Fallacy and Myth in 1980: Bayh-Dole, Public Capital, and the Forgotten State

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Introduction:

In December 1979, Steve Jobs and Apple engineers visited Xerox's Palo Alto Research Center (PARC), where they saw the Alto's graphical user interface. The visit illustrated the potential of a new approach to personal computing. In an office in California, one could glimpse a personal computing revolution waiting to unfold.[1]

Beyond Xerox PARC, the United States was grappling with what President Jimmy Carter termed a "crisis of confidence."[2] In a televised address during that July, Carter lamented that "the erosion of our confidence in the future is threatening to destroy the social and the political fabric of America."[3] A mood of malaise gripped the nation, fueling skepticism about big government. Pundits and politicians openly dismissed the federal government as bloated and ineffectual, insisting that innovation was best left to the scrappy entrepreneurs of the private sector. Ironically, at that very moment, government-supported research and institutional labs were producing some of the era's most radical breakthroughs in tech. Xerox PARC's innovations, from the GUI and mouse to Ethernet networking, did not emerge solely from the minds of private sector trailblazers. Instead, they germinated in Xerox's corporate-funded research lab, drawing on federally supported research and the intellectual seed capital of federal programs. Many of PARC's leading scientists were veterans of the Advanced Research Projects Agency (ARPA), the Pentagon agency that funded pioneering work in interactive computing and networking during the 1960s. The Alto's interface drew direct inspiration from earlier experiments at Douglas Engelbart's ARPA-funded lab, where the first computer mouse and windowed software were

[1] Computer History Museum, "Xerox PARC," Revolution: The First 2000 Years of Computing, accessed October 12, 2026, https://www.computerhistory.org/revolution/input-output/14/348.
[2] Jimmy Carter, "Crisis of Confidence" speech, televised address, July 15, 1979.
[3] Jimmy Carter, "Crisis of Confidence," July 15, 1979.

unveiled in 1968. The paradox is self-evident. Federally funded innovation flourished in Palo Alto even as the public proclaimed that the state was cumbersome and too inefficient to innovate.

For all their ingenuity, however, Xerox's management struggled to grasp and commercialize the products of PARC. The Alto's GUI was light-years ahead of its time, and although it would go on to shape the trajectory of technology itself, many thought it was impractical to commercialize. The executives of Xerox, already preoccupied with defending their lucrative copier business, were reluctant to invest in personal computing. PARC researchers had, by the late 1970s, already built the ubiquitous computer products of today. Still, Xerox failed to commercialize these breakthroughs, ultimately squandering its technological lead.[4] The company's belated 1981 attempt to monetize PARC's work—the Xerox Star—was a $16,000 GUI workstation that was too costly and too late to the scene to make an impact. Instead, the task of bringing PARC's ideas to the world fell to private sector entrepreneurs. In December 1979, Steve Jobs and Apple engineers visited PARC to examine the Alto's graphical interface. The visit reinforced graphical-interface work already underway at Apple. In the early 1980s, Apple incorporated graphical interfaces into its Lisa and Macintosh computers, helping to bring this approach to a wider audience. The story of Xerox PARC transcends Silicon Valley lore. The contrast was undeniably stark; a government-influenced corporate lab had developed the future of computing, and yet a private startup commercialized and globalized it. Such narratives of technocratic geniuses and garage start-ups triumphing over the government and corporate labs may be compelling, but they are incomplete.

PARC's history offers a more nuanced understanding of how innovation materialized. Alan Kay would never go on to achieve the global acclaim and commercial success of Steve

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[4] Michael Hiltzik, *Dealers of Lightning: Xerox PARC and the Dawn of the Computer Age* (New York: HarperCollins, 1999), 18.

Jobs, but he played a paramount role in the advent of modern technology. The revolutionary technologies that fueled Silicon Valley were often born of risky public investment and institutional support before they were refined by the private entrepreneurs. As economist Mariana Mazzucato argues, the state has long played an uncredited role in financing and incubating transformative innovation, from the internet and semiconductors to personal computing.[5] The late 1970s milieu of PARC – a federally inspired lab of creativity amid an era of governmental disillusionment – encapsulates this hidden dynamic.

The story of PARC in 1979 is not an anomaly. As this paper will go on to establish, public capital played a crucial role in developing the foundational technologies of modernity. Government agencies and large-scale research programs provided the fertile ground in which paradigm-shifting ideas took root, even as popular sentiment consigned the state to the sidelines. Celebrated entrepreneurs of the personal computer revolution built upon a foundation that the state – and its partners – had already established. Ultimately, in this paper I will illustrate how, and why, fallacious narratives around 1970s–1980s innovation became so ubiquitous. While scholarship surrounding Silicon Valley myths is extensive, the scale and impact of the Bayh-Dole Act of 1980 have not received significant historical analysis. In the following pages, this essay aims to establish the empirical efficacy of government initiatives after World War II, as well as the catalysts and major forces behind the dissemination of these technological fallacies.

While the Bayh-Dole Act of 1980 is lionized as the catalyst for American innovation, it relies on a neoliberal fallacy that obscures the true engine of technological progress: the "entrepreneurial state" established by Vannevar Bush. Bush, who headed the U.S. Office of Scientific Research and Development, believed in the Endless Frontier of Science and

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[5] Mariana Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (London: Anthem Press, 2013), 81–94.

popularized the notion that innovation was necessary for survival, at all costs.[6] The Act's aggrandizement was full of falsities; a juxtaposition of these two histories reveals that geopolitical context and popular sentiment – rather than economic efficiency – dictated the surge of Bayh-Dole neoliberalism. Bayh-Dole did not emerge in a vacuum. Instead, it arose from the Cold War science regime, a collapse in public trust in the 1970s, and the ideological ascent of neoliberalism.

To understand how Bayh-Dole became symbolically inflated, historians must first explain the ideological foundations it rejected. This requires tracing the Cold War model of state-driven innovation, the crisis that eroded trust in government, and the neoliberal reconstruction of innovation mythologies. Only then can Bayh-Dole be evaluated as a historical product, rather than accepted as a triumphant origin story.

Cold War Science and Public Capital

Following the consequential twelve-year term of Franklin Roosevelt – which spanned the Great Depression and most of World War II — President Harry S. Truman was faced with a decision of momentous importance: to use the first atomic bomb in history. Intelligence studies indicate that it was "almost a certainty that the Japanese would have capitulated upon the entry of Russia into the war," which Stalin had offered to Truman.[7] Despite this, the Truman administration, and American media for decades to follow, often portrayed the bomb as a necessary means through which to save the lives of American soldiers.[8] Further scholarship revealed that in the summer of 1945 President Truman and his top advisers were aware that "use

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[6] Vannevar Bush, *Science—The Endless Frontier: A Report to the President on a Program for Postwar Scientific Research* (Washington, DC: U.S. Government Printing Office, 1945), 55.
[7] Alperovitz and Messer, "Correspondence: Marshall, Truman, and the Decision to Drop the Bomb," 204–214.
[8] Gar Alperovitz and Robert L. Messer, "Correspondence: Marshall, Truman, and the Decision to Drop the Bomb," International Security 16, no. 3 (Winter 1991–1992): 204–214.

of the atomic bomb was no longer necessary."[9] The common supposition is that Truman's choice — which ushered in the Cold War and an era of rapid nuclear proliferation — was mainly to intimidate the Soviet Union. This explanation, while perhaps accurate in part, fails to take into account the ideology of Vannevar Bush that would come to characterize American progress. According to Bush, to maintain a position of world leadership, "the flow of new scientific knowledge must be both continuous and substantial."[10] His rationale was fair. Bush believed that practical science created more innovation and less of the drudgery of manual work that had burdened the masses of history. His perspective set the stage for rapid growth in public capital allocations, which characterized post-war America. As the Soviet Union launched the first artificial satellite in 1957, Sputnik I, many Americans worried that "the country was losing technological leadership to its cold war adversary."[11] President Dwight Eisenhower's administration created the Advanced Research Projects Agency (ARPA) in 1958 as a response; it was renamed the Defense Advanced Research Projects Agency (DARPA) in 1972. Initially, DARPA focused on space, missile defense, and missile detection technologies.[12] Eventually, however, DARPA remodeled itself to "invent and commercialize the Internet within the US Department of Defense."[13] DARPA, alongside agencies like the Department of Defense (DOD) and the Small Business Administration, went on to fund the research and development that created many of the main technological innovations of the 20th century. By supporting research at universities like Stanford that helped lay the foundations for later work at corporate labs like Xerox PARC, the government spurred the commercialization of the Internet, the graphical user

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[9] Alperovitz and Messer, "Correspondence: Marshall, Truman, and the Decision to Drop the Bomb," 204–214.
[10] Vannevar Bush, Science—The Endless Frontier: A Report to the President on a Program for Postwar Scientific Research (Washington, DC: U.S. Government Printing Office, 1945), 5.
[11] William B. Bonvillian, Richard Van Atta, and Patrick Windham, eds., *The DARPA Model for Transformative Technologies: Perspectives on the U.S. Defense Advanced Research Projects Agency* (Cambridge, UK: Open Book Publishers, 2019), 3.
[12] Mazzucato, *The Entrepreneurial State,* 30.
[13] Mazzucato, *The Entrepreneurial State,* 30.

interface, and ubiquitous computers. In 1960, the United States accounted for 69% of global research and development (R&D) spending. The federal government contributed "approximately twice as much R&D as U.S. business."[14] Not only was public sector capital allocation high, the pace of progress was rapid. The ARPANET, which expanded into the "network of networks known today as the internet," was thus launched in 1969.[15] Companies like Intel used DARPA and DOD research to build early semiconductors and microprocessors. In 1955, IBM became one of the first manufacturers to market a business computer.[16] Xerox PARC brought the world the very products that commercialized the computer: a stand-alone PC equipped with a graphics display screen and mouse, the laser printer, Ethernet networking, and the "user interface that Apple later made famous with the Macintosh — the one with windows, icons, menus, scroll bars and all the rest."[17] Because private firms carry a fiduciary duty to generate returns, public capital was far more effective: it could afford to conduct research and development that was high-risk and high-reward. Initiatives like the ARPANET had no visible path to revenue when they began, and the massive infrastructure they required could only have been undertaken by the federal government. While private companies for decades to come would generate inordinate wealth from such technologies, it was the exploratory research of the government that created the environment for technology to ascend so rapidly. In short, public sector funding, along with Bush's Endless Frontier, was foundational to the development of American technological infrastructure. And, despite the efficacy of government-funded research, it was not widely recognized as such in 1980. Instead, the political climate villainized and rejected public sector capital as a vehicle of change.

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[14] Congressional Research Service, *The Global Research and Development Landscape and Implications for the Department of Defense*, CRS Report R45403 (Washington, DC: CRS, 2021), n.p.
[15] Waldrop, M. Mitchell. *"The Origins of Personal Computing."* Scientific American 285, no. 6 (2001): 84–91.
[16] Waldrop, *Origins of Personal Computing,* 84–91.
[17] Waldrop, *Origins of Personal Computing,* 84–91.

Crisis of Confidence: Vietnam, the Soviet Union, and the Collapse of Trust

Despite the empirical success of government-funded research, the 1970s brought a collapse in public trust that reconfigured the intellectual climate of the United States. The broader political context of the late 1970s reveals a denigration of government that enveloped all of its functions, not just science and innovation policy. A series of malignant events — economic malaise under President Carter, the loss of onshore manufacturing, President Nixon's Watergate scandal, and the contentious Vietnam War — eroded public confidence in federal institutions. Vietnam was perhaps the biggest cause of pessimism in the country.[18] With the death of young Americans, ambiguous moral grounds for intervention, and Pentagon-issued reports that later revealed falsities in the data upon which the war was initially waged, the conflict was immensely unpopular. Even journalist Walter Cronkite, a renowned public figure who embodied journalistic integrity, violated traditional impartiality out of exasperation with the war. For a disillusioned American public filled with "outright opposition," the war caused extremely low "levels of confidence in the perpetrator of the war, the national government."[19] Vietnam did not simply erode trust as the Watergate scandal did; it fundamentally changed the lens through which Americans viewed their nation's role in the world — a stark contrast to the savior rhetoric of World War II. By the peak of the war, it was considered "commonplace" for Americans to distrust the government. A Pew Research Center study indicated that during the 1970s, "trust had fallen by more than half to 36%," and by the year 1980, "only about a quarter of Americans felt that they could trust the government at least most of the time."[20] In addition to the events of Vietnam, the late 1970s and early 1980s marked a period of significant stagnation for the United

[18]Arthur H. Miller, "The Impact of Vietnam on Trust in Government," *Journal of Social Issues* 31, no. 4 (1975): 41–65.
[19] Miller, "The Impact of Vietnam on Trust in Government," 41–65.
[20] Pew Research Center, "Public Trust in Government: 1958–2019," Pew Research Center, 1.

States. Jimmy Carter, who preceded Reagan as president, described a "crisis of confidence" amid inflation and energy shortages.[21] The Soviet Union was their direct adversary in the Cold War and a prime example of a state-run economy that seemed to be flailing. Thus, the U.S. ostensibly lost even more trust in government as they feared that further state intervention would bring the problems of the Soviet Union to their domestic homefront. This collapse in confidence is essential to understanding Bayh-Dole. Whereas the staunch ideology of Bush was popular after the heroic victory in World War II, the inversion of that ideology — the notion that government was inefficient, corrupt, and obstructive — surged after what was seen by many as an immoral and mismanaged war. The credibility gap of Vietnam, coupled with economic stagnation and the direct Soviet comparison, made the historically successful model of state-led innovation politically untenable by 1980. The U.S. economy was sputtering, and a Keynesian model that advocated for boosting government spending to spur growth had failed.[22] The Vietnam War — itself an ideological battle against communism — was extremely costly. This confluence of monetary dissatisfaction and ethical disgust with U.S. interventionism made a neoliberal, business-first outlook enticing. Before Bayh-Dole was even conceived, its intellectual foundations were already established. In such conditions, public capital became suspect and insidious, and federal research was no longer seen as a catalyst but as a bottleneck to progress. The entrepreneurial state, in short, was forgotten, and the entrepreneurial myth of private capital emerged.

Neoliberalism, the Entrepreneurial Myth, and the Rejection of the State

Neoliberalism is an ideology that favors free-market capitalism, deregulation, and reduction in government spending in the name of social and economic progress, viewing the

[21] Jimmy Carter, "Crisis of Confidence," 1979.
[22] Jimmy Carter, "Crisis of Confidence," 1979.

state as inefficient relative to the private sector. As stagflation and unemployment plagued the U.S. in the late 20th century, neoliberal political leaders such as Margaret Thatcher in England and Ronald Reagan in the United States glorified entrepreneurs as capitalist heroes.[23] Such marketing was effective. Now, there exists what Jacqueline Best has described as a "widespread narrative" that the early 1980s policies of Reagan and Thatcher caused a "decisive and successful shift away from the postwar era."[24] By this time, the postwar era held a distinctly negative connotation, even though the true happenings in the country were seldom stated directly. The neoliberal contingent that swept the U.S. viewed support for entrepreneurs primarily in negative terms, more of a nuisance than value-add. Because Bayh-Dole was passed at the genesis of this shift, it gained significant symbolic value in the neoliberal cause. The moral core of neoliberalism — to bring real industry, jobs, and innovation — was ultimately misguided. Yet, Bayh-Dole succeeded not because it accurately described reality, but because it accurately described the most comfortable reality for a disillusioned American public.

The bill asserted that the individual entrepreneur thrived in the absence of government intervention. The proponents of neoliberalism viewed markets as the key to national prosperity; however, such markets could only prosper if they were "free." In this sense, the private sector was set as the arena of the entrepreneur and was pitted directly against the federal state. A policy agenda subsequently emerged in the spirit of "entrepreneurship": lower taxes, decreased social funding, minimal regulation, liberalized financial markets, and diminished antitrust activity.

Bayh–Dole and the Revision of Innovation History

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[23] Vogel, Steven K. "Neoliberal Ideology and the Myth of the Self-Made Entrepreneur." In Entrepreneurialism and Society: New Theoretical Perspectives, edited by Robert N. Eberhart, Michael Lounsbury, and Howard E. Aldrich. Bingley, UK: Emerald Publishing, 2022, 77–99.

[24] Best, Jacqueline. "The Quiet Failures of Early Neoliberalism: From Rational Expectations to Keynesianism in Reverse." *Review of International Studies* 46, no. 5 (2020): 594–612.

While paradoxical considering the historic benefit of government funding, the Bayh-Dole Act catalyzed a marked rejection of public sector technology. Passed in 1980 under Public Law 96-517 — formally the Patent and Trademark Law Amendments Act — the Act upended the structure of federal research in the U.S., enabling small businesses and nonprofit organizations to keep ownership of inventions that were funded by government R&D. Bayh-Dole changed the allocation of rights in federally funded inventions, rather than shifting responsibility for funding R&D onto the private sector.[25] The Act's aim was twofold: first, to increase the rate of technological commercialization from federal R&D, and second, to recast innovation policy around market logics of ownership, competition, and profit.[26]

Its immediate effect was administrative: it standardized patent procedures across agencies. Unlike previous years, when patent rights from federally funded research typically remained with federal agencies under an assortment of policies, Bayh-Dole placed ownership with universities, nonprofits, and small corporations, spurring rapid commercialization.[27] While technically a patent reform bill, the Bayh-Dole Act functioned as the foundation of a new, neoliberal order in technology. Its perceived importance transcended patent law. The Act became a statutory moment in which "public knowledge" was legally transmuted into "private asset," signaling a shift that went far beyond university tech transfer offices.[28] There was an inherent capitalist agenda of competition in the bill; its stated objective, ultimately, was to "encourage maximum participation of small business firms" and "to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise."[29] Bayh–Dole, therefore, in relinquishing federal omnipresence in

[25] U.S. Congress, Bayh–Dole Act, §200 (1980).
[26] U.S. Congress, *Bayh–Dole Act*, §200 (1980).
[27] U.S. Congress, *Bayh–Dole Act*, §200 (1980).
[28] U.S. Congress, *Bayh–Dole Act*, §200 (1980).
[29] U.S. Congress, *Bayh–Dole Act*, §200 (1980).

technology, would "promote commercialization."[30] The Republican Party worried that America's scientific lead was failing because federally funded inventions were trapped in bureaucratic limbo. Senator Bayh himself articulated this anxiety while advocating for the bill, claiming that one of the greatest threats to "economic wellbeing is the recent slump in American innovation and productivity."[31] He argued that government patent policy is "by no means the only cause of this problem, but it is certainly a contributing factor." Over time, Bayh's views reflected a broader shift in public thought in which "competitiveness" became the master value uniting both political parties.[32] Bayh-Dole was, therefore, hailed as a hallmark of American innovation. Scholars declared it the "determining factor in promoting the transfer of technology" to universities and private enterprise.[33] In allowing universities and corporations to patent and commercialize innovations emerging from federally funded initiatives, Bayh-Dole is said to have "unleashed" universities and private firms into mass commercialization. Staunch proponents of the legislation argued that, prior to 1980, inventions were trapped in bureaucratic limbo as the government owned latent patents. To them, this represented the crux of technological inefficiency — the single largest bottleneck to American competitiveness. If the "Vannevar Bush ideology" held that technology was a public trust to be stewarded by the state, the "Bayh-Dole ideology" argued that technology was a dormant asset to be awakened by the free market. While ample scholarship has identified legislative fallacies surrounding Bayh–Dole and public capital in general, a deeper analysis reveals that, strangely, Bayh-Dole is distorted on an economic and cultural level as well. Senator Bayh himself, cautioning that the U.S. was experiencing a downturn in innovation, still classified patent policy as one of a myriad of problems. He did not

[30] U.S. Congress, *Bayh–Dole Act*, §200 (1980).
[31] U.S. Congress. Senate. Senator Bayh of Indiana speaking on the Patent and Trademark Law Amendments Act. 96th Cong., 2nd sess. *Congressional Record* 126, pt. 1 (February 5, 1980): S847–S848.
[32] Senator Bayh of Indiana, *Congressional Record*, 1980.
[33] Bremer, H. W., Allen, J., & Latker, N. J. (2009). The US Bayh–Dole Act and revisionism redux. *Industry and Higher Education*, *23*(5), 355.

portray his Act — by any measure — as a holistic solution to capital allocation. Nonetheless, there exists a shocking amount of legislative puffery in the discourse surrounding the Act. An intensive OECD report asserted that "Bayh-Dole is credited with providing an important market force for creating the entrepreneurial university and for bolstering activity in a key economic sector."[34] Bayh-Dole, therefore, is stripped of its true legislative intent — to improve patent management systems and commercialization incentives — and inflated into a creation myth of American technological supremacy. Despite being widely cited as "central," the verbiage of the bill itself does not match such ambition, and evidence suggests that Bayh-Dole was only one of multiple critical factors underlying the rise of university patenting and licensing activity.[35] And, even without Bayh-Dole, the U.S. university patenting and licensing system was already on a trajectory of rapid growth. The post-1980 surge in academic entrepreneurship was not solely an outcome of the law's passage. Scholarship, therefore, conflates the symbolism of Bayh-Dole with its legislative significance.

Bayh-Dole Economics: Risk, Crowding-In, and the Misreading of Capital

In terms of economic impact, the paramount importance of government research and development in building modern technology reveals yet another set of fallacies surrounding Bayh-Dole. The ideology of the Endless Frontier propelled federal initiatives forward, and programs like DARPA and NASA supported research that helped lay the foundations for the internet, essential semiconductor breakthroughs, and later work at corporate labs such as Xerox PARC on personal computing and Ethernet. Still, there existed a notion that privatization is "the

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[34] "A World of Competitors: Assessing the US High-Tech Advantage and the Process of Globalisation," *Higher Education Management and Policy* 20, no. 2 (2008): 67.
[35] David C. Mowery, Richard R. Nelson, Bhaven N. Sampat, and Arvids A. Ziedonis, *Ivory Tower and Industrial Innovation: University-Industry Technology Transfer Before and After the Bayh-Dole Act* (Stanford, CA: Stanford University Press, 2004).

innovative force, while the State is cast as the inertial one."[36] The state was therefore portrayed as too large and cumbersome to be a dynamic engine of progress. This theory, however, fails to account for basic economic principles of risk. Standard economics justified state spending when the likelihood of quick returns is so far below what the private sector would expect. With projects like creating the internet or the graphical user interface, the risk profile is undoubtedly beyond the scope of private firms with a fiduciary duty to generate steady returns. In this light, public investment was an essential lever for growth, not the impediment that it was alleged to be.

The Efficacy of a Hybrid Model

Further, while scholarship around Bayh-Dole has attempted to bifurcate public and private capital, I believe a hybrid model has proved quite effective. Mariana Mazzucato asserts that capital "de-risks" the private sector, taking on the "greatest areas of risk and uncertainty" at an early stage, and then letting private allocators join once research and development is mature enough to commercialize.[37] The catalytic undertakings that define American innovation — like going to the moon or creating the internet — required much more complexity than non-subsidized free markets could provide. While the U.S. is often hailed for its free markets, it actually "has one of the most interventionist governments when it comes to innovation."[38] Thus, there exists a misconception that the U.S. has always been "small gov, large cap," compared to an inverted Europe. In reality, the American free market was enabled by government initiative. During the Cold War era, economists believed in the crowding-out hypothesis, which asserts that state spending takes the space of private capital. In reality, public capital often crowds in private investment. High-risk R&D initiatives by the federal government create novel markets that don't

[36] Mazzucato, *The Entrepreneurial State,* 21.
[37] Mazzucato, *The Entrepreneurial State,* 19.
[38] Mazzucato, *The Entrepreneurial State,* 18.

necessarily compete with the private sector. The economic value of NASA programs, for example, and the jobs they provided, didn't even exist prior to the government initiatives that funded them — and thus are accretive to private sector growth.

The internet, for example, enabled the growth of thousands of technology companies that provided opportunity for significant follow-on private investment — thus crowding in. Extensive literature indicates that it is the "rate — and direction — of innovation that drives the ability for economies to grow."[39] The paradox here is clear. By 1980, the State had already been a driving force behind U.S. technological leadership — not an obstacle, as purported — and yet economic antagonization of the state surged with Bayh-Dole. Bayh-Dole did formalize and standardize patent procedures, but the innovation ecosystem it operated in was built on decades of public investments. The glorified venture capital myths of Silicon Valley, therefore, rejected the truth: innovation was largely subsidized by the state. While the Bayh-Dole fallacy has been recorded in modern scholarship, it is still ambiguous why, and exactly how, it came to be in 1980.

The advocacy for state capital as an agent of change, however, is not a critique of the private sector. It simply argues for a hybrid, dynamic approach that doesn't bifurcate capital allocation into "good" and "bad." Venture capital, for example, serves a different role across private and public institutions. Public venture capital differs from private venture capital as it is "willing to invest in areas with much higher risk, while providing greater patience and lower expectations of future returns."[40]

Such allocations are paramount because they are willing to take on the risk profile of projects that simply cannot fit private thresholds for security. Still, public and private venture capital projects are compared on an equal scale, regardless of their vastly different functions. As

[39] Mazzucato, *The Entrepreneurial State,* 23.
[40] Mazzucato, *The Entrepreneurial State,* 19.

Mariana Mazzucato indicates, some current studies — not available in the time of Bayh-Dole — have demonstrated that "what drives entry behaviour into industries (companies deciding to move into one particular sector) are not existing profits in that sector but projected technological and market opportunities. And such opportunities are linked to the amount of State investment in those areas."[41] Despite the condemnation of public funding as anti-competitive, the turn to private capital did not provide the material benefit to society that was promised. At the start of the 1960s, the U.S. accounted for just under 70% of global R&D spend. Internally, the federal government was the main driver of innovation, funding around twice as much R&D as U.S. business.[42] But from 1960 until 2019, the U.S. share of total R&D dropped to 30%, and the federal funding share of U.S. R&D fell from 65% in 1960 to 21% in 2019, according to the cited 2021 CRS report.[43] Considering the ostensible value of government funding — and the fallacies that percolated around Bayh-Dole — the root of these fallacies must be found not in legislative misinterpretation, but in context.

Ultimately, these legislative and economic misconceptions are rooted in political turmoil. The broader political context of the late 1970s reveals a denigration of government that enveloped all of its functions, not just Bayh-Dole. The anti-government sentiment created by Vietnam, compounded by Watergate and by the conditions associated with Carter's so-called "malaise speech," produced a political vacuum in which alternative ideologies were not only attractive, but necessary. This was not simply an intellectual debate over patent management, but materialized into an emotional reevaluation of American identity. The war's aftermath created what current scholarship refers to as a "credibility gap" where nothing the government claimed

[41] Mazzucato, *The Entrepreneurial State,* 36.
[42] Mazzucato, *The Entrepreneurial State,* 36.
[43] Congressional Research Service, "The Global Research and Development Landscape and Implications for the Department of Defense," CRS Report R45403 (June 28, 2021), 1–2.

about the war could be believed.[44] The common belief that America had, relative to World War II, lost its moral high ground embedded itself into the public psyche. Christian Appy asserts that because Vietnam shattered the exceptionalist belief that "the United States is a unique force for good in the world," two major phenomena occurred:[45] First, the American public lost faith in government, which made legislation like Bayh-Dole easy to frame as an attack on all government programs, even those (like R&D) that had empirical value. Secondly, devoid of the exceptionalism that had characterized World War II, Reagan-era politicians needed a new ideology to inspire a disenchanted public. Neoliberalism — with its promise of self-made success — was a pragmatic solution, regardless of its veracity.

The massive public capital effort of Vannevar Bush's era — the Manhattan Project — resulted in the death of hundreds of thousands of people, even after the war had been unofficially won. Still, it did not tarnish the perception of public capital because the overarching cause of the American government retained moral exceptionalism. By contrast, Vietnam — a far less successful intervention — corroded that belief system so profoundly that even research and development became politically suspect. Even now, simplistic narratives have overridden the nuanced truth of neoliberalism.[46] It is within this context of glossed-over failure and performative success that Bayh-Dole is most often remembered. Just as macroeconomic failures were rebranded as victories, the privatization of public science was sold not on evidence, but on the same neoliberal faith. Thus, the mythology of Bayh-Dole must be understood in the context of necessity; it served to rebalance the emotional ledger of the nation and offer a new source of hope for government.

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[44] David Halberstam, *The Best and the Brightest* (New York: Random House, 1972), 668–671.
[45] Christian G. Appy, *American Reckoning: The Vietnam War and Our National Identity* (New York: Viking, 2015).
[46] Jacqueline Best, "The Quiet Failures of Early Neoliberalism: From Rational Expectations to Keynesianism in Reverse," *Review of International Studies* 46, no. 5 (2020): 599–600.

Ultimately, the mythology surrounding the Bayh-Dole Act exemplified how easily narrative can eclipse empirical reality. In the early 1980s, America lionized the "self-made" entrepreneur and recoiled from the alleged inefficiencies of government, retroactively crediting Bayh-Dole as the catalytic moment of American innovation. In fact, as has been demonstrated thus far, the principal engine of the computer revolution was the decades of public investment and institutional research that preceded the Act. The entrepreneurial triumphs of firms like Apple were built atop foundations laid by the entrepreneurial state — the very federal programs and laboratories neoliberal ideology sought to discredit.

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