition of government publication in the legislative history of the 1976 Copyright Act, thereby finally legitimizing decades of questionable publishing practices. [121]. So what became of the more substantial documents that
constituted the heart of agency publication, works authored by federal researchers who were not hired specifically to write but whose investigations invariably culminated in publication? Their fate continued to rest upon the unfettered discretion of issuing agencies and private sector collaborators, whose activities for the first time received the sanction of the copyright statutes.

Notes


19. Even 30 years after it ceased to function, the Creel Committee continued to attach a stigma to government documents. In 1949 former administrator in the Editorial Branch of the Office of Naval Research Marion Jurgens noted, “publication in the government, by tradition, has been viewed rather dimly because Congress frowns on publicity by government agencies. Although scientific publication is a necessary part of research and a far cry from publicity, the bad connotation of publishing by the government persists.” Marion Jurgens, Research Publications: A Federal Responsibility,” Science 110 (August 26, 1949), 209.


24. Burchard, 16.


30. “Memorandum of Agreement,” (McGraw Hill and MIT), undated, Box 13, C78, Record Group 227, National Archives II, College Park, Maryland.

31. Thomas Creamer, “Memorandum re Plans for Publication of Radiation Lab’s Technical Series,” Box 13, C78, Record Group 227, National Archives II, College Park, Maryland.


33. Burchard to Cleveland Norcross, Acting Executive Secretary, OSRD, 22 January 1946, Box 3, Monographs, Record Group 227, National Archives II, College Park, Maryland.

34. Burchard to Norcross, 22 January 1946.

35. Burchard to G. P. Putnam Sons, 2 October 1945, Box No. 1, Chronology, Record Group 227, National Archives II, College Park, Maryland.

36. Burchard to Vannevar Bush, 25 October 1945, Box No. 1, Chronology, Record Group 227, National Archives II, College Park, Maryland.


44. Price, 46.


56. Klienman, 92.
57. Klienman, 97.
58. Klienman, 97.
59. Klienman, 95.
67. Greenberg, 10.
75. Barber, 54.
77. Miller, 977.
78. Miller, 979.

82. *Investigation Relating To Messages and Papers of the Presidents*, Senate Report 56-1473, 2.


86. *Copyright Law Revision, Pt. 2: Discussion and Comments*, 203.

87. *Copyright Law Revision, Pt. 2: Discussion and Comments*, 102, 104.


115. Copyright Law Revision, Pt. 2: Hearings Before Subcommittee No. 3, 114, 1215.


