

ONLINE ARTICLE

Searching for an Anti-Monopolist Foreign Policy in the Era of AI and
Big Tech

Lorand Laskai and Dakota Foster¹

Recommended Citation

Lorand Laskai and Dakota Foster, *Searching for an Anti-Monopolist Foreign Policy in the Era of AI and Big Tech*, HARV. NAT'L SEC. J. ONLINE (May 19, 2024), <http://harvardnsj.org/wp-content/uploads/2024/05/Final-Foster-Laskai.pdf>

¹ Lorand Laskai is a graduate of Yale Law School. Dakota Foster is a graduate Stanford Law School.

I. INTRODUCTION

After decades of languishing from neglect, concerns about market concentration and monopolies, particularly in the tech sector, are boiling over. State Attorneys General have launched antitrust suits against the likes of Facebook, Google, and Amazon. A bipartisan group of legislators are pushing for a comprehensive overhaul of the country's antitrust law.² President Joseph Biden has issued an executive order revamping the country's approach to competition policy.³ In the past several years, the FTC and the Department of Justice have filed antitrust suits against some of the United States' largest technology companies, setting the stage for some of the most significant antitrust cases in recent memory.

As the United States undergoes a historic realignment in competition policy and antitrust, there are substantial—and often, unacknowledged—implications for national security and foreign policy. The Biden Administration has positioned the antitrust resurgence as part of building a vibrant innovation base to help the United States secure a technological advantage over China. As National Security Advisor Jake Sullivan put it at the NSCAI conference in 2021, “America’s technology leadership was—and again has to be—built on competition, not on concentration.”⁴ The Administration’s executive order on competition has framed “competitive pressures from foreign monopolies,” as threats to American economic prosperity, raising the prospect of a realignment behind a truly anti-monopolist foreign policy that strikes against monopolies at home and abroad.

However, the current centrality of “Big Tech” to American technological leadership creates a wrinkle in this realignment. The role of private companies has always been uncomfortably indeterminate in state-centric views of foreign policy.⁵ However, the importance of private actors in American foreign policy has only grown, particularly as technology has become central to the future of state power. Companies like Google, Facebook, Microsoft, and Amazon disproportionately contribute to sustaining the United States’ technological edge. They consistently rank among the largest investors in research and development (R&D); maintain an

² See Lauren Feiner, *New bipartisan bill would force Google to break up its ad business*, CNBC (May 19, 2022), <https://www.cnbc.com/2022/05/19/new-bipartisan-bill-would-force-google-to-break-up-its-ad-business.html> [https://perma.cc/6KEP-5ZMC]; Lauren Feiner, *Lawmakers unveil major bipartisan antitrust reforms that could reshape Amazon, Apple, Facebook and Google*, CNBC (June 11, 2021), <https://www.cnbc.com/2021/06/11/amazon-apple-facebook-and-google-targeted-in-bipartisan-antitrust-reform-bills.html> [https://perma.cc/L9EN-9WVH].

³ Exec. Order No. 14036, “Promoting Competition in the American Economy,” 86 Fed. Reg. 36987, THE WHITE HOUSE (July 9, 2021), <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy/> [https://perma.cc/XDR7-TUJ3].

⁴ Jake Sullivan, U.S. Nat’l Sec. Advisor, Remarks by National Security Advisor Jake Sullivan at the National Security Commission on Artificial Intelligence Global Emerging Technology Summit (July 21, 2021), <https://www.whitehouse.gov/nsc/briefing-room/2021/07/13/remarks-by-national-security-advisor-jake-sullivan-at-the-national-security-commission-on-artificial-intelligence-global-emerging-technology-summit/> [https://perma.cc/9RH2-MNJP].

⁵ The international political economy literature on multinational corporations has long struggled to theorize on the relationship between corporations and the state. See, e.g. RAYMOND VERNON, SOVEREIGNTY AT BAY: THE MULTINATIONAL SPREAD OF U.S. ENTERPRISES 213 (1971) (arguing that states and corporations “hold each other at arm’s length”); KARI LEVITT, SILENT SURRENDER: THE AMERICAN ECONOMIC EMPIRE IN CANADA (1971) (arguing that the modern corporation is a descendant from the mercantilist mold exemplified the Dutch East Asian company. In other words, they are agents of national interest). For a treatment of various strains of thinking, see Robert Gilpin, *The Political Economy of the Multinational Corporation: Three Contrasting Perspectives*, 70 AM. POLIT. SCI. REV. (1976).

American presence in foreign markets; attract top talent from around the world; and play an important role in the deployment of emerging technologies for national defense. Understandably, given the strategic importance of these companies, many in the national security community are concerned that antitrust action against America's largest technology companies could harm national security.⁶

This paper considers the relationship between national security and antitrust. Since its inception, antitrust has been at tension with concerns about national competitiveness and resilience and, by extension, national security. Despite this history, how national security and antitrust interact—and how courts, legislators, and policymakers mediate between these competing interests—remains undertheorized. This paper considers the tradeoffs involved in embracing “bigness” in national security.⁷ It argues that bigness often has practical advantages, providing scale and global clout that can be translated into concrete outcomes in foreign policy and national security. However, these advantages must be considered within the context of private power and democracy. Over the long-term, economic concentration can undercut the means through which a country effectively pursues national interest. Worse yet, excessively unaccountable private power can be corrosive to the foundation of democracy.

This paper is organized into three sections. The first section takes a historical view, looking at how previous generations grappled with the lure and curse of bigness. The second section turns to the present and weighs the advantages and disadvantages of Big Tech. The third section provides an argument for embracing antitrust in national security and sketches an approach to preserving the advantages that Big Tech provides without relying on economic concentrations.

II. AN ABBREVIATED HISTORY OF ANTITRUST AND NATIONAL SECURITY

Concerns about national security and economic competitiveness have long frustrated attempts to break up some of America's largest companies. During World War II, the Department of Justice dismissed or postponed antitrust actions against companies like Standard Oil, DuPont, GE, Union Railways, and Alcoa—all in the name of national security. A decade later, after the Suez Crisis, the Eisenhower Administration halted antitrust investigations into Western oil companies. Antitrust enforcement, Eisenhower's National Security Council concluded, was “secondary to the national security interest.”⁸ Two weeks after the attacks of 9/11, U.S. District Court Judge Kollar-Kotelly ordered the Justice Department and Microsoft to settle their decade-long antitrust suit, stating, “in light of the recent tragic events affecting our Nation, this Court regards the benefit which will be derived from a quick resolution of these cases as increasingly significant.”⁹

⁶ Zachary Basu & Margaret Harding McGill, *Ex-intel officials claim antitrust could hurt U.S. in China tech race*, AXIOS (Sept. 15, 2021), www.axios.com/china-antitrust-big-tech-national-security-d0fb2141-aeef-407c-97ef-8da09cb54b55.html [<https://perma.cc/G7QZ-5TTZ>].

⁷ We use the term “bigness” to refer to large-scale enterprises, specifically large companies that dominate industry through their immense resources, the breadth of their products, the size of their workforce, and the position that the occupy relative to competitors in that space.

⁸ DANIEL YERGIN, *THE PRIZE: THE EPIC QUEST FOR OIL, MONEY & POWER* 618 (2008).

⁹ Jonathan Krim, *Microsoft Judge Presses Sides to Settle Case*, THE WASHINGTON POST (Sept. 29, 2009), <https://www.washingtonpost.com/archive/business/2001/09/29/microsoft-judge-presses-sides-to-settle->

Although the contemporary legal consensus around antitrust ignores national security, national security has long lurked in the shadows of antitrust. Theodore Roosevelt, often remembered as the original trustbuster, spoke passionately about the perils of economic concentration,¹⁰ but he also worried that breaking up large firms might lead the United States to “fall behind in the race for the world’s markets.”¹¹ As the former president said during the 1912 election, “If we isolate ourselves and insist upon the subdivisions of industry . . . we shall be defeated in the world’s markets.”¹² The suggestion that embracing antitrust could amount to unilateral disarmament—exposing the country to external danger in a world where ‘bigness’ pays—has resurfaced repeatedly in modern antitrust history, especially during periods of international instability and uncertainty.

This section reconstructs the history of antitrust and national security, resurfacing the political considerations about how breaking up America’s largest companies might impact security, foreign relations, and national competitiveness. This history demonstrates that although antitrust has gone through a series of radical transformations, national security has been and continues to be an intervening variable that shapes enforcement.

A. Cartelization at the Turn of the Century

Early antitrust action in the United States is a study in contrast between the laws in force and the widespread support for cartels. During the First World War, President Woodrow Wilson and Chief Justice White agreed to suspend pending antitrust cases.¹³ [V]indicating the law,” the President said, “would disorganize industry.”¹⁴ Even during peacetime, skepticism about free competition abounded. Informed by a series of severe economic downturns, the intellectual zeitgeists held that antitrust laws were responsible for fueling “destructive competition” that put markets into disarray.¹⁵ Economists and regulators believed that “benevolent cartels” of regulated and coordinated producers could generate more social good than free competition.¹⁶

For one, regulators believed competition was ill-suited to produce provisions associated with being a great power: a strong fleet and export-oriented industries. The preceding decade had revealed the weakness of the American shipping industry. The grand tour of President Theodore Roosevelt’s Great White Fleet depleted the country’s supply of merchant marines, forcing the

case/c6e1ae31-19e2-42f7-bce1-22f943487d38/ [https://perma.cc/R7DV-A4VF]; Renata Hesse, *Section 2 Remedies and U.S. v. Microsoft: What Is To Be Learned?*, 75 ANTITRUST L.J. 847, 855 (2009).

¹⁰ MATT STOLLER, GOLIATH: THE 100-YEAR WAR BETWEEN MONOPOLY POWER AND DEMOCRACY 112 (2019).

¹¹ *Id.*

¹² *Id.*

¹³ Richard M. Steuer & Peter A. Barile III, *Antitrust in Wartime*, 16 ANTITRUST 71, 71-72 (2002).

¹⁴ *Id.* at 72.

¹⁵ *Federal Statutory Exemptions from Antitrust Law*, 2007 A.B.A. SEC. ANTITRUST L. 13 [hereinafter ABA MONOGRAPH].

¹⁶ ANTITRUST DIV., U.S. DEP’T OF JUSTICE, ROUNDTABLE DISCUSSION SERIES ON COMPETITION & DEREGULATION 6, 35 (2018), <https://www.justice.gov/media/981866/dl?inline> [https://perma.cc/J8GQ-MNPN]. See also WYATT WELLS, ANTITRUST AND THE FORMATION OF THE POSTWAR WORLD 9 (2002) (“That humanity could and must manipulate its social as well as its natural environment, and do so rationally and collectively, had been the central message of leading social theorists since the late nineteenth century.”); ALFRED CHANDLER, THE FIXABLE HAND 122-55 (1977); ALFRED CHANDLER JR., THE VISIBLE HAND (1977).

merchants to rely on European vessels.¹⁷ When World War I broke out, American ports ground to a standstill as European vessels were enlisted in the war effort.¹⁸

Reliance on European vessels continued to grow in the subsequent years. Beyond national pride, Congress considered the country's weak shipping industry to be an issue of security and resilience. In response, Congress passed the Shipping Act of 1916, an ambitious project of state planning that exempted much of the shipping industry from antitrust liability.¹⁹ In Europe, shipping companies organized themselves into "liner conferences" that coordinated prices and routes.²⁰ Congress identified this coordination as a key reason for Europe's advantage in shipping.²¹ The Shipping Act, accordingly, provided U.S. shippers with broad immunity from antitrust statutes, bringing them into a system of regulated conferences, overseen by the Federal Maritime Commission (FMC).²²

Congress turned to a similar toolkit to keep pace with the European powers in trade. After the war, Germany, Italy, France, and the United Kingdom rapidly cartelized export-orient industries in an effort to regain lost market share.²³ Confronted with the rapid cartelization in Europe, the Federal Trade Commission identified antitrust laws as a potentially fatal hindrance to United States' ability to compete.²⁴ In a move that created another statutory carveout to antitrust law, Congress passed the Webb-Pomerene Act of 1918 (WPA).²⁵ The law immunized certain exporters from violating the Sherman Act's prohibition on horizontal coordination, allowing them to form export trade associations. Unlike the Shipping Act of 1916, the WPA had less of a pronounced impact on American businesses, leading Congress to overhaul the statute in the 1980s.

¹⁷ See ROBERT A. HART, *THE GREAT WHITE FLEET: ITS VOYAGE AROUND THE WORLD* 289-90 (1965).

¹⁸ See generally Richard Sicotte, *Economic Crisis and Political Response: The Political Economy of the Shipping Act of 1916*, 59 J. ECON. HIST. 861 (1999).

¹⁹ *Id.* at 861 ("With the Shipping Act of 1916, the United States embarked upon one of the largest experiments in government ownership American had yet seen.")

²⁰ Ann B. FitzSimons, *Antitrust and the Shipping Industry: Interpretation of the Shipping Act of 1916*, 12 N.Y.U. J. INT'L L. & POL. 115, 117 (1979) ("A liner conference, the basic unit of the industry, is an association of competing cargo carriers that act together to set freight rates, coordinate sailing schedules, pool revenues, allocate freight and formulate uniform trade practices for trade between certain specified ports and regions.")

²¹ See generally H.R. COMM. ON THE MERCHANT MARINE AND FISHERIES, REP. ON STEAMSHIP AGREEMENTS AND AFFILIATIONS IN THE AMERICAN FOREIGN AND DOMESTIC TRADE, H.R. DOC. NO. 63-805 (1914).

²² See Ganesh Sitaraman, *The Regulation of Foreign Platforms*, 74 STAN. L. REV. 1073 (2022).

²³ WELLS, *supra* note 17, at 10; see also, JEFFREY R. FEAR, *CARTELS AND COMPETITION: NEITHER MARKETS NOR HIERARCHIES* 15 (2006) ("By the advent of WWII, cartels governed about 40% of world trade at the apex of the cartel movement.")

²⁴ See 34 F.T.C. ANN. REP. 2 (1916) ("[O]ther nations have marked advantages in foreign trade from superior facilities and more effective organization [...] doubt and fear as to legal restrictions prevent Americans from developing equally effective organizations for overseas business and that foreign trade of American manufacturers and producers, particularly the smaller concern, suffers in consequence."); see also SEN. INTERSTATE COMMERCE COMMITTEE REPORT ("Since the beginning of the European war, the allies have even organized buying agencies for the benefit of their Government and their people. Our manufacturers must meet this situation. Very few of them can compete single-hand with these great combinations. Our belief is that it is necessary to permit our businessmen to form similar organizations or associations so as to enable them to meet foreign competitors on a more equal footing."); RICHARD HARVEY AND WILLIAM NOTZ, *AMERICAN FOREIGN TRADE, AS PROMOTED BY THE WEBB-POMERENE AND EDGE ACTS, WITH HISTORICAL REFERENCES TO THE ORIGIN AND ENFORCEMENT OF THE ANTI-TRUST LAWS* 146 (2012).

²⁵ See Webb-Pomerene Act, 15 U.S.C. §§ 61-65 (1918).

B. War Mobilization, International Cartels, and the Wartime Economy

The Great Depression and the New Deal turned the tides against private cartelization.²⁶ Under the leadership of Thurman Arnold, the Antitrust Division of the Justice Department oversaw a resurgence in antitrust action. However, the onset of the Second World War undercut the nascent antitrust revival, as the demand of total war overshadowed the Roosevelt Administration's effort to combat monopolies.

With war on the horizon, Arnold attempted to align the antitrust resurgence with national security. He observed how defense efforts were being "hampered by the attitude of powerful private groups culminating in basic industries who have feared to expand their production because expansion would endanger their future control of industry."²⁷ At Arnold's direction, the Justice Department targeted international cartels that had monopolized crucial inputs for the war effort like rubber and optical components.²⁸ Political rancor directed at American companies that impeded war efforts, or worse, actively abetted the Third Reich for profit, aided Arnold's push.²⁹ Angered by the slow pace at which aluminum giant Alcoa was increasing production to meet military production, President Roosevelt ordered his Attorney General Robert Jackson to revive a languishing antitrust case against the company's virtual monopoly over aluminum.³⁰ The decision was cheered by allies in the Senate including Senator Joseph Mahoney, who bashed monopolists like Alcoa for "all play[ing] their part in the growth of Hitler's power."³¹

Despite this early momentum, the onset of World War II stopped the New Deal antitrust resurgence in its tracks. As the country entered a wartime footing, trusts became synonymous with wartime planning. Corporate executives, many previously investigated for antitrust violations, were enlisted to help run the wartime economy.³² The War Production Department was authorized to grant immunity from antitrust action to companies involved in the war effort. The Justice Department dismissed or postponed antitrust action against companies like Standard Oil, DuPont, GE, Union Railways, and Alcoa.³³ After the White House blocked Arnold's attempt to prosecute railroad price-fixing on national security grounds, the Assistant Attorney General

²⁶ At least at the onset, government officials in the FDR administration believed that the solution to the country's dire economic situation was more coordination between businesses, not less. In 1933, President Roosevelt signed into law the National Industrial Recovery Act (NIRA), which required companies to write industry-wide codes that established production quotas and placed restrictions on new market entrants. Only after the Supreme Court struck down the NIRA in *Schechter Poultry Corp v. United States*, did the Roosevelt Administration shed its ambivalence towards antitrust. See Gene M. Gressley, *Thurman Arnold, Antitrust, and the New Deal*, 38 BUSINESS HIST. REV. 214, 215-220 (1964).

²⁷ THURMAN W. ARNOLD, *THE BOTTLENECKS OF BUSINESS* (1940); DEPARTMENT OF JUSTICE, ANNUAL REPORT OF THE ATTORNEY GENERAL OF THE UNITED STATES at 58 (1941).

²⁸ See *United States v. Standard Oil Co.*, 1940-43 Trade Cas. (CCH) ¶ 56,198 (D.N.J. 1942) (prosecuting Standard Oil for entering an illegal cartel agreement with I.G. Farbenindustrie dividing the oil and chemical markets); see also *United States v. Bausch & Lomb Optical Co.*, 34 F. Supp. 267 (S.D.N.Y. 1940) (prosecuting Bausch & Lomb for entering an illegal agreement that gave Germany's Carl Zeiss a virtual monopoly over optical instruments).

²⁹ See Frank L. Kluckhohn, *Arnold Says Standard Oil Gave Nazis Rubber Process*, N.Y. TIMES, Mar. 27, 1942, at 1.

³⁰ See STOLLER, *supra* note 10, at 6.

³¹ *Id.* at 146.

³² See generally MARK R. WILSON, *DESTRUCTIVE CREATION: AMERICAN BUSINESS AND THE WINNING OF WORLD WAR II* (2018).

³³ *Id.*

resigned.³⁴

To what degree was this bending of antitrust law necessary to aid the war effort? The war saw the industrial capacity of the United States converted into what the President called “the arsenal for democracy” – a war machine churning out weapons, ships, and planes at an astonishing clip.³⁵ Heeding President Roosevelt’s call to not just out-produce the enemy, but “outproduce them overwhelmingly, so that there can be no question of our ability to provide a crushing superiority of equipment in any theater [of war],”³⁶ America’s factories accomplished incredible feats of industrial prowess. Assembly lines at Ford Motor’s Willow Run plant in Ypsilanti, Michigan churned out a long-range bomber every 63 minutes.³⁷ By the war’s end, half of the world’s wartime industrial production was in the United States. But could the same results have been attained without accommodating large businesses?

Historians differ over whether partnering with big business was a necessary condition for war mobilization or a short-sighted mistake.³⁸ What is clear is that amid the exigencies of war, the Roosevelt administration saw enlisting big business as a more reliable route than free competition to meet wartime needs. The government needed business leaders that “under[stood] how to deal with industry’s intricate structure and operation,” Roosevelt’s procurement coordinator Donald Nelson argued.³⁹ Besides, many of the government’s monopoly problems could be solved through money. In the shadow of its pending antitrust suit against Alcoa, the federal government solved its aluminum shortage by working with Alcoa to build government-run aluminum plants.⁴⁰ Against the backdrop of total war, antitrust had to take a backseat.

C. Cold War Antitrust

The end of WWII inaugurated a new era of antitrust enforcement, buoyed by the experience of the war and the fading luster of cartelization. Amidst growing recognition that economic concentration in the Weimar Republic aided Hitler’s rise, Congress shed its previous sympathy for cartels and moved towards strengthening American antitrust laws.⁴¹ At the same time, a new

³⁴ Spencer Weber Waller, *The Antitrust Legacy of Thurman Arnold*, 78 ST. JOHN’S L. REV. 569, 606-607 (2004).

³⁵ THE AMERICAN PRESIDENCY PROJECT, FRANKLIN D. ROOSEVELT ANNUAL BUDGET MESSAGE (1942), <https://www.presidency.ucsb.edu/documents/annual-budget-message-2> [<https://perma.cc/5QP7-B9KM>].

³⁶ P.B.S., *War Production*, <https://www.pbs.org/kenburns/the-war/war-production/> [<https://perma.cc/GKD2-X2Z8>] (2023).

³⁷ *Id.*

³⁸ Compare ARTHUR HERMAN, *FREEDOM’S FORGE: HOW AMERICAN BUSINESS PRODUCED VICTORY IN WORLD WAR II* (2012) (chronicling the essential role of business executives like General Motors President William Signius and shipbuilder Henry Kaiser in the war effort) and RICHARD E. HOLL, *FROM THE BOARDROOM TO THE WAR ROOM: AMERICA’S CORPORATE LIBERALS AND FDR’S PREPAREDNESS PROGRAM* (2005) with DAVID KENNEDY, *FREEDOM FROM FEAR: THE AMERICAN PEOPLE IN DEPRESSION AND WAR, 1929 – 1945* 650 (1999) (describing Kaiser’s cozy relationship with the federal government as presaging the “military-industrial complex”) and BRIAN WADDELL, *THE WAR AGAINST THE NEW DEAL: WORLD WAR II AND AMERICAN DEMOCRACY* (2001).

³⁹ HERMAN at 198.

⁴⁰ WILSON AT 475.

⁴¹ See Daniel A. Crane, *Fascism and Monopoly*, 118 MICH. L. REV. 1315, 1324 (2020)

(“[F]loor statements by the bill’s two primary sponsors—New York Senator Emanuel Celler and Tennessee Senator Estes Kefauver—reveal a preoccupation with the political consequences of concentrated economic power, particularly in the correlation between industrial cartelization and monopoly and the rise of fascism in pre-War Germany, and with totalitarianism more broadly.”)

trade consensus—one that aimed to reduce foreign barriers to the free flow of goods—took shape, which antitrust enforcers successfully coupled with a global agenda of promoting antitrust and competition policy.⁴²

However, even as the consensus around trade and cartels energized antitrust enforcement, the emergence of the Cold War compelled new rationales for postponing or limiting antitrust action. In 1949, the Soviet Union shocked the world by detonating an atom bomb, feeding paranoia about waning American technology leadership. Less than five years after the end of WWII, the United States was once again engaged in hostilities abroad, this time on the Korean peninsula. After American forces suffered a devastating setback at the hands of Chinese forces in the late 1950s, President Truman declared a state of emergency calling for the subordination of civilian needs to those of defense.⁴³ Among those subordinated interests was antitrust.

With Congress in favor of enforcing antitrust laws, the onus of permitting exemptions fell on the President and his Attorney General. In 1949, President Truman delayed a suit to split Western Electric from its parent company AT&T.⁴⁴ As hostilities intensified in Korea, President Truman judged the company's contribution to the war effort as too important to disrupt through an antitrust suit. Influencing the President's decision was intense lobbying from AT&T executives, who highlighted the company's contribution to the war effort.⁴⁵ The company's renowned research center Bell Labs had made a sizable contribution during WWII and was poised to do so again during the Cold War.⁴⁶ Bell Lab executives made their case to Truman's Secretary of Defense Robert Lovitt, who successfully entreated the President to delay the case. Other international events also left antitrust sidelined. After the Suez Crisis, President Eisenhower called off a criminal investigation into major American oil companies for conspiring with international counterparts to fix prices. Concerned that an oil shortage in Europe would fuel communism, the administration granted the main co-conspirators immunity in exchange for their participation in the administration's plan to increase oil supplies to Europe.⁴⁷ Antitrust enforcement, Eisenhower's National Security Council concluded, was "secondary to the national security interest."⁴⁸

National security, however, did not always serve as a trump card to antitrust. Vigorous protest by United Fruit executives that an antitrust suit against the company would cause "great damage" to American security only temporarily delayed the suit that would break up the company.⁴⁹ Similarly, forceful rhetoric from IBM that antitrust action against the company would harm

⁴² See WELLS at 108 (discussing how antitrust enforcers at the Justice Department inserted a crucial provision against international cartels in the 1942 Lend-Lease Agreement).

⁴³ See THE AMERICAN PRESIDENCY PROJECT, HARRY S. TRUMAN, 90 Stat. 1255 (Proclaiming the Existence of a National Emergency (1950)).

⁴⁴ *U.S. v. Am. Tele. and Tele. Co. et al.* 552 F.Supp. 131 (D.D.C. 1982).

⁴⁵ GERALD W. BROCK, *THE SECOND INFORMATION REVOLUTION* 117 (Harvard University Press, 2003).

⁴⁶ JON GARTNER, *THE IDEA FACTORY: BELL LABS AND THE GREAT AGE OF AMERICAN INNOVATION* 59 (2012) (reporting that by the mid-1940s nearly all Bell Labs' work was redirected towards research aimed at aiding the war effort).

⁴⁷ Burton I. Kaufman, *Oil and Antitrust: The Oil Cartel Case and the Cold War*, 51 BUS. HIST. REV. 35, 47.

⁴⁸ DANIEL YERGIN, *THE PRIZE: THE EPIC QUEST FOR OIL, MONEY & POWER* (2012)

⁴⁹ Bruce A. Khula, *Antitrust at the Water's Edge: National Security and Antitrust Enforcement* 78 NOTRE DAME L. REV. 629, 647-48 (2003).

national interest failed to sway antitrust enforcers.⁵⁰ Nevertheless, with the right advocates in government, national security became a powerful limiter to antitrust action during the Cold War era. In 1956, President Eisenhower signed a consent decree with AT&T, ending the seven-year suit against the company. Fierce lobbying from the Defense Department, which worked closely with AT&T on a range of defense projects, ensured that the decree did not touch AT&T's prized subsidiary Western Electric – essentially leaving the company's telecommunication monopoly intact.⁵¹ Because of national security, AT&T's monopoly over the country's telecommunications sector would persist for nearly half-a-decade longer.

D. Japan Panic, the AT&T Break Up, and Defense Consolidation

In the 70s and 80s, a confluence of domestic and international events once again brought the conflict between antitrust and national security to the surface. Abroad, Japan's economic miracle sparked concern among policymakers that antitrust laws were hindering national competitiveness. At home, an unusual sequence of events led the Justice Department to renew its effort to break up AT&T, despite fierce resistance from members of President Reagan's cabinet. Finally, the end of the Cold War precipitated an extended period of consolidation within the defense industry. Each event prompted concerns about the appropriate role of antitrust in areas of national security. And each event drew the three branches of government into a role of making tradeoffs between the country's interest in competitive markets and national security.

First, Japan's rapid economic ascent prompted soul searching over the durability of free competition. The widespread cartelization of the Japanese economy and informal coordination between companies, often facilitated by Japan's chief industry policy planning body, the Ministry of International Trade and Industry (MITI), distinguished Japan from the United States. The *sogoshos*—large, vertically-integrated Japanese trading companies that were the backbone of Japan's export boom—were entirely inconceivable under American antitrust laws.⁵² As Japanese firms expanded their market share—thereby increasing the U.S. trade deficit and threatening U.S. leadership in industries with significant defense applications like microelectronics—Congress and the Reagan administration saw weakened antitrust laws as a way to level the playing field.

In 1982, Congress unanimously passed the Foreign Trade Antitrust Improvement Act (FTAIA) and Export Trading Company Act (ETC).⁵³ The laws limited the Sherman Act's jurisdiction over conduct involving commerce that exclusively touched foreign nations and expanded the WPA's

⁵⁰ *Id.* at 656.

⁵¹ Defense Secretary Charles Wilson argued that forcing a divestiture of Western Electric would “effectively disintegrate the coordinated organization which is fundamental to the successful carrying forward of these critical defense projects,” and would “be contrary to the vital interests of the Nation.” *Id.* at 647-48.

⁵² Robert W. Dziubla, *International Trading Companies: Building on the Japanese Model*, 4 NW. J. INT'L J. & BUS. 422, 446-45 (1982) (“No doubt such an arrangement by an American corporation would violate antitrust laws against vertical mergers, or at least would be the subject of lawsuits or other action by the Justice Department or the Federal Trade Commission. This is not the case in Japan.”)

⁵³ Spencer W. Waller, *The Failure of the Export Trading Company Program*, 17 N.C. J. INT'L L. & COM. REG. 239, 240 (1992) (Congress anticipated the laws would “encourage the formation of well financed vertically integrated general trading companies along the line of Japanese general trading companies (“sogoshos”) to assist United States exporters with all aspects of the exporting process.”)

antitrust liability safe harbor for certified exporters.⁵⁴ Congress hoped that the FTAIA and ETC would reorder American business, encouraging industries to organize themselves into *sogoshos*-style trading companies.⁵⁵ This lofty expectation was soon disappointed. Neither the FTAIA nor ETC ended up sizably changing the conduct of American firms.⁵⁶ A more consequential revision to antitrust law came in 1984. Responding to concerns that Japanese R&D consortiums were helping Japanese firms out-innovate their American competitors, Congress passed the National Cooperative Research Act (NCRA). Although the overall impact on American firm conduct is debatable,⁵⁷ the NCRA enabled the Defense Department to stand up SEMATECH, an R&D consortium of U.S. semiconductor companies that helped revitalize the country's chip industry and which would have otherwise run afoul of the antitrust laws.⁵⁸

At home, a very different conflict between antitrust and national security was brewing. When President Ronald Reagan took office, he inherited a new antitrust suit against AT&T. Despite campaigning against the suit, the Reagan Administration's pugnacious Assistant Attorney General for the Antitrust Division William Baxter decided to pursue the case.⁵⁹ The case set off a vicious fight between the Justice Department and Defense Secretary Caspar Weinberger, who viewed AT&T's national network as crucial to national defense. Testifying before the Senate Armed Services Committee, Secretary Weinberger explained that the Pentagon relied on AT&T for its command-and-control systems—the integrity of which was essential in the event of an armed conflict or nuclear war.⁶⁰ As the case proceeded, Secretary Weinberger warned Attorney General William French Smith against breaking up AT&T, but to little effect. AG Smith, who had recused himself from the AT&T case, had no power to rein in Baxter.⁶¹ The conflict erupted into the open with Secretary Weinberger and Commerce Secretary Malcolm Baldrige, who had concerns about the case's impact on American competitiveness, asking President Reagan to intervene to stop Baxter.⁶² Despite sympathizing with their positions, the President refused.⁶³

The national security concerns at the heart of the AT&T case did not end with the President. Aware of the outsized implications that accompanied dismantling a company like AT&T, Judge Harold Greene gave the Defense Department a hearing and ultimately required the Justice Department to address some of the Pentagon's concerns in its plan to break up AT&T.⁶⁴ As

⁵⁴ The WPA's antitrust immunity applied only to commodities. In contrast, the ETC's immunity provision applied to a wide range of service sectors like finance, insurance, law, and communications. *Id.* at 244.

⁵⁵ *Id.*

⁵⁶ Waller, *supra* note 53, at 246 (describing deep disappointment in the Reagan administration that the lack of business interest in the program and the continued widening of the trade deficit).

⁵⁷ APA MONOGRAPHY at 50 (“the ‘modified’ standard likely had little impact on prevailing law”).

⁵⁸ NATIONAL RESEARCH COUNCIL, SECURING THE FUTURE: REGIONAL AND NATIONAL PROGRAMS TO SUPPORT THE SEMICONDUCTOR INDUSTRY 100, <https://www.nap.edu/read/10677/chapter/6?term=antitrust#100> [<https://perma.cc/3FQH-ZWLG>] (“Previously antitrust concerns prevented semiconductor companies from communicating effectively about what they were doing, except at certain conferences. Now legislation allowed them to talk together on matters related to SEMATECH and, although the effect was difficult to quantify, they benefited greatly from this new avenue of communication.”)

⁵⁹ STEVEN COLL, THE DEAL OF THE CENTURY: THE BREAKUP OF AT&T 177 (1986).

⁶⁰ GEORGE H. BOLLING, AT&T: AFTERMATH OF ANTITRUST 7 (1983).

⁶¹ COLL *supra* note 60 at 220.

⁶² COLL *supra* note 60 at 186.

⁶³ *Id.* at 160.

⁶⁴ American Tel. and Tel., 552 F. Supp. at 135.

Judge Greene oversaw the negotiation of a consent decree and plan of reorganization that would break up AT&T into a handful of Regional Bell Operating Companies (RBOCs), he invoked the Tunney Act to raise several of the Defense Department's concerns about the proposed decree.⁶⁵ Finding that these concerns held "substantial merit,"⁶⁶ he required the Department of Justice to integrate these concerns into its plan of reorganization.⁶⁷ Ultimately, the final reorganization plan for AT&T provided for the creation of a centralized control center that ensured networks could be operated from a single point of contact in the event of a national catastrophe or nuclear attack.⁶⁸

Finally, the end of the Cold War set off a wave of consolidation in the defense industry, sparking new concerns about how to reconcile antitrust and national security. In response to diminished military spending, the defense sector underwent an unprecedented period of mergers and acquisitions, sparking scrutiny from competition regulators. During this period, the FTC sued to block a number of defense industry M&As.⁶⁹ Although the Defense Department did not formally weigh in on these suits, its role as the main procurer of defense goods and responsibility for defense readiness lent to a different perspective from the FTC.⁷⁰ Unlike the FTC, the Pentagon's main objective is to maintain military readiness, a goal that does not always align with maintaining a competitive marketplace. This tension reached a head in 1992, when an assistant secretary of the Army testified against the FTC in his personal capacity.⁷¹ The near clash was enough to convince the Defense Department and the FTC to de-conflict. In 1994, the Defense Science Board released a report stating that although antitrust enforcement in the defense industry was in the public's interest, the needs of national defense would occasionally necessitate a different outcome.⁷² Following the report, the Defense Department and the FTC formalized a consultation mechanism whereby antitrust enforcers would consider the Defense Department's views and expertise when reviewing M&As.

E. The Contemporary Antitrust Debate and Return of Geopolitics

⁶⁵ *Id.* at 216 ("In view of that history, and in view of the mandate of the Tunney Act, the Court would be derelict in its duties if it relied upon Department of Justice enforcement alone for the protection of the public interest following the signing of the judgment itself.")

⁶⁶ *Id.* at 209; *Id.* at 216 ("In view of that history, and in view of the mandate of the Tunney Act, the Court would be derelict in its duties if it relied upon Department of Justice enforcement alone for the protection of the public interest following the signing of the judgment itself.")

⁶⁷ *Id.* at 209 ("The Court expects that AT & T's plan of reorganization will resolve these issues in a manner which satisfies the Defense Department's legitimate needs without impairing the basic antitrust purposes of the judgment.")

⁶⁸ *United States v. AT&T Co. (Modification of Final Judgment)*, 552 F. Supp. 131 (D.D.C. 1982), *aff'd mem. sub nom. Maryland v. United States*, 460 U.S. 1001 (1983).

⁶⁹ *See Grumman Corp. v. LTV Corp.*, 665 F.2d 10 (2d Cir. 1981); *F.T.C. v. PPG Indus., Inc.*, 798 F.2d 1500, (D.C. Cir. 1986); *F.T.C. v. Imo Indus. Inc.*, No. CIV A. 89-2955 SSH, 1989 WL 362363 (D.D.C. Nov. 22, 1989); *F.T.C. v. Alliant Techsystems Inc.*, 808 F. Supp. 9 (D.D.C. 1992).

⁷⁰ *Supra* note 72.

⁷¹ *See Alliant Techsystems*, 808 F. Supp. 9.

⁷² DEF. SCI. BD., REPORT OF THE DEFENSE SCIENCE BOARD TASK FORCE ON ANTITRUST (Apr. 1994) [hereinafter DEF. SCI. REPORT] ("there will be some instances where DOD will support a merger that increases concentration substantially in order, for example, to maintain a particular research capability or the capacity to expand production promptly in case of emergency. . . .").

The success of the “consumer welfare” revolution, started by Robert Bork in the 1980s, led to an extended period in which antitrust deliberations treated economic efficiency as its lodestar.⁷³ This orientation eschewed overtly political considerations like excessive concentration of private power and market structure.⁷⁴ Considerations further upstream from the stated goals of antitrust law like national defense, resilience, emergency mobilization, and geopolitical competition, were often neglected.

Over the past few years, cracks in this legal consensus have emerged as legal scholars, economists, and policymakers concerned about excessive concentration of private power have called for a return to antitrust political roots.⁷⁵ Nearly in parallel, national security has also reemerged as a consideration in the larger policy discourse surrounding antitrust and competition. Rather than an offshoot of this emerging legal debate, however, national security’s reemergence seems to have been spurred by China’s rise.

As great power competition between the United States and China intensifies, and the two countries vie for leadership in science and technology, policymakers have debated the optimal size for American firms to best compete against Chinese counterparts. The telecommunications market, in particular, has become a focal point of this debate, given China’s lead in fifth generation telecommunications. Well-resourced Chinese juggernauts like Huawei and ZTE, which have benefited from enormous state subsidies and a quasi-state-sponsored duopoly in China, have gradually accumulated a sizable share of the global market for fifth-generation telecommunications.⁷⁶ Officials in the United States and European Union have accused both Huawei and ZTE of engaging in predatory pricing.⁷⁷ And American officials have voiced concerns that Huawei’s growing global footprint could endanger the integrity of sensitive communications, leaving the United States reliant on technology susceptible to Chinese government eavesdropping.⁷⁸

The conspicuous lack of an American competitor to either Huawei or ZTE has prompted soul-searching among policymakers. During the Trump administration, Attorney General William P. Barr advocated for the government to fund a national champion to compete in the 5G market, a proposal that failed to gain traction but highlighted ongoing dissatisfaction with competition

⁷³ Cf. *Nat’l Collegiate Athletic Ass’n v. Bd. of Regents of Univ. of Okla.*, 468 U.S. 85, 107–08 (1984) (“Congress designed the Sherman Act as a ‘consumer welfare prescription.’ . . . Restrictions on price and output are the paradigmatic examples of restraints of trade that the Sherman Act was intended to prohibit”).

⁷⁴ See Robert Pitofsky, *The Political Content of Antitrust*, 127 U. PA. L. REV. 1076 (1979). See also, Lina M. Khan, *The Ideological Roots of America’s Market Power Problem*, 127 YALE L.J. F. 960 (2018).

⁷⁵ See e.g., Marshall Steinbaum and Maurice E. Stucke, *The Effective Competition Standard: A New Standard for Antitrust*, 87 U. CHI. L. REV. 595, 595–623.

⁷⁶ See Chuin-Wei Yap, *State Support Helped Fuel Huawei’s Global Rise*, WALL ST. J. (Dec. 25, 2019), <https://www.wsj.com/articles/state-support-helped-fuel-huaweis-global-rise-1157728073> [<https://perma.cc/V573-RTS8>].

⁷⁷ *Matsushita Electrical Industrial Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 589 (1986) (“[T]here is a consensus . . . that predatory pricing schemes are rarely tried, and even more rarely successful”).

⁷⁸ David E. Sanger, Julian E Barnes, Raymond Zhong & Marc Santora, *In 5G Race With China, U.S. Pushes Allies to Fight Huawei*, N.Y. Times (Jan. 26, 2019), <https://www.nytimes.com/2019/01/26/us/politics/huawei-china-us-5g-technology.html> [<https://perma.cc/C23Z-W8P8>].

policy.⁷⁹ Some policy experts have, however credulously, pointed to the breakup of AT&T's telecommunications monopoly as a fateful decision that left the United States behind in the global telecommunication race.⁸⁰

In 2019, the Trump administration's Department of Justice made an argument in this vein in a statement of interest filed in an antitrust suit against Qualcomm. As one of the largest American chipmakers, Qualcomm plays an important role in setting standards for mobile communications. It also maintains a steady stream of royalty payments through a "no license, no chips" policy, which requires mobile device makers to buy the company's chips in order to license essential Qualcomm-owned patents. In 2019, the Federal Trade Commission filed a suit against the practice, alleging that it was anticompetitive.⁸¹ After Qualcomm sustained an unfavorable ruling at the district court level, the Department of Justice's Antitrust Division intervened before the Ninth Circuit. In a statement of interest, the Antitrust Division argued that Qualcomm's commercial prowess was crucial to maintaining American leadership in setting global technical standards for fifth-generation telecommunications.⁸² Enforcing an antitrust remedy against Qualcomm, it argued, would impair Qualcomm's global competitiveness, thereby ceding global standard-setting leadership to China and jeopardizing U.S. national security.⁸³

Although the Ninth Circuit ultimately reversed the ruling on unrelated grounds, the statement of interest marked a watershed moment that put national security and antitrust into conversation. After all, the Department of Justice had suggested that Qualcomm's monopoly profits were a necessary price to pay to preserve national security interests.⁸⁴

III. TWO VISIONS OF BIGNESS IN FOREIGN POLICY

As national security concerns enter into deliberations about tech break-ups, a number of questions come to the fore: Is it in the national interest to preserve the scale of leading technology companies? Should these interests override antitrust efforts? Advocates of Big Tech

⁷⁹ See Ellen Nakashima & Jeanne Whalen, *Barr suggests U.S. consider investing in Noki, Ericsson to counter Huawei*, Wash. Po. (February 6, 2020), https://www.washingtonpost.com/national-security/barr-warns-against-chinese-dominance-of-5g-super-fast-networks/2020/02/06/1da26794-48ec-11ea-9164-d3154ad8a5cd_story.html [<https://perma.cc/PS27-MCGX>].

⁸⁰ See e.g., Alex Rubin, Alan Omar Loera Martinez, Jake Dow & Anna Puglisi, *Policy Brief: The Huawei Moment*, Center for Security and Emerging Technology (July 2021), <https://cset.georgetown.edu/wp-content/uploads/CSET-The-Huawei-Moment.pdf> [<https://perma.cc/KPW7-L4WQ>] ("The breakup of AT&T was motivated primarily by a drive to improve consumer protections but, as the above highlighted, weakened the institutional foundation for robust R&D in the U.S. telecommunications industry."). Other experts point to a range of factors including structural shifts in the telecommunication equipment market, short-term financial pressures, and a hands-off approach to standard-setting. See Robert D. Atkinson, *Who Lost Lucent?: The Decline of America's Telecom Equipment Industry*, 4 American Affairs 3 (Fall 2020), <https://americanaffairsjournal.org/2020/08/who-lost-lucent-the-decline-of-americas-telecom-equipment-industry/> [<https://perma.cc/4GME-WS75>].

⁸¹ F.T.C. v. Qualcomm Inc., 411 F. Supp 3d 658 (N.D. Cal. 2019).

⁸² Brief of Plaintiff-Appellee, F.T.C. v. Qualcomm Inc., No. 19-16122 (9th Cir. July 12, 2019), <https://www.justice.gov/atr/case-document/file/1183936/download> [<https://perma.cc/4V5Y-L5V7>].

⁸³ *Id.* at 6–7 ("China would likely compete robustly to fill any void left by Qualcomm should Qualcomm's ability to invest and innovate be diminished. . . . [A] shift to Chinese dominance in 5G would have substantial negative national security consequences for the United States.").

⁸⁴ Brief of the United States of America, Qualcomm Inc., 935 F.3d. 752 (9th Cir. 2019) (No. 19-16122).

have marshaled a number of arguments in defense of maintaining current levels of concentration in the American technology sector. However, as the previous section demonstrates, national security interests often cut both ways; just as scale can be imperative to national security objectives, breaking up companies can have salutary national security effects.

In this section, we categorize and contextualize the various arguments made in favor of and against exempting tech platforms from antitrust considerations on national security grounds. In assessing these arguments, it is clear that disagreements extend beyond whether to exempt Big Tech from antitrust law. Rather, advocates on both sides hold distinct—and largely irreconcilable—visions of the relationship between scale (or “bigness”) and foreign policy. In presenting these visions side-by-side, we find that each comes with evident trade-offs. Bigness often provides a number of practical advantages to national security. However, over the long-term, economic concentration hobbles the means through which a country effectively pursues national interest, and worse, can be corrosive to the foundation of democracy.

A. Advantages

As discussed above, in the late nineteenth and early twentieth centuries, economists and regulators believed that “benevolent cartels” of regulated and coordinated producers could generate more social good than free competition.⁸⁵ In today’s age of great power competition, policymakers could conceivably decide that exempting tech giants from antitrust considerations is a necessary concession to protect and advance American national interest.

This section unpacks the arguments that can be made in favor of that position: (1) American technology companies are extensions of state power overseas; (2) dominant American technology companies are preferable to dominant foreign companies; (3) large American technology companies drive innovation; and (4) American technology companies’ scale and control over public platforms allow them to perform quasi-governmental security and governance functions in the public sphere.

B. Extension of State Power

The most persuasive argument that Mark Zuckerberg made in defense of his company during his first appearance before the Senate in April 2018 came not in a sound bite, but in a photo of Zuckerberg’s notes, which read: “Break Up FB? U.S. tech companies key asset for America; break up strengthens Chinese companies.”⁸⁶ Encapsulated in this abbreviated note is an argument as old as antitrust itself: that bigness aids the pursuit of national interest by ensuring that American enterprises, rather than the enterprises of adversaries, control key overseas markets.

⁸⁵ U.S. Department of Justice, Roundtable Discussion Series on Competition & Deregulation (2018), <https://www.justice.gov/file/1120636/download> [<https://perma.cc/8TUG-5UFZ>].

⁸⁶ Alistair Barr, “Facebook’s China Argument Revealed in Zuckerberg’s Hearing Notes,” Bloomberg (April 11, 2018), <https://www.bloomberg.com/news/articles/2018-04-11/facebook-antitrust-rebuttal-revealed-in-zuckerberg-hearing-notes> [<https://perma.cc/XY47-4WDH>].

This argument is the tech monopolist's version of "what's good for General Motors is good for America." If America's technology giants are prospering, then so is the country. Internationally competitive companies capable of dominating global markets deliver economic benefits, knowledge, and influence to their home country. Therefore, the argument goes, the machinery of U.S. statecraft is best deployed defending these companies and negotiating trade deals that allow them to expand their market share. Undermining American technology companies' advantage at home through intrusive regulation or antitrust action is, in sum, like squandering the crown jewels.

The argument in favor of Big Tech companies as instruments for advancing national interest doubles as a warning—namely, that without Big Tech, the United States would be exposed to foreign threats. Just as United Fruit argued that its breakup would fuel the spread of communism, and IBM insisted that its dissolution would be a windfall for European and Japanese producers, Big Tech executives today contend that only they can hold Chinese technology giants like Alibaba, Tencent, Bytedance, and Baidu back from global domination. Zuckerberg—the most ardent articulator of this argument—called Chinese technology companies “a real strategic and competitive threat that, in American technology policy, we...should be thinking about.”⁸⁷ Months later, Zuckerberg made his point more explicit, arguing that Chinese technology companies would not “cooperate . . . and aid the national interest”⁸⁸ on issues like election interference and terrorism.⁸⁹ Zuckerberg has also expressed alarm at Chinese apps like TikTok, framing their growing popularity as a threat to American interests.⁹⁰

Some in Congress seem receptive to the argument, especially within the context of U.S.-China competition. Congressman Ro Khanna, for example, called for thoughtful regulation and inquiry into Big Tech but has conversely noted that “we don't want [...] the only big tech companies to be Chinese — Alibaba, Baidu and Tencent.”⁹¹ Senator Mark Warner also cautioned against

⁸⁷ *Transcript of Mark Zuckerberg's Senate Hearing*, Washington Post (April 10, 2018).

<https://www.washingtonpost.com/news/the-switch/wp/2018/04/10/transcript-of-mark-zuckerbergs-senate-hearing/?noredirect=on> [https://perma.cc/Z7MX-TPRJ].

⁸⁸ Kurt Wagner, *Mark Zuckerberg Says Breaking up Facebook Would Pave the Way for China's Tech Companies to Dominate*, VOX (July 18, 2018), <https://www.vox.com/2018/7/18/17584482/mark-zuckerberg-china-antitrust-breakup-artificial-intelligence> [https://perma.cc/ZZ8Z-A5VH].

⁸⁹ Hearing Before the United States House of Representatives Committee on Financial Services, 116 Cong. (Statement of Mark Zuckerberg), <https://docs.house.gov/meetings/BA/BA00/20191023/110136/HHRG-116-BA00-Wstate-ZuckerbergM-20191023-U1.pdf> [https://perma.cc/3B3Z-M495]. (“Before we move forward, there are important risks that need to be addressed. There are questions about financial stability, fighting terrorism, and more. I'm here today to discuss those risks and how we plan to address them. But I also hope we can talk about the risks of not innovating. While we debate these issues, the rest of the world isn't waiting. China is moving quickly to launch similar ideas in the coming months. Libra will be backed mostly by dollars and I believe it will extend America's financial leadership as well as our democratic values and oversight around the world. If America doesn't innovate, our financial leadership is not guaranteed”).

⁹⁰ Georgia Wells, Jeff Horwitz, and Aruna Viswanatha, “Facebook CEO Mark Zuckerberg Stoked Washington's Fears About TikTok,” WALL ST. J. (Aug. 23, 2020), <https://www.wsj.com/articles/facebook-ceo-mark-zuckerberg-stoked-washingtons-fears-about-tiktok-11598223133> [https://perma.cc/V3MP-ULVU] (“On TikTok, the Chinese app growing quickly around the world, mentions of protests are censored, even in the U.S. Is that the internet we want?”).

⁹¹ Harper Neidig, “Co-Founder's Call to Break up Facebook Energizes its Critics,” THE HILL (May 11, 2019), <https://thehill.com/policy/technology/443217-co-founders-call-to-break-up-facebook-energizes-its-critics> [https://perma.cc/R579-6LD8].

breaking up America's technology giants: "[C]hop[ping] off the legs of Facebook and Google," he said, would lead them to "be replaced by Alibaba, Baidu, Tencent—companies that are totally enmeshed with the Chinese government in their global economic plan."⁹²

Although these arguments are both broad and abstract, concrete examples can be found. When the arms of American companies extend overseas, American intelligence collection reaps tangible benefits. As Jon Bateman has noted, tech companies provide "some of the fastest-growing intelligence streams."⁹³ The Foreign Intelligence Surveillance Act (FISA) requires companies to hand over data on suspected terrorists or foreign actors to law enforcement. The popularity of American platforms around the world has provided the government with valuable troves of intelligence. Compelling companies to turn over information becomes significantly more challenging when the companies are foreign and their data is stored outside of American jurisdiction. If American platforms were broken up—or if Chinese platforms absorbed many of their users—intelligence agencies would lose a considerable advantage over foreign governments in surveilling potential threats.

C. Engine of Innovation

The innovation that sustains American technological leadership is essential to both national defense and economic competitiveness. Big Tech proponents argue that the size and scale of leading American tech companies uniquely position them to innovate. As Alphabet CEO Sundar Pichai put it, "scale does offer many benefits," most notably the ability to make long-term bets on future technologies like AI, self-driving cars, and quantum computing while ignoring short-term losses.⁹⁴ Google's enormous investments in R&D speak for themselves. In 2022, Alphabet invested \$39.5 billion in R&D, approximately 14 percent of its overall revenue.⁹⁵ Alphabet, like its Big Tech peers, consistently ranks among the top investors in R&D. And at least prior to the stock market selloff that hit high-tech companies in 2022, Big Tech also significantly outspent other major companies on capital expenditures, further contributing to productivity and innovation.⁹⁶

The argument that Big Tech's scale is an accelerant for the type of innovation that benefits society was popularized by economist Joseph Schumpeter, who famously argued that large firms operating within oligopolistic markets are optimally positioned to innovate. For Schumpeter, imperfect competition, bigness, and outsized market power are the preconditions that allow large

⁹² Jonathan Tepper, "Zuckerberg Fancies Himself Our 'National Champion' Against China," THE AMERICAN CONSERVATIVE (December 31, 2019), <https://www.theamericanconservative.com/articles/zuckerberg-fancies-himself-our-national-champion-against-china/> [<https://perma.cc/7VT6-955Q>].

⁹³ Jon Bateman, "The Antitrust Threat to National Security," WALL ST. J. (Oct. 22, 2019), <https://www.wsj.com/articles/the-antitrust-threat-to-national-security-11571784197> [<https://perma.cc/Q5FS-G4RB>].

⁹⁴ Seth Fiegerman, *Google CEO Reacts to Looming US Antitrust Probes for First Time*, CNN (June 17, 2019), <https://edition.cnn.com/2019/06/14/tech/sundar-pichai-google-antitrust/index.html> [<https://perma.cc/L8D7-22C9>].

⁹⁵ *Alphabet Announces Fourth Quarter and Fiscal Year 2022 Results*, ALPHABET, (Feb. 2, 2023), <https://abc.xyz/assets/c4/d3/fb142c0f4a78a278d96ad5597ad9/2022q4-alphabet-earnings-release.pdf> [<https://perma.cc/A4WD-FA8R>].

⁹⁶ Shira Ovide, *Spending Is Big Tech's Superpower*, N.Y. TIMES (Oct. 12, 2021), <https://www.nytimes.com/2021/10/12/technology/big-tech-spending.html> [<https://perma.cc/H623-Y5FR>].

companies to pour more resources into R&D and take more risks.⁹⁷ Venture capitalist Peter Thiel crassly summed up this argument for bigness with the simple phrase “competition is for losers,” noting that “monopolists can afford to think about things other than making money; non-monopolists can’t.”⁹⁸

However, the academic literature on the relationship between innovation and firm size is more nuanced than the Schumpeterian position would suggest. Several studies have demonstrated that firms with larger R&D programs get fewer patents per dollar of R&D.⁹⁹ Although patents are an imperfect proxy for innovation—not all inventors, after all, seek to patent their breakthroughs—studies that rely on different measurements of innovative output reach similar conclusions.¹⁰⁰ In fact, research links smaller firms with better R&D productivity.¹⁰¹ Small firms also have a “comparative advantage” relative to larger firms when it comes to leveraging knowledge spillover.¹⁰²

Where large firms excel is in incremental innovation, that is, improving existing products and services rather than inventing new ones—hardly the disruptive innovation that national security policymakers seek as a source of competitive advantage.¹⁰³ Summarizing the literature on the relationship between innovation and firm size, Matt Clancy and Arnaud Dyèvre write, “it appears that larger firms get fewer innovations per dollar of R&D and that those innovations tend to be more incremental and less impactful.”¹⁰⁴ Unsurprising, the biggest advancement in AI over the past decade, ChatGPT, came from OpenAI, a young upstart with a small research team, not from a large tech firm. The breakthrough led Microsoft CEO Satya Nadella to remark, “OpenAI built this with 250 people. Why do we have Microsoft Research at all?”¹⁰⁵

⁹⁷ “[T]here are superior methods available to the monopolist which are either not available at all to a crowd of competitors or are not available to them so readily: for there are advantages which, though not strictly unattainable on the competitive level of enterprise, are as a matter of fact secured only on the monopoly level, for instance, because monopolization may increase the sphere of influence of the better, and decrease the sphere of influence of the inferior, brains, or because the monopoly enjoys a disproportionately higher financial standing.” JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM, AND DEMOCRACY* 101 (1942), 101.

⁹⁸ Peter Thiel, *Competition Is For Losers*, WALL ST. J. (Sept. 12, 2014), <https://www.wsj.com/articles/peter-thiel-competition-is-for-losers-1410535536> [<https://perma.cc/XVL9-GZJD>].

⁹⁹ John Bound et al., *Who Does R&D and Who Patents?* (Nat’l Bureau of Econ. Rsch., Working Paper No. 0908, 1982), <https://www.nber.org/papers/w0908> [<https://perma.cc/3GJ7-PT4B>].

¹⁰⁰ Wesley M. Cohen & Steven Klepper, *A Reprise of Size and R&D*, 106 THE ECONOMIC JOURNAL 925, 927-930 (1996).

¹⁰¹ Zoltán J. Ács & David B. Audretsch *Innovation and Technological Change in* HANDBOOK OF ENTREPRENEURSHIP RESEARCH 12, 13 (Zoltán J. Ács & David B. Audretsch eds., 1991); Robert Vossen, *Relative Strengths and Weaknesses of Small Firms in Innovation*, 16 no. 3 INTERNATIONAL SMALL BUSINESS JOURNAL 1688, 88-94 (1998).

¹⁰² Zoltan J Acs et al., “R & D Spillovers and Recipient Firm Size,” 76 no. 2 THE REVIEW OF ECONOMICS AND STATISTICS 336, 336-340. (May 1994).

¹⁰³ See, e.g., ANNUAL THREAT ASSESSMENT OF THE U.S. INTELLIGENCE COMMUNITY, February 6, 2023 (referencing breakthrough tech).

¹⁰⁴ Matt Clancy & Arnaud Dyèvre, *The Size of Firms and the Nature of Innovation*, NEW THINGS UNDER THE SUN (Jun. 1, 2023), <https://www.newthingsunderthesun.com/pub/d3a1wqfn/release/4> [<https://perma.cc/B3R6-NT3H>].

¹⁰⁵ Ashish Kakran, *Generative AI: A new Gold Rush for software engineering innovation*, VENTUREBEAT (Aug. 6, 2023), <https://venturebeat.com/ai/generative-ai-a-new-gold-rush-for-software-engineering-innovation/> [<https://perma.cc/7CD2-TYW8>].

Despite these findings, there is no single recipe for innovation. Some sectors have maintained a high degree of innovation in spite—or possibly because—of market concentration. Many of the 20th century’s most revisionary inventions—the transistor, photovoltaic cell, and radar, among others—came from Bell Labs, AT&T’s famed research institution, which was sustained, in large part, by the profits that AT&T generated through its monopoly over telephone services.¹⁰⁶ Similarly, many segments of the semiconductor supply chain churn out world-altering innovation despite high levels of market concentration.¹⁰⁷

These arguments have particular resonance on issues related to artificial intelligence. Frontier advancements in machine learning have, to date, required enormous amounts of computing power, also known as “compute.” According to one study conducted by Open AI, the amount of compute used for large-scale AI training has doubled every 3.4 months.¹⁰⁸ The trend shows no sign of slowing down, creating exorbitant costs for training large AI models.¹⁰⁹ Feeding this expanding appetite for compute has required increasingly bespoke hardware for specialized AI, which can run computational tasks more efficiently than off-the-shelf general-purpose chips. However, bespoke hardware is an expensive proposition, easily costing in excess of \$60 million and requiring years to perfect.¹¹⁰ These costs restrict truly state-of-the-art computing potential to the select few companies that can afford the costs of prototyping, testing, and deploying specialized systems.

The cost of AI could position Big Tech as an engine of innovation. After all, Big Tech companies are among the few global companies with the deep pocketbooks and rich data to truly drive progress in artificial intelligence.¹¹¹ One of the world’s foremost AI labs, DeepMind, offers a particularly compelling example of this phenomenon. When Google bought DeepMind in 2014, it billed the purchase as a “Manhattan Project for AI.”¹¹² Since then, Alphabet has

¹⁰⁶ JON GERTNER, *THE IDEA FACTORY: BELL LABS AND THE GREAT AGE OF AMERICAN INNOVATION* PG# (2012).

¹⁰⁷ *How ASML became chipmaking’s biggest monopoly*, *THE ECONOMIST* (Feb. 27, 2020), .
<https://www.economist.com/business/2020/02/29/how-asml-became-chipmakings-biggest-monopoly>
[<https://perma.cc/MP99-FVJ2>].

¹⁰⁸ Karen Hao, “The Computing Power Needed to Train AI is Now Rising Seven Times Faster Than Ever Before,” *MIT Technology Review* (Nov. 11, 2019), <https://www.technologyreview.com/2019/11/11/132004/the-computing-power-needed-to-train-ai-is-now-rising-seven-times-faster-than-ever-before/> [<https://perma.cc/DGF2-L5DJ>].

¹⁰⁹ Andrew Lohn and Micah Musser, *AI and Compute: How Much Longer Can Computing Power Drive Artificial Intelligence Progress?*, Center for Security and Emerging Technology (January 2022), cset.georgetown.edu/publication/ai-and-compute [<https://perma.cc/6W69-ZTEQ>].

¹¹⁰ Karl Freund, “Will ASIC Chips Become The Next Big Thing In AI?,” *FORBES* (August 4, 2017), www.forbes.com/sites/moorinsights/2017/08/04/will-asic-chips-become-the-next-big-thing-in-ai/?sh=72d4a22b11d9 [<https://perma.cc/8KJ9-YBUQ>].

¹¹¹ As Beijing Academy of Artificial Intelligence chair Dr. Zhang Hongjiang said earlier this year: “The way to artificial general intelligence is big models and big computer (Kyle Wiggers, “AI Weekly: China’s massive multimodal model highlights AI research gap,” *VENTUREBEAT* (Janu 4, 2021), <https://venturebeat.com/2021/06/04/ai-weekly-chinas-massive-multimodal-model-highlights-ai-research-gap/> [<https://perma.cc/9JUC-DPCF>].

¹¹² James Temple, “More on DeepMind: AI Startup to Work Directly With Google’s Search Team,” *RECODE* (January 27, 2014), <https://www.vox.com/2014/1/27/11622778/more-on-deepmind-ai-startup-to-work-directly-with-googles-search-team> [<https://perma.cc/LU3H-PLHQ>].

absorbed deep losses—over half a billion dollars in 2018¹¹³—to fund the lab’s research agenda.¹¹⁴ Google’s vast resources—products of its scale—enable the company to incur these losses. OpenAI, the AI research lab behind ChatGPT, offers another timely example. When established in 2015, the organization was designated as a non-profit and deliberately swore off investments from for-profit companies. In 2019, however, OpenAI accepted a \$1 billion investment from Microsoft in exchange for certain licensing rights. Why the change of heart? As OpenAI’s co-founder Samuel Altman has explained on multiple occasions, the exorbitated and growing cost of compute was a major factor in the lab’s decision.

D. Governance and Security

As digital platforms become interwoven with the fabric of society, the task of securing and governing these platforms has become increasingly consequential. As the 2016 election demonstrated, failure to do so can produce a cascade of harms relevant to national security and the stability of American democracy. And counterintuitively, this very failure in recent elections demonstrates the important role that Big Tech must play in securing and protecting our digital lives.

Naturally, Big Tech argues that they are best equipped in their current iteration to effectively secure and govern the public sphere. In its more rudimentary form, this argument comes down to the size of these companies’ pocketbooks and the price tag they are willing to spend on security. Facebook’s security team has advertised its large investments, including in state-of-the-art machine learning defense, boasting an improved capacity to remove fake accounts and disrupt malicious information campaigns.¹¹⁵ As Facebook executive and former United Kingdom Deputy Prime Minister Nick Clegg wrote in 2019: “[T]he resources that we will spend on security and safety this year alone will be more than our overall revenues at the time of our initial public offering in 2012. That would be pretty much impossible for a smaller company.”¹¹⁶

However, the argument extends further than deep pockets. The immense scale of large technology platforms allows them to counter potential threats in a manner that neither the government nor a lesser-resourced company could replicate. Facebook, Twitter, and Google, for example, can track and dismantle information operations conducted by sophisticated nation-state actors at a rapid pace.¹¹⁷ Smaller firms, by contrast, may lack the “complete picture” and can

¹¹³ Nate Lanxon, “Alphabet’s DeepMind Takes on Billion-Dollar Debt and Loses \$572 Million,” BLOOMBERG (Aug. 7, 2019), <https://www.bloomberg.com/news/articles/2019-08-07/alphabet-s-deepmind-takes-on-billion-dollar-debt-as-loss-spirals>. [<https://perma.cc/CKP7-RAXV>]

¹¹⁴ An example of the type of breakthroughs Google’s vast resources can buy include AlphaFold, DeepMind’s protein-structure program, a game changer in computational biology, which is able to accurately predict protein structures from their amino-acid sequence—potentially unlocking paths to new saving drug treatments. Andrew W. Senior et al., “Improved protein structure prediction using potentials for deep learning,” 577 *Nature* 706, 706 (2020).

¹¹⁵ But see Kyle Wiggers, *Facebook’s Improved AI Isn’t Preventing Harmful Content From Spreading*, VENTUREBEAT (Nov. 19, 2020), <https://venturebeat.com/2020/11/19/facebooks-improved-ai-isnt-preventing-harmful-content-from-spreading/> [<https://perma.cc/L6TR-2JTJ>].

¹¹⁶ Nick Clegg, *Breaking Up Facebook Is Not the Answer*, N.Y. TIMES, May 11, 2019, <https://www.nytimes.com/2019/05/11/opinion/facebook-nick-clegg-chris-hughes.html> [<https://perma.cc/2QUX-NUZX>].

¹¹⁷ Jen Weedon, William Nuland, and Alex Stamos, *Information Operations and Facebook* (Apr. 27, 2017), https://i2.res.24o.it/pdf2010/Editrice/ILSOLE24ORE/ILSOLE24ORE/Online/_Oggetti_Embedded/Documenti/2017/04/28/facebook-and-information-operations-v1.pdf [<https://perma.cc/B8C3-2STJ>].

either miss sophisticated information campaigns as they transpire or become overwhelmed by them as they occur.¹¹⁸ Even when smaller firms do identify threats, their piecemeal responses are likely far less effective, in part because state-actors can simply move onto other platforms.¹¹⁹ In contrast, Facebook, Twitter, and Google can coordinate effectively to formulate an ecosystem-wide response and can share knowledge across their platforms through the Global Internet Forum to Counter Terrorism.

Microsoft, in particular, has been an exemplar of formulating ecosystem-wide responses to cyber threats. Over 1.3 billion computers run on Windows 10—roughly half of the world’s personal computers—allowing the company to stop many cyberattacks in their tracks.¹²⁰ When Russian hackers launched a devastating supply chain attack on SolarWinds, an IT infrastructure management tool installed on thousands of government and corporate systems, Microsoft rapidly pushed an update to all systems running Microsoft Windows. The update prompted computers with the malicious program to implement a quarantine protocol and vastly slowed the spread of the malware, heading off some of the worst SolarWind’s damage. After SolarWinds, one commentator likened Microsoft to the Death Star: “able to completely destroy a planet in a single blast.”¹²¹

E. Disadvantages

As proponents of antitrust action are quick to note, pro-bigness national security arguments turn on key assumptions about corporate incentives and the relationship between monopoly and innovation. Public-private partnerships once served the pocketbooks of corporations and the technological needs of the federal government alike. Viewing the government as their primary consumer and government funding as their principal income, companies like DuPont and government-funded organizations like Lincoln Laboratories used to drive strategically-vital national security innovations. As the private sector innovated with its main consumer—the federal government—in mind, a prosperous corporate-government alignment blossomed. Over recent decades, however, these partnerships have withered. Fortune 500 companies no longer look to the federal government for revenue; globalization has opened the doors to more lucrative markets. And resultantly, these companies no longer innovate with government needs in mind.

¹¹⁸ See “Extremists Exploiting Small Social Media Websites, Experts Warn,” BBC, Sept. 1, 2018, <https://www.bbc.com/news/uk-wales-45341746>. [<https://perma.cc/TL9X-43V5>].

¹¹⁹ U.S. Securities and Exchange Commission, *The Need for Greater Focus on the Cybersecurity Challenges Facing Small and Midsize Businesses* (Cyber Security Review, Oct. 2015), <https://www.sec.gov/news/statement/cybersecurity-challenges-for-small-midsize-businesses.html> [<https://perma.cc/E6ZL-5B7S>]; Adam Janofsky, *Small Companies Are Least Prepared for Cyberattacks*, WALL ST. J (June 21, 2020), <https://www.wsj.com/articles/small-companies-are-least-prepared-for-cyberattacks-11592606067> [<https://perma.cc/7ZR3-Y2S9>].

¹²⁰ Mark Hachman, *Microsoft Did It: Windows 10 Now Powers Over Half of the World’s PCs*, PC WORLD (Sept. 6, 2019), <https://www.pcworld.com/article/3436838/windows-10-powers-over-half-of-the-worlds-pcs.html> [<https://perma.cc/JRF2-PNCP>].

¹²¹ Christopher Budd, *Microsoft Unleashes ‘Death Star’ on SolarWind Hackers in Extraordinary Response to Breach*, GEEKWIRE (Dec. 16, 2020), <https://www.geekwire.com/2020/microsoft-unleashes-death-star-solarwinds-hackers-extraordinary-response-breach/> [<https://perma.cc/YX5F-EAAS>].

Rhetoric around competition lays bare this tension: National Security Adviser Jake Sullivan and others have called for a return to competition,¹²² but for many of America's technology giants, "competition is for losers."¹²³ Over the last decade in particular, the frequent contradictions between state and corporate interests have been on full display, as have discrepancies between the optimal innovation ecosystem for national competitiveness and the optimal ecosystem for corporate growth.

These tensions can undercut Big Tech's national security case against antitrust, highlighting weaknesses in the pro-monopolist position, including: (1) Big Tech interests are often at odds with the national interest; (2) over-reliance on Big Tech contracting can create supply chain vulnerabilities and raise prices; (3) Big Tech dominance can depress innovation; and (4) Big Tech can undercut democracy.

F. Misaligned Interests

Large technology companies and regulators regularly clash over domestic issues including privacy, consumer protection, and competition.¹²⁴ Unsurprisingly, Big Tech skeptics contend that these companies are ill-suited to serve as stewards of national interest in foreign policy and national security.

Corporations are legally structured to put shareholders first. While corporate managers may account for the country's interests, they can only do so only insofar as they are advancing shareholder interests as well. In general, the profit-seeking behavior of corporate actors misaligns with national security interests.¹²⁵ As former Exxon CEO Lee Raymond once stated, "I don't make decisions based on what's good for the U.S."¹²⁶ It should come as no surprise, then, that misalignments between Big Tech interests and the national interest have arisen.

Over the past decade, no geopolitical situation has better encapsulated tensions between corporate and national interests than U.S.-China relations. China stands as simultaneously the largest economic and ideological competitor to the United States—and the world's largest market. Lured by the size of this market, American technology companies have transferred

¹²² "Remarks by National Security Advisor Jake Sullivan at the National Security Commission on Artificial Intelligence Global Emerging Technology Summit," THE WHITE HOUSE (July 21, 2021), <https://www.whitehouse.gov/nsc/briefing-room/2021/07/13/remarks-by-national-security-advisor-jake-sullivan-at-the-national-security-commission-on-artificial-intelligence-global-emerging-technology-summit/> [<https://perma.cc/TU28-GT5B>].

¹²³ Peter Thiel, *Competition Is For Losers*, WALL ST. J., Sep. 1 Journal (Sept. 2, 2014), <https://www.wsj.com/articles/peter-thiel-competition-is-for-losers-1410535536>.

¹²⁴ See Delaware General Corporation Law; *Harris v. Carter*, 582 A.2d 222, 234 (Del. Ch. 1990) (finding a corporate fiduciary duty to shareholders).

¹²⁵ David G. Yosifon, *Is Corporate Patriotism a Virtue?*, 13 SANTA CLARA J. INT'L L. 265 (2016), Available at SSRN: <https://ssrn.com/abstract=2593960> [<https://perma.cc/R8K5-FPDV>].

¹²⁶ Bernard Vaughan, *Global Power of ExxonMobil Spotlit in New Coll Book*, REUTERS (Apr. 27, 2012), <https://www.reuters.com/article/books-exxonmobil/global-power-of-exxonmobil-spotlit-in-new-coll-book-idUSL2E8FQP6B20120427> [<https://perma.cc/AQ2A-V4NU>].

critical technology with military applications to Chinese counterparts,¹²⁷ aided state surveillance efforts (including against persecuted ethnic minorities¹²⁸), circumvented U.S. export controls to continue selling to sanctioned companies like Huawei, and supported the Chinese government's programs to gain leadership in emerging technologies like AI.¹²⁹

In recent years, American technology companies' attitudes towards China have soured as China has turned inward.¹³⁰ Meta, in particular, has done an abrupt about-face, shifting from wooing Chinese leadership in hopes of currying favor to publicly bashing Chinese censorship and positioning itself as a counterweight to Chinese technology giants.¹³¹ Former Alphabet Chairman Eric Schmidt has championed Big Tech as a bulwark for American interests against rising Chinese influence.¹³² However, the ability of American technology giants to reliably act as national champions against China is doubtful. Technology companies like Meta cannot fully turn away from the Chinese market. In fact, they continue to press for opportunities to establish footholds in it.¹³³ Apple remains entrenched in China and, as of late 2021, held the largest share of the country's cell phone market.¹³⁴ The Chinese government, for its part, has grown skillfully at leveraging market access to manipulate foreign companies to encourage them to self-censor and support Beijing's political goals. During the trade war, China wooed American multinationals with promises of market access to pressure the Trump administration to lower tariffs.¹³⁵

The divergence between government and Big Tech interests is not limited to China. Differences have hit closer to home during the COVID-19 pandemic. Meta executives and government health

¹²⁷ Kate O'Keeffe and Brian Spegele, *How a Big U.S. Chip Maker Gave China the 'Keys to the Kingdom'*, WALL ST. J. (June 27, 2019), <https://www.wsj.com/articles/u-s-tried-to-stop-china-acquiring-world-class-chips-china-got-them-anyway-11561646798> [<https://perma.cc/6UML-BBC7>].

¹²⁸ Paul Mozur and Don Clark, *China's Surveillance State Sucks Up Data. U.S. Tech Is Key to Sorting It*, N.Y. TIMES (Nov. 22, 2020), <https://www.nytimes.com/2020/11/22/technology/china-intel-nvidia-xinjiang.html> [<https://perma.cc/RWH8-KR9X>].

¹²⁹ Carlos Tejada, *Google, Looking to Tiptoe Back Into China Announces A.I. Center*, N.Y. TIMES (Dec. 13, 2017), <https://www.nytimes.com/2017/12/13/business/google-ai-china.html> [<https://perma.cc/UR38-LSFR>].

¹³⁰ *China's 'Dual-Circulation' Strategy Means Relying Less on Foreigners*, THE ECONOMIST (Nov. 7, 2020), www.economist.com/china/2020/11/05/chinas-dual-circulation-strategy-means-relying-less-on-foreigners [<https://perma.cc/GE2W-Y5XH>].

¹³¹ Aaron Holmes, *Mark Zuckerberg Just Slammed China for Allegedly Censoring Hong Kong Protest Videos on TikTok: 'Is That the Internet we Want?'*, BUSINESS INSIDER (Oct. 17, 2019), <https://www.businessinsider.com/mark-zuckerberg-china-tiktok-censorship-2019-10> [<https://perma.cc/R28R-F5U7>].

¹³² Intelligence Matters, *Eric Schmidt Warns China is Catching Up to U.S. in AI*, CBS NEWS (Apr. 21, 2021), www.cbsnews.com/news/tech-giant-eric-schmidt-warns-china-is-catching-up-to-u-s-in-a-i/ [<https://perma.cc/B5E4-XSAH>].

¹³³ Indeed, Facebook continues to expand its China operation, growing its China presence into an estimated \$5 billion dollar revenue stream. See Maggie Baughman, *Facebook's China Advertising*, THE WIRE (Aug. 1, 2020), <https://www.thewirechina.com/2021/08/01/facebooks-china-advertising/> [<https://perma.cc/7DB8-PD2Y>].

¹³⁴ Jack Nicas, Raymond Zhong, and Daisuke Wakabayashi, *Censorship, Surveillance and Profits: A Hard Bargain for Apple in China*, N.Y. TIMES (May 17, 2021), <https://www.nytimes.com/2021/05/17/technology/apple-china-censorship-data.html> [<https://perma.cc/MTE7-M7L6>]; Wayne Ma, *Inside Tim Cook's Secret \$275 Billion Deal with Chinese Authorities*, THE INFORMATION (Dec. 7, 2021), <https://www.theinformation.com/articles/facing-hostile-chinese-authorities-apple-ceo-signed-275-billion-deal-with-them> [<https://perma.cc/E523-MCEL>].

¹³⁵ Aledandra Stevenson, Kate Kelly, Kiether Bradsher, *As Trump's Trade War Mounts, China's Wall Street Allies Lose Clout*, N.Y. TIMES (Sept. 16, 2018), www.nytimes.com/2018/09/16/business/china-wall-street-trade.html [<https://perma.cc/GF95-6SL7>].

officials were at odds over Facebook's data-sharing related to coronavirus vaccine misinformation. Frustrations over the company's handling of vaccine misinformation boiled over in 2021, leading President Biden to accuse Facebook of "killing people."¹³⁶ Underlying this dispute is a clash between competing objectives: Facebook's desire to keep highly engaged content on its platform and the administration's goal of vaccinating Americans.

Just as United Fruit portrayed itself as a champion of American interests abroad (despite flaming anti-American sentiment in Latin America) and thereby helped foster pro-communist conditions, Facebook today is likely stoking resentment that damages American soft power and increases the attractiveness of Chinese or Russian approaches to internet governance.¹³⁷ When the actions of American companies undermine American credibility, the tension between corporate ends and government ambitions is at its zenith.

G. Supply Side Risks

The risks of bigness extend beyond foreign policy to government procurement at home. Big Tech has assumed a growing role in government contracting, from enterprise software to big data analytics and cloud infrastructure. Those that believe the federal government is stuck in the past have heralded this as a positive development.¹³⁸ However, as the coronavirus pandemic laid bare, single-source dependency—when supply chains or operating systems rely on a single vendor—creates major vulnerabilities. Concentrating critical national security technologies within a small, select set of companies raises risks adverse to state interest.

When markets are concentrated with few vendors, those vendors wield exceptional leverage, including the power to dictate contract terms, prices, and supply. Faced with few options, consumers are powerless to turn elsewhere, often bearing the higher costs of low-competition marketplaces. Monopolists have also historically restricted supply as a means to temper costs and keep prices high. Alcoa's World War II steel monopoly is instructive. In the lead up to World War II, Alcoa harnessed its monopoly over steel to restrict production capacity. Once the government began mobilizing for war, Alcoa's monopoly created a severe aluminum shortage that required massive investments in new capacity.¹³⁹ As historian Wyatt Wells writes, "[i]n a competitive industry there is always some excess capacity, which can be put to use when demand increases, but a monopoly does not have to provide spare capacity."¹⁴⁰ The lack of built-in slack in supply capacity in critical markets has been a recurring national security issue.

For the government, quite simply, competition is paramount to keeping contract costs low. Within the defense industry, competition has steadily eroded, prompting members of Congress to

¹³⁶ Zolan Kanno-Youngs and Cecilia Kang, *Inside the White House-Facebook Rift Over Vaccine Misinformation*, N.Y. TIMES (Aug. 10, 2021), <https://www.nytimes.com/2021/08/10/technology/facebook-vaccine-misinformation.html> [<https://perma.cc/MJA4-THA9>].

¹³⁷ Eric Posner, *Facebook's 'Ugly American' Problem Abroad*, THE BANGKOK POST (Nov. 11, 2021), <https://www.bangkokpost.com/opinion/opinion/2213455/facebooks-ugly-american-problem-abroad> [<https://perma.cc/2YW5-X23T>].

¹³⁸ Ash Carter, *Why Big Tech and the Government Need to Work Together*, WIRED (Sept. 14, 2018), <https://www.wired.com/story/why-big-tech-and-the-government-need-to-work-together/> [<https://perma.cc/V292-89GL>].

¹³⁹ WYATT WELLS, *Antitrust and the Formation of the Postwar World*, 62-63 (2002).

¹⁴⁰ *Id.* at 62.

call for “both the FTC and Congress...to make major antitrust reforms in order to protect national security and cut costs for American taxpayers.”¹⁴¹ In July 2021, Senator Elizabeth Warren urged increased FTC oversight over defense industry mergers, citing anticompetitive harms like higher costs for government procurement and diminished Department of Defense agency in setting contract terms.¹⁴²

The same dynamic that is playing out among defense contractors is also present among technology giants. While contracting Project JEDI for example, the Pentagon sought a competitive marketplace—former Acting Secretary of Defense Patrick Shanahan said “the fundamental premise on our approach to the JEDI implementation was to have competition”¹⁴³—yet only four companies worldwide submitted final bids for JEDI and two, IBM and Oracle, were deemed insufficient.¹⁴⁴ The Pentagon, in short, had only two choices for a multi-billion dollar deal critical to the United States’ national security posture. As suppliers merge and new companies struggle to expand, government has increasingly few options, raising concerns about supply chain vulnerabilities, higher prices, and inflexible contracting.

Single-vendor reliance presents a cybersecurity risk as well. When the government relies on a single product, system, or manufacturer—effectively a “technology monoculture”—the compromise or failure of that entity is devastating and systemic, inflicting significantly more damage than would have occurred in a diversified ecosystem.¹⁴⁵ Since one vulnerability can imperil an entire system, monocultures present adversaries with an automatic, high-value target. In the early 2000s, Microsoft Windows’ Operating System dominated the software market, comprising approximately 94% of “consumer client software” sold in 2002.¹⁴⁶ Viruses targeting

¹⁴¹ The last five years have been marked by widespread defense industry mergers and acquisitions, including General Dynamics and CSRA (2018), Northrop Grumman and Orbital (2018), Lockheed Martin and Sikorsky (2015), and Raytheon and United Technologies Corp (2020). See Marcus Weisgerber, *Defense Business Brief: Questions Loom About Lockheed Martin-Aerojet Deal; New Skunkworks Factory; Warren Aide Tapped for Top Pentagon Policy Position, and More*, DEFENSE ONE (Aug. 13, 2021), <https://www.defenseone.com/business/2021/08/defense-business-brief-questions-loom-about-lockheed-martin-aerojet-deal-new-skunkworks-factory-warren-aide-tapped-top-pentagon-policy-position-and-more/184524/> [https://perma.cc/5VLH-JSXH].

¹⁴² Letter from Elizabeth Warren, United States Sen., to Lina Khan, FTC Chair, *Sen. Elizabeth Warren’s Office* (July 16, 2021), [https://www.warren.senate.gov/imo/media/doc/FTC%20-%20DOD%20Letter%20re%20Behavioral%20Remedies%20-%20207.16.21%20\(Warren\).pdf](https://www.warren.senate.gov/imo/media/doc/FTC%20-%20DOD%20Letter%20re%20Behavioral%20Remedies%20-%20207.16.21%20(Warren).pdf) [https://perma.cc/4ERD-T4WJ].

¹⁴³ Jason Miller, *Oracle Sends 8 Letters to Lawmakers Asking for Stronger Oversight of DoD’s JEDI Program*, FEDERAL NEWS NETWORK (May 6, 2019), <https://federalnewsnetwork.com/reporters-notebook-jason-miller/2019/05/oracle-sends-8-letters-to-lawmakers-asking-for-stronger-oversight-of-dods-jedi-program/> [https://perma.cc/QD69-V43F].

¹⁴⁴ After Project JEDI was scrapped in July 2021, the Pentagon named Microsoft and Amazon as the two “likely” contractors for the Pentagon’s new cloud project, the Joint Warfighter Cloud Capability (JWCC). See Damon Poeter, *Pentagon Scraps \$10B JEDI Project With Microsoft, Calls Deal Outdated*, VENTUREBEAT (July 6, 2021), <https://venturebeat.com/2021/07/06/pentagon-scraps-10b-jedi-project-with-microsoft-calls-deal-outdated/> [https://perma.cc/E2ZP-TYS6].

¹⁴⁵ Michael Chertoff, *Qualcomm’s Monopoly Imperils National Security*, WALL ST. J. (Nov. 24, 2019), <https://www.wsj.com/articles/qualcomms-monopoly-imperils-national-security-11574634436> [https://perma.cc/2W27-JPYS].

¹⁴⁶ Daniel Greer, *Cyber Insecurity: How the Dominance of Microsoft’s Products Poses a Risk to Security*, ANTI-VIRUS RANKINGS January (Jan. 18, 2019), <https://antivirusrankings.com/cyber-insecurity-how-the-dominance-of-microsofts-products-poses-a-risk-to-security> [https://perma.cc/A7Q8-AUMT].

or exploiting Windows OS triggered “cascade failures,” disabling large swaths of American computers;¹⁴⁷ security experts at the time warned that Microsoft’s “monopoly position undermines [U.S. government] security.”¹⁴⁸ Today, the risks of technological monoculture, particularly with cybersecurity, are evident; one flaw, one compromise, one vulnerability and an entire system is crippled.

H. Incentivizing the Wrong Type of Innovation

Bigness disincentivizes paradigm shifts that are necessary to keep pace with technological change. In the 1980s, Japan’s tech giants like NEC, Panasonic, and Toshiba appeared on the verge of overtaking their U.S. rivals. However, whereas the United States rigorously enforced antitrust laws, breaking up AT&T and subjecting IBM to over a decade of antitrust litigation, Japan heaped their national champions with government support and erected protectionist barriers. The results speak for themselves: Japan fell far behind in software and personal computing while American companies like Microsoft led a new wave of technological growth that ultimately made companies like NEC obsolete.¹⁴⁹ Large R&D budgets cannot overcome the constraints that bigness imposes on speed and effectiveness. As Ganesh Sitaraman has written, “market competition is good for innovation because competitors have to find ways to differentiate themselves in order to survive and expand.”¹⁵⁰ Existing research—and the case of Japanese personal software—generally support Sitaraman’s assertions: increased market competition can spur both innovation¹⁵¹ and R&D spending.¹⁵²

Antitrust can play a role in keeping markets competitive and optimizing the innovation ecosystem. Even when antitrust investigations do not lead the government to break up big companies, rigorous enforcement of antitrust laws—what Tim Wu calls the “the policeman at elbow” effect¹⁵³—can prevent large companies from stamping out new competitors that will out-innovate the established players. Eisenhower’s antitrust accord with AT&T, for example, kept the telecommunication behemoth out of the inchoate information technology space, giving new entrants like Intel, Texas Instruments, and Fairchild Semiconductor a chance to develop. Prolonged antitrust litigation against IBM in the 60s and 70s led IBM to unbundle hardware and

¹⁴⁷ Charles Duan, *Federal Trade Commission v. Qualcomm Incorporated*, R ST. (Nov. 28, 2019), <https://www.rstreet.org/2019/11/28/federal-trade-commission-v-qualcomm-incorporated/> [<https://perma.cc/RZ54-QL8U>].

¹⁴⁸ Paul Thurrott, *Microsoft Monoculture a US National Security Risk: Report*, IT NEWS (Jan. 1, 2000), <https://www.itnews.com.au/news/microsoft-monoculture-a-us-national-security-risk-report-12206> [<https://perma.cc/ZMF3-JRY5>].

¹⁴⁹ Tim Wu, *Don’t Fall for Facebook’s ‘China Argument,’* N.Y. TIMES December (Dec. 10, 2018), <https://www.nytimes.com/2018/12/10/opinion/facebook-china-tech-competition.html> [<https://perma.cc/S8ZN-R66Y>].

¹⁵⁰ Ganesh Sitaraman, *The National Security Case for Breaking Up Big Tech*, KNIGHT FIRST INSTITUTE AT COLUMBIA UNIVERSITY (Jan. 30, 2020), <https://knightcolumbia.org/content/the-national-security-case-for-breaking-up-big-tech> [<https://perma.cc/9Q7P-Y4CS>].

¹⁵¹ Paul A. Geroski, *Innovation, Technological Opportunity, and Market Structure*, 42 OXFORD ECON. PAPERS NEW SERIES 586, 600 (1990).

¹⁵² Philippe Aghion et al., *The Causal Effects of Competition on Innovation: Experimental Evidence*, 34 J.L. ECON. & ORG. 162, 165 (2018). The enforcement of competition policy has also been tied to increased innovation. See Frank Crowley & Declan Jordan, *Does More Competition Increase Business-Level Innovation? Evidence From Domestically Focused Firms in Emerging Economies*, 26 ECON. INNOV. NEW TECHNOL., 477, 485 (Sept. 2016).

¹⁵³ Tim Wu, *Tech Dominance and the Policeman at the Elbow*, Columbia Public Law Research Paper 81, 82 (2019).

software, allowing for the creation of an independent software industry and ultimately the rise of Microsoft and Apple.¹⁵⁴ Similarly, the Justice Department’s antitrust suit against Microsoft in the late 1990s paved the way for the rise of today’s technological giants like Facebook, Google, and Amazon.¹⁵⁵ Time will tell how recent antitrust suits brought against these very companies change the innovation landscape of the future.

Big Tech’s dominant position across the digital economy makes the costs of independent entry to these markets higher—and the probability of achieving long-term commercial success remote. As a result, more and more startups today are innovating with an eye toward acquisition, rather than building viable businesses—“building for sale and not for scale.”¹⁵⁶ This orientation affects the very nature of innovation. As Director of the Consumer Financial Protection Bureau Rohit Chopra remarked: “If the nature of innovation is distorted toward selling to an incumbent, you’re going to get more feature-driven innovation rather than systemic disruption.”¹⁵⁷

Big Tech companies have re-written investment and competition rules in many markets both by acquiring start-ups simply to kill them (so-called “killer-acquisitions”) and by increasingly occupying the role of venture capitalists themselves. University of Chicago researchers found that from 2006-2016 when Google or Facebook purchased a start-up, venture capital investment in the same space fell by 46 percent over the next three years while the number of deals plummeted 42 percent.¹⁵⁸ This data suggests that Google or Facebook’s entrance into a market significantly dampens investors’ willingness to back competing start-ups, thereby lessening broader market competition.

But even if we accept the hypothesis that monopolies spur innovation, the question remains, “innovation for whom?” If concentration produces greater innovation, is it producing the right type of innovation? Innovation might surge under a pro-Schumpeterian system, but perhaps it’s the wrong type of innovation from a national security perspective. Even if consolidation leads to a booming technology industry, the industry’s advances may be largely insular from—or detrimental to—national security needs. Corporate research can be famously short-sighted. A Center For Security and Emerging Technology survey of corporate AI labs, for example, found that major companies were underinvesting in critical AI applications that could offset the structural advantage of authoritarian regimes in deploying AI.¹⁵⁹

And perhaps in supporting this type of innovation, Big Tech deprives the rest of the innovation ecosystem of the resources it needs. Flush with cash, Big Tech can scoop up top talent that

¹⁵⁴ *Id.* at 92.

¹⁵⁵ *Id.* at 88.

¹⁵⁶ See Mark Lemley and Andrew McCreary, *Exit Strategy*, 1-90, 22 (Stan. L. & Econ. Olin Working Paper No. 542, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3506919 [<https://perma.cc/4EX7-SUGN>].

¹⁵⁷ Alexis C. Madrigal, *Silicon Valley Abandons the Culture That Made It the Envy of the World*, THE ATL. (Jan. 15, 2020), <https://www.theatlantic.com/technology/archive/2020/01/why-silicon-valley-and-big-tech-dont-innovate-anymore/604969/> [<https://perma.cc/TZF6-H4EX>].

¹⁵⁸ Andrew Clark, *Why Big-Tech Mergers Stifle Innovation*, CHI. BOOTH REV. (March 4, 2020), <https://review.chicagobooth.edu/economics/2020/article/why-big-tech-mergers-stifle-innovation> [<https://perma.cc/6HRQ-PP7F>].

¹⁵⁹ Rebecca Gelles et al., *Mapping Research Agendas in U.S. Corporate AI Laboratories*, CTR. FOR SEC. & EMERGING TECH. (April 2021), <https://doi.org/10.51593/20200037> [<https://perma.cc/YZF4-PQUC>].

otherwise would support public innovation.¹⁶⁰ Corporate R&D, in general, skews towards applied projects with near-term commercialization prospects. From a national security perspective, the talent and resources that further corporate research would be better utilized at a public institution with a long history of federal agency collaboration.¹⁶¹

I. Undermining Governance and Democracy

Big Tech touts the advantages of scale to governance and security, but it may be praising a solution to a problem that it created. For every technology executive arguing that bigness is a bulwark against cyber threats or unaccountable management, clear counterpoints exist. As Shoshana Zuboff argues, these platforms “ceaselessly escalate the scale of engagement but don’t care what engages [users].”¹⁶² This largely unregulated quest for data and growth has profound governance consequences: leading technology platforms drive underlying threats to democracy—including inequality, extremism, polarization, and misinformation—raising legitimate questions about these platforms’ case for “superior” governance.

In 2019, Mark Zuckerberg stated “If what you care about is democracy and elections...then you want a company like us to be able to invest billions of dollars a year, like we are, in building really advanced tools to fight election interference.”¹⁶³ He did not mention Facebook’s role in facilitating such interference in the first place. Similarly, YouTube proudly notes that its content moderation programs have removed 83 million videos from the platform since 2017,¹⁶⁴ but YouTube’s own algorithms have also radicalized users, driving them toward extremist content and positions.¹⁶⁵ Misinformation is another growing problem with Big Tech at its center. President Biden directly attributed COVID-19’s spread to misinformation about the virus; and his Surgeon General went further, portraying Big Tech as the facilitator of misinformation, enabling falsehoods to “poison our information environment with little accountability.”¹⁶⁶ Despite repeated assertions about their unique governance capacity, the past decade has prompted more doubts about Big Tech’s governance than assurances. Platforms’ role

¹⁶⁰ Josh Lohensohn, *Uber Gutted Carnegie Mellon’s Top Robotics Lab to Build Self-Driving Cars*, THE VERGE (March 19, 2015), <https://www.theverge.com/transportation/2015/5/19/8622831/uber-self-driving-cars-carnegie-mellon-poached> (explaining that Uber, in its quest to develop self-driving cars, poached around 50 academics and researchers from Carnegie Mellon University’s robotic center, gutting the department of much of its top talent) [<https://perma.cc/XN4Y-PB63>].

¹⁶¹ Most recently Carnegie Mellon’s robotics department partnered with Army Future Command. See *Carnegie Mellon Hosts Activation of U.S. Army AI Task Force*, CARNEGIE MELLON UNIV. (Feb. 1, 2019), <https://www.cmu.edu/news/stories/archives/2019/february/army-ai-task-force.html> [<https://perma.cc/CX84-X39X>].

¹⁶² Shoshanna Zuboff, *The Coup We Are Not Talking About*, N.Y. TIMES (Jan. 29, 2021), <https://www.nytimes.com/2021/01/29/opinion/sunday/facebook-surveillance-society-technology.html> [<https://perma.cc/MD7R-4ZXH>].

¹⁶³ Jill Lepore, *Facebook’s Broken Vows*, THE ATLANTIC (July 26, 2021), <https://www.newyorker.com/magazine/2021/08/02/facebooks-broken-vows> [<https://perma.cc/45W7-7CCH>].

¹⁶⁴ Rebecca Heilweil, *YouTube Says it’s Better at Removing Videos that Violate its Rules, But Those Rules Are in Flux*, VOX (April 6, 2021), <https://www.vox.com/recode/2021/4/6/22368809/youtube-violative-view-rate-content-moderation-guidelines-spam-hate-speech> [<https://perma.cc/7SMG-S8QK>].

¹⁶⁵ Zeynep Tufekci, *YouTube, the Great Radicalizer*, N.Y. TIMES (March 10, 2018), <https://www.nytimes.com/2018/03/10/opinion/sunday/youtube-politics-radical.html> [<https://perma.cc/JEV6-P4HT>].

¹⁶⁶ Sheryl Gay Stolberg & Davey Alba, *Surgeon General Assails Tech Companies Over Misinformation on Covid-19*, N.Y. TIMES (July 15, 2021), <https://www.nytimes.com/2021/07/15/us/politics/surgeon-general-vaccine-misinformation.html> [<https://perma.cc/62EK-L3UX>].

perpetuating and facilitating election interference, extremism, and misinformation legitimizes those concerns.

Decades ago, President Roosevelt spoke about the threat industrial monopoly posed to democracy, asserting that “the liberty of a democracy is not safe if the people tolerate the growth of private power to a point where it becomes stronger than their democratic state itself.”¹⁶⁷ Today, data’s unprecedented concentration in the hands of technology titans may pose a comparable threat. Data could be the currency of the future and AI the technology of the future, raising serious concerns about their concentration within a select few companies. Beyond making these platforms natural and high-yield targets—and tools—for malicious actors intent on spreading misinformation or subverting elections, these platforms wield unparalleled control over the future of innovation. Democratizing innovation and control over data is critical, if only to ensure that a handful of powerful institutions are not setting the national innovation agenda.

This democratization also matters for less industrial ends. Changing where innovation occurs and who drives it will ensure more heterogeneity in products, the people these products serve, and the ambitions these products hold. Right now, data is leveraged by a select few companies to shape the digital economy. In a society where data is widely available to university researchers and city planners alike, data could serve the common good, not just companies’ bottom line. Compute’s concentration within a select few companies has already amplified inequality in industry. Within academia, an unprecedented compute gap between elite universities and their less prestigious counterparts serves as one example. This so-called “compute divide” between wealthy research institutions and their less-resourced peers is self-reinforcing.¹⁶⁸ Armed with the financial ability to access compute and test deep learning applications, these schools hire top AI talent and pioneer breakthroughs, many of which reinforce the continued importance of compute, pushing barriers of entry ever higher. Paradoxically, this pattern mirrors the power imbalance between industry and top universities. Over the past decade, leading technology companies have increasingly poached academics and researchers from elite universities, luring them to industry with large salaries, access to superior data, and stronger computing power.¹⁶⁹ The result has been an AI “brain drain” within academia, further narrowing where AI innovation is likely to occur.¹⁷⁰

¹⁶⁷ Franklin D. Roosevelt, *Message to Congress on Curbing Monopolies*, Speech to Congress, April 29, 1938, <https://www.presidency.ucsb.edu/documents/message-congress-curbing-monopolies> [<https://perma.cc/3QPT-DBPC>].

¹⁶⁸ Khari Johnson, *AI Research Finds a ‘Compute Divide’ Concentrates Power and Accelerates Inequality in the Era of Deep Learning*, VENTUREBEAT (Nov. 11, 2020), https://venturebeat.com/2020/11/11/ai-research-finds-a-compute-divide-concentrates-power-and-accelerates-inequality-in-the-era-of-deep-learning/?utm_campaign=AI%20Weekly&utm_medium=email&utm_source=Revue%20newsletter [<https://perma.cc/S2QS-ZMJY>].

¹⁶⁹ Daniela Hernandez & Rachael King, *Universities’ AI Talent Poached by Tech Giants*, WALL ST. J., (Nov. 24, 2016), <https://www.wsj.com/articles/universities-ai-talent-poached-by-tech-giants-1479999601> [<https://perma.cc/ECR5-Q7VM>]; Cade Metz, *A.I. Researchers Are Making More Than \$1 Million, Even at a Nonprofit*, N.Y. TIMES (Apr. 19, 2018), <https://www.nytimes.com/2018/04/19/technology/artificial-intelligence-salaries-openai.html> [<https://perma.cc/R7GW-KEW2>]; Ben Dickson, *What Is the AI Brain Drain?*, TECHTALKS (Sept. 26, 2019), <https://bdtechtalks.com/2019/09/26/artificial-intelligence-brain-drain/> [<https://perma.cc/PC34-BQ35>].

¹⁷⁰ Roman Jurowetcki et. al, *The Privatization of AI Research(-ers): Causes and Potential Consequences -- From University-Industry Interaction to Public Research Brain-Drain?* (ARXIVFeb. 15, 2021),

Finally, as their profits and data grow, America's leading technology companies are exerting more power over governmental institutions and citizens alike. In 2020, seven of the country's largest technology companies spent over \$65 million on domestic lobbying and spent millions more overseas.¹⁷¹ A recent report from Corporate Europe Observatory and Lobby Control found that technology companies spent more than the pharmaceutical, finance, and fossil fuel industries combined in 2020 lobbying expenses.¹⁷² This trend shows no signs of stopping—Facebook spent over \$5 million in lobbying last quarter alone—and it extends beyond spending.¹⁷³ Big Tech has been scooping up top Congressional staffers, bringing valuable expertise and inside knowledge from Capitol Hill to Silicon Valley.¹⁷⁴ And conversely, tech executives have leveraged their wealth to expand their public reach, purchasing companies like Twitter (Elon Musk) and the Washington Post (Jeff Bezos).¹⁷⁵ Intellectual proponents of antitrust, often associated with Supreme Court Justice Louis Brandeis, viewed economic concentration as an existential threat to democracy.¹⁷⁶ The accumulation of private power, in their view, naturally leads to a concentration of political power that could undermine the foundation of self-government.¹⁷⁷ Following this line of thinking, monopolists, wielding power over the political process, could rig the system in their favor. Data suggests that this fixing does occur. Industry concentration has been strongly associated with elevated lobbying spending.¹⁷⁸

As we have repeatedly witnessed in recent years, Big Tech's power goes well beyond the halls of Washington. The unprecedented concentration of data held by leading technology companies enables them to wield remarkable control over modern information and communication ecosystems.¹⁷⁹ These companies shape users' decisions and broadly dictate how users arrive at

<https://arxiv.org/pdf/2102.01648> [<https://perma.cc/M5YD-CBSL>]; Oren Etzioni, *AI Academy Under Siege*, INSIDE HIGHER ED (Nov. 19, 2019), <https://www.insidehighered.com/views/2019/11/20/how-stop-brain-drain-artificial-intelligence-experts-out-academia-opinion> [<https://perma.cc/CDG6-K8XU>].

¹⁷¹ Tony Romm, *Amazon, Facebook, Other Tech Giants Spent Roughly \$65 Million to Lobby Washington Last Year*, WASH. POST (Jan. 22, 2021), <https://www.washingtonpost.com/technology/2021/01/22/amazon-facebook-google-lobbying-2020/> [<https://perma.cc/VH9Y-ENW9>]; Natasha Lomas, *U.S. Giants Top Tech Industry's \$100M+ a Year Lobbying Blitz in EU*, TECHCRUNCH (Aug. 31, 2021), <https://techcrunch.com/2021/08/31/us-giants-top-tech-industrys-100m-a-year-lobbying-blitz-in-eu/> [<https://perma.cc/YY5G-G5PN>].

¹⁷² Jonathan Owen, *Report: Big Tech Spends More on Lobbying Than Pharma, Finance, and Chemical Firms Combined*, PR WEEK (Sept. 6, 2021), <https://www.prweek.com/article/1726166/report-big-tech-spends-lobbying-pharma-finance-chemicals-firms-combined> [<https://perma.cc/J6CV-UBD4>].

¹⁷³ Caitlin Oprysko & Emily Birnbaum, *Facebook Lobbying Surges to \$5M Amid Whistleblower Uproar*, POLITICO (Oct. 21, 2021), <https://www.politico.com/news/2021/10/21/facebook-lobbying-uproar-516443> [<https://perma.cc/W9PS-3CMB>].

¹⁷⁴ Emily Birnbaum & John Hendel, *Big Tech Sweeps up Hill Staffers — Just When Congress Needs Them the Most*, POLITICO (Oct. 12, 2021), <https://www.politico.com/news/2021/10/12/hill-staffers-tech-lobbying-515742> [<https://perma.cc/9CYQ-D3KZ>].

¹⁷⁵ Note: Jeff Bezos' managerial control over the Washington Post is quite distinct from Elon Musk's control over Twitter because editorial independence protects the Post from Bezos' interference with editorial decisions.

¹⁷⁶ TIM WU, *THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GILDED AGE* 42 (2018).

¹⁷⁷ Lina Khan, *The New Brandeis Movement: America's Antimonopoly Debate*, 9(3) J. EUR. COMP. L. & PRAC. 131 (2018).

¹⁷⁸ REED SHOWALTER, *DEMOCRACY FOR SALE: EXAMINING THE EFFECTS OF CONCENTRATION ON LOBBYING IN THE UNITED STATES* (Aug. 2021), http://www.economicliberties.us/wp-content/uploads/2021/08/Working-Paper-Series-on-Corporate-Power_10_Final.pdf [<https://perma.cc/JET9-BZ8U>].

¹⁷⁹ See SHOSHANA ZUBOFF, *THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER* (2019).

these decisions.¹⁸⁰ To the extent that democracy requires autonomy or agency—that a populace be able to “voice its own free will”—Big Tech proves dangerous. These companies do not merely shape the digital town square. They are the town square.

Regardless of the advantages Big Tech delivers, the long-term consequence of economic concentration might be too costly to democracy to justify maintaining tech giants. While contemporary antitrust thinking has centered around the value of consumer welfare and efficiency, the early antitrust movement was primarily animated by a fear that the excessive concentration of economic power would undercut democracy.¹⁸¹ Over time, economic concentration can pave the way for illiberal or authoritarian outcomes. Nazi Germany’s industrial cartels consolidated control over the Weimar economy and are widely recognized to have aided the rise of Hitler and the entrenchment of fascism.¹⁸² This recognition led Congress to strengthen antitrust laws at home in the aftermath of World War II. If monopolies in fact threaten democratic governance, a democratic foreign policy must naturally view economic concentration with extreme skepticism—if not hostility.

IV. THE NATIONAL SECURITY ARGUMENT FOR ANTITRUST

This paper is not *primarily* prescriptive, but it has presented a number of dilemmas and trade-offs. And while there is no easy remedy to the tensions inherent to this debate, there are practical responses that offer some measure of resolution.

As a general principle, there should be a presumption that innovation and a competitive marketplace benefit national security over the long term. Over the past five decades, innovation has been responsible for generating a significant share of American economic growth.¹⁸³ Similarly, technological innovation has advantaged the United States’ military, enabling it to lead a global “revolutions in military affairs.”¹⁸⁴ Maintaining an innovative technological ecosystem ensures that the United States will both lead the technologies of today and serve as a pace-setter for future innovation. We propose the following policy approaches to this end.

A. Limited Antitrust Exceptions and Regulated Industries

Under circumstances where Big Tech’s scale yields a decisive innovation advantage, there may be reason to selectively exempt innovative technology companies from antitrust enforcement. As discussed in the first section, there is a long history of the United States creating exceptions to

¹⁸⁰ See FRANCIS FUKUYAMA ET AL., MIDDLEWARE FOR DOMINANT DIGITAL PLATFORMS: A TECHNOLOGICAL SOLUTION TO A THREAT TO DEMOCRACY, https://fsi-live.s3.us-west-1.amazonaws.com/s3fs-public/cpc-middleware_ff_v2.pdf [<https://perma.cc/Y96G-QTHG>].

¹⁸¹ Robert Pitofsky, *The Political Context of Antitrust*, 127 U. PA. L. REV. 1051 (1979).

¹⁸² Daniel A. Grane, *Fascism and Monopoly*, 118 MICH. L.J. 1315 (2020).

¹⁸³ Robert M. Solow, *A Contribution to the Theory of Economic Growth*, 7 Q. J. ECON. 65 (1956); Robert M. Solow, *Technical Change and the Aggregate Production Function*, 39 R. ECON. & STAT. 312, 316 (1957) (“It is possible to argue that about one-eighth of the total increase is traceable to increased capital per man hour, and the remaining seven-eighths to technical change.”); DALE W. JORGENSON ET AL., *PRODUCTIVITY: INFORMATION TECHNOLOGY AND THE AMERICAN GROWTH RESURGENCE* (MIT Press, 2005).

¹⁸⁴ See Benjamin Huebschman, *Historical Lessons Applied to the Current Technical Revolution in Military Affairs*, ASS’N OF U.S. ARMY (Mar. 14, 2012), <https://www.ausa.org/publications/historical-lessons-applied-current-technical-revolution-military-affairs> [<https://perma.cc/UF59-DX9R>].

antitrust laws in order to encourage certain outcomes. These exceptions need not provide a *carte blanche* for companies to pursue monopolies. Congress could narrowly tailor them to exempt specific conduct like research collaboration.¹⁸⁵ Where a larger statutory carveout is required, Congress could marry the exception to a larger regulatory scheme, whereby the industry would be regulated like a utility under the watchful eye of a government body like the FMC or the Federal Energy Regulatory Commission (FERC). Interventions like the Shipping Act of 1916, which turned shipping into a regulated industry, have enduring and largely successful legacies.¹⁸⁶ In an era of strategic competition over technology, policymakers may see it fit to create antitrust exceptions to allow companies to organize themselves as ‘innovation cartels’ that catalyze these large-scale innovations. However, to guard against the risks of the private concentration of market power, these exceptions should be coupled with government oversight in the form of a new regulator.

B. Government Intervention to Create Competitors

In consolidated markets, government procurement and spending can help diversify suppliers. While competition policy is overwhelmingly focused on antitrust, government spending power has often been a more important lever in breaking up monopolies. For example, after World War II, Alcoa’s monopoly was dismantled when the federal government sold government-owned capacity to upstart competitors.¹⁸⁷ While the famous antitrust case, *American Aluminum v. United States*, held that Alcoa’s monopoly violated Section 2 of the Sherman Act, it was ultimately government interventions, rather than court-ordered remedies, that took down Alcoa. Government spending had a similar impact on United Launch Alliance’s monopoly in the space launch vehicle market in the 2000s. By providing contracts and technical support to SpaceX, NASA and the Pentagon were able to create competitors that counteracted ULA’s consolidation of the industry.¹⁸⁸ Rather than training its attention on breaking up Big Tech, the federal government can focus on using procurement and other levers of federal spending power to create competitive marketplaces.

C. Preserving Scale Without Monopolies

Scale is not synonymous with monopolies or single source providers. Through collaboration, public-private partnerships, and technology-sharing agreements, government and industry alike have long taken steps to innovate beyond their individual capacity. The most notable example of this approach is SEMATECH. In the 1980s, with Japan’s semiconductor industry surpassing the United States in market share, the federal government partnered with the United States’ fourteen leading chip manufacturers to create SEMATECH, a public-private semiconductor consortium dedicated to joint R&D collaboration. Through the consortium, the country’s largest semiconductor companies (Intel, Texas Instruments, etc.) pooled ideas, research, and resources. Although SEMATECH was originally comprised of large companies like Intel and Hewlett-

¹⁸⁵ In order to encourage innovation, Congress provides some limited exemptions to antitrust liability in the National Cooperative Research and Production Act of 1933. See *National Cooperative Research and Production Act of 1993*, P.L. 103-42, 15 U.S.C. §§ 4301-06.

¹⁸⁶ See *supra* note 17.

¹⁸⁷ Wells, *supra* note 174, 64.

¹⁸⁸ William E. Kovacic, *Competition Policy Retrospective: the Formation of the United Launch Alliance and the Ascent of SpaceX*, 27 GEO. MASON L. REV. 863 (2020).

Packard, its industry contributions (like standardizing semiconductor qualification processes) hugely benefited smaller companies. Today, a number of critical technologies, including AI, quantum, and cloud systems, could benefit from an approach that replicates the resource benefits of a large firm while maintaining a diverse, de-concentrated technology ecosystem.

V. CONCLUSION

In late January 2022, Kent Walker, Google's President of Global Affairs & Chief Legal Officer, wrote that antitrust legislation before Congress risked "ceding America's technology leadership and threatening our national security." Walker painted said legislation as a threat to "American competitiveness," noting that the bills could harm "our leading sources of research and development spending."¹⁸⁹ Google's narrative is one that leading American technology companies have increasingly embraced as calls for antitrust action have grown. This paper aims to examine the relationship between antitrust and national security in light of this claim. Ultimately, it seeks to understand: Should we associate monopoly with security in the twenty-first century?

The historical record and academic literature show that national security concerns surrounding corporate break-ups have rarely been realized. More often than not, monopolies have been a threat to military readiness and national competitiveness. Today, technological power is more concentrated in the hands of a small number of companies than at perhaps any prior point in history. Technology is also a more vital strategic interest today than ever before, deeply integrated with and critical to national security. The future structure of markets, industries, and corporations may well dictate the trajectory of American innovation and competitiveness. In a world where technologists, not technocrats, shape geopolitical futures, the antitrust-national security discourse should be both robust and well-informed. The historical record, academic literature, and discourse described in this paper offer a start.

¹⁸⁹ Kent Walker, *The Harmful Consequences of Congress's Anti-tech Bills*, GOOGLE (Jan. 18, 2022), <https://blog.google/outreach-initiatives/public-policy/the-harmful-consequences-of-congresss-anti-tech-bills/> [<https://perma.cc/VQN8-4T6P>].