

**How “Maximizing Shareholder Value” Minimized the Strategic
National Stockpile:
The \$5.3 Trillion Question for Pandemic Preparedness Raised by
the Ventilator Fiasco[†]**

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ABSTRACT

With just 4.2 percent of the world’s population, the United States had, as of July 21, 2020, 26.0 percent of its confirmed Covid-19 cases and 23.1 percent of its deaths. The magnitude of the tragedy raises the critically important counterfactual question of how the United States as a nation would have fared had there been competent and committed political leadership in place when, during January 2020, intelligence indicating the severity of the unfolding pandemic became available. A partial answer to this question lies in identifying the organizational and technological capabilities to develop, produce, and deliver “countermeasures”—personal protective equipment (PPE), ventilators, diagnostic tests, therapies, and vaccines—that a prepared federal administration would have been able to mobilize to respond to the pandemic. Main repositories of the necessary

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capabilities are government agencies and business firms, with the development, production, and delivery of countermeasures heavily reliant on government-business collaborations (GBCs). We contend that the success of projects for pandemic preparedness and response depends on the strength of GBCs.

In this essay, we focus on the particular case of ventilators for the Strategic National Stockpile (SNS). We trace the historical evolution within the federal government of the current system of pandemic preparedness for and response through the end of the Obama administration. We then analyze the particular GBCs to develop ventilators for the SNS initiated and implemented by the Biomedical Research and Development Authority (BARDA), under the Assistant Secretary for Preparedness and Response (ASPR) within the U.S. Department of Health and Human Services (HHS). BARDA initiated two successive GBCs, one beginning in 2010 and the second in 2014, with two different business firms, for the purpose of developing portable, easy-to-use, and affordable ventilators for the SNS. We show that the strength of these collaborations lay with the innovative ventilator manufacturers with which BARDA contracted. The weakness of these GBCs appeared when these innovative manufacturers fell under the control of business corporations committed to the ideology of “maximizing shareholder value” (MSV). In each case, the financialized business corporation undermined development and delivery of ventilators to the SNS.

We then explain why, in general, we should expect that business firms driven by MSV will be unreliable partners in GBCs—at the expense of the nation’s preparedness for and response to an emergency such as the Covid-19 pandemic. This lack of reliability is rooted in the strategic orientation of corporations which have put stock-market valuation of the company ahead of its innovative performance in producing goods and services. The Covid-19 crisis has already revealed the extent to which, in the U.S. economy, the stock market functions not to support value creation but rather as the prime means of value extraction. The most overt form of value extraction is the corporate practice of open-market repurchases of the company’s own shares—aka stock buybacks—typically done in addition to copious distributions to shareholders in the form of cash dividends. In the decade 2010-2019, companies in the S&P 500 Index spent \$5.3 trillion on buybacks, representing 54 percent of net income, in addition to \$3.8 trillion (39 percent of net income) distributed to shareholders as dividends.

In view of this “predatory value extraction,” we conclude this essay with the “\$5.3 trillion” question for executives and directors of corporations who, in their embrace of MSV ideology, must bear significant responsibility for the failure of the United States to respond to not only the Covid-19 pandemic but also climate change and income inequity. The question: Why does the company that you head do stock buybacks? In particular, we direct this question to the executives and directors of three corporations that, as of the year 2020, are the biggest repurchasers of their own stock in history: Microsoft at number three, ExxonMobil at number two, and Apple at number one. We also pose this question to the senior executives and board members of any company engaged in the practice who, in August 2019, signed the Business Roundtable (BRT) Statement of the Purpose of a Corporation, which explicitly rejected the BRT’s 1997 pronouncement that “corporations exist principally to serve shareholders,” replacing it with a redefinition of “the purpose of the corporation to promote ‘an economy that serves all Americans’.”

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1. Government-business collaborations for pandemic countermeasures

The coronavirus pandemic caught most Americans by surprise. Until it happened, even the generally well-informed among us could not imagine a pathogen that is so contagious, so deadly, and so lacking in medical remedy that a necessary condition for bringing it under control would be physical distancing—undertaken as quickly and completely as possible, and with no clear end in sight. For the more privileged in society who can continue to receive paychecks while working in the safety of their own homes, it has been much easier to abide by the latest scientific and medical expertise. All too many others who must show up at their physical workplaces to earn a living, who are confined to nursing homes, who are incarcerated, or who are homeless or living in crowded, unsanitary conditions face the ravages of the pandemic on a daily basis.

With just 4.2 percent of the world's population, the United States had, as of July 21, 2020 26.0 percent of its confirmed Covid-19 cases and 23.1 percent of its deaths.¹ Moreover, as of this date, the first wave of the Covid-19 pandemic rages on in the United States. The magnitude of the tragedy raises the critically important counterfactual question of how the United States as a nation would have fared had there been competent and committed political leadership in place when, during January 2020, intelligence indicating the severity of the unfolding pandemic became available.

A partial answer to this question lies in identifying the organizational and technological capabilities to develop, produce, and deliver “countermeasures”—personal protective equipment (PPE), ventilators, diagnostic tests, therapies, and vaccines—that competent and committed leadership would have sought to mobilize to respond to the Covid-19 pandemic. Main repositories of the necessary capabilities are government agencies and business firms, with the development, production, and delivery of countermeasures relying heavily on government-business collaborations (GBCs).² We contend that the success of projects for public-health preparedness and response depends on the strength of GBCs.

In this essay, which is the first in a series that our research organization, the Academic-Industry Research Network, plans to publish on the Covid-19 crisis over the coming months, we focus on the particular case of provisioning the Strategic National Stockpile (SNS) with innovative ventilators—arguably the most manageable of all the complicated countermeasures. In the next section, we trace the historical evolution within the U.S. federal government of the current system of pandemic preparedness and response through the end of the Obama administration. Then, we analyze the particular GBCs to develop ventilators for the SNS that were initiated and implemented by the Biomedical Research and Development Authority (BARDA), under the Assistant Secretary for Preparedness and Response (ASPR) within the U.S. Department of Health and Human Services (HHS). BARDA initiated two successive GBCs, one beginning in 2010 and the second in 2014,

¹ Johns Hopkins University Coronavirus Resource Center, June 23, 2020, at <https://coronavirus.jhu.edu/map.html>.

² What we call GBCs are usually termed “public-private partnerships” (PPPs). We object to the use of the term “private” with reference to business for two reasons. First, as a technical matter, “private” implies that the firm is not “publicly listed” on a stock exchange and that the regulatory authority does not require public reports that disclose certain operating and financial information. That said, even “private” firms are subject to government taxation and certain types of government regulation. Second, of more social significance, the term “private sector” is often used to exempt business firms, both “public” and “private,” from public accountability. Hence, we use the term “business sector,” not “private sector,” and, in parallel, the term “government sector” rather than “public sector.”

with two different business firms, for the purpose of developing portable, easy-to-use, and affordable ventilators for the SNS. We show that the strength of these collaborations lay with the innovative ventilator manufacturers with which BARDA contracted. The weakness of these GBCs appeared when these innovative manufacturers fell under the control of business corporations committed to the ideology of “maximizing shareholder value” (MSV). In each case, the financialized business corporation undermined development and delivery of ventilators to the SNS.

We then explain why, in general, we should expect that business firms driven by MSV will be unreliable partners in GBCs—at the expense of the nation’s preparedness for and response to an emergency such as the Covid-19 pandemic. This lack of reliability is rooted in the strategic orientation of those U.S. business corporations which have put the stock market valuation of the company ahead of its innovative performance in producing goods and services. The Covid-19 crisis has already revealed the extent to which, in the U.S. economy, the stock market functions not to support value creation but rather as the prime means of value extraction. The most overt form of value extraction is the corporate practice of open-market repurchases of the company’s own shares—aka stock buybacks—typically done in addition to copious distributions to shareholders in the form of cash dividends. In the decade 2010-2019, companies in the S&P 500 Index spent \$5.3 trillion on buybacks, representing 54 percent of net income, in addition to \$3.8 trillion (39 percent of net income) distributed to shareholders as dividends.³

In view of this “predatory value extraction,”⁴ we conclude this essay with an urgent question for executives and directors of corporations who, in their embrace of MSV ideology, must bear significant responsibility for the failure of the United States to respond to not only the Covid-19 pandemic but also the scourges of climate change and income inequity. The question: Why does the company that you head do stock buybacks? In particular, we direct this question to the executives and directors of three corporations that, as of the year 2020, are the biggest repurchasers of their own stock in history: Microsoft at number three, ExxonMobil at number two, and Apple at number one.

2. Organizing the federal government for pandemic preparedness and response

As a part of a national strategy, the federal government must take the lead in establishing GBCs to prepare for a possible pandemic, to contain a contagion before it goes viral, and to implement an appropriate public-health response if and when the disease transforms from an epidemic into a pandemic. In the preparation stage, one critical task of the government is to stockpile countermeasures that are as safe, effective, and affordable as possible, with the hope that they will never have to be used. In the containment stage, the countermeasures in the stockpile must be rapidly deployed where they are needed when they are needed to support frontline organizations working to treat patients and shut down the contagion. If, using the stockpile, that effort is

³ Calculations done by Mustafa Erdem Sakinç and Emre Gömeç of the Academic-Industry Research Network, using the S&P Compustat database and company 10-K filings to the U.S. Securities and Exchange Commission.

⁴ William Lazonick and Jang-Sup Shin, *Predatory Value Extraction: How the Looting of the Business Corporation Became the US Norm and How Sustainable Prosperity Can Be Restored*, Oxford University Press, 2020.

unsuccessful, GBCs must be in place to accelerate vaccine and therapy development and to ramp up the production and delivery of test kits, medical equipment, and PPE to frontline organizations.

As we summarize below, by 2017 the U.S. federal government possessed an organizational structure to respond to a pandemic, and, during the last presidential transition, the Obama administration even handed the Trump administration a detailed “Playbook for Early Response to High-Consequence Emerging Infectious Disease Threats and Biological Incidents.”⁵ This “Playbook” represented the accumulated learning of federal agencies from over three decades of concern about, and analysis of, actual and potential pandemics. Within the U.S. federal government, the Department of Health and Human Services (HHS), established in May 1980,⁶ and the Department of Homeland Security (DHS), founded in November 2002, contain the agencies with responsibility for preparing for a pandemic, taking actions to contain an epidemic, and implementing a response for a contagion that cannot be contained.

Within HHS, the first challenge of dealing with a pandemic occurred in 1987, a year after the World Health Organization (WHO) declared that Acquired Immunodeficiency Syndrome (AIDS) was spreading uncontrolled around the globe. In the United States, the Reagan administration had largely ignored, and even derided, the AIDS crisis.⁷ On June 5, 1987, HHS Secretary Otis Bowen, speaking to over 6,000 doctors and scientists at the Third International Conference on AIDS in Washington DC, reportedly was met with jeers and laughter from several thousand in the audience when he said: “The problem of AIDS and the efforts at solution have the president's complete attention.”⁸ A decade later, HHS Secretary Donna Shalala said that in the United States more than 600,000 people had died from AIDS, while 750,000 people were living with the human immunodeficiency virus (HIV).⁹ By that time, medical scientists had created a cocktail of therapies that could keep HIV-infected people alive, but these medicines were available and affordable to a very small percentage of the millions of people in the world who faced death without them. To this date, a vaccine to eradicate HIV has not been developed, and in 2018 there were between 33 million and 44 million people living with HIV worldwide.¹⁰

Within HHS, the United States possesses the world’s foremost agency for funding research into the development of life-saving medicines: the National Institutes of Health (NIH), with its 27 specialized institutes and centers. From 1938, the year it first recorded expenditures, through 2019, the NIH spent almost \$1.2 trillion in 2019 dollars in support of life-sciences research. In 2020, the NIH budget is \$41.7 billion.¹¹ Between 1998 and 2004, the NIH budget increased by 2.1 times in nominal dollars (1.8 times in real dollars). The single year with by far the largest budget increase in NIH history was 2003, with over \$3.8 billion (\$4.6 billion in 2019 dollars) added to the total

⁵ Executive Office of the President of the United States, “Playbook for Early Response to High-Consequence Emerging Infectious Disease Threats and Biological Incidents,” at <https://assets.documentcloud.org/documents/6819268/Pandemic-Playbook.pdf>.

⁶ Prior to May 1980, the Department of Health, Education and Welfare had contained the agencies that would constitute the Department of Health and Human Services. The name change occurred when Congress created a separate Department of Education.

⁷ Walt Odets, “Ronald Reagan presided over 89,343 deaths to AIDS and did nothing,” *Literary Hub*, July 22, 2019, at <https://lithub.com/ronald-reagan-presided-over-89343-deaths-to-aids-and-did-nothing/>.

⁸ Jerry Estill, “Bowen pledges to protect the rights and dignity of AIDS victims,” *Associated Press*, June 5, 1987.

⁹ “HHS Secretary statement on World AIDS Day,” *U.S. Newswire*, December 1, 1997.

¹⁰ “Global HIV & AIDS statistics—2019 fact sheet,” *UNAIDS*, at <https://www.unaids.org/en/resources/fact-sheet>.

¹¹ Office of Budget, National Institutes of Health, at <https://officeofbudget.od.nih.gov/>.

budget. Of the 27 institutes and centers that constitute the NIH, the greatest beneficiary of this doubling of the NIH budget was the National Institute of Allergy and Infectious Diseases (NIAID), whose own budget increased from \$1.4 billion in 1998 to \$4.3 billion in 2004. Of the almost \$3-billion boost to NIAID's annual budget between 1998 and 2004, two-thirds occurred in the final two years.

As the NIH institute with work most relevant to a pandemic, NIAID already had the third-largest budget in 1998, with 9.9 percent of the NIH total, trailing the National Cancer Institute (NCI) with 18.6 percent and the National Heart, Lung and Blood Institute (NHLBI) with 11.2 percent. As a result of the NIH budget's doubling, NIAID was in second place in 2004 with 15.4 percent of the NIH total, just behind NCI with 16.9 percent.

The U.S. invasion of Iraq precipitated the sharp increase in NIAID funding in 2003 and 2004. Immediately after the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001, there was alarm about the possibility of a bioterrorist attack on the U.S. population, utilizing highly contagious and lethal pathogens. Indeed, just one week after 9/11, one or more bioterrorists (by all accounts domestic) mailed envelopes with anthrax spores to 22 people, including prominent politicians, resulting in five fatalities.¹² In his 2002 State of the Union Address, President George W. Bush signaled a focus on Iraq as a potential terrorist enemy, arguing that "the Iraqi regime has plotted to develop anthrax and nerve gas and nuclear weapons for over a decade."¹³

In November 2002, Congress created the Department of Homeland Security (DHS), which consolidated 22 agencies into one. Included in DHS were a number of agencies that could enable the United States to respond to a bioterrorist attack, the most important of which were the newly created Federal Emergency Management Agency (FEMA), the Strategic National Stockpile (SNS) as part of FEMA, the National Biodefense Analysis and Countermeasures Center (NBACC), and the National Disaster Medical System (NDMS).¹⁴ Previously the SNS had been the National Pharmaceutical Stockpile, launched in 1999 as part of the Center for Disease Control and Prevention (CDC) within HHS.

In his 2003 State of the Union address, delivered on January 28, President Bush engaged in fear mongering about Iraqi capacity to launch a bioterrorist or nuclear attack. Bush's speech created a pretext for the U.S. invasion of Iraq less than two months later. Although debate over whether to invade Iraq focused on whether or not Saddam Hussein possessed nuclear weapons of mass destruction, Bush used his address to emphasize the bioterrorist threat, laying out the "evidence" point by point:

The United Nations concluded in 1999 that Saddam Hussein had biological weapons sufficient to produce over 25,000 liters of anthrax — enough doses to kill several million people. He hasn't accounted for that material. He has given no evidence that he has destroyed it.

¹² "Timeline: How The anthrax terror unfolded," *NPR*, February 15, 2011, at <https://www.npr.org/2011/02/15/93170200/timeline-how-the-anthrax-terror-unfolded>.

¹³ "President delivers State of the Union address," *The White House*, January 29, 2002, at <https://georgewbush-whitehouse.archives.gov/news/releases/2002/01/20020129-11.html>.

¹⁴ "History," *Department of Homeland Security*, at <https://www.dhs.gov/history>.

The United Nations concluded that Saddam Hussein had materials sufficient to produce more than 38,000 liters of botulinum toxin—enough to subject millions of people to death by respiratory failure. He hasn't accounted for that material. He has given no evidence that he has destroyed it.

Our intelligence officials estimate that Saddam Hussein had the materials to produce as much as 500 tons of sarin, mustard and VX nerve agent. In such quantities, these chemical agents could also kill untold thousands. He has not accounted for these materials. He has given no evidence that he has destroyed them.

U.S. intelligence indicates that Saddam Hussein had upwards of 30,000 munitions capable of delivering chemical agents. Inspectors recently turned up 16 of them, despite Iraq's recent declaration denying their existence. Saddam Hussein has not accounted for the remaining 29,984 of these prohibited munitions. He has given no evidence that he has destroyed them.

From three Iraqi defectors we know that Iraq in the late 1990s had several mobile biological weapons labs. These are designed to produce germ warfare agents and can be moved from place to place to evade inspectors. Saddam Hussein has not disclosed these facilities. He has given no evidence that he has destroyed them.¹⁵

Bush then went on to make his assertions that Iraq had nuclear-weapons capability. Subsequently, these allegations were center stage in gaining Congressional approval for the Iraq invasion. Bush also highlighted Iraq's advanced nuclear weapons program, claiming that Saddam had "recently sought significant quantities of uranium from Africa" and "attempted to purchase high strength aluminum tubes suitable for nuclear weapons production."

In the immediate aftermath of 9/11, the Bush administration had called for \$1.5 billion for bioterrorism defense, of which \$1.1 billion would be used for stockpiling vaccines. Sen. Edward Kennedy (D-MA) and Sen. William Frist (R-TN), the only medical doctor in the U.S. Senate at the time, put forth a bill for \$3.2 billion, which included \$1.1 billion for stockpiling vaccines but far greater funding for local public-health initiatives. In the U.S. House, Rep. Henry Waxman (D-CA), the ranking Democrat on the House Government Reform Committee, who spent his decades in Congress focusing on the affordability of safe and effective medicines, reportedly argued that funding for the national stockpile without adequate attention to local public-health needs "was like building fire houses and buying fire trucks, without hiring fire fighters or installing alarms." Waxman continued: "We need to focus our spending on systems and people, not just things."¹⁶

As, subsequent to Bush's 2003 State of the Union address, the United States became embroiled in Iraq, Rep. Richard Burr (R-NC) took a leading role in promoting Project BioShield, which sought as much as \$10 billion over the next decade to contract with pharmaceutical companies to develop vaccines and therapies for biodefense to be added to the SNS. Calling the proposed funding system "unprecedented," Rep. John Shadegg (R-AZ), chair of the Department of Homeland Security subcommittee on emergency preparedness, stated: "Quite frankly, I am very uncomfortable about

¹⁵ "Text of President Bush's State of the Union Address," *Washington Post*, January 28, 2003, at https://www.washingtonpost.com/wp-srv/onpolitics/transcripts/bushtext_012803.html.

¹⁶ Joanne Kenen, "U.S. senators urge doubling of bioterror funds," *Reuters News*, November 15, 2001.

it.” Rep. John Dingell (D-MI) remarked that Project BioShield contracts with pharmaceutical companies would be “a blank check of the most extraordinary nature I’ve ever seen.”¹⁷

Burr’s position was clear: “Terrorism is real, and bioterrorism is real. We’re dealing in an area where research and development has grown dormant.”¹⁸ In 2003, Project BioShield received \$890 million in preauthorization funding. In May 2004, the Senate voted 99-0 to authorize funding for Project BioShield for research on and production of vaccines to counter bioterrorist agents such as anthrax, botulinum toxin, and smallpox. The Project BioShield Act, with an appropriation to DHS of \$5.6 billion over ten years to contract with business for “next generation countermeasures,” was signed by President Bush on July 21, 2004.¹⁹

By 2005, Burr, now a senator, was pushing for an expansion of Project BioShield to broaden the authority of the federal government to fight not only bioterrorism but also naturally occurring pandemic viruses—as exemplified by the outbreak in 2003 of severe acute respiratory syndrome (SARS, a coronavirus, now known as SARS-CoV-1),²⁰ and the spread in 2004 of H5N1 avian influenza.²¹ In November 2005, President Bush’s Homeland Security Council issued a report, *National Strategy for Pandemic Influenza*, in view of “an unprecedented outbreak of avian influenza in Asia and Europe, caused by the H5N1 strain of the Influenza A virus,”²² followed by, in May 2006, the Council’s *Implementation Plan*.²³ In November 2005, HHS Secretary Michael Leavitt, sworn in the previous January, issued the *HHS Pandemic Influenza Plan* “as a blueprint for all HHS pandemic influenza and preparedness planning and response activities.”²⁴ Governors and state health officials followed with their own pandemic influenza preparedness plans.²⁵

In December 2006, Congress passed the Pandemic and All Hazards Preparation Act (PAHPA) “to improve the Nation’s public health and medical preparedness and response capabilities for emergencies, whether deliberate, accidental, or natural.”²⁶ In charge of PAHPA, within HHS, was the newly created position of Assistant Secretary for Preparedness and Response (ASPR). Under PAHPA, Project BioShield became part of BARDA and responsibility for the SNS moved from DHS to HHS. BARDA had a budget of \$5.9 billion over ten years to develop vaccines and other countermeasures for the SNS.

¹⁷ “Bioterrorism—Smallpox: Second health worker dies after receiving vaccine,” *American Health Line*, March 28, 2003.

¹⁸ Peter Kaplan, “U.S. House panel backs bioterror remedies bill,” *Reuters News*, May 15, 2003.

¹⁹ “Project BioShield: Progress in the war on terror,” *The White House*, July 21, 2004, at <https://georgewbush-whitehouse.archives.gov/infocus/bioshield/index.html>.

²⁰ “Severe Acute Respiratory Syndrome (SARS),” *Centers for Disease Control and Prevention*, December 6, 2017, at <https://www.cdc.gov/sars/index.html>.

²¹ R. G. Webster, Y. Guan, L. Poon, S. Krauss, R. Webby, E. Govorkovai, and M. Peiris, “The Spread of the H5N1 Bird Flu Epidemic in Asia in 2004,” in C. J. Peter and Charles H. Calisher, eds., *Infectious Diseases from Nature: Mechanisms of Viral Emergence and Persistence*, SpringerLink, 20: 117-129, at https://link.springer.com/chapter/10.1007/3-211-29981-5_10.

²² Homeland Security Council, “National Strategy for Pandemic Influenza,” *The White House*, November 2005, at <https://www.cdc.gov/flu/pandemic-resources/pdf/pandemic-influenza-strategy-2005.pdf>.

²³ Homeland Security Council, “National Strategy for Pandemic Influenza: Implementation Plan,” *The White House*, May 2006, at <https://www.cdc.gov/flu/pandemic-resources/pdf/pandemic-influenza-implementation.pdf>.

²⁴ “HHS Pandemic Influenza Plan,” *Department of Health & Human Services*, November 2005, at <https://www.cdc.gov/flu/pandemic-resources/pdf/hhs/pandemicinfluenzaplan.pdf>.

²⁵ “Preparing for a Pandemic Influenza: A Primer for Governors and Senior State Officials,” *National Governors Association Center for best Practices*, June 2006, at <https://www.nga.org/wp-content/uploads/2020/02/Pandemic-Influenza-Primer.pdf>.

²⁶ “Pandemic and All Hazards Preparedness Act,” *Department of Health & Human Services*, at <https://www.phe.gov/Preparedness/legal/pahpa/Pages/default.aspx>.

The Obama administration's first Secretary of Health and Human Services was Kathleen Sebelius, confirmed to the position in May 2009. Three years earlier, as governor of Kansas, Sebelius had participated in a pandemic planning summit with HHS Deputy Secretary Alex Azar as part of the initiative under HHS Secretary Leavitt to engage all of the states in the national preparedness effort. A press release for the Kansas event spelled out the terms of the federal-state collaboration:

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In the planning resolution, HHS commits to providing guidance and technical assistance to Kansas. This includes an initial \$1,162,607 for planning, and HHS agrees to review the state's plans for use, storage and distribution of antivirals and notify it of its portion of the federal stockpile of pandemic influenza antiviral drugs. Kansas agrees to assure that its operational plan for pandemic influenza response is an integral element of the overall state and local emergency response plan and to establish a Pandemic Preparedness Coordinating Committee representing all relevant stakeholders. The state will also notify HHS of the amount of additional pandemic influenza antiviral drugs it will plan to purchase and work toward exercising its preparedness plan within eight months of today's summit.

In late April 2009, President Barack Obama declared a public-health emergency because of a swine-flu (H1N1) epidemic that had broken out in Mexico, with 20 cases confirmed in the United States. Now-former Secretary Leavitt weighed in, stating that leaders of schools, businesses, and local governments should make plans as to "how they can continue functioning if a high number of employees cannot attend work," adding that "any community that fails to prepare for pandemic disease because it expects the federal government can come to the rescue will be tragically disappointed....Ultimately the delivery of anti-viral drugs and vaccines will fall to local leaders....The biggest worry I have is states' ability to effectively distribute anti-virals on a wide basis."²⁸

On April 28, a *New York Times* editorial asked: "Is the new swine flu virus that has killed many people in Mexico and has spread to the United States and other countries the start of a much feared pandemic? Or is this yet another false alarm—the latest in a long history of worrying that someday a hugely lethal flu strain might sweep through the world and kill tens of millions of people, much as it did in 1918-1919?"²⁹ By June 11, the WHO had declared the swine flu to be a pandemic, and throughout the remainder of 2009 the CDC coordinated efforts to contain its spread in the United States. The CDC has estimated (within a wide range of variability) that in the United States from April 12, 2009 to April 10, 2010 there were 60.8 million cases of H1N1 swine flu, 274,304 hospitalizations, and 12,469 deaths.³⁰

Under the authority of the CDC, an existing vaccine technology was adapted to the H1N1 swine flu, and by the beginning of 2010 the pandemic had been largely tamed, with 155 million doses of vaccine distributed and 70 million Americans inoculated. In a speech to a public-health preparedness conference in February 2010, Secretary Sebelius said: "We worked to squeeze every

²⁷ "HHS Deputy Secretary Alex Azar joins Governor Sebelius at Kansas planning pandemic summit," *PR Newswire*, May 31, 2006.

²⁸ Matt Canham, "As swine flu grows, states must plan for worst, Leavitt says," *Salt Lake Tribune*, April 27, 2009.

²⁹ The Editors, "The new swine flu," *New York Times*, April 27, 2009, at <https://www.nytimes.com/2009/04/28/opinion/28tue1.html>.

³⁰ "2009 N1N1 Pandemic (H1N1pdm09 virus)," Centers for Disease Control and Prevention, at <https://www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html>.

last bit of efficiency and dependability out of a safe, but outdated [vaccine] technology.”³¹ She recognized that the federal government had much to learn about accelerating the development, production, and delivery of vaccines.

Two months earlier, in December 2009, HHS had issued a report titled *National Health Security Strategy of the United States of America*, which includes an outline of the capabilities required to achieve national health security.³² This document directly links health security and economic security, albeit very broadly:

Any large-scale incident such as a natural disaster or an infectious disease pandemic that affects the health of critical workers and compromises a society’s ability to provide food, water, health care and, more broadly, economic productivity endangers the security and stability of that society. Conversely, a society that can accommodate and function effectively during such an incident is inherently more secure.³³

Responding explicitly to the H1N1-pandemic experience, HHS published in August 2010 *The Public Health Emergency Medical Countermeasures Enterprise Review: Transforming the Enterprise to Meet Long-Term National Needs*. This document examines the content and efficacy of the system—that is, the “countermeasures enterprise”—through which the federal government could collaborate with the American “community” to prepare for and respond to a pandemic. “The vision to combat such threats,” the *Review* declares, “is simple: *our nation must have the nimble, flexible capability to produce medical countermeasures rapidly in the face of any attack or threat, whether known or unknown, novel or reemerging, natural or intentional*” [emphasis in original]. It argues that the prevailing countermeasure enterprise requires new, innovative approaches to meet this vision. The new strategy envisioned a capabilities-based approach that would enable the federal government to take a much more active and effective role in forging partnerships, attacking constraints, modernizing regulatory oversight, and supporting transformative technologies.

In the summer of 2014, the Obama administration tested U.S. organizational capabilities in collaborating on a global scale to stem and contain the Ebola crisis in West Africa. Ebola spreads through body fluids and has a death rate averaging around 50 percent for those infected. There was no vaccine for Ebola viruses. In September 2014, a WHO official stated: “The Ebola epidemic ravaging parts of West Africa is the most severe acute public health emergency seen in modern times. Never before in recorded history has a biosafety level four pathogen infected so many people so quickly, over such a broad geographical area, for so long.”³⁴

In the United States, there was intense public focus on the few recorded domestic Ebola cases, which numbered no more than six. The interhuman transmission of the disease could only occur by contact with body fluids of an infected and symptomatic person, and, properly alerted, the U.S.

³¹ Lisa Schnirring, “Sebelius lauds pandemic partnerships,” *Center for Infectious Disease Research and Policy, University of Minnesota*, February 17, 2010, at <https://www.cidrap.umn.edu/news-perspective/2010/02/sebelius-lauds-pandemic-partnerships>.

³² “National Health Security Strategy of the United States of America,” Department of Health & Human Services, December 2009, at <https://www.phe.gov/Preparedness/planning/authority/nhss/Documents/nhss0912.pdf>.

³³ *Ibid.*, p.3.

³⁴ “Experimental therapies: growing interest in the use of whole blood or plasma from recovered Ebola patients (convalescent therapies),” *World Health Organization*, September 26, 2014, at <https://www.who.int/mediacentre/news/ebola/26-september-2014/en/>.

public-health system prevented its spread. As Dr. Anthony Fauci, director of NIAID, remarked: “We have considerable experience dealing with Ebola and controlling outbreaks. The system that’s in place, with our health care infrastructure, would make it extraordinarily unlikely that we would have an outbreak.”³⁵ In the aftermath of the Ebola threat, the White House National Security Council established the Directorate for Global Health Security and Biodefense to advise the president. In the words of Beth Cameron, the senior director of the Directorate, its purpose was “to do everything possible within the vast powers and resources of the U.S. government to prepare for the next disease outbreak and prevent it from becoming an epidemic or pandemic.”³⁶

3. BARDA seeks ventilator innovation for the Strategic National Stockpile

Unfortunately, SARS-CoV-2 is transmitted by respiratory droplets, even those emanating from infected people who are asymptomatic. The mortality rate for people who have Covid-19 is far lower than for those infected by Ebola, but SARS-CoV-2 is far more contagious. As the novel coronavirus spread rapidly in the United States in March 2020, there was a surge in the number of people with severe respiratory problems who needed intensive care, with most Covid-19 patients in ICUs requiring ventilators to sustain their oxygen levels.³⁷

As expected under such circumstances, the demand for ventilators in epicenters of the Covid-19 pandemic far exceeded the number of ventilators that a local healthcare system would have on hand, based on normal usage. The total number of ventilators possessed by the United States’ healthcare system is unclear; by the most recent estimate, from 2010, the American Hospital Association counted approximately 200,000 ventilators, not including an unknown number in federal or state stockpiles.³⁸

As New York City became the U.S. epicenter of the pandemic in the second half of March, in widely televised daily briefings New York Governor Andrew Cuomo repeatedly sounded the alarm concerning the impending ventilator shortage as an escalating number of people with Covid-19 would become critically ill.³⁹ Cuomo blamed the Trump administration for the scarcity. He claimed that New York and other states could not obtain ventilators needed from the SNS, forcing them to compete among themselves, and even with FEMA, to purchase ventilators on the product

³⁵ Manny Fernandez, Michael Shear, and Abby Goodnough, “Dallas hospital alters account, raising questions on Ebola case,” *New York Times*, October 3, 2014, at <https://www.nytimes.com/2014/10/04/us/containing-ebola-cdc-troops-west-africa.html>.

³⁶ Beth Cameron, “I ran the White House pandemic office. Trump closed it,” *Washington Post*, March 13, 2020, at https://www.washingtonpost.com/outlook/nsc-pandemic-office-trump-closed/2020/03/13/a70de09c-6491-11ea-acc8-80c22bbee96f_story.html.

³⁷ There has subsequently been debate about when and under what conditions a ventilator is necessary for treating Covid-19. See Sharon Begley, “With ventilators running out, doctors say the machines are overused for Covid-19,” *STAT News*, April 8, 2020, at <https://www.statnews.com/2020/04/08/doctors-say-ventilators-overused-for-covid-19/>; Lindsay Beyerstein, “The staggeringly complicated ethics of ventilating coronavirus patients,” *The New Republic*, April 10, 2020, at <https://newrepublic.com/article/157262/staggeringly-complicated-ethics-ventilating-coronavirus-patients>.

³⁸ “United States Resource availability for COVID-19,” *Society of Critical Care Medicine*, May 12, 2020, at <https://sccm.org/Blog/March-2020/United-States-Resource-Availability-for-COVID-19/>; “Ventilator stockpiling and availability in the US,” *Johns Hopkins Center for Health Security*, April 1, 2020, at <https://www.centerforhealthsecurity.org/resources/COVID-19/COVID-19-fact-sheets/200214-VentilatorAvailability-factsheet.pdf>.

³⁹ Jesse McKinley, and Shane Goldmacher, “How Cuomo, once on sidelines, became the politician of the moment,” *New York Times*, March 24, 2020, at <https://www.nytimes.com/2020/03/24/nyregion/governor-andrew-cuomo-coronavirus.html>.

market at exorbitant prices.⁴⁰ In New York State's scramble to secure 40,000 ventilators, on the recommendation of FEMA volunteers recruited by White House advisor Jared Kushner, it entered into a \$86-million contract for 1,450 ventilators (over \$59,000 per unit) purchased from a Silicon Valley engineer who could not deliver the machines.⁴¹

It became obvious in March 2020 that to some extent the ventilator "shortage" was the result of a President of the United States who used his control over the SNS for his own political ends by hoarding ventilators in the stockpile when they were critically needed, rewarding "friendly" state governors with ventilators while denying them to state governors whom he deemed to be "the enemy".⁴² Trump claimed that the SNS was "bare" at the start of his term, but in fact the Trump administration had access to over 19,000 ventilators, of which 14,000 included additions to the SNS made under the Obama administration.⁴³ Inept management of the SNS by HHS contributed to the problem: over 2,100 ventilators in the SNS in March 2020 were not functioning properly because HHS had let the stockpile's ventilator maintenance contract lapse in the late summer of 2019, renewing it only in January 2020.⁴⁴

In March 2020, the SNS had 16,660 ventilators available for distribution, but released only 7,920 by April 6.⁴⁵ As a result of Cuomo's daily public cajoling of Trump, New York secured 4,400 ventilators from the SNS.⁴⁶ Beyond that, New York and other states paid extortionate prices to procure critically needed ventilators from device vendors as cases of Covid-19 escalated. For example, in late March Louisiana paid \$43,500 per unit for 2,000 Medtronic ventilators.⁴⁷

In the context of the initial release of ventilators from the SNS, on April 2, at a White House coronavirus briefing, Kushner infamously declared: "The notion of the federal stockpile was it's supposed to be *our* stockpile. It's not supposed to be states' stockpiles that they then use."⁴⁸ Also on April 2, the Trump administration invoked the Defense Production Act, permitting HHS to enter into contracts with ten manufacturing companies for 198,890 new ventilators to be delivered to the SNS through the end of 2020 at a cost of \$2.9 billion, for an average unit cost of about

⁴⁰ Bernadette Hogan, "Cuomo blames ventilator shortage on competition with FEMA, states," *New York Post*, March 31, 2020, at <https://nypost.com/2020/03/31/cuomo-blames-ventilator-shortage-on-competition-with-fema-states/>; Lauren Feiner, "Warren and Harris introduce Senate bill to crack down on price gouging during the coronavirus pandemic," *CNBC*, April 10, 2020, at <https://www.cnbc.com/2020/04/10/coronavirus-price-gouging-bill-from-warren-fights-price-gouging.html>.

⁴¹ Luis Ferré-Sadurní and Thomas Kaplan, "He had never sold a ventilator. N.Y. gave him an \$86 million deal," *New York Times*, May 8, 2020, at <https://www.nytimes.com/2020/05/08/nyregion/ventilators-fema-coronavirus-cuomo.html>.

⁴² Denver Post Editorial Board, "Editorial: Trump is playing a disgusting political game with our lives," *Denver Post*, April 9, 2020, at <https://www.denverpost.com/2020/04/09/coronavirus-editorial-trump-gardner-polis-supplies/>.

⁴³ Daniel Dale, "Fact check: Trump claimed he was left 'no ventilators.' His administration just confirmed he had more than 16,000," *CNN*, June 24, 2020, at <https://www.cnn.com/2020/06/24/politics/fact-check-trump-16000-ventilators-stockpile-obama/index.html>.

⁴⁴ David E. Sanger, Zolan Kanno-Youngs and Nicholas Kulish, "A ventilator stockpile, with one hitch: Thousands do not work," *New York Times*, April 1, 2020, at <https://www.nytimes.com/2020/04/01/us/politics/coronavirus-ventilators.html>.

⁴⁵ D'Angelo Gore, "Trump inherited more ventilators than have been distributed," *FactCheck.org*, June 22, 2020, at <https://www.factcheck.org/2020/06/trump-inherited-more-ventilators-than-have-been-distributed/>.

⁴⁶ Dinah Voyles Pulver and Erin Mansfield, "Rare look at stockpile handouts shows which states got ventilators, masks amid coronavirus," *USA Today*, April 10, 2020 at <https://www.usatoday.com/story/news/investigations/2020/04/10/rare-look-stockpile-shows-which-states-got-supplies-amid-covid/5126900002/>.

⁴⁷ Rachana Pradhan, "White House left states on their own to buy ventilators. Inside their mad scramble," *Kaiser Health News*, June 15, 2020, at <https://khn.org/news/white-house-left-states-on-their-own-to-buy-ventilators-inside-their-mad-scramble/>.

⁴⁸ Aaron Blake, "The Trump administration just changed its description of the national stockpile to jibe with Jared Kushner's controversial claim," *Washington Post*, April 3, 2020, at <https://www.washingtonpost.com/politics/2020/04/03/jared-kushner-stands-trump-proceeds-offer-very-trumpian-claim-about-stockpiles/>.

\$14,600.⁴⁹ As of June 14, the states had received 10,640 units in total from the SNS. With additions to the SNS from the contracted manufacturers, the Trump administration was now hoarding about 24,000 ventilators.⁵⁰

There could have been an additional 10,000 ventilators with advanced technological features in the SNS in March 2020 but for the failure of business corporations to deliver innovative machines for which, through BARDA, HHS had contracted during the Obama era. These contracts provided upfront seed funding and guaranteed procurement once the Food and Drug Administration (FDA) approved the ventilator. Investigative reports published at the end of March 2020 by the *New York Times*⁵¹ and *ProPublica*⁵² established that the scarcity of ventilators in the SNS when New York City and other pandemic epicenters needed them stemmed in part from a failure to deliver by medical-equipment companies under two successive contracts—the first dating to 2010, the second to 2014—for portable, easy-to-use, affordable ventilators.

A ventilator is a complex, computerized machine that provides artificial respiration for a patient. When invasive ventilation is used in intensive-care units, a tube is inserted into the windpipe (trachea) of a patient who is having difficulty breathing for the purpose of pumping air in and out of his or her lungs. Patients are kept in a medically induced coma during the period of intubation. Ventilators can potentially save the lives of those who experience severe acute respiratory failure from Covid-19 infection by keeping them alive until the viral attack subsides. These intensive-care procedures require teams of doctors, therapists, and nurses with specialized training in the operation of ventilators.

Building the SNS' inventory of ventilators in preparation for a pandemic entails decisions concerning the quality, quantity, and cost of the machines in the stockpile.⁵³ This inventory consists of ventilators that HHS has purchased from manufacturers at agreed-upon prices. If HHS wants the SNS to hold, say, 20,000 ventilators and the average price per unit is \$10,000, the capital expenditure for the stockpile would be \$200 million. This capital cost, to which obsolescence and maintenance expenses must be added, is like the premium on a life-insurance policy. Taxpayers

⁴⁹ For details of the contracts, see “HHS Announces Ventilator Contract with GM under Defense Production Act,” HHS Press Release, April 8, 2020, at <https://www.hhs.gov/about/news/2020/04/08/hhs-announces-ventilator-contract-with-gm-under-defense-production-act.html>; “HHS Announces Ventilator Contract with Philips under Defense Production Act,” HHS Press Release, April 8, 2020, at <https://www.hhs.gov/about/news/2020/04/08/hhs-announces-ventilator-contract-with-philips-under-defense-production-act.html>; “HHS Announces New Ventilator Contracts, Orders Now Totaling Over 130,000 Ventilators,” HHS Press Release, April 13, 2020, at <https://www.hhs.gov/about/news/2020/04/13/hhs-announces-new-ventilator-contracts-orders-now-totaling-over-130000-ventilators.html>; and “HHS Announces Ventilator Contract with GE Under Defense Production Act,” HHS Press Release, April 16, 2020, at <https://www.hhs.gov/about/news/2020/04/16/hhs-announces-ventilator-contract-with-ge-under-defense-production-act.html>.

⁵⁰ D’Angelo Gore, “Trump inherited more ventilators.”

⁵¹ Nicholas Kulish, Sarah Kliff, and Jessica Silver-Greenberg, “The U.S. tried to build a new fleet of ventilators. The mission failed,” *New York Times*, March 29, 2020, at <https://www.nytimes.com/2020/03/29/business/coronavirus-us-ventilator-shortage.html>.

⁵² Patricia Callahan, Sebastian Rotella, and Tim Golden, “Taxpayers paid millions to design a low-cost ventilator for a pandemic. Instead, the company is selling versions of it overseas,” *ProPublica*, March 30, 2020, at <https://www.propublica.org/article/taxpayers-paid-millions-to-design-a-low-cost-ventilator-for-a-pandemic-instead-the-company-is-selling-versions-of-it-overseas->.

⁵³ Hsin-Chan Huang, Ozgur M. Araz, David P. Morton, Gregory P. Johnson, Paul Damien, Bruce Clements, and Lauren Ancel Meyers, “Stockpiling Ventilators for Influenza Pandemics,” *Emerging Infectious Diseases*, 23, 6, 2017: 914-921, at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5443432/>.

invest in the ventilators in the stockpile even as they hope that no pandemic will occur and that the machines will not have to be deployed.

Since it will seek to reduce the cost of the “insurance premium” incurred in building the SNS, the government agency that procures the ventilators has an interest in the availability of higher-quality and lower-cost ventilators than those previously available. The government agency, in this case BARDA, can enter into a collaboration with an innovative manufacturer to develop and deliver improved equipment. A higher-quality—or next-generation—ventilator might include improved features related to *portability* from one healthcare venue to another; *flexibility* to accommodate home, transport, and hospital use; *dependability* of power supply; *synchronicity* with the patient’s breathing; *manufacturability*, as determined by the sourcing, complexity, and number of components; and *usability* that permits non-specialist health personnel to safely operate the device when a pandemic surge causes shortages of pulmonologists, respiratory therapists, and specialized nurses.

Government procurement contracts to supply the SNS can induce a company to invest in these higher-quality features. The prestige of having the U.S. government as a customer provides a selling point that can help the manufacturer in a GBC capture a large share of the commercial market, so that, by achieving economies of scale, it can transform the high fixed cost of developing the superior machine into low unit cost.⁵⁴ The manufacturer can thus profit from the particular ventilator product even as it sells the ventilator to the government at a discounted price.

Through BARDA, HHS has a mandate, backed by a budget, to collaborate with business on innovative projects aimed at improving the quality and reducing the cost of the ventilators in the SNS.⁵⁵ In 2007, at a time when there was considerable discussion of national preparedness for a pandemic,⁵⁶ a panel of experts advised HHS that even in an influenza pandemic that was only moderate, the United States would need 70,000 more ventilators than are normally in use in the healthcare system.⁵⁷ In 2008, HHS told Congress that it was seeking to add 40,000 ventilators to the SNS at a cost of \$3,000 each, or \$120 million in total.

In August 2008, under the Bush administration, BARDA issued a Request for Proposal⁵⁸ for

a contract for domestic manufacturing to support advanced development of next generation portable ventilators with accessory components at a cost of <\$2000/fully kitted unit that will advance the technology to meet the needs for an expected overwhelming number of respiratory

⁵⁴ William Lazonick, “Is the Most Unproductive Firm the Foundation of the Most Efficient Economy? Penrosian Learning Confronts the Neoclassical Fallacy,” Institute for New Economic Thinking Working Paper No. 111, January 2020, at <https://www.ineteconomics.org/research/research-papers/is-the-most-unproductive-firm-the-foundation-of-the-most-efficient-economy-penrosian-learning-confronts-the-neoclassical-fallacy>.

⁵⁵ “HHS spurs innovation to develop next-generation portable ventilator,” *Emsworld*, September 18, 2014, at <https://www.emsworld.com/news/12004768/hhs-spurs-innovation-to-develop-next-generation-portable-ventilator>.

⁵⁶ Peter Levin, Eric Gebbie, and Kristine Qureshi, “Can the Health-Care System Meet the Challenge of Pandemic Flu? Planning, Ethical, and Workforce Considerations,” *Public Health Reports*, 122, 5, 2007: 573-578, at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1936949/>.

⁵⁷ Kulish et al., “The U.S. tried to build a new fleet of ventilators.”

⁵⁸ “Federal Contract Opportunity for Advanced Development of Next Generation Portable Ventilators,” *Govtribe*, August 2008, at <https://govtribe.com/opportunity/federal-contract-opportunity/advanced-development-of-next-generation-portable-ventilators-presolhhsbarda0820>.

infectious disease patients during a pandemic influenza outbreak or in an all-hazards (chemical, biological, radiological, nuclear (CBRN)) event in which mass casualties may be expected.⁵⁹

In September 2010, under the Obama administration, as part of its planning for “a severe influenza pandemic or other public health emergency,” BARDA awarded California-based Newport Medical Instruments a three-year contract, initiated with a \$6.7 million government grant, to “help fill the need for domestically manufactured, low-cost, user-friendly and flexible next-generation ventilators.”⁶⁰ According to an article in *Infection Control Today*, the purpose of the contract was to support “development of ventilators that utilize advanced technology, are easier for healthcare providers to use without special training, and can be used for a wider patient population. The advanced technology also considers portability and environmental factors, cost, and suitability for stockpiling.”⁶¹

The goal was for BARDA to procure 10,000 such ventilators from Newport at \$3,000 per unit, which would yield \$30 million in sales for the company. If Newport had succeeded in developing the device according to the targets set by BARDA, it would have been a significant achievement. BARDA claimed that portable ventilators with all the requisite features would have a market price of \$6,000 to \$30,000 each.⁶² The implied cost savings to the SNS for 10,000 ventilators from Newport under the contract would range from \$30 million to \$270 million.

In 2012, however, Newport, with 160 employees,⁶³ was acquired by Covidien, with 43,000 employees, and by late 2013 Covidien had backed out of the project without having delivered a single ventilator to the SNS. BARDA, therefore, had to find a new business collaborator for the project to supply the SNS. In September 2014, it awarded a contract, with a \$13.8-million seed grant, to Philips Respironics, a Pennsylvania-based manufacturer, wholly owned by the Dutch company Royal Philips.⁶⁴

This contract, which remains in force, includes an option for the SNS to purchase 10,000 completely kitted, initial production ventilators for a total of \$32.8 million.⁶⁵ In September 2019, the FDA approved the ventilator, the Trilogy Evo Universal, that Philips Respironics had agreed to deliver to the SNS.⁶⁶ But as of March 2020, Philips had delivered not one of these machines to the SNS because its contract with HHS did not require the initial shipment of ventilators until August 2020, with all 10,000 to be delivered to the SNS by August 2022.

In a Philips press release issued on March 31 as a rapid response to the charge by *ProPublica*, published the previous day, that the company was selling a commercial version of the Trilogy Evo

⁵⁹ Ibid.

⁶⁰ “BARDA funds development of next-generation portable ventilators,” *Infection Control Today*, September 30, 2010, at <https://www.infectioncontroltoday.com/epidemics-pandemics/barda-funds-development-next-generation-portable-ventilators>.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Vita Reed, “Newport Medical sees local, global growth with ventilators,” *Orange County Business Journal*, May 8, 2011, at <https://www.ocbj.com/news/2011/may/08/newport-medical-sees-local-global-growth-ventilato/>.

⁶⁴ Global Biodefense Staff, “Next-generation ventilators needed for pandemics,” *Global Biodefense*, September 22, 2014, at <https://globalbiodefense.com/2014/09/22/next-generation-ventilators-needed-pandemics/>.

⁶⁵ Richard Pizzi, “HHS funds ventilators for public health emergencies,” *HealthcareITNews*, September 23, 2014, at <https://www.healthcareitnews.com/news/hhs-funds-ventilators-public-health-emergencies>.

⁶⁶ Letter from James Lee, FDA, to Colleen Witt, Respironics, announcing 510k approval (510k no. K181166) for the Trilogy Universal Ventilatory, July 18, 2019, at https://www.accessdata.fda.gov/cdrh_docs/pdf18/K181166.pdf.

Universal overseas while the HHS had still received none, Philips stated that it was “working closely with BARDA to accelerate delivery to the SNS.”⁶⁷ In a sense, the GBC that BARDA had begun in 2008 to add 10,000 innovative ventilators to the SNS could have, after 12 years, fulfilled its purpose—except for the fact that the Covid-19 pandemic had appeared about eight months too soon!

Since the 19th century, GBCs have been fundamental to U.S. economic development.⁶⁸ In preparing for a pandemic, the United States needs GBCs to innovate in the types of countermeasures—including, in addition to ventilators, vaccines, therapies, diagnostic tests, and PPE—that go into the SNS. It may be that government agencies could generate a desired product on the scale it required without a partnership with a business firm. In an advanced economy, however, business corporations are vast repositories of productive capabilities—in the areas of purchasing, researching, manufacturing, and marketing—that GBCs can mobilize to serve the common good. Once a pandemic hits, public health will depend on GBCs for rapid ramp-ups in the production of approved countermeasures, as well as on their rapid distribution where and when they are needed.

The *New York Times* and *ProPublica* carried out investigative reports into U.S. pandemic preparedness, in which they exposed the failure of the BARDA contracts to add ventilators to the SNS as the Covid-19 crisis unfolded. At the root of this failure is a highly contagious corporate disease known as “maximizing shareholder value” (MSV) that has ravaged our collective ability to engage in public-health preparedness and response in the face of a pandemic.⁶⁹ The BARDA experience with the two successive ventilator contracts illustrates the centrality of innovative enterprise to public-health preparedness and how the pursuit of MSV ideology can undermine GBCs.

In 2010, when it signed the first BARDA contract, Newport was a 29-year-old company based in Costa Mesa, California, owned by the Japanese medical-device company Tokibo.⁷⁰ Newport’s president, Hong-Lin Du, had joined the company in 1997 at the age of 31 after working as a product manager for Tokibo in Japan.⁷¹ With graduate degrees that included doctorates from Beijing Medical School and Tokyo University, and substantial scientific credentials, Du became Newport’s president in 2001.

BARDA contracted with Newport to develop a next-generation ventilator because of the company’s track record of successful innovation, which included supplying ventilators to state stockpiles.⁷² Newport viewed the federal contract as a learning opportunity and the prestige of being awarded it as a selling point in the commercial ventilator market. For its part, the federal

⁶⁷ Steve Klink, “Philips statement on its ongoing collaboration with HHS and BARDA,” Philips press release, March 31, 2020, at <https://www.usa.philips.com/a-w/about/news/archive/standard/news/articles/20200331-philips-statement-on-its-ongoing-collaboration-with-hhs-and-barda.html>.

⁶⁸ Matt Hopkins and William Lazonick, “Who Invests in the High-Tech Knowledge Base?” Institute for New Economic Thinking Working Group on the Political Economy of Distribution Working Paper No. 6, September 2014 (revised December 2014), at <http://ineteconomics.org/ideas-papers/research-papers/who-invests-in-the-high-tech-knowledge-base>.

⁶⁹ Lazonick and Shin, *Predatory Value Extraction*; William Lazonick and Mary O’Sullivan, “Maximizing Shareholder Value: A New Ideology for Corporate Governance,” *Economy and Society*, 29, 1, 2000: 13-35, at <https://www.tandfonline.com/doi/abs/10.1080/030851400360541>.

⁷⁰ tkb Group, “at <https://www.tokibo.co.jp/tokibo-en>.

⁷¹ “Hong-Lin Du” LinkedIn page, at <https://www.linkedin.com/in/hong-lin-du-67055662/>.

⁷² Obituary, “Elizabeth (Liz) Ann Sanborn,” *Los Angeles Times*, July 28, 2011, at <https://www.latimes.com/socal/daily-pilot/news/tn-dpt-sanborn-20110728-story.html>.

government recognized that commercial sales of the new ventilator would further enhance the quality of the product while making it possible for Newport to reap economies of scale, and that the combination of these two benefits would make it financially worthwhile for the company to sell the new ventilator to the SNS for \$3,000 per unit.

The *New York Times* story describes frequent and positive interactions between Newport and the Centers of Disease Control and Prevention (CDC), the agency within HHS that was monitoring Newport's progress in developing the ventilator. Thomas Frieden, who then led the CDC, told the *New York Times* that he "got all excited" about the performance of three working prototypes that Newport demonstrated at the CDC in 2011.⁷³ In April 2012, HHS told Congress that the Newport ventilator was "on schedule for market approval [by the FDA] in September 2013."

In the first half of 2011, Newport took out a lease on a 35,000-square-foot industrial building, doubling its total workspace.⁷⁴ Of Newport's 160 employees, 30 worked in R&D. In an interview in May 2011, Du said that Newport could develop a new ventilator in three years, compared with five to eight years for its competitors. The company co-located R&D and manufacturing in Costa Mesa for the sake of collective learning and quality control.

The largest privately held ventilator manufacturer in the United States, Newport expected sales of \$50 million in 2011, with the company's ventilators for hospital use selling for an average of \$16,000, a far lower price than those of its competitors, which included Covidien, CareFusion, Drägerwerk, and Maquet. Du extolled the advantage of not being listed on the stock market, saying: "Wall Street doesn't like to hear 'every three years'—they like to hear 'every three months.' Staying private, we can afford to invest our money for three years later, not for next quarter."⁷⁵

One year after this interview, however, Tokibo sold Newport to Covidien for \$108 million in cash. At this point, Du was quoted as stating: "This transaction highlights both companies' commitment to driving innovation and growth in the respiratory care sector by expanding their ventilator portfolio and global presence."⁷⁶ Unfortunately, as the *New York Times* story documents, Covidien's commitment was to kill Newport's BARDA project because the commercialization of the Newport product would undercut Covidien's more profitable ventilators.⁷⁷

In June 2012, one month after the acquisition closed, Covidien requested and received another \$1.4 million from HHS, while also demanding a higher sales price from the agency for continuing with the project. But at Newport, now a wholly owned subsidiary of Covidien, the organizational learning that is the essence of innovation had stopped. As Du put it: "Up until the time the company sold, I was really happy and excited about the project. Then I was assigned to a different job."⁷⁸ Rick Crawford, who had been the head of R&D at Newport before the Covidien acquisition, was

⁷³ Kulish et al., "The U.S. tried to build a new fleet of ventilators."

⁷⁴ Reed, "Newport Medical sees local, global growth with ventilators."

⁷⁵ Ibid.

⁷⁶ Intrepid Investment Bankers LLC, "Intrepid Investment Bankers LLC Advises Newport Medical Instruments, Inc. in its Sale to Covidien plc," *PRNewswire*, May 1, 2012, at <https://www.prnewswire.com/news-releases/intrepid-investment-bankers-llc-advises-newport-medical-instruments-inc-in-its-sale-to-covidien-plc-149748365.html>.

⁷⁷ Kulish et al., "The U.S. tried to build a new fleet of ventilators."

⁷⁸ Ibid.

kept on at Covidien to run the project but had no one assigned to work with him.⁷⁹ In 2014 Covidien told BARDA that the ventilator Newport had promised to deliver would not be sufficiently profitable, and that it therefore wanted out of the contract. With Covidien exiting from the GBC, four years had been lost in carrying out the nation's SNS-ventilator mission.

Starting over, BARDA turned to Philips Respironics, based in Murrysville, Pennsylvania, to develop a portable, user-friendly ventilator for the stockpile. The company that became Respironics was founded in Murrysville in 1971 as Lanz Medical Products by Gerald E. McGinnis, a mechanical engineer with 13 years of work experience, 11 of those years doing bioengineering R&D at Westinghouse and the other two engaged in medical engineering at Pittsburgh hospitals. Renamed Respironics in 1976, the company pioneered continuous positive airway pressure (CPAP) therapy as a treatment for obstructive sleep apnea (a sleep disorder in which breathing repeatedly stops and starts), releasing its SleepEasy product in 1985.⁸⁰

In 1988, Respironics went public on NASDAQ, raising \$3.4 million for use in expanding its product lines and enhancing its marketing capability. In its fiscal year 1988 (ending June 30), the company had \$14.0 million in revenues, \$1.3 million in profits, and 236 employees. In fiscal 2007, just before being acquired by the old-line Dutch company Royal Philips, Respironics had \$1.2 billion in revenues, \$122.3 million in profits, and 4,900 employees, of whom 1,700 were at the company's headquarters near Pittsburgh alongside its main global locations for R&D and manufacturing.

Respironics epitomized a "retain-and-reinvest" company: It retained its profits, which it leveraged at times using long-term debt issues, and reinvested in productive capabilities related to respiration technology.⁸¹ Besides raising funds from the stock market in its IPO, Respironics did two secondary stock issues, one for \$11.7 million in 1991, when the company also took on a net of \$4.8 billion in long-term debt, and the other for \$47.9 million in 1998 to finance its largest acquisition, Healthdyne Technologies. Over the two decades 1988-2007, the company's capital expenditures amounted to 6.6 percent of sales and its R&D spending 4.9 percent of sales.

In the 20 years that Respironics was publicly listed, the company never paid a dividend. Nor, except for in 1999 and 2000, did the company do stock buybacks. When its stock price slumped at the height of the dot.com boom, Respironics' management took the opportunity to repurchase \$42.3 million of its outstanding shares (representing 7.3 percent of its profits over its 20 years as a publicly listed company). In contrast to the widespread practice of U.S. companies that, in addition to paying generous dividends, will do buybacks at high share prices during a boom to give manipulative boosts to their stock-market value,⁸² Respironics repurchased its shares at low prices and then retained them in its corporate treasury to be used for employee stock-based pay.

⁷⁹ Callahan et al., "Taxpayers paid millions to design a low-cost ventilator."

⁸⁰ "The evolution of Respironics," *Monitor Medical*, August 29, 2020, at <https://thecpapco.com/2018/08/29/the-evolution-of-respironics/>; "CEO interview, Respironics Inc.," *Wall Street Journal*, July 22, 1993; "Sleep Apnea," *Mayo Clinic*, at <https://www.mayoclinic.org/diseases-conditions/sleep-apnea/symptoms-causes/syc-20377631>.

⁸¹ William Lazonick, "Stock Buybacks: From Retain and Reinvest to Downsize-and-Distribute," *Brookings*, April 17, 2015, at <https://www.brookings.edu/research/stock-buybacks-from-retain-and-reinvest-to-downsize-and-distribute/>.

⁸² William Lazonick, Mustafa Erdem Sakinç, and Matt Hopkins "Why Stock Buybacks Are Dangerous for the Economy," *Harvard Business Review*, January 7, 2020, at <https://hbr.org/2020/01/why-stock-buybacks-are-dangerous-for-the-economy?ab=hero-subleft-2>.

McGinnis was the company's chairman and CEO from its founding until 1994. At that point, he continued as chairman while naming as new CEO Dennis S. Meteny, an MBA who had joined Respiroics in 1984.⁸³ With \$78 million in sales and almost 1,100 employees, Respiroics shifted from exclusive reliance on growth through internal investment to growth through acquisition as well. Meteny oversaw the 1996 acquisition of Colorado-based LIFECARE International, a company whose \$33 million in sales made it about one-third the size Respiroics had been in 1995. LIFECARE was a global leader in portable ventilation therapy, mainly for the home.⁸⁴ In 1998, Respiroics acquired Healthdyne Technologies, a Georgia-based company producing medical devices for sleep and respiratory disorders with \$155 million in sales and almost 600 employees. As a result, Respiroics' sales increased from \$179 million in 1997 to \$352 million in 1998, with employment expanding from 1,565 to 2,045.

In 1999, however, Respiroics' growth stalled, and McGinnis, still in control of the company even though his personal shareholding had fallen to 2.72 percent of shares outstanding from 10.62 percent in 1991, decided to change CEOs. Out was Meteny, whom McGinnis described as "a process guy. His background was in finance. He could meet timetables and budgets better than any person I've met."⁸⁵ In as CEO, as of August 1999, was James W. Liken, who had built and sold his own respiratory-device company before joining the Respiroics board six months earlier. McGinnis was looking to Liken to use his marketing expertise to increase the company's sales of its now-expanded product lines. As the chairman put it: "Jim's successful business career has been focused on marketing, selling and distributing products and services through home health care organizations to end users who range from hospitals to individuals."⁸⁶

Under Liken, who served as the company's CEO for just over four years from 1999 to 2003, Respiroics increased its sales from \$358 million to \$630 million, with its employment growing from 1,900 to 2,700. In 2002, Respiroics acquired Novamatrix, a leading cardiorespiratory monitoring company based in Connecticut with \$55 million in sales and 235 employees.⁸⁷

Then, in October 2003, McGinnis named John L. Miclot as the new CEO, with Liken staying on at Respiroics in a newly created vice-chairman position. Miclot had joined Respiroics in 1998 with the Healthdyne acquisition and had risen to become chief strategic officer prior to his appointment as CEO.⁸⁸ From 2004 through 2007, Respiroics sales increased by 57 percent and its employment by 63 percent.

Along with McGinnis and Liken, Miclot negotiated the sale of Respiroics to Philips in January 2008.⁸⁹ With the sale of Respiroics to Philips, McGinnis, now 73, retired, his 1.5 percent of the

⁸³ Len Boselovic, "McGinnis takes over as Respiroics chief in a heartfelt move," *Pittsburgh Post-Gazette*, November 17, 1994.

⁸⁴ "Respiroics acquires LIFECARE International," *Business Wire*, October 22, 1996.

⁸⁵ Jim McKay, "Seeking change, Respiroics chose entrepreneur of new CEO," *Pittsburgh Post-Gazette*, August 20, 1999.

⁸⁶ "Respiroics names James W. Liken Chief Executive Officer, to succeed Dennis S. Meteny," *PR Newswire*, August 19, 1999.

⁸⁷ "Respiroics to acquire Novamatrix Medical Systems," *PR Newswire*, December 18, 2001.

⁸⁸ "Respiroics appoints John L. Miclot President and Chief Executive Officer to succeed James W.

Liken. Liken to assume Vice Chairman role," *PR Newswire*, October 2, 2003.

⁸⁹ "Respiroics Board endorses \$5.1 billion bid from Philips," *Penton Insight*, January 8, 2008; see also "Philips announces completion of tender offer to acquire Respiroics," *WebWire*, March 14, 2008, at <https://www.webwire.com/ViewPressRel.asp?aId=61199>.

company's shares worth about \$73 million.⁹⁰ Liken left Philips Respironics in March 2008 and Miclot in November 2008. From 1989 through 1992, Respironics had been in *Forbes* magazine's annual list of the 200 best small companies in the United States. In December 2007, just prior to Respironics' sale to Philips, *Forbes* came out with its annual list of the 26 large U.S. companies that it had selected as best managed, one company for each of 26 industries. With its acquisition of Respironics, Philips would be taking control of *Forbes*' selection as the best-managed company in the U.S. healthcare-equipment industry.⁹¹

4. The financialized corporations that put stock price ahead of the SNS

It was 12 years ago that BARDA launched its initiative to support the development of a portable, user-friendly, low-cost ventilator with a view to securing 10,000 units for the SNS. What accounts for the failure of the two successive contracts under this initiative to deliver a single ventilator to the SNS by the time the Covid-19 pandemic swept the nation in from March 2020?

This failure was not the fault of either of the original ventilator manufacturers, Newport Medical Instruments and Respironics. To the contrary, in terms of their strategy, organization, and finance, both Newport, a relatively small company when it was acquired by Covidien, and Respironics, a relatively large company by the time it was acquired by Philips, exemplified what we call "the innovative enterprise."⁹² Newport and Respironics were the type of business firm that any economy needs to contribute to both technological progress and the achievement of stable and equitable growth.

The problems with the SNS contracts occurred after these innovative businesses were acquired by financialized business corporations—Covidien and Philips. Once acquired, these companies were subordinated to a new managerial structure that had its own strategic priorities. While innovative companies like Newport or Respironics make acquisitions as a means of growth, or to expand on their investments in new product lines, financialized companies may make acquisitions to stop innovation in its tracks or to divert the profits of innovation away from product development and into the hands of what we call "predatory value extractors."⁹³

As we shall document, the prime corporate purpose of Covidien, of Medtronic, which acquired Covidien in 2015, and of Philips has been to "maximize shareholder value" (MSV). That is, they seek to inflate their profits by any means possible—in both of these cases, via acquisition—and then they distribute those profits to shareholders in the form of stock buybacks as well as cash dividends. Buybacks done, as the majority of them are, in the form of open-market repurchases serve primarily to give manipulative boosts to the repurchasing company's stock price, creating opportunities for *sharesellers* to pocket gains. The prime beneficiaries of the inflated stock prices are the corporation's senior executives, with their stock-based pay, as well as professional stock traders who are in the business of timing the buying and selling of shares on the public stock

⁹⁰ Dan Fitzpatrick, "Respironics is sold to Dutch firm," *Pittsburgh Post-Gazette*, December 22, 2007, at <https://www.post-gazette.com/business/businessnews/2007/12/22/Respironics-is-sold-to-Dutch-firm/stories/200712220110>.

⁹¹ "America's Best Managed Companies," *Forbes*, December 28, 2007, at <https://www.forbes.com/global/2008/0107/075.html#289e157e7a54>.

⁹² William Lazonick, "Innovative Enterprise and Sustainable Prosperity," *The Academic-Industry Research Network*, January 18, 2019, at <http://www.theairnet.org/v3/backbone/uploads/2019/03/Lazonick-IESP-20190118.pdf>.

⁹³ Lazonick and Shin, *Predatory Value Extraction*.

markets.⁹⁴ We would not expect a company that, in the name of MSV, engages in buybacks with the aim of rewarding sharesellers to be a reliable partner in a GBC.

Let's recap what happened under each of these two successive contracts. The available information indicates that Newport was a highly capable and motivated company that, but for its acquisition, would have made good on its contract with HHS. It was on track to getting its ventilator approved by the FDA in late 2013 and to manufacturing 10,000 units for delivery to the SNS in 2014 and 2015. Newport would have generated \$30 million in revenue—a significant sum for this medium-sized company. But, as documented in the *New York Times* exposé, after Covidien acquired Newport in 2012, its corporate office ensured that the manufacturing division's contract with HHS would come to an end by effectively dissolving Newport's research team and making no effort to overcome what the new owner claimed were problems with the ventilator's prospects and profitability.⁹⁵

BARDA started over, turning to Philips Respironics in the second half of 2014 with a new contract to supply the SNS with the type of portable, inexpensive ventilator with universal application that Newport was ultimately prevented from producing. Respironics was also a highly capable and motivated ventilator-manufacturing firm when it was acquired by Philips in 2008. By June 2009, Philips Respironics had introduced the Trilogy100 portable at-home life-support ventilator,⁹⁶ a machine that launched the series that five years later would enable the company to enter into the collaboration with BARDA. In July 2019, the FDA approved the Philips Respironics Trilogy Evo Universal ventilator.⁹⁷ When, in December 2019, HHS and Philips negotiated the timeframe for the delivery of 10,000 Trilogy Evo Universal units to the SNS, nobody knew that a coronavirus pandemic would ravage the globe in the following months. Unfortunately, under the agreement, the first batch of this order was not scheduled to enter the SNS until August 2020.

Meanwhile, as documented by *ProPublica* in its story of March 30, Philips was selling the Trilogy EVO300—an upgraded version of the Trilogy Evo Universal—at pandemic-inflated prices around the world.⁹⁸ In a follow-up article on April 8, *ProPublica* reported that Philips had newly agreed to supply HHS with 43,000 Trilogy EVO300 ventilators for \$646.7 million.⁹⁹ At just over \$15,000 each, the price was an eye-popping 4.6 times the unit price of \$3,280 for the 10,000 Respironics ventilators that HHS had earlier purchased. Philips claims that the EVO300 is an upgraded version of the ventilator in the original SNS contract, which remains to be completed on its own. Under the new contract revealed by *ProPublica*, Philips Respironics was scheduled to deliver 2,500

⁹⁴ Ibid.

⁹⁵ Kulish et al., “The U.S. tried to build a new fleet of ventilators.”

⁹⁶ “Philips expands home healthcare commitment with portable life-support ventilator; Offers ease of use, portability and versatility for patient,” *PR Newswire*, June 2, 2009.

⁹⁷ Letter from James Lee, FDA, to Colleen Witt, Respironics.

⁹⁸ Callahan et al., “Taxpayers paid millions to design a low-cost ventilator.”

⁹⁹ Patricia Callahan and Sebastian Rotella, “A company promised cheap ventilators to the government, never delivered and is now charging quadruple the price for new ones,” *ProPublica*, April 8, 2020, at <https://www.propublica.org/article/a-company-promised-cheap-ventilators-to-the-government-never-delivered-and-is-now-charging-quadruple-the-price-for-the-new-ones>.

See also Patricia Callahan and Sebastian Rotella, “Congress is investigating whether a ventilator company is gouging the U.S.—and why the government is letting it happen,” *ProPublica*, April 16, 2020, at <https://www.propublica.org/article/congress-is-investigating-whether-a-ventilator-company-is-gouging-the-us-and-why-the-government-is-letting-it-happen>.

ventilators to the SNS by the end of May 2020,¹⁰⁰ presumably for immediate use rather than to be kept in the stockpile, and the remaining 41,500 by the end of December 2020.

Neither the *New York Times* nor *ProPublica* mentions the financialization of, respectively, Covidien and Philips as a potential explanation for why, as we write in mid-June of 2020, these companies have failed to deliver ventilators to the SNS. Putting the spotlight on financialization, however, illuminates a number of highly pertinent facts about these companies that make clear why they were not reliable partners in a GBC for a critical public-health mission.

We can start with Covidien, which had previously been a division of Tyco International, one of the most visibly corrupt companies of the 1990s and early 2000s. Covidien, whose executive and operational headquarters were based in Massachusetts, was a classic global tax dodger: In July 2007, under its new, made-up name,¹⁰¹ the company began a new corporate life domiciled in Bermuda, the work location of only five of its 43,000 employees worldwide.¹⁰² In its previous corporate life, Covidien was named Tyco Healthcare, a division of Tyco International. The parent company's CEO was Dennis Kozlowski, who was convicted in 2005 of corporate fraud and would spend six-and-a-half years in prison.¹⁰³ In 1997, Kozlowski had "relocated" Tyco International's tax home from the United States to Bermuda in what *Forbes* called "an obvious tax dodge."¹⁰⁴ In 2007, the same year that it spun off Covidien, Tyco International paid \$3 billion in the largest shareholder-lawsuit settlement ever agreed to by a single corporation.¹⁰⁵

Covidien, looking in 2009 for greener tax-dodging pastures, established a new tax home in Ireland. When it acquired Newport, both HHS and the Federal Trade Commission (FTC), the latter being tasked with reviewing and signing off on proposed mergers and acquisitions, should have known that Covidien had made a two-step tax hop across the Atlantic with no concern whatsoever for U.S. public-health preparedness. Given Covidien's commitment to dodging U.S. taxes, it should have come as no surprise to HHS that the company backed out of the SNS contract on the grounds that the prospective profits were insufficient.

As it happened, the existence of Covidien as an "Irish medical device company," as *ProPublica* called it, created a tax-dodging opportunity for an even larger medical-equipment corporation: Medtronic.¹⁰⁶ In January 2015, Minnesota-based Medtronic completed a \$50 billion acquisition of

¹⁰⁰ As of July 20, 2020, there is no evidence that Philips has delivered any of these ventilators to the SNS.

¹⁰¹ "Tyco International Ltd. to name medical products spin-off Covidien," *Biospace*, January 25, 2007, at <https://www.biospace.com/article/releases/tyco-international-ltd-to-name-medical-products-spin-off-b-covidien-b/>. On Covidien in the context of the BARDA contract, see David Dayen, "Unsanitized: Covidien's story is corporate America's story," *The American Prospect*, March 30, 2020, at <https://prospect.org/coronavirus/unsanitized-covidien-story-corporate-america-ventilators/>.

¹⁰² Todd Wallack, "Covidien plans to incorporate in Ireland, exit Bermuda Mansfield firm says move will help growth," *Boston Globe*, December 24, 2008.

¹⁰³ Marcia Heroux Pounds, "Dennis Kozlowski, former Tyco CEO who went to prison, back in M&A business," *South Florida SunSentinel*, January 11, 2017, at <https://www.sun-sentinel.com/business/fl-dennis-kozlowski-life-after-prison-20170111-story.html>.

¹⁰⁴ "Tyco and the Bermuda triangle," *Forbes*, Sept 17, 2002 at <https://www.forbes.com/2002/09/17/0917topnews.html#8fadc9d14450>.

¹⁰⁵ Katherine Webster, "Tyco to pay \$3 billion to settle shareholders' lawsuit," *Insurance Journal*, May 17, 2007, at <https://www.insurancejournal.com/news/national/2007/05/17/79793.htm>.

¹⁰⁶ William Lazonick, "The real cost of America's global tax dodgers," *Salon*, August 19, 2011, at https://www.salon.com/2011/08/18/global_tax_dodgers/.

Covidien,¹⁰⁷ using a “corporate inversion”¹⁰⁸—the largest in history—to assume Covidien’s tax domicile in Ireland and cut its corporate tax bill.¹⁰⁹ Obama’s Treasury Department cracked down on this tax-dodging technique in 2016, introducing new rules to prevent corporate inversions.¹¹⁰

The senior executives at both Covidien and Medtronic have allocated the profits boosted by global tax dodging to distributions to shareholders in the form of dividends and buybacks. The consequent increases in stock prices have in turn boosted the massive paychecks of the very corporate executives who exercise discretion in making dividend and buyback decisions.¹¹¹ When the senior executives at Covidien or Medtronic allocated corporate cash to buybacks to give manipulative boosts to their company’s stock price, they gave themselves opportunities to realize gains on the exercise of their stock options and the vesting of their stock awards.¹¹² These realized gains represent taxable income that executives receive from their stock-based compensation.¹¹³

In the years 2010 to 2014, Covidien allocated 75 percent of its profits to distributions to shareholders, of which two-thirds were in the form of stock buybacks. Prime beneficiaries of the buybacks were the company’s own executives. In 2011-2014, Covidien CEO José E. Almeida received an average of \$10.2 million per year in total remuneration, of which 68 percent came from realized gains on stock-based pay. The total compensation of the other four highest-paid Covidien executives named on proxy statements for each year from 2007 through 2014 ranged from an average of \$2.0 million in 2012, of which 29 percent was stock-based, to \$9.8 million in 2011, of which 48 percent was stock-based.

At Medtronic, which absorbed Covidien in 2015, financialization was even more extreme. From fiscal years 2015 through 2019 (ending April 24, 2020), Medtronic distributed \$12.7 billion as buybacks on top of \$12.6 billion as dividends for a combined 126 percent of profits. According to the latest data currently available, Omar S. Ishrak took home, as CEO of Medtronic from 2011 through 2018, a total of \$159.9 million—an average of \$20.0 million per year—49 percent of

¹⁰⁷ Rakesh Sharma, “Medtronic avoids U.S. taxes while saddling shareholders with a hefty tax bill,” *TheStreet*, January 28, 2015, at <https://www.thestreet.com/investing/medtronic-avoids-us-taxes-while-saddling-shareholders-with-a-hefty-tax-bill-13024863>.

¹⁰⁸ David Crow, “Medtronic: the tax inversion that got away,” *Financial Times*, January 27, 2015, at <https://www.ft.com/content/ddcd9ad6-a5cf-11e4-ad35-00144feab7de>.

¹⁰⁹ Jeanne Whalen, “Medtronic gets big cut in repatriation taxes after move to Ireland,” *MarketWatch*, September 28, 2015, at <https://www.marketwatch.com/story/medtronic-gets-big-cut-in-repatriation-taxes-after-move-to-ireland-2015-09-28>.

¹¹⁰ William Lazonick, “We stopped Pfizer’s tax dodge, now let’s end the buybacks,” *Institute for New Economic Thinking Perspectives*, April 8, 2016 at <https://www.ineteconomics.org/perspectives/blog/we-stopped-pfizers-tax-dodge-now-lets-end-the-buybacks>; Caroline Humer and Ransdell Pearson, “Obama’s inversion curbs kill Pfizer’s \$160 billion dollar Allergan deal,” *Reuters*, April 5, 2016, at [https://www.reuters.com/article/us-allergan-m-a-pfizer/obamas-inversion-curbs-kill-pfizers-160-billion-allergan-deal-idUSKCN0X21NV#:~:text=NEW%20YORK%20\(Reuters\)%20%2D%20U.S.,stop%20tax%2Ddodging%20corporate%20m ergers](https://www.reuters.com/article/us-allergan-m-a-pfizer/obamas-inversion-curbs-kill-pfizers-160-billion-allergan-deal-idUSKCN0X21NV#:~:text=NEW%20YORK%20(Reuters)%20%2D%20U.S.,stop%20tax%2Ddodging%20corporate%20m ergers).

¹¹¹ William Lazonick, “Profits Without Prosperity: Stock Buybacks Manipulate the Market and Leave Most Americans Worse Off,” *Harvard Business Review*, September 2014, at <https://hbr.org/2014/09/profits-without-prosperity>; William Lazonick and Matt Hopkins, “If the SEC Measured CEO Pay Packages Properly, They Would Look Even More Outrageous,” *Harvard Business Review*, December 22, 2016, at <https://hbr.org/2016/12/if-the-sec-measured-ceo-pay-packages-properly-they-would-look-even-more-outrageous>.

¹¹² William Lazonick and Matt Hopkins, “Corporate executives are making way more money than anybody reports,” *The Atlantic*, September 15, 2016, at <https://www.theatlantic.com/business/archive/2016/09/executives-making-way-more-than-reported/499850/>.

¹¹³ Matt Hopkins and William Lazonick, “The Mismeasure of Mammon, Uses and Abuses of Executive Pay Data,” *Institute for New Economic Thinking Working Paper No. 49*, August 29, 2016, at <https://www.ineteconomics.org/research/research-papers/the-mismeasure-of-mammon-uses-and-abuses-of-executive-pay-data>.

which consisted of his realized gains from the exercise of stock options and the vesting of stock awards.

The total compensation of the other four highest-paid Medtronic executives named on proxy statements for each year from 2006 through 2018 varied from an average of \$2.2 million in 2010, of which 16 percent was stock-based, to \$13.7 million in 2014, of which 32 percent was stock-based. In 2007, at the peak of the stock market boom that preceded the financial crisis, the total compensation of the four other highest-paid Medtronic executives averaged \$8.5 million, of which 79 percent was stock-based.

About 25 percent of CEO Ishrak's total compensation for 2011-2018 came from cash payouts from a complex "long-term incentive plan" based on a variety of financial metrics, including revenue growth, earnings per share, cash from operations, and return on invested capital. Ishrak also received \$24.7 million in fiscal 2014 (another 16 percent of his compensation over the eight-year period) under the nebulous category "other compensation." The \$24.7 million materialized as part of a "change in control" payment triggered by the Covidien acquisition. The purpose of this payment was, as stated in a Medtronic Transaction Proxy S-4 filing (November 20, 2014), "to provide compensation to offset the impact of the Covidien acquisition associated excise tax on [CEO Ishrak's] unexercised stock options and unvested restricted stock units."

Medtronic's other senior executive employees received the same treatment, which yielded them millions of dollars in additional pay. Meanwhile, under Internal Revenue Service rules, Medtronic's acquisition of Covidien through a corporate inversion meant that Medtronic's shareholders were deemed to have sold their shares, on which, if their tax home was in the United States, they then had to pay capital-gains taxes of up to 33 percent.¹¹⁴ In other words, Medtronic's top executives had this tax disincentive to merge removed from their decision-making—and, arguably, had all the more reason to do the corporate inversion—while the company's other shareholders were pushed into what for many was a major taxable event.

With its historical growth solidly rooted in the United States, and U.S. sales making up 53 percent of its total revenue of \$30.9 billion in fiscal 2018, Medtronic—the world's largest medical-device company—is an American corporation.¹¹⁵ But with its tax home in Ireland and its obeisance to MSV, one would not expect Medtronic, any more than Covidien, to be a reliable partner in any GBC needed to beat back a pandemic. In that regard, Medtronic is no different than Royal Philips, a company born and bred in the Netherlands, whose division Philips Healthcare represents the world's third-largest medical-device company (number two is Johnson & Johnson, and number four is GE Healthcare).¹¹⁶

Founded in 1891 as a light-bulb company—Europe's counterpart to General Electric—Philips entered the medical-equipment industry over a century ago and expanded rapidly through acquisitions from the beginning of the 2000s. In 2006 and 2007, the company went on a medical-

¹¹⁴ Steven Davidoff Solomon, "In deal to cut corporate taxes, shareholders pay the price," *New York Times*, July 14, 2014.

¹¹⁵ "Top 10 Medical Device Companies in the World 2019," *Technovio*, April 24, 2019, at <https://blog.technavio.com/blog/top-10-medical-device-companies-worldwide>.

¹¹⁶ *Ibid.*

device shopping spree. In September 2007, it changed its medical-device division's name from Philips Medical Systems to Philips Healthcare.¹¹⁷

On December 21, 2007, Philips announced its \$5.1 billion bid for Respireonics in an all-cash transaction that gave the acquiree's shareholders a 31 percent premium over the market price of the stock.¹¹⁸ Its largest acquisition ever, Philips was gaining possession of a highly successful company that had increased its sales by 2.4 times from 2002 to reach \$1.2 billion dollars in 2007. In 2002, Respireonics' \$38 million in profits represented 7.8 percent of sales, while in 2007, its \$122 million in profits was 10.2 percent of sales.

Respireonics' shareholders may have benefited financially from the fact that on December 10, less than two weeks before the bid, U.S. hedge funds D. E. Shaw and Jana Partners, which between the two of them had purchased 1.6 percent of Philips' outstanding shares, informed the Dutch company that they intended "to act together to jointly communicate their views, publicly or privately, regarding operating performance and capital structure."¹¹⁹ A *Financial Times* article noted that the pressure on Philips "comes at a time when Dutch companies are increasingly takeover targets, thanks to corporate governance changes introduced since 2004 that hand greater powers to investors." It went on to say that the communication to Philips from the U.S. hedge funds "set nerves jangling in the Netherlands, where activist investors have initiated a series of high-profile break-ups and takeovers, such as this year's battle for ABN Amro."¹²⁰

Philips had already repurchased \$7.8 billion of its own shares since 2005 but was still accumulating cash from retained earnings and asset sales. The company may have been willing to pay more for Respireonics than would have otherwise been the case, in order to get cash off its books to appease the U.S. hedge funds. In discussing the hedge-fund demands, the Philips CFO, Pierre-Jean Sivignon, said that the Respireonics acquisition helped his company to move toward "an efficient balance sheet."¹²¹ More directly to the point, within a week of being given notice by the hedge funds, Philips announced a new €5-billion stock-buyback program for the next two years.¹²² In fact, Philips did most of the buybacks in the first four months of 2008, while Shaw was selling its Philips shares.¹²³

Since then, Philips has become among the most financialized companies in Europe. From 2010 through 2019, the company did \$8.1 billion in buybacks, equal to 86 percent of its profits, plus

¹¹⁷ Vasantha Ganesan, "Philips: Healthcare segment growth on track," *Business Times*, July 22, 2006; "Philips doubles profit forecast as it announces reorganization," *Associated Press Newswires*, September 10, 2007; "Philips teams up with healthcare firms on R&D," *Reuters News*, January 30, 2007; Stefan Kloet, "Philips buys Visicu to further grow healthcare ops," *Dow Jones Newswires*, December 18, 2007.

¹¹⁸ Foo Yun Chee and Niklas Mika, "Philips in \$5 billion Respireonics deal," *Reuters*, December 21, 2007.

¹¹⁹ Dealbook, "Two funds put Philips in spotlight," *New York Times*, December 10, 2007, at <https://dealbook.nytimes.com/2007/12/10/two-funds-put-philips-in-spotlight/>.

¹²⁰ Michael Steen, "Philips in 5bn share buy-back," *Financial Times*, December 19, 2007.

¹²¹ Michael Steen, "Philips buys Respireonics for 3.6bn.," *Financial Times*, December 21, 2007.

¹²² Harro ten Wolde, "Philips plans \$7.2 billion share buyback," *Reuters*, December 19, 2007, at <https://www.reuters.com/article/us-philips-buyback/philips-plans-7-2-billion-share-buyback-idUSWEB095020071219>.

¹²³ For information on Philips' share repurchases, see "Annual Results," *Royal Philips*, various years, retrieved from <https://www.results.philips.com/publications/ar19#downloads>; for D.E. Shaw shareholding, see Quarterly Form 13F-HR, *D. E. Shaw & Co*, CIK# 0001009207, EDGAR, Securities Exchange Commission, at <https://www.sec.gov/cgi-bin/browse-edgar?CIK=0001009207&owner=exclude&action=getcompany&Find=Search>. We lack data on share sales done by Jana Partners, a likely result of their having made both the purchase and sale of Philips' stock inside of a quarter, eliminating the need for regulatory disclosure.

\$3.9 billion in dividends, another 41 percent of profits. Over his nine years as CEO of Philips, from 2011 through 2019, Frans van Houten averaged \$4.8 million per year in total remuneration, of which 34 percent was realized gains from stock-based pay. From 2017 through 2019, his average total remuneration was \$7.0 million, of which 49 percent was stock-based. In addition, other components of his compensation were dependent on the performance of the company's stock.

The BARDA ventilator contract with Philips is for machines developed and produced in the United States by its Respiroics division. Yet the contract leaves HHS dependent on a company, Dutch-based Philips, that is afflicted by the American disease known as MSV, even though, as an independent ventilator-manufacturing company, U.S.-based Respiroics had never contracted that disease. We call MSV a disease because it undermines the social conditions of innovative enterprise and, as a result, the nation's public-health capabilities to prepare for and respond to a pandemic. In the next section, we explain why MSV is hazardous to both our wealth and our health.

5. Why MSV renders a business firm unreliable in a GBC

The success of a GBC depends in part on the resource-allocation strategy of the business firm with which a government agency partners. As we have seen in the case of Respiroics, a small firm can grow to be large by generating a competitive product that can make the company profitable and by then reinvesting those profits in a widening array of new competitive products. These products are competitive because the innovative enterprise develops a higher-quality product than had previously been available and then, possessing a higher-quality product, drives down unit costs as it captures a larger extent of the market. The growth of the innovative enterprise entails, first and foremost, investments in the productive capabilities of the firm's employees, who through continued employment engage in the collective and cumulative learning that is the essence of the innovation process.

We call this mode of innovative resource allocation "retain-and-reinvest": The firm retains a substantial portion of its profits and reinvests in the productive capabilities of its employees.¹²⁴ A retain-and-reinvest allocation regime explains not only the growth of the firm but also its contributions to rising living standards as the company shares its productivity gains, monetized as profits, with employees in the form of higher wages, enhanced benefits, and more secure employment. Innovation is an inherently uncertain process. By committing financial resources to the organizational integration of the skills and efforts of employees, however, the firm can confront and overcome that uncertainty by generating a higher-quality, lower-cost product than had previously been available. As a result, both the firm and the economy in which it operates can grow.

It is always possible, however, that the senior executives of a firm that has generated profits through an innovative strategy of retain-and-reinvest will at some point choose instead to make resource allocations that are diametrically opposed; a strategy that we summarize as "downsize-and-distribute." These executives may be able and willing to downsize the labor force by cutting pay, reducing benefits, and laying off employees, all for the sake of distributing more corporate

¹²⁴ Lazonick, "Stock buybacks"; Lazonick, "Is the Most Unproductive Firm the Foundation of the Most Efficient Economy?"

cash to shareholders in the form of buybacks and dividends. MSV ideology, buttressed by pressures from today's corporate raiders, the so-called "hedge-fund activists," may motivate corporate executives to engage in downsize-and-distribute, or even intimidate them into doing so.¹²⁵ Stock-based pay rewards senior corporate executives for this financialized behavior.¹²⁶

In any GBC focused on preparedness for and response to a pandemic, a government agency would want to partner with firms that retain and reinvest. Here is how "retain-and-reinvest" works: A business firm creates value when it generates products (goods and services) that buyers need or want at prices that they are able or willing to pay. Product-market competition requires the firm to be capable of producing a *higher-quality* product than its rivals, which means that the firm has to mobilize the skills and efforts of its employees to engage in organizational learning—the essence of the innovation process. This organizational learning, however, burdens the firm with a high fixed cost that it incurs in advance of generating revenues from the products that its productive capabilities have the potential to create. This high fixed cost places the firm at a *competitive disadvantage* unless it can manage to embody this learning in a product that it sells on the market to generate revenues.

If that high fixed-cost investment in organizational learning can indeed generate a higher-quality product—an outcome which is always uncertain—the firm may be able to capture a large extent of the product market. This high sales volume would then enable the firm to reap economies of scale, thus transforming its high fixed cost into low unit cost, thereby giving the firm a sustainable competitive advantage. The word for this process of developing and utilizing the firm's productive capabilities to generate a higher-quality, lower-cost product is "innovation."

In any accounting period, innovation may enable a firm to generate profits; that is, an excess of revenues over cost. The firm can then, over accounting periods, retain the profits from innovation and reinvest in the growth of the firm. Specifically, the innovative enterprise uses its profits as a financial foundation for a) maintaining and expanding its existing plant and equipment; b) rewarding its employees in the form of higher wages, superior benefits, and stable employment for their prior contributions of skill and effort to generating the firm's profits; *and* c) reinvesting in the organizational-learning processes that, building on the firm's existing capabilities, can generate a new higher-quality, lower-cost product. By sharing the gains from innovation with employees, this retain-and-reinvest regime of corporate resource allocation enables the firm to contribute to stable and equitable growth in the economy as a whole.

But beware the emergence of predatory value extractors: stock-market traders who, by timing the buying and selling of shares, lay claim to the profits that the skills and efforts of employees have generated.¹²⁷ Without making any investment whatsoever in the productive capabilities of the business enterprise, these stock-market traders—misleadingly called "investors"—can use their wealth, visibility, hype, and influence to increase distributions to shareholders in the form of cash dividends and stock buybacks. They can then use insider information on when buybacks are being

¹²⁵ Lazonick and Shin, *Predatory Value Extraction*.

¹²⁶ Hopkins and Lazonick, "The Mismeasure of Mammon"; Lazonick and Hopkins, "If the SEC measured CEO pay packages properly."

¹²⁷ Lazonick and Shin, *Predatory Value Extraction*.

done to time their stock trades so as to increase their realized gains.¹²⁸ Among these predatory value extractors may be a corporation's own senior executives, with their stock-based pay, and hedge-fund managers who are in the business of timing the buying and selling of shares.

The rise of MSV as an ideology of corporate resource allocation from the 1970s legitimized and empowered the transformation of the resource-allocation strategies of U.S. publicly listed corporations from retain-and-reinvest to downsize-and-distribute. This transformation has been a prime driver of both the concentration of income among the richest U.S. households and the erosion of the middle-class employment opportunities that large business corporations provided in the past.¹²⁹ The distributions to shareholders that have made the rich even richer at the expense of most corporate employees have taken the form of stock buybacks in addition to cash dividends.

We have tracked distributions to shareholders by the 222 companies in the S&P 500 Index in January 2019 that were publicly listed from 1981 through 2018. In 1981-1983, these companies paid out 50 percent of their profits as dividends and less than five percent as stock buybacks. In 2016-2018, these same 222 companies distributed 52 percent of profits as dividends and 64 percent as buybacks.

Dividends are a reward to shareholders for *holding* shares in the company. When a dividend is paid on a class of shares, all shareholders of that class receive the same dividend. Nevertheless, shareholding across all U.S. households is highly skewed. In 2016, almost half of U.S. households held some shares—either directly, or indirectly through mutual funds, pension accounts, or trusts—but 84 percent of the value of all outstanding stock in American hands benefited just the richest ten percent of households, contributing to income inequality when shares are sold or dividends are paid.¹³⁰

The distribution of the gains from buybacks are far more unequal because professional *sharesellers*—including senior executives, Wall Street bankers, and hedge-fund managers—have access to inside information that can help them time the sale of their shares. Subject to an announced buyback *program*, approved in advance by the company's board, the vast majority of actual buybacks are done as open-market repurchases, with the company's CEO and CFO instructing its broker to repurchase a certain value of shares on any given trading day.

Buybacks are much more volatile than dividends over the booms and busts of the stock market and are mostly done when stock prices are high and rising—in part boosted by buybacks themselves.¹³¹ Moreover, under Rule 10b-18, adopted by the Securities and Exchange Commission

¹²⁸ William Lazonick, Matt Hopkins, and Ken Jacobson “What We Learn About Inequality from Carl Icahn’s \$2 Billion Apple ‘No Brainer’,” *Institute for New Economic Thinking Perspectives*, June 6, 2016, at <https://www.ineteconomics.org/perspectives/blog/what-we-learn-about-inequality-from-carl-icahn-2-billion-apple-no-brainer>.

¹²⁹ William Lazonick, “Labor in the Twenty-First Century: The Top 0.1% and the Disappearing Middle Class,” in Christian E. Weller, ed., *Inequality, Uncertainty, and Opportunity: The Varied and Growing Role of Finance in Labor Relations*, Cornell University Press, 2015: 143-192.

¹³⁰ Edward Wolff, “Household Wealth Trends in the United States, 1962 to 2016: Has Middle Class Wealth Recovered?” National Bureau of Economic Research Working Paper No. 24985, November 2017, at <https://www.nber.org/papers/w24085.pdf>. See also Heidi Chung, “The richest 1% own 50% of stocks held by American households,” *Yahoo! Finance*, January 17, 2019, at <https://finance.yahoo.com/news/the-richest-1-own-50-of-stocks-held-by-american-households-150758595.html>.

¹³¹ Lazonick et al., “Why Stock Buybacks are Dangerous.”

(SEC) in November 1982, the precise days on which buybacks are being done are not disclosed to the public—or even to the SEC.¹³² As a result, buybacks overwhelmingly benefit senior executives, Wall Street bankers, and hedge-fund managers, who either know or, as professional stock traders, can figure out when the company’s broker is executing a repurchase order.¹³³

Distributions to shareholders, and in particular those done as buybacks, are massive. From 2009 through 2018, the 465 companies in the S&P 500 Index in January 2019 that were publicly listed over the decade expended \$4.3 trillion dollars on stock buybacks, equal to 52 percent of their combined profits.¹³⁴ That was on top of the \$3.3 trillion (39 percent of profits) in dividends that these companies distributed to shareholders.

The top ten corporate repurchasers over 2009-2018 were Apple with \$239 billion in buybacks; Exxon Mobil, \$112 billion; Microsoft, \$103 billion; Oracle, \$98 billion; IBM, \$87 billion; JPMorgan Chase, \$73 billion; Walmart, \$72 billion; Wells Fargo, \$69 billion; Pfizer, \$68 billion; and Cisco Systems, \$67 billion. As we have seen, by giving manipulative boosts to the company’s stock price, these distributions to shareholders augment the realized gains on the stock-based pay of the same corporate executives who make these resource-allocation decisions. From 2009 through 2018, the total annual remuneration of the 500 highest-paid CEOs in the United States for each year ranged from an average of, in 2009, \$12.4 million, of which 56 percent was realized gains from stock-based pay, to, in 2015, \$25.0 million, of which 79 percent was stock-based. Our research reveals that this stock-based executive pay tends to incentivize downsize-and-distribute rather than retain-and-reinvest.¹³⁵

Corporate executives like to say that these distributions, whether carried out as dividends or buybacks, constitute the “return” of cash to shareholders.¹³⁶ But as a rule the only shares that public shareholders buy or sell are those already outstanding on the stock market; they do not, therefore, provide the firms whose stocks they may acquire with any finance for investment in productive capabilities.¹³⁷ How, then, can corporate cash be “returned” to these shareholders?

The MSV argument that legitimizes this financialized behavior traces its origins back to a magazine article entitled “The social responsibility of a business is to increase its profits,” published in the *New York Times* in September 1970. Its author, the free-market economist Milton Friedman, was responding to consumer activists who, as part of “Campaign GM,” had submitted

¹³² Lenore Palladino, “The \$1 Trillion Question: New Approaches to Regulating Stock Buybacks,” *Yale Journal of Regulation*, 36, 2018: 89-105, at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3274357.

¹³³ See, for example, John Ramsay, Investors Exchange LLC, letter to Brent J. Fields, Securities Exchange Commission, March 27, 2018, at <https://www.sec.gov/rules/petitions/2018/petn4-722.pdf>.

¹³⁴ William Lazonick, Öner Tulum, Matt Hopkins, Mustafa Erdem Sakinç, and Ken Jacobson, “Financialization of the U.S. Pharmaceutical Industry,” *Institute for New Economic Thinking Perspectives*, December 2, 2019, at <https://www.ineteconomics.org/perspectives/blog/financialization-us-pharma-industry>.

¹³⁵ See the research webpages for “William Lazonick,” Institute for New Economic Thinking, at <https://www.ineteconomics.org/research/experts/wlazonick>.

¹³⁶ William Lazonick, “Apple’s ‘Capital Return Program’: Where Are the Patient Capitalists?,” *Institute for New Economic Thinking Perspectives*, November 13, 2018, at <https://www.ineteconomics.org/perspectives/blog/apples-capital-return-program-where-are-the-patient-capitalists>.

¹³⁷ Lazonick, et al., “Carl Icahn’s \$2 Billion Apple ‘No Brainer’.” See William Lazonick, “The Functions of the Stock Market and the Fallacies of Shareholder Value,” Institute for New Economic Thinking Working Paper No. 58, July 20, 2017, at <https://www.ineteconomics.org/research/research-papers/the-functions-of-the-stock-market-and-the-fallacies-of-shareholder-value>.

a shareholder proposal to General Motors' annual meeting in May 1970 to include three "public interest" members on GM's board of directors for the purpose of advocating for safer and more fuel-efficient cars.¹³⁸ The proposal garnered little shareholder support, but GM announced in August that, in response to Campaign GM, it had set up a five-person committee of existing board members to study the matters of car safety and fuel efficiency.

A *New York Times* editor's comment that prefaced the article stated that Friedman "calls such drives for social responsibility in business 'pure and unadulterated socialism,' and quoted Friedman further: 'Businessmen who talk this way are unwitting puppets of the intellectual forces that have been undermining the basis of a free society.'"

Really? "Pure and unadulterated socialism"? "Undermining the basis for a free society"?

The demands of Campaign GM for safer and less-polluting cars were basically demands that the world's largest car company deliver higher-quality products and thereby engage in automobile innovation.¹³⁹ Indulging in silly name-calling, Friedman passed over the profoundly important insights of Joseph Schumpeter, who, writing in the first half of the twentieth century, saw innovation as "the fundamental phenomenon" of a capitalist economy.¹⁴⁰ In fact, one can search Friedman's writings in vain for any semblance of a discussion of "innovation," for the reason that he held the neoclassical-economics view that the most unproductive firm is the foundation of the most efficient economy.¹⁴¹ This obviously absurd intellectual "basis of a free society" underpins all of the cant that academics, executives, and reporters have spewed about "maximizing shareholder value" in the half-century since Friedman wrote these words.¹⁴²

If, in the last decades of the twentieth century, GM's executives had been advantaged by the presence of public-interest representatives on the company's board of directors, they might have competed with Asian and European car companies in producing the "socially responsible" cars that buyers have increasingly demanded. In the name of MSV, GM chose not to be an innovator in global markets. This organizational failure is a prime reason why, over the ensuing decades, GM's market share declined.¹⁴³ In retrospect, it is evident that what Professor Friedman called "pure and unadulterated socialism" was in fact the innovative future of the automobile industry!

The purpose of any business firm is to sell safe, effective, and affordable products. In an industry such as automobiles, different types of buyers with different needs, tastes, and incomes have different views of what "safe," "effective," and "affordable" mean. But there is widespread agreement that the government has an important, and even critical, regulatory role to play in

¹³⁸ Donald Schwartz, "Proxy Power and Social Goals--How Campaign GM Succeeded," *St. John's Law Review*, 45, 4, 1971: 764-771, at

<https://scholarship.law.stjohns.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=3327&context=lawreview>.

¹³⁹ Michael Olenick, "Shareholder Value Theory: Milton Friedman Redux," *Innowiki*, December 28, 2019, at <https://innowiki.org/2019/12/28/shareholder-value-theory-milton-friedman-redux/>.

¹⁴⁰ Joseph A. Schumpeter, *The Theory of Economic Development*, Harvard University Press, 1934 (first published in German in 1911).

¹⁴¹ Lazonick "Is the Most Unproductive Firm the Foundation of the Most Efficient Economy?"

¹⁴² William Lazonick, "Innovative Enterprise or Sweatshop Economics? In Search of Foundations of Economic Analysis," *Challenge*, 59, 2, 2016: 65-114.

¹⁴³ William Lazonick and Matt Hopkins "GM's Stock Buyback Is Bad for America and the Company," *Harvard Business Review*, March 11, 2015, at <https://hbr.org/2015/03/gms-stock-buyback-is-bad-for-america-and-the-company>.

reducing the probability of accidental death and preserving the environment. At any point in time, there may be a legitimate argument about tradeoffs among safety, effectiveness, and affordability. But over time, innovation can reduce tradeoffs, making it possible to improve safety, effectiveness, and affordability simultaneously.

That is, as we have seen, precisely what BARDA was attempting to accomplish with its contracts for portable, easy-to-use, and inexpensive ventilators when, for the sake of public-health preparedness for a pandemic, it entered into collaborations with Newport Medical Instruments and Philips Respironics. Now that we are in the midst of a pandemic of gargantuan proportions, the importance for public health of GBCs in vaccines, therapies, diagnostic tests, and PPE, as well as ventilators, has become all too painfully obvious.

Of all the countermeasures in the SNS, the supply of ventilators has proven to be the most tractable challenge. Even if it took two successive contracts and a dozen years, the BARDA ventilator initiative did in the end support the generation of an innovative product, largely due to the productive capabilities accumulated by Respironics over almost half a century. Even figuring in the cost of the wasted time and effort caused by Covidien's reneging on the first contract, BARDA dispensed a modest \$21.9 million in upfront subsidies to Newport Medical and Philips Respironics combined. With 10,000 ventilators in BARDA's procurement contract with Philips Respironics priced at only \$3,280 per unit, U.S. taxpayers are receiving excellent value for the \$21.9 million in subsidies paid out under the two contracts. Because of Respironics' innovative capability, accumulated over decades, the SNS is getting a ventilator that is not only a lower cost but also a higher quality product than was previously available.

There are justified concerns that corporations that prioritize boosting their stock prices might impede the development, production, and delivery of safe, effective and affordable vaccines¹⁴⁴ and therapies.¹⁴⁵ We will be very fortunate if, after billions of dollars in U.S. government subsidies to the pharmaceutical industry, we have a safe and effective Covid-19 vaccine available by the end of 2021. There will then be the immense task of producing billions upon billions of doses and distributing them, affordably, throughout the world.

While some nations have gone a long way in containing the contagion by diagnostic testing, monitoring, and contact tracing, as of mid-July 2020 the U.S. effort had barely gotten off the ground.¹⁴⁶ There is a host of logistical issues related to diagnostic testing and contact tracing, for which reliance on financialized companies such as Quest Diagnostics and LabCorp—or completely unqualified vendors¹⁴⁷—pose problems such as week-long delays in providing Covid-

¹⁴⁴ See, for example, Tom Bergin and Robin Respaut, "How Moderna executives are cashing in on Covid-19 vaccine stock speculation," *Reuters*, July 2, 2020, at <https://www.reuters.com/article/us-health-coronavirus-moderna-pay-insigh/how-moderna-executives-are-cashing-in-on-covid-19-vaccine-stock-speculation-idUSKBN2433AH>.

¹⁴⁵ Fred Ledley, Ekaterina Cleary, Zoë Folchman-Wagner, and Matthew Jackson, "Big Pharma Wants to Pocket the Profits from a COVID Treatment You Already Paid For," *Institute for New Economic Thinking Perspectives*, July 7, 2020, at <https://www.ineteconomics.org/perspectives/blog/big-pharma-covid-profits>.

¹⁴⁶ Margaret Bordeaux, Beth Cameron, and Jonathan Zittrain, "Testing is in the brink of paralysis. That's very bad news," *New York Times*, July 16, 2020, at <https://www.nytimes.com/2020/07/16/opinion/coronavirus-testing-us.html>.

¹⁴⁷ Robert P. Baird, "How Utah's tech industry tried to disrupt coronavirus testing," *New Yorker*, June 13, 2020, at <https://www.newyorker.com/tech/annals-of-technology/how-utahs-tech-industry-tried-to-disrupt-coronavirus-testing>.

19 test results.¹⁴⁸ In 2010-2019, Quest distributed just over 100 percent of profits to shareholders, 74 percent as buybacks, while LabCorp paid out 63 percent of profits, all as buybacks.

While a ramp-up and distribution of most PPE should be straightforward, the Trump administration has been unable and, indeed, unwilling to lead these efforts. Front-line medical workers in pandemic hotspots have experienced severe PPE shortages.¹⁴⁹ The world's three largest producers of N95 respirator masks—3M, Honeywell, and Kimberly-Clark—are U.S.-based, with most of their production being done in China.¹⁵⁰ These three companies are all dedicated to MSV—which, along with the inept and conniving Trump administration,¹⁵¹ may help explain the slow ramp up in N95 mask production.¹⁵² For 2010-2019, the proportion of profits distributed to shareholders was 121 percent for 3M, 90 percent for Honeywell, and 129 percent for Kimberly-Clark, with, respectively, 72 percent, 47 percent, and 59 percent going to buybacks. Meanwhile, in 2010-2019, the largest PPE distributor, McKesson paid out 115 percent of profits to shareholders, with 100 percent of profits as buybacks; for the second largest, Cardinal Health, these figures were 101 percent and 57 percent, respectively. Both of these companies paid huge penalties for their involvement in the opioid public-health crisis.¹⁵³

Quite apart from the inconstancy of the direction emanating from the White House, the failure of the Trump administration to provide leadership in response to the pandemic can plausibly be attributed to the extent to which its cabinet is dominated by business people who have made their fortunes as predatory value extractors. Like Trump himself, two of the more prominent businesspeople, Treasury Secretary Steven Mnuchin and Commerce Secretary Wilbur Ross,

¹⁴⁸ Rachel Weiner, William Wan, and Abigail Hauslohner, “Long delays in getting test results hobble coronavirus response,” *Washington Post*, July 12, 2020, at https://www.washingtonpost.com/health/long-delays-in-getting-test-results-hobble-coronavirus-response/2020/07/12/d32f7fa8-c1fe-11ea-b4f6-cb39cd8940fb_story.html.

¹⁴⁹ William Wan, “America is running short on masks, gowns, and gloves. Again.” *Washington Post*, July 8, 2020, at <https://www.washingtonpost.com/health/2020/07/08/ppe-shortage-masks-gloves-gowns/>.

¹⁵⁰ “Coronavirus outbreak boosts the sales of world’s top 10 N95 mask manufacturers,” *Technovio Blog*, April 8, 2020, at <https://blog.technovio.com/blog/top-10-n95-mask-manufacturers>; Chris Newmarker, “Honeywell, 3M to ramp up N95 face masks production,” *Mass Device*, March 23, 2020, at https://www.washingtonpost.com/politics/inside-americas-mask-crunch-a-slow-government-reaction-and-an-industry-wary-of-liability/2020/04/02/b3155e2a-6f85-11ea-aa80-c2470c6b2034_story.html; Jeanne Whalen, Rosalind S. Helderman, and Tom Hamburger, “Inside America’s mask crunch: A slow government reaction and an industry wary of liability,” *Washington Post*, April 2 2020, at https://www.washingtonpost.com/politics/inside-americas-mask-crunch-a-slow-government-reaction-and-an-industry-wary-of-liability/2020/04/02/b3155e2a-6f85-11ea-aa80-c2470c6b2034_story.html; EHS Today Staff, “3M will import 166 million respirators from China,” *EHS Today*, April 8, 2020, at <https://www.ehstoday.com/ppe/article/21128174/3m-will-import-166-million-respirators-from-china>; Micah Maidenber, “Fewer products, localized production—companies seek supply-chain solutions,” *Wall Street Journal*, April 26, 2020, at <https://www.wsj.com/articles/coronavirus-disrupted-supply-chains-that-companies-are-still-fixing-11587893401>.

¹⁵¹ Jon Swaine, “Federal government spent millions to ramp up mask readiness, but that isn’t helping now,” *Washington Post*, April 3, 2020, at https://www.washingtonpost.com/investigations/federal-government-spent-millions-to-ramp-up-mask-readiness-but-that-isnt-helping-now/2020/04/03/d62dda5c-74fa-11ea-a9bd-9f8b593300d0_story.html; Adam Clark Estes, “America’s emergency medical stockpile is almost empty. Nobody knows what happens next,” *Vox*, April 7, 2020, at <https://www.vox.com/recode/2020/4/3/21206170/us-emergency-stockpile-jared-kushner-almost-empty-coronavirus-medical-supplies-ventilators>.

¹⁵² Austen Hufford, “N95 mask makers ramp up production to meet U.S. Covid-19 demand,” *Wall Street Journal*, July 17, 2020, at <https://www.wsj.com/articles/n95-mask-makers-ramp-up-production-to-meet-u-s-covid-19-demand-11594987201>.

¹⁵³ Laura Strickler, “Massive drug companies pursuing \$50 billion deal to avoid opioid trial,” *NBC News*, October 16, 2019, at <https://www.nbcnews.com/health/health-news/three-major-drug-distributors-talks-settle-opioid-claims-18-billion-n1067311>; Brian Mann, “Doctors and dentists still flooding the .S. with opioid prescriptions,” *NPR*, July 17, 2020, at <https://www.npr.org/2020/07/17/887590699/doctors-and-dentists-still-flooding-u-s-with-opioid-prescriptions>.

acquired their wealth through predatory value extraction—in all three cases in real estate.¹⁵⁴ One can add to this list Trump’s top advisor, Jared Kushner.¹⁵⁵

It follows that the Trump administration’s policy for dealing with the pandemic can be described as downsize-and-distribute. “Downsize” is measured not only in many tens of millions of people stricken from payrolls but also in many tens of thousands of low-paid and unemployed Americans, and especially people of color, dead from Covid-19.¹⁵⁶ “Distribute” is measured in the hundreds of billions of dollars in taxpayer money to the richest households in the form of tax breaks, low-interest loans, and outright gifts.¹⁵⁷

Notwithstanding the plunge in the U.S. stock markets in March 2020, their subsequent complete “recovery” demonstrates clearly that, driven as it is by speculation, and manipulation in addition to innovation, stock-market performance has little to do with the performance of the economy as a whole.¹⁵⁸ In particular, as a larger-scale extension of “quantitative easing” policies during the Obama administration that helped fuel the buyback boom, the Federal Reserve has assumed a permanent role in shoring up financial markets, reinforcing fiscal allocations in the congressional bailouts that put first making whole debtholders and shareholders while doing little to secure the livelihoods of American workers and the viability of small businesses.

As we ask why the federal government was so slow in responding to the coronavirus pandemic once it was known to have arrived, we learn of brazen acts of pandemic value extraction, none of which is more egregious than that of U.S. Senator Richard Burr (R-NC). In February 2020, ahead of the coronavirus-induced stock-market decline, he sold \$1.7 million in stock. The sales occurred at a time when Burr, in his capacity as chair of the Senate Intelligence Committee, had access to nonpublic congressional briefings on the potentially devastating impacts of the coronavirus

¹⁵⁴ See Alexander Sammon, “It’s Steve Mnuchin’s economy now,” *The American Prospect*, April 1, 2020, at <https://prospect.org/economy/its-steve-mnuchins-economy-now-coronavirus-bailout/>; Chase Peterson-Withorn, “What you need to know about commerce secretary pick Wilbur Ross, Trump’s billionaire pal,” *Forbes*, November 20, 2016, at <https://www.forbes.com/sites/chasewithorn/2016/11/29/what-you-need-to-know-about-likely-commerce-secretary-wilbur-ross-trumps-billionaire-pal/#47c54af31213>.

¹⁵⁵ Stephanie Mencimer, “Jared Kushner had one job: Solve America’s supply crisis. He helped private companies instead,” *Mother Jones*, May 20, 2020, at <https://www.motherjones.com/politics/2020/05/jared-kushner-had-one-job-solve-americas-supply-crisis-he-helped-private-companies-instead/>; Alex Gibney, “Slumlord Millionaire,” *Dirty Money*, 2020 (Season 2, Episode 3). *Netflix*, at <https://www.netflix.com/title/80118100>; Sarah Kendzior, *Hiding in Plain Sight: The Invention of Donald Trump and the Erosion of America*, Flatiron Books, 2020.

¹⁵⁶ Yaryna Serkez, “Who Is most likely to die from the coronavirus?” *New York Times*, June 4, 2020, at <https://www.nytimes.com/interactive/2020/06/04/opinion/coronavirus-health-race-inequality.html?referringSource=articleShare=:>; Tiffany Ford, Sarah Reber, and Richard V. Reeves, “Race gaps in COVID-19 deaths are even bigger than they appear,” *Brookings*, June 16, 2020, at <https://www.brookings.edu/blog/up-front/2020/06/16/race-gaps-in-Covid-19-deaths-are-even-bigger-than-they-appear/>.

¹⁵⁷ See, for example, Jesse Drucker, “The tax-break bonanza inside the economic rescue package,” *New York Times*, April 24, 2020, at <https://www.nytimes.com/2020/04/24/business/tax-breaks-wealthy-virus.html>; Zachary Warmbrodt, “Mnuchin secrecy on bailout sparks rift with Congress,” *Politico*, June 12, 2020, at <https://www.politico.com/news/2020/06/12/mnuchin-secrecy-bailout-rift-congress-315940>.

¹⁵⁸ Emily Stewart, “The economy is in free fall. So why isn’t the stock market?” *Vox*, May 6, 2020, at <https://www.vox.com/covid-19-coronavirus-economy-recession-stock-market/2020/5/6/21248069/stock-market-economy-federal-reserve-jerome-powell>; Gunjan Banerji, “Why Is the stock market rallying when the economy Is so bad?,” *Wall Street Journal*, May 8, 2020, at <https://www.wsj.com/articles/why-is-the-stock-market-rallying-when-the-economy-is-so-bad-11588974327>; Lyn Alden Schwartz, “First liquidity, then solvency,” *Seeking Alpha*, May 19, 2020, at <https://seekingalpha.com/article/4348831-first-liquidity-solvency>. See William Lazonick, “The Value-Extracting CEO: How Executive Stock-Based Pay Undermines Investment in Productive Capabilities,” *Structural Change and Economic Dynamics*, 48, 2019: 53-68.

outbreak.¹⁵⁹ A secret recording, obtained by *NPR*, revealed that on February 27, about two weeks after he sold his stock, Burr “warned a small group of well-connected constituents...to prepare for dire economic and societal effects of the coronavirus.”¹⁶⁰ Also on February 27, President Trump claimed that the coronavirus would simply disappear “like a miracle.”¹⁶¹

We met Richard Burr earlier in this essay. The distinctive focus of his congressional career, on the basis of which he ultimately became Senate Intelligence Committee chair, was his leadership, first as a House member and then as a senator, in the creation of Project BioShield and BARDA subsequent to President Bush’s 2003 State of the Union address, which goaded Congress into supporting the U.S. invasion of Iraq. Burr’s apparent concerns were preparedness for and response to a bioterrorist attack. There is no evidence that, in taking an interest in the threat of bioterrorism, Burr was calculating that doing so might ultimately place him in a position in which insider access to congressional intelligence would give him a heads up and enable him to dump his stockholdings before the public became aware of an emerging pandemic. Nevertheless, the fact is that in February 2012 Burr had been one of only three senators to vote against the Stop Trading on Congressional Knowledge (STOCK) Act; the Senate vote was 96-3 and the House vote 417-2.¹⁶²

In legislating the STOCK Act in 2012, Congress sought to prevent elected officials from engaging in a form of insider trading, given their access to nonpublic information or their ability to influence economic policy. At the same time, Congress should have taken a look at the opportunities for senior corporate executives to trade for their personal benefit, also on the basis of nonpublic material information, facilitated by SEC Rule 10b-18, in realizing gains on their stock-based pay.¹⁶³ As already mentioned, since November 1982, Rule 10b-18 has given both corporate executives and corporate raiders a license to loot the treasuries of major U.S. business corporations.¹⁶⁴

More recently, congressional scrutiny of the damage that stock buybacks do has resulted in the introduction by Sen. Tammy Baldwin (D-WI) of the *Reward Work Act*, which would rescind Rule 10b-18 and give employees representation on the boards of publicly listed companies.¹⁶⁵ If passed

¹⁵⁹ Michelle Ye Hee Lee, John Wagner, and Teo Armus, “Sen. Richard Burr, head of powerful committee, sold large amount of stocks before sharp declines in market,” *Washington Post*, March 20, 2020.

¹⁶⁰ Tim Mak, “Weeks before virus panic, intelligence chairman privately raised alarm, sold stocks,” *NPR*, March 19, 2020, at <https://www.npr.org/2020/03/19/818192535/burr-recording-sparks-questions-about-private-comments-on-covid-19>

¹⁶¹ Lee et al., “Sen. Richard Burr.”

¹⁶² Franco Ordoñez, “N.C. Sen. Burr defends ‘no’ vote on insider trading act,” *McClatchy*, February 7, 2012, at <https://www.mcclatchydc.com/news/politics-government/article24723682.html>; Paul Blest, “Deborah Ross criticizes Richard Burr’s 2012 vote against the STOCK Act, which banned insider trading for members of Congress,” *IndyWeek*, August 31, 2016, at <https://indyweek.com/news/archives/deborah-ross-criticizes-richard-burr-s-2012-vote-stock-act-banned-insider-trading-members-congress/>.

¹⁶³ Hopkins and Lazonick, “The Mismeasure of Mammon”; Robert J. Jackson, Jr., “Letter on stock buybacks and insiders’ cashouts,” *Harvard Law School Forum on Corporate Governance*, March 8, 2019, at <https://corpgov.law.harvard.edu/2019/03/08/letter-on-stock-buybacks-and-insiders-cashouts/>; Lenore Palladino, “Do corporate insiders use stock buybacks for personal gain?” *International Review of Applied Economics*, 34, 2, 2020: 153-174, at <https://www.tandfonline.com/doi/abs/10.1080/02692171.2019.1707787>.

¹⁶⁴ Ken Jacobson and William Lazonick, “A License to Loot: Opposing Views of Capital Formation and the Adoption of SEC Rule 10b-18,” The Academic-industry Research Network Working Paper, forthcoming. See Lazonick, “Stock Buybacks”; Palladino, “The \$1 Trillion Question.”

¹⁶⁵ “U.S. Senator Tammy Baldwin reintroduces legislation to rein in stock buybacks and give workers a voice on corporate boards,” Senator Baldwin press release, March 27, 2019, at <https://www.baldwin.senate.gov/press-releases/reward-work-act-2019>. For background, see William Lazonick, “Buybacks: From Basics to Politics.” AIR Special Report, The Academic-Industry Research Network, August 15, 2015, at <http://www.theairnet.org/v3/backbone/uploads/2015/08/Lazonick-Buybacks-Basics-to-Politics-20150819.pdf>.

into law, the *Reward Work Act* would represent a historic first step in reforming U.S. corporate governance to serve the common good. The proposed Baldwin legislation has been reinforced by Sen. Elizabeth Warren (D-MA) with her *Accountable Capitalism Act*, which would create a national corporate charter to set standards for corporate responsibility, restrict gains on stock-based pay, and place worker representatives on corporate boards.¹⁶⁶ Meanwhile, with the looting of the U.S. business corporation continuing unchecked, the unmitigated dominance of MSV in the governance of U.S. corporations remains the prime economic disease exacerbating the devastation of Covid-19.¹⁶⁷

6. The \$5.3 trillion for the largest stock repurchasers: Why do you do them?

With senior executives of major U.S. corporations paying homage to MSV ideology, Americans have received little leadership from the world of big business in responding to the Covid-19 crisis, much less preparing for its eventuality in advance. A highly visible apparent exception is Bill Gates, the billionaire who founded Microsoft in 1975 and was its CEO until 2000. At that point, as one of the richest people in the world, he launched the Bill and Melinda Gates Foundation, with a focus on infectious diseases.¹⁶⁸ In 2015, Gates gave a now-famous TED Talk in which, influenced by the recent Ebola outbreak in West Africa, he warned: “If anything kills over 10 million people in the next few decades, it’s most likely to be a highly infectious virus rather than a war. Not missiles, but microbes.” Gates concluded the talk with the optimistic advice that “there’s no need to panic...if there’s one positive thing that can come out of the Ebola epidemic, it’s that it can serve as an early warning, a wake-up call to get ready. If we start now, we can be ready for the next epidemic.”¹⁶⁹

Yet, as chairman of Microsoft until 2014 and then a director until March 2020, Gates bears a portion of the blame for the fact that the United States was not ready for the Covid-19 pandemic. As we have seen, for a decade before Gates gave his TED Talk, the U.S. government had been creating plans and agencies to prepare for and respond to a pandemic. So what was a company such as Microsoft doing to engage in pandemic preparedness?

Gates had become one of the world’s richest people by building a retain-and-reinvest company that over its first two decades pioneered in software innovation for the personal computer, culminating in the release of the Windows operating system and its suite of applications in 1995. Since that time, however, Microsoft has become one of the most financialized companies on earth, embracing a monopolistic resource-allocation regime that we call “dominate-and-distribute”; the company has dominated its main product market and distributed its profits to shareholders.

¹⁶⁶ Matthew Yglesias, “Elizabeth Warren has a plan to save capitalism,” *Vox*, August 15, 2018, at <https://www.vox.com/2018/8/15/17683022/elizabeth-warren-accountable-capitalism-corporations>.

¹⁶⁷ William Lazonick, Matt Hopkins, Ken Jacobson, Lenore Palladino, Mustafa Erdem Sakinç, and Öner Tulum, “4 Ways to Eradicate the Corporate Disease That Is Working the Covid-19 Pandemic,” *Institute for New Economic Thinking Perspectives*, March 23, 2020, at <https://www.ineteconomics.org/perspectives/blog/4-ways-to-eradicate-the-corporate-disease-that-is-worsening-the-covid-19-pandemic>.

¹⁶⁸ For a critical perspective on Bill Gates and his foundation, in view of his behavior as a corporate executive, see Linsey McGoey, *No Such Things as a Free Gift: The Gates Foundation and the Price of Philanthropy*, Verso, 2016.

¹⁶⁹ “Bill Gates TED Talk transcript from 2015: Warns of pandemics epidemics,” *Rev*, at <https://www.rev.com/blog/transcripts/bill-gates-ted-talk-transcript-from-2015-warns-of-pandemics-epidemics>.

Table 1 shows Microsoft's distributions to shareholders by decade from 1985 through 2014, for the half decade 2015-2019, and for the first nine months of 2020. As can be seen in Table 1, for the years 2005-2019, the company spent \$190 billion on buybacks, equal to 68 percent of its net income, for the purpose of giving manipulative boosts to its stock price. These buybacks were done in addition to dividend payments of \$147 billion, absorbing 52 percent of net income. During this period, Microsoft was the third largest repurchaser of its own stock, after Apple with \$306 billion in buybacks and Exxon Mobil with \$227 billion.

Table 1: Microsoft, distributions to shareholders of net income (NI) as dividends (DV) and buybacks (BB), 1985-2020Q3 (fiscal years ending June 30)

	NI \$m	DV \$m	BB \$m	DV/NI %	BB/NI %	(DV+BB)/ NI%
1985-1994	3,979	0	977	0.0	24.5	24.5
1995-2004	62,134	2,670	37,337	4.3	60.1	64.4
2005-2014	173,993	86,730	117,254	49.8	67.4	117.2
2015-2019	106,006	60,160	72,464	56.8	68.4	125.1
2020Q1&2&3	33,079	11,272	17,177	34.1	51.9	86.0

Source: S&P Compustat database and Microsoft annual 10-K and quarterly 10-Q filings with the SEC.

On its website, Microsoft has a page labeled “Cash Returned to Shareholders,” with buybacks and dividends displayed on a quarterly basis from 2005 to the present.¹⁷⁰ Why “returned”? The only funds Microsoft ever raised from the public stock market were \$59 million in its initial public offering in March 1986. The company also did a convertible bond issue for \$875 million in 1996; however, a stated purpose for that offering was to fund the repurchase of shares.

As a founder, CEO and chairman and/or director of Microsoft from 1975 to 2020, Gates more than anyone must know that it makes no sense to portray as being “returned” to shareholders the \$406 billion—\$245 billion as buybacks and \$161 billion as dividends—that the company distributed from 1990 through the third quarter of 2020. Gates must know that public shareholders are not “investors” in Microsoft’s productive capabilities; its shareholders do no more than buy and sell outstanding shares on the highly liquid NASDAQ stock exchange. The company’s cash cannot be “returned” to shareholders who never gave the company anything. So, we ask Bill Gates: Why did Microsoft do all those stock buybacks?

The allocation of Microsoft’s resources, including those that it accounts for as profits, is under the control of the company’s board. Under the leadership of Gates, Microsoft’s board could have allocated a portion of the corporate cash that it wasted on buybacks, for example, to GBCs to prepare for and respond to a pandemic. Just 25 percent of the \$190 billion dissipated as buybacks from 2005 through 2019 would have meant \$45 billion devoted to GBCs over 15 years (7.6 times the government funds actually allocated to vaccine research by BARDA). If Microsoft had taken the lead in such an initiative and other companies had followed suit, the resources available to GBCs would have been immense. Moreover, these funds could have been put to use in preparing

¹⁷⁰ “Trended historical financials: cash returned to shareholders,” Microsoft Investor Relations, at <https://www.microsoft.com/en-us/Investor/earnings/trended/cash-returned.aspx>.

for a pandemic by employing talented and motivated people, many of whom would have already accumulated unique productive capabilities working for knowledge-intensive companies such as Microsoft.

Gates has had no problem getting together with the senior executives of other U.S. companies to lobby the federal government to use taxpayer money to fund investments in knowledge and infrastructure to develop productive capabilities that their companies need. A case in point is the self-styled American Energy Innovation Council (AEIC), which, when it came on the scene in 2010, was made up of current and former heads of Bank of America, Cummins Engine, Du Pont, General Electric, Lockheed Martin, Microsoft, and Xerox as well as John Doerr, partner in the venture capital firm Kleiner Perkins Caufield & Byers. In June 2010 AEIC released a plan for “America’s Energy Future,” which called for the U.S. government to increase annual spending on clean-energy innovation from \$5 billion to \$16 billion.¹⁷¹ Gates represented Microsoft on the AEIC and, according to its current website, he remains one of the group’s 12 “principals,” listing his affiliations as the Gates Foundation and Microsoft.¹⁷²

Back in 2010, in a press release for “America’s Energy Future,” Doerr stated:

When our company [Kleiner Perkins] shifted our attention to clean energy, we found the innovation cupboard was close to bare. America has simply neglected to support serious energy innovation. My partners and I found the best fuel cells, the best energy storage, and the best wind technologies were all born outside the United States. Other countries are investing huge amounts in these fields. Without innovation, we cannot build great energy companies. We need to restock the cupboard or be left behind.¹⁷³

The corporate executives who constituted AEIC at the time were looking for the U.S. taxpayer to foot the bill for stocking the clean-energy cupboard. What about financial contributions to a national clean-energy effort by business corporations that would be collaborators with the government in the development of these new technologies? As a result of involvement in GBCs, these business corporations would then have possessed unique productive capabilities that could have generated innovative products and processes over the next generation and beyond.

If the corporate executives who banded together as AEIC had not been so immersed in MSV ideology, dissipating hundreds of billions of corporate dollars on stock buybacks, they might have offered to invest substantial sums of corporate cash in GBCs for innovation in clean technology. Over the decade 2001–2010, the seven publicly listed corporations whose current or former leaders were members of the AEIC had spent a total of \$241 billion buying back their companies’ stock, including \$110 billion by Microsoft (the second highest of all U.S. companies over the decade), \$52 billion by Bank of America, and \$48 billion by General Electric. Through GBCs, corporate

¹⁷¹ American Energy Innovation Council, “The Business Plan,” June 10 2010, at <http://americanenergyinnovation.org/the-business-plan-2010/>; John M. Broder, “A call to triple U.S. spending on energy research,” *New York Times*, June 9, 2010, at <https://www.nytimes.com/2010/06/10/business/energy-environment/10gates.html>.

¹⁷² American Energy Innovation Council, “Renewing America’s Energy Technology Leadership,” at <http://americanenergyinnovation.org/>.

¹⁷³ Quoted in William Lazonick, “How greedy corporations are destroying America’s status as ‘innovation nation’,” *Roosevelt Institute*, July 28, 2011, at <https://rooseveltinstitute.org/how-greedy-corporations-are-destroying-americas-status-as-innovation-nation/>.

cash could have been invested in clean energy innovation to “restock the cupboard” instead of being used to manipulate these companies’ stock prices.

In laying out its 2010 plan for “America’s Energy Future,” AEIC could have also demanded that the U.S. government cease subsidizing the fossil-fuel industry¹⁷⁴ and that the leading oil-refining companies desist from wasting their corporate cash on buybacks. For the decade 2001-2010, Exxon Mobil was the world’s number-one stock repurchaser, with \$174 billion in buybacks. Of the other leading oil companies, Chevron spent \$26 billion and ConocoPhillips \$22 billion on buybacks over the decade, placing them 21st and 25th in repurchases among companies that were in the S&P 500 Index in January 2011. Of course, the business executives who constituted AEIC were themselves begging for government subsidies for their companies’ clean-energy needs. Executive members of the AEIC were not about to ask their oil company counterparts to stop doing buybacks when they themselves were looting their own corporate treasuries to boost their companies’ stock prices.

As in the case of Microsoft, stock buybacks by the major oil companies cannot be construed as cash being returned to shareholders. Exxon Mobil traces its roots back to Standard Oil, which was founded in 1870. Standard Oil of New Jersey (eventually Exxon) listed on the New York Stock Exchange (NYSE) in 1920, and Standard Oil of New York (eventually Mobil) in 1927. Chevron dates back to 1876 and, as Standard Oil of California, was first listed on the NYSE in 1921, while ConocoPhillips originated in 1875 and debuted on the NYSE in 1929.

As Steve Coll summed up the theme of his book *Private Empire: ExxonMobil and American Power*: “ExxonMobil saw itself as an independent, transnational corporate sovereign in the world, a power independent of the American government, one devoted firmly to shareholder interests and possessed of its own foreign policy.”¹⁷⁵ ExxonMobil is infamous for keeping secret an early, and quite accurate, study of climate change that the company funded, and for backing members of Congress and a corporate lobby group engaged in climate-change denial.¹⁷⁶

In 1983 and 1984 Exxon was quick to respond to Rule 10b-18, the “license to loot” promulgated by the SEC in November 1982. In addition to distributing 52 percent of net income over the two years as dividends, Exxon did \$762 million in buybacks in 1983 (15 percent of net income) and \$2.6 billion in 1984 (48 percent of net income). Subsequent to the adoption of Rule 10b-18, Mobil did not do significant buybacks until 1988, and the company’s total spending on buybacks in 1983-1998 was \$3 billion, compared with \$25 billion by Exxon. Table 2 summarizes the history of

¹⁷⁴ See, for example, H. Josef Hebert, “As gas prices soar, Congress presses oil chiefs on big profits,” *Associated Press*, April 1, 2008; Chris Kahn, “Exxon earns \$11 billion in first quarter and defends itself against calls to end subsidies,” *Associated Press*, April 28, 2011; Laura Meckler and Cory Boies, “Senate rejects attempt to end oil subsidies,” *Wall Street Journal*, March 29, 2012; Clayton Coleman and Emma Dietz, “Fossil Fuel Subsidies: A Closer Look at Tax Breaks and Societal Costs,” Environmental and Energy Study Institute, July 2019, at https://www.eesi.org/files/FactSheet_Fossil_Fuel_Subsidies_0719.pdf.

¹⁷⁵ Steve Coll, “Rex Tillerson, from a corporate oil sovereign to the State Department,” *New Yorker*, December 11, 2016, at <https://www.newyorker.com/news/news-desk/rex-tillerson-from-a-corporate-oil-sovereign-to-the-state-department>; Steve Coll, *Private Empire: Exxon Mobile and American Power*, Penguin Books, 2012.

¹⁷⁶ Suzanne Goldenberg, “ExxonMobil gave millions to climate change-denying lawmakers despite pledge,” *The Guardian*, July 15, 2015, at <https://www.theguardian.com/environment/2015/jul/15/exxon-mobil-gave-millions-climate-denying-lawmakers>; Neela Banerjee, Lisa Song, and David Hasemyer, “Exxon: The road not taken,” *Inside Climate News*, September 16, 2015, at <https://insideclimatenews.org/content/Exxon-The-Road-Not-Taken>.

distributions to shareholders by Exxon and Mobil combined from 1985 through 1998 and for ExxonMobil from 1999 through the first quarter of 2020.

Table 2: ExxonMobil, distributions to shareholders of net income (NI) as dividends (DV) and buybacks (BB), 1985-2020Q1 (fiscal years ending December 31)

	NI \$m	DV \$m	BB \$m	DV/NI %	BB/NI %	(DV+BB)/ NI%
1985-1994	65,075	42,454	15,501	65.24	23.82	89.06
1995-2004	138,376	60,235	37,707	43.53	27.25	70.78
2005-2014	362,240	88,568	220,435	24.45	60.85	85.30
2015-2019	78,880	65,994	6,983	83.66	8.85	92.52
2020Q1	-610	3,719	305	-609.67	-50.00	-659.67

Sources: S&P Compustat database and ExxonMobil annual 10-K and quarterly 10-Q filings with the SEC.

Note: From 1985 through 1998, the data are for Exxon and Mobil combined, and from 1999 for the merged company ExxonMobil.

As can be seen in Table 2, ExxonMobil went wild with buybacks during the decade 2005-2014. The company had already increased its buybacks to an average of \$5.5 billion per year in 2001-2003 (86 percent of net income), and then, as oil prices soared between 2003 and 2008, increased the value of its annual buybacks six-fold, from almost \$6 billion in 2003 to a peak of almost \$36 billion in 2008. The 2008 figure stood as the record for stock buybacks done as open-market repurchases for any company in one year until Apple did \$45 billion in 2014 (and then \$73 billion in 2018, followed by \$67 billion in 2019).

Oil prices hit an all-time peak in July 2008, then fell dramatically from September 2008 to January 2009 with the global financial meltdown.¹⁷⁷ As ExxonMobil's profits declined from \$45 billion in 2008 to \$19 billion in 2009, the company cut its buybacks from \$36 billion to "only" \$20 billion, still more than its own net income and twice the buybacks done by Microsoft in that year. With annual profits averaging more than \$36 billion in 2010-2014, ExxonMobil averaged \$17 billion in buybacks per year. But with a precipitous collapse in oil prices in 2015, from which the industry only partially recovered in subsequent years, the company's annual profits averaged under \$16 billion in 2015-2019 (less than half the average in the previous five-year period). While increasing its dividends, ExxonMobil became an also-ran in the stock-buybacks race, averaging \$1.4 billion per year, declining from just over \$4 billion in 2015 to \$594 million in 2019.

In March 2019, in an interview on *CNBC*, ExxonMobil CEO Darren Woods was asked when the corporation would announce a new buyback program. He explained that the company had been making expenditures to replace its depleted oil reserves. Nevertheless, Woods went on to say that he had told Wall Street analysts concerned with ExxonMobil's stock price that the company was

¹⁷⁷ "Crude Oil Prices—70 Year Historical Chart," Macrotrends, at <https://www.macrotrends.net/1369/crude-oil-price-history-chart>.

embarking on a \$15-billion asset-divestment program, and “our expectation is that as that begins to materialize that would go back into stock buybacks.”¹⁷⁸

We call ExxonMobil’s resource-allocation strategy “downsize-and-distribute.” ExxonMobil’s CEO during the years when the company was the buyback king was Rex Tillerson. He began his career with Exxon in 1975, straight out of college, and rose through the company ranks to become CEO on January 1, 2006. He left that position on January 1, 2017, to take up his appointment as Secretary of State in the Trump administration.

When Tillerson became CEO of ExxonMobil at the beginning of 2006, the company was ripe for extreme predatory value extraction. Soaring oil prices had increased the company’s profits by 2.5 times between 2001 and 2005, even as it had downsized its labor force from 97,900 to 83,700. During his 11 years as CEO, Tillerson cut the labor force a further 15 percent, to 71,100 at end of 2016, while he oversaw the distribution of \$106 billion in dividends (30 percent of net income) and \$207 billion in buybacks (59 percent of net income). As his personal reward, he raked in \$223 million in total remuneration, an average of \$20.3 million per year, with 41 percent of it stock based. In severing all ties with ExxonMobil upon becoming Secretary of State, Tillerson worked out an agreement with the company that handed him another \$182 million.¹⁷⁹

In addition to his Russian connections,¹⁸⁰ Tillerson’s experience with downsize-and-distribute in his years as ExxonMobil’s CEO was ideal preparation for a cabinet appointment in the Trump administration. As Secretary of State, Tillerson then set out to downsize the State Department. As Dexter Filkins wrote in November 2017: “In only ten months, Tillerson, the former C.E.O. of ExxonMobil, has presided over the near-dismantling of America’s diplomatic corps, chasing out hundreds of State Department employees and scaling back the country’s engagement with the world.”¹⁸¹ After Trump fired Tillerson on March 13, 2018, a *Vox* article summarized his 14-month tenure as the hollowing out of the State Department: “Under Tillerson’s watch, 60 percent of State’s top-ranking career diplomats resigned and new applications to join the foreign service fell by half, according to a November [2017] count by the American Foreign Service Association.”¹⁸²

It was not, however, this agency downsizing that got Tillerson fired. A report had it that in a private meeting the Secretary of State had called President Trump a “fucking moron.”¹⁸³ In an interview nine months after being ousted from his cabinet position, Tillerson denied the moron comment but said that, while he was in total agreement with Trump’s objectives, the man was “pretty undisciplined, doesn’t like to read,” and had to be informed whenever the way he wanted to do

¹⁷⁸ Tim DiChristopher, “The road to ExxonMobil’s long-awaited stock buybacks is paved with asset sales,” *CNBC*, March 7, 2019, at <https://www.cnbc.com/2019/03/07/the-road-to-exxons-buybacks-is-paved-with-billions-in-asset-sales.html>.

¹⁷⁹ Subrat Patnaik, “ExxonMobil, Tillerson agree to cut all ties,” *Reuters*, January 3, 2017, at <https://www.reuters.com/article/exxon-mobil-tillerson/exxon-mobil-tillerson-agree-to-cut-all-ties-idINKBN14O09I>.

¹⁸⁰ Bradley Olson, “Q&A: What to know about Rex Tillerson’s ties to Russia,” *Wall Street Journal*, January 11, 2017, at <https://www.wsj.com/articles/q-a-what-to-know-about-rex-tillersons-ties-to-russia-1484130604>.

¹⁸¹ Dexter Filkins, “How Rex Tillerson wrecked the State Department,” *New Yorker*, November 30, 2017, at <https://www.newyorker.com/news/news-desk/how-rex-tillerson-wrecked-the-state-department>; see also Nahal Toosi, “Tillerson scales back State Department restructuring plan,” *Politico*, February 7, 2018, at <https://www.politico.com/story/2018/02/07/tillerson-state-department-restructuring-downsizing-397612>.

¹⁸² Zack Beauchamp, “Rex Tillerson has been fired. Experts say he did damage that could last ‘a generation’,” *Vox*, March 13, 2018, at <https://www.cnbc.com/2019/03/07/the-road-to-exxons-buybacks-is-paved-with-billions-in-asset-sales.html>.

¹⁸³ Eric Lutz, “Trump and Tillerson feud over who is ‘dumber than a rock’: Why not both?” *Vanity Fair*, May 23, 2019, at <https://www.vanityfair.com/news/2019/05/trump-tillerson-feud-over-who-is-dumber-than-a-rock>.

things that “violate[d] the law, violate[d] a treaty.” It was not however Trump’s disregard for the rule of law that troubled Tillerson; he told the interviewer that he let Trump know that he would be happy to go with him to Congress to get the applicable laws changed.¹⁸⁴

In terms of a social concern with the human condition, no one would confuse Rex Tillerson with Bill Gates. Yet as corporate executives, the two men have overseen the second- and third-largest lootings of corporate treasuries in history. As manifested by their willingness to do stock buybacks to manipulate their companies’ stock prices, Tillerson and Gates have been among the most fervent co-religionists in their devotion to MSV.

Until just a few years ago, ExxonMobil and Microsoft were numbers one and two on the list of the largest stock repurchasers. With its enormous profits, Microsoft remains in the mix, while, as already observed, the current CEO of ExxonMobil is looking to sell assets so that he can give the company’s stock price a manipulative boost. The new buyback leader, still massively profitable, is Apple, with, as Table 3 indicates, more buybacks in the half-decade 2015-2019 than the former number one, Exxon Mobil, did in the decade 2005-2014.

Going back in time, Apple’s \$1.8 billion in buybacks in the decade 1985-1994 were carried out after the ouster in 1985 of Steve Jobs from the company he had founded nine years earlier. Under CEO John Sculley, who Jobs had recruited from Pepsi Cola, Apple became a highly financialized company run explicitly in the name of MSV.¹⁸⁵ This profligacy almost drove Apple into bankruptcy, with net losses of \$186 million in 1996 and over \$1 billion in 1997. It was under these dire circumstances that in early 1997 Jobs came back to Apple as interim CEO. He then agreed with Bill Gates to put Microsoft Office on Apple computers and to make Microsoft’s Internet Explorer their default browser. In return, Microsoft bailed out Apple with a \$150-million preferred-share investment,¹⁸⁶ which was just 8.5 percent of the almost \$1.8 billion in buybacks that Apple had done from 1985 through 1993.

Table 3. Apple, distributions to shareholders of net income (NI) as dividends (DV) and buybacks (BB), 1985-2020Q2 (fiscal years ending September 30)

	NI, \$m	DV, \$m	BB, \$m	DV/NI%	BB/NI%	(DV+BB)/NI%
1985-1994	2,999	385	1,761	12.8	58.7	71.6
1995-2004	644	72	217	11.2	33.7	44.9
2005-2014	178,104	24,414	68,218	13.7	38.3	52.0
2015-2019	259,202	64,377	237,510	24.8	91.6	116.5
2020Q1&2	33,485	6,917	38,516	20.7	115.0	135.7

Sources: S&P Compustat database and Apple annual 10-K and quarterly 10-Q filings with the SEC.

¹⁸⁴ Aaron Blake, “Rex Tillerson on Trump: ‘undisciplined, doesn’t like to read,’ and tries to do illegal things,” *Washington Post*, December 7, 2018, at <https://www.washingtonpost.com/politics/2018/12/07/rex-tillerson-trump-undisciplined-doesnt-like-read-tries-do-illegal-things/>.

¹⁸⁵ William Lazonick, Mariana Mazzucato, and Öner Tulum, “Apple’s Changing Business Model: What Should the World’s Richest Company Do with All Those Profits,” *Accounting Forum*, 37, 4, 2013: 249-267.

¹⁸⁶ Yoni Heisler, “Whatever became of Microsoft’s \$150 million investment in Apple?” *Engadget*, May 20, 2014.

Under Jobs, who took the title of CEO (without the interim) in 2000, Apple once more became a retain-and-reinvest company. Apple paid no dividends from 1997 through 2011, and the only open-market repurchases done with Jobs in command were \$75 million in 1999, \$116 million in 2000, and \$26 million in 2003. With the phenomenal success of, first, the iPod and iTunes, launched in 2001, and then the iPhone from 2007 and the iPad from 2010, Apple transformed itself from simply a microcomputer company into a ground-breaking communication-technology powerhouse.¹⁸⁷

In October 2011, at the age of 56, Jobs succumbed to pancreatic cancer. The new CEO was Tim Cook, who had joined Apple in 1998 as a senior vice president for worldwide operations. Prior to coming to Apple, Cook's main employment experience was 12 years at IBM, where he had risen to director of North American fulfillment. As a supply-chain executive, Cook was responsible for closing Apple's manufacturing facilities and outsourcing the production of Apple's devices to contract manufacturers, with Foxconn in China becoming by far the most important.¹⁸⁸ As Apple's CEO, Cook has controlled the allocation of huge profits, but he has shown himself to be far more adept at using those profits to cash in on Apple's past rather than to take advantage of the company's privileged opportunity to finance and develop the path-breaking technologies of the future.

In 2012, Apple paid its first dividends (equal to six percent of its net income) since 1995 and instituted a \$10-billion stock buyback program. The following year, Apple was attacked by hedge-fund activist David Einhorn and, in response, increased the size of its stock-buyback program to \$60 billion.¹⁸⁹ In fiscal 2013 Apple distributed almost \$11 billion in dividends and \$23 billion in buybacks, the combination absorbing 90 percent of net income. From 2013 through the second quarter of fiscal 2020 (ending March 28, 2020), Apple did \$344 billion in buybacks, equal to 93 percent of net income, along with \$93 billion in dividends, representing an additional 25 percent of net income.

In the summer of 2013, Carl Icahn, with going on four decades of experience as a corporate raider,¹⁹⁰ began buying Apple shares on the stock market, and by January 2014 had amassed a stake of \$3.6 billion, representing nearly one percent of Apple's stock-market capitalization. In an article published in June 2016, we documented how Icahn had sought to drive up the price of Apple's stock through a combination of a) deployment of his "war chest" accumulated as a corporate raider; b) his high level of visibility among stock-market traders; c) the hyping of Apple's future profits via Tweets (on the assumption that every discounted cent of those future profits should be captured in the current stock price); and d) his influence with, as he liked to put it, "Tim and the board."

Icahn's sole purpose was to realize, at an opportune moment, a gain on the sale of his Apple shares.¹⁹¹ It appears that, when Icahn did liquidate his Apple holdings in the first quarter of calendar

¹⁸⁷ Lazonick et al., "Apple's Changing Business Model."

¹⁸⁸ Tripp Mickle and Yoko Kubota, "Time Cook and Apple bet everything on China. Then the coronavirus hit," *Wall Street Journal*, March 3, 2020, at <https://www.wsj.com/articles/tim-cook-and-apple-bet-everything-on-china-then-coronavirus-hit-11583172087?mod=searchresults&page=1&pos=4>.

¹⁸⁹ Lazonick et al., "Apple's Changing Business Model."

¹⁹⁰ Lazonick and Shin, *Predatory Value Extraction*, ch. 6.

¹⁹¹ Lazonick, et al., "Carl Icahn's \$2 Billion Apple 'No Brainer'."

year 2016 for a gain of \$2.0 billion, he may have had the benefit of access to material nonpublic information on a decline of iPhone sales in China.¹⁹² During the two full fiscal years in which Icahn held his Apple shares, the company helped him out in achieving his financial bonanza: It did a then-record \$45 billion in stock buybacks in 2014, followed by over \$35 billion in 2015.

As, in the winter of 2016, Icahn was selling his Apple shares, another billionaire, Warren Buffett, currently the fourth-richest person in the world, was buying Apple stock. By our estimate, between January 2016 and September 2018, Berkshire Hathaway, the financial and industrial conglomerate that Buffett controls through dual-class shares, doled out \$36.2 billion (ten times what Icahn had spent) to scoop up from the stock market over 252 million Apple shares. As of March 31, 2020, with 5.6 percent of Apple's outstanding shares in its possession (second only to Vanguard, with 7.2 percent),¹⁹³ Berkshire still held 245 million shares, valued at \$62.3 billion. That gave Berkshire a paper gain of \$26 billion even after it had realized \$1.7 billion in sales of Apple shares and \$2.2 billion in dividends.

During the three full fiscal years that Berkshire has held Apple shares, the company did buybacks valued at \$33 billion in 2017, \$73 billion in 2018, and \$67 billion in 2019. And, as we can see in Table 3, in just the first half of fiscal 2020, Apple's buybacks were almost \$39 billion. In an interview just after the May 2018 announcement of Berkshire's latest increase in its Apple shareholding, Buffett enthused: "I'm delighted to see [Apple] repurchasing shares. I love the idea of having our 5 percent, or whatever it is, maybe grow to 6 or 7 percent without our laying out a dime."¹⁹⁴ The Oracle of Omaha, as Buffett is known,¹⁹⁵ has become the new cheerleader for the corporate strategy of dominate-and-distribute.

The irony, if one can call it that, is that Buffett has become one of the world's richest people by running Berkshire Hathaway, which he has controlled since 1964, as a retain-and-reinvest company. In 2019 Berkshire had \$255 billion in revenues, placing it sixth in the Fortune 500, and (mainly because of gains on securities investments) \$82 billion in net income, with 391,500 employees worldwide as of December 31, 2019. Retaining its profits for reinvestment in the growth of the company, Berkshire has not paid a dividend since 1967. Only in 2018 and 2019 did Berkshire begin doing significant open-market repurchases, distributing \$6.2 billion, just over seven percent of its profits over the two years.

In an interview in 2018, the Oracle of Omaha revealed his understanding of the importance of retain-and-reinvest: "the reason stocks are worth a whole lot more than they were 20 years ago, or 50 years ago, or a hundred years ago, is that companies have ploughed back part of the earnings."¹⁹⁶ Berkshire has grown and profited over the decades by acquiring well-managed companies and letting them create value through investments in productive capabilities. Meanwhile, the corporate

¹⁹² Ibid.

¹⁹³ "Top 10 Owners of Apple Inc." *CNN Business*, June 5, 2020, at <https://money.cnn.com/quote/shareholders/shareholders.html?symb=AAPL&subView=institutional>.

¹⁹⁴ Trevor Hunnicutt and Jonathan Stempel, "Warren Buffett is now Apple's third biggest shareholder—and he wants to own more," *Financial Post*, May 7, 2018, at <https://business.financialpost.com/investing/rpt-wrapup-3-buffett-craves-more-apple-shares-endorses-its-buybacks>.

¹⁹⁵ Joshua Kennon, "How Warren Buffett became one of the wealthiest people in America," *The Balance*, March 19, 2020, at <https://www.thebalance.com/warren-buffett-timeline-356439>.

¹⁹⁶ Squawk Alley, "Buffett: Stocks driven by companies reinvesting," *CNBC*, August 30, 2018, at <https://www.cnbc.com/video/2018/08/30/buffet-stocks-driven-by-companies-reinvesting.html>.

office in Omaha, Nebraska, consisting of Buffett and 26 staffers,¹⁹⁷ aided by the dual-class share structure, has protected Berkshire's 70 subsidiaries (most of them wholly owned)¹⁹⁸ from the pressure of the stock market to distribute cash to shareholders.

As for Apple, "Capital Return Program" is the official name that it gave to its system of predatory value extraction, which as of March 28, 2020 had made distributions of \$96 billion in dividends since 2012 and \$344 billion in buybacks since 2013.¹⁹⁹ "Tim and the board" (to use Icahn's phrase) should realize that this program name is ideologically laden, since these distributions of corporate cash to shareholders have nothing to do with "returning capital." First, as we have already observed, one cannot "return" something to a party that never gave one anything. The only time in its history that Apple raised funds from public shareholders was on the occasion of its initial public offering in 1980, which yielded \$97 million for the company.²⁰⁰ Second, in distributing cash to shareholders, Apple is not giving them "capital." It's just transferring cash that may be used for a multitude of purposes,²⁰¹ ranging from household consumption to building the war chests of corporate raiders—in the latter case, augmenting their financial power to engage in new rounds of predatory value extraction.²⁰²

Neither Carl Icahn nor Warren Buffett invested a dime in Apple's productive capabilities. Yet it is those productive capabilities that generate the sustained stream of profits that, as people who simply buy and sell shares on the stock market, Icahn and Buffett extract. And, with their "Capital Return Program," Tim Cook and the board have been extraordinarily helpful in enabling Icahn, Buffett, and others to engage in predatory value extraction.

In 2014, as Apple was embarking on its buyback binge, Lazonick posted an open letter to CEO Cook on the *Harvard Business Review* (HBR) website.²⁰³ Referring to a previous *HBR* article in which Lazonick had pointed out that, in its history, Apple had only raised funds from the stock market at its IPO,²⁰⁴ Lazonick asked Cook: "How can Apple 'return' capital to shareholders if those shareholders never supplied Apple with capital in the first place?"

After explaining to Cook how taxpayers and workers contribute to a company's productivity and profits, while public shareholders just buy, hold, and sell shares, Lazonick suggested ways that are consistent with an innovative business model in which Apple could use its immense profits. These included a) more compensation for tens of thousands of employees in Apple stores (not to mention hundreds of thousands of people working at companies in Apple's global supply chain), b) more

¹⁹⁷ Akin Oyedele, "If you want to work in Berkshire Hathaway's Omaha office, start looking for another job," *Business Insider*, February 27, 2016, at <https://www.businessinsider.com/berkshire-hathaway-omaha-office-staff-2016-2>; Berkshire Hathaway Inc., *2019 Annual Report*, p. A-1.

¹⁹⁸ Ibid.; "List of assets owned by Berkshire Hathaway," Wikipedia, at https://en.wikipedia.org/wiki/List_of_assets_owned_by_Berkshire_Hathaway.

¹⁹⁹ Lazonick, "Apple's 'Capital Return Program'."

²⁰⁰ William Lazonick, "Numbers Show Apple Shareholders Have Already Gotten Plenty," *Harvard Business Review*, October 16, 2014, at <https://hbr.org/2014/10/numbers-show-apple-shareholders-have-already-gotten-plenty>.

²⁰¹ William Lazonick, "Innovative Enterprise Solves the Agency Problem," Institute for New Economic Thinking Working Paper No. 62, August 2017, at <https://www.ineteconomics.org/research/research-papers/innovative-enterprise-solves-the-agency-problem>.

²⁰² Lazonick and Shin, *Predatory Value Extraction*, chs. 6 and 7.

²⁰³ William Lazonick, "What Apple Should Do with Its Massive Piles of Money," *Harvard Business Review*, October 20, 2014, at <https://hbr.org/2014/10/what-apple-should-do-with-its-massive-piles-of-money>.

²⁰⁴ Lazonick, "Numbers Show Apple Shareholders Have Already Gotten Plenty."

educational support to enhance the career opportunities for Apple employees, especially for those in dead-end jobs in Apple stores and call centers, c) collaboration with government in social investments in knowledge and infrastructure, and d) collaboration with government in social innovation to develop the technologies of the future to meet society's needs.

Lazonick did not receive a response from CEO Cook, but \$276 billion in stock buybacks later, we pose the question again. *Mr. Cook, please tell us why you do buybacks.* We also pose the same question to the other six members of the Apple board of directors, and in particular to the two of them who have been on the board the longest.

The Apple director with the longest tenure is Arthur D. Levinson, who has been on the board since 2000 and its chairman since late 2011. Levinson is a scientist who spent most of his career with the pioneering biopharmaceutical company Genentech, joining the firm in 1980 and becoming its CEO from 1995 to 2009 and chairman of its board from 1999 to 2014.²⁰⁵ From 1990, Levinson and other Genentech employees were protected from the pressures of predatory value extractors by the majority ownership of the company by F. Hoffmann-La Roche AG, a Swiss-based corporation that, better known simply as Roche, is both the least financialized and, currently, the most innovative of the global “big pharma” companies.²⁰⁶ Given his employment experience, perhaps Dr. Levinson has some thoughts about how Apple might have invested a portion of the hundreds of billions of dollars that it has wasted on buybacks in a GBC to develop vaccines for preparedness for a pandemic.

The Apple director with the second-longest tenure is Albert Arnold Gore, Jr., who has been on its board since 2003. The former U.S. vice-president and Democratic candidate for U.S. president in 2000 has been one of the world's leading activists for social awareness of the threat of global warming to human existence. One could say that what Bill Gates is to preparedness for a pandemic, Al Gore is to preparedness for the ravages of climate change.²⁰⁷ The difference is that Gore's Oscar-winning documentary *An Inconvenient Truth*, released in 2006, has had far more visibility than Gates' 2015 TED Talk, just as the world was far more aware of the dangers of global warming than those of a global pandemic—until the Covid-19 crisis was upon us. Perhaps Mr. Gore has some thoughts about how Apple might have invested a portion of the hundreds of billions of dollars that it has wasted on buybacks in a GBC to combat climate change.

More generally, America's corporate executives and directors need to recognize another “inconvenient truth”: Stock buybacks manipulate the market and make most Americans worse off.²⁰⁸ Companies such as Microsoft, ExxonMobil, and Apple throw away billions, and even tens of billions, per year on buybacks without any justification other than the indefensible one that they are “returning cash to shareholders.” These executives and directors should recognize their

²⁰⁵ “Arthur D. Levinson,” *Wikipedia*, at https://en.wikipedia.org/wiki/Arthur_D._Levinson.

²⁰⁶ Öner Tulum, *Innovation and Financialization in the US Biopharmaceutical Industry*, doctoral dissertation, Faculty of Economics, University of Ljubljana, June 2018; Öner Tulum and William Lazonick, “Financialized Corporations in a National Innovation System: The US Pharmaceutical Industry,” *International Journal of Political Economy*, 47, 3-4, 2018: 281-316.

²⁰⁷ “*An Inconvenient Truth* then and now: What's changed for our climate since 2006?” The Climate Reality Project, January 16, 2017, at <https://climateresearchproject.org/blog/inconvenient-truth-then-and-now>.

²⁰⁸ Lazonick, “Profits Without Prosperity.”

responsibility for the failure of corporate America to deal with not only the Covid-19 pandemic but also the ravages of climate change and income inequity.

Executives and directors are free to remain silent, but then they are complicit in the national failure to prepare for a pathogen pandemic, mitigate climate change, and reduce income inequity. In asking for an explanation of why companies do stock buybacks, we have singled out prominent executives and directors at Microsoft, ExxonMobil, and Apple because these companies are the world leaders in looting their corporate treasuries. But we can ask the same question of the senior executives and board members of many other U.S. corporations that are among the largest repurchasers of their companies' own stock.

In particular, we pose this question to the senior executives and board members of any company engaged in the practice who, in August 2019, signed the Business Roundtable (BRT) Statement of the Purpose of a Corporation, which explicitly rejected the BRT's 1997 pronouncement that "corporations exist principally to serve shareholders,"²⁰⁹ replacing it with a redefinition of "the purpose of the corporation to promote 'an economy that serves all Americans'."²¹⁰ Specifically, the 2019 BRT Statement declares "a fundamental commitment to all of our stakeholders," which includes: "Delivering value to our customers"; "Investing in our employees"; "Dealing fairly and ethically with our suppliers"; "Supporting the communities in which we work"; and "Generating long-term value for our shareholders." We contend that, in doing massive stock buybacks as open-market repurchases, a publicly listed business corporation will fail to meet any of these objectives, including "long-term value" for shareholders.²¹¹

In the midst of the Covid-19 crisis, some cash-rich companies that are among the largest repurchasers, have been paying more attention to society's needs than had previously been the case.²¹² Highly profitable companies should, as a matter of course, be returning a portion of their profits to society, recognizing, at a minimum, the contributions of knowledge and infrastructure that society has provided to them. The attention to social crises by a corporation that adheres to MSV ideology, however, will tend to be too little too late.

For example, of crisis-related activities recently announced by Apple, two are relevant to important GBCs in which the company could have been involved well before the onset of the Covid-19 pandemic. One activity, launched in May 2020, is a \$10 million investment in COPAN, a company

²⁰⁹ Business Roundtable "Statement on Corporate Governance," September 1997, at <http://www.ralphgomory.com/wp-content/uploads/2018/05/Business-Roundtable-1997.pdf>. See also Ken Jacobson, "Whose corporation? Our corporation!" in Lynn Parramore ed., *Corporations for the 99%*, *Alternet*, at http://www.theairnet.org/files/research/lazonick/alternet_ebook_corps3.pdf.

²¹⁰ "Business Roundtable redefines the purpose of a corporation to promote 'an economy that serves all Americans'," Business Roundtable press release. August 19, 2019, at <https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans>.

²¹¹ See research and comments posted on the websites of the Institute for New Economic Thinking (<https://www.ineteconomics.org/research/experts/wlazonick>); *Harvard Business Review* (<https://hbr.org/search?term=william+lazonick>); and the Academic-Industry Research Network (<http://www.theairnet.org/v3/>).

²¹² The Business Roundtable has been documenting the "Covid-19" activities of its members on its website: "Business Roundtable CEOs are responding to Covid-19," at <https://www.businessroundtable.org/covid-19>.

that produces diagnostic tests.²¹³ Apple's investment in COPAN amounts to 0.026 percent of the \$38.5 billion in buybacks that the company did from September 2019 through March 2020—that is, during the six months *after* CEO Tim Cook signed the BRT's new Statement of the Purpose of a Corporation. Given that, in the midst of the pandemic, Apple sees fit to make this investment in diagnostic testing raises the question of why, in preparation for a pandemic, it did not enter into a large-scale GBC devoted to diagnostic testing years ago—but rather prioritized throwing away \$344 billion repurchasing its own shares since 2013.

Another one of Apple's Covid-19 activities that has caught our attention is its \$100 million "Racial Equity and Justice Initiative," announced on June 11, 2020.²¹⁴ In a Twitter video, CEO Cook declared: "The initiative will challenge the systemic barriers to opportunity and dignity that exist for communities of color and [in] particular for the black community."²¹⁵ Given the resurgence of the Black Lives Matter movement in the midst of the Covid-19 crisis, perhaps this \$100 million initiative can be seen as the Apple's commitment to the BRT Statement of Purpose of a Corporation. But that \$100 million is still only 0.26 percent of the money Apple spent on buybacks in the six months after Cook signed the BRT Statement in August 2019 and 0.03 percent of the company's spending on buybacks since 2013.

Or compare this \$100 million contribution to fighting racial inequity to the gains of just one person/company from trading in Apple shares. Never mind the \$2 billion that corporate raider Carl Icahn took home for simply buying and selling Apple shares between 2013 and 2016. If Warren Buffett had cashed in Berkshire Hathaway's Apple shares on March 31, 2020, its total gain on its purchase of \$36.3 billion between January 2016 and September 2018 would have been about \$30 billion. As we have seen, Buffett/Berkshire Hathaway contributed not a dime to investing in Apple's productive capabilities. Meanwhile, supporting its share price during the time that Berkshire Hathaway bought and held shares, Apple repurchased \$234 billion of its shares, which is equal to \$55 billion per year.

As one of the richest corporations in history, Apple's recognition of the problem of racial inequity in the midst of the current crisis reflects a very much belated awakening to a deep social crisis that corporate America should have confronted a very long time ago. The many trillions of dollars of corporate cash that major corporations have devoted to buybacks have been a prime reason for the extreme concentration of income among the richest households and the erosion of middle-class employment opportunities that have been the dominant "performance" characteristics of the U.S. economy since the 1980s. The failure of the American economy since the 1980s to deliver stable and equitable employment opportunities to the mass of American workers, among whom the hardest hit have been Blacks, is deeply rooted in the rise to dominance of the destructive ideology that a business corporation should be run to "maximize shareholder value."²¹⁶

²¹³ "Apple awards \$10 million from Advanced Manufacturing Fund to COPAN Diagnostics," *Apple Newsroom*, May 7, 2020, at <https://www.apple.com/newsroom/2020/05/apple-awards-10-million-from-advanced-manufacturing-fund-to-copan-diagnostic>.

²¹⁴ Ina Fried, "Apple launches \$100 million racial justice initiative," *Axios*, June 11, 2020 at https://www.axios.com/apple-launches-100-million-racial-justice-initiative-bb2ac090-f311-428d-95e5-c1963708ac5b.html?utm_campaign=organic&utm_medium=socialshare&utm_source=twitter.

²¹⁵ Jacob Kastrenakes, "Apple Launches \$100 million Racial Equity Justice Initiative," *The Verge*, June 11, 2020 at <https://www.theverge.com/2020/6/11/21287999/apple-racial-equity-justice-initiative-amount-cook-lisa-jackson>.

²¹⁶ See William Lazonick, Philip Moss, and Joshua Weitz, "How the Disappearance of Unionized Jobs Obliterated an Emergent Black Middle Class," *Institute for New Economic Thinking Perspectives*, June 15, 2020, at

<https://www.ineteconomics.org/perspectives/blog/how-the-disappearance-of-unionized-jobs-obiterated-an-emergent-black-middle-class>; William Lazonick, Philip Moss, and Joshua Weitz, “There Can Be No Equality Without a Dramatic Renewal of Employment Opportunity for All American Workers,” *Institute for New Economic Thinking Perspectives*, July 16, 2020, at <https://www.ineteconomics.org/perspectives/blog/there-can-be-no-equality-without-a-dramatic-renewal-of-employment-opportunity-for-all-american-workers>.

References

- “America’s Best Managed Companies,” *Forbes*, December 28, 2007, at <https://www.forbes.com/global/2008/0107/075.html#289e157e7a54>.
- “*An Inconvenient Truth* then and now: What’s changed for our climate since 2006?” The Climate Reality Project, January 16, 2017, at <https://climaterealityproject.org/blog/inconvenient-truth-then-and-now>.
- “Annual Results,” *Royal Philips*, various years, retrieved from <https://www.results.philips.com/publications/ar19#downloads>
- “Apple awards \$10 million from Advanced Manufacturing Fund to COPAN Diagnostics,” *Apple Newsroom*, May 7, 2020, at <https://www.apple.com/newsroom/2020/05/apple-awards-10-million-from-advanced-manufacturing-fund-to-copan-diagnostic>.
- “Arthur D. Levinson,” *Wikipedia*, at https://en.wikipedia.org/wiki/Arthur_D._Levinson.
- “BARDA funds development of next-generation portable ventilators,” *Infection Control Today*, September 30, 2010, at <https://www.infectioncontroltoday.com/epidemics-pandemics/barda-funds-development-next-generation-portable-ventilators>.
- “Bill Gates TED Talk transcript from 2015: Warns of pandemics epidemics,” *Rev*, at <https://www.rev.com/blog/transcripts/bill-gates-ted-talk-transcript-from-2015-warns-of-pandemics-epidemics>.
- “Bioterrorism—Smallpox: Second health worker dies after receiving vaccine,” *American Health Line*, March 28, 2003.
- “CEO interview, Respironics Inc.,” *Wall Street Journal*, July 22, 1993.
- “Coronavirus outbreak boosts the sales of world’s top 10 N95 mask manufacturers,” *Technovio Blog*, April 8, 2020, at <https://blog.technavio.com/blog/top-10-n95-mask-manufacturers>.
- “Crude Oil Prices—70 Year Historical Chart,” *Macrotrends*, at <https://www.macrotrends.net/1369/crude-oil-price-history-chart>.
- “Federal Contract Opportunity for Advanced Development of Next Generation Portable Ventilators,” *Govtribe*, August 2008, at <https://govtribe.com/opportunity/federal-contract-opportunity/advanced-development-of-next-generation-portable-ventilators-presolhhsbarda0820>.
- “Global HIV & AIDS statistics—2019 fact sheet,” *UNAIDS*, at <https://www.unaids.org/en/resources/fact-sheet>.
- “HHS spurs innovation to develop next-generation portable ventilator,” *Emsworld*, September 18, 2014, at <https://www.emsworld.com/news/12004768/hhs-spurs-innovation-to-develop-next-generation-portable-ventilator>.
- “Hong-Lin Du” LinkedIn page, at <https://www.linkedin.com/in/hong-lin-du-67055662/>.
- “List of assets owned by Berkshire Hathaway,” *Wikipedia*, at https://en.wikipedia.org/wiki/List_of_assets_owned_by_Berkshire_Hathaway.
- “Philips expands home healthcare commitment with portable life-support ventilator; Offers ease of use, portability and versatility for patient,” *PR Newswire*, June 2, 2009.
- “Philips teams up with healthcare firms on R&D,” *Reuters News*, January 30, 2007.
- “Respironics acquires LIFECARE International,” *Business Wire*, October 22, 1996.
- “Respironics appoints John L. Mielot President and Chief Executive Officer to succeed James W.

- “Respironics Board endorses \$5.1 billion bid from Philips,” *Penton Insight*, January 8, 2008; see also “Philips announces completion of tender offer to acquire Respironics,” *WebWire*, March 14, 2008, at <https://www.webwire.com/ViewPressRel.asp?aId=61199>.
- “Respironics names James W. Liken Chief Executive Officer, to succeed Dennis S. Meteny,” *PR Newswire*, August 19, 1999.
- “Respironics to acquire Novamatrix Medical Systems,” *PR Newswire*, December 18, 2001.
- “Sleep Apnea,” *Mayo Clinic*, at <https://www.mayoclinic.org/diseases-conditions/sleep-apnea/symptoms-causes/syc-20377631>.
- “Text of President Bush’s State of the Union Address,” *Washington Post*, January 28, 2003, at https://www.washingtonpost.com/wp-srv/onpolitics/transcripts/bushtext_012803.html.
- “The evolution of Respironics,” *Monitor Medical*, August 29, 2020, at <https://thecapco.com/2018/08/29/the-evolution-of-respironics/>.
- “Timeline: How The anthrax terror unfolded,” *NPR*, February 15, 2011, at <https://www.npr.org/2011/02/15/93170200/timeline-how-the-anthrax-terror-unfolded>.
- “Top 10 Medical Device Companies in the World 2019,” *Technovio*, April 24, 2019, at <https://blog.technavio.com/blog/top-10-medical-device-companies-worldwide>.
- “Top 10 Owners of Apple Inc.” *CNN Business*, June 5, 2020, at <https://money.cnn.com/quote/shareholders/shareholders.html?symb=AAPL&subView=institutional>.
- “Trended historical financials: cash returned to shareholders,” Microsoft Investor Relations, at <https://www.microsoft.com/en-us/Investor/earnings/trended/cash-returned.aspx>
- “Tyco and the Bermuda triangle,” *Forbes*, Sept 17, 2002 at <https://www.forbes.com/2002/09/17/0917topnews.html#8fadc9d14450>.
- “Tyco International Ltd. to name medical products spin-off Covidien,” *Biospace*, January 25, 2007, at <https://www.biospace.com/article/releases/tyco-international-ltd-to-name-medical-products-spin-off-b-covidien-b/>.
- “U.S. Senator Tammy Baldwin reintroduces legislation to rein in stock buybacks and give workers a voice on corporate boards,” Senator Baldwin press release, March 27, 2019, at <https://www.baldwin.senate.gov/press-releases/reward-work-act-2019>.
- “United States Resource availability for COVID-19,” *Society of Critical Care Medicine*, May 12, 2020, at <https://sccm.org/Blog/March-2020/United-States-Resource-Availability-for-COVID-19>.
- “Ventilator stockpiling and availability in the US,” *Johns Hopkins Center for Health Security*, April 1, 2020, at <https://www.centerforhealthsecurity.org/resources/COVID-19/COVID-19-fact-sheets/200214-VentilatorAvailability-factsheet.pdf>.
- “William Lazonick,” Institute for New Economic Thinking, at <https://www.ineteconomics.org/research/experts/wlazonick>.
- American Energy Innovation Council, “Renewing America’s Energy Technology Leadership,” at <http://americanenergyinnovation.org/>.
- American Energy Innovation Council, “The Business Plan,” June 10 2010, at <http://americanenergyinnovation.org/the-business-plan-2010/>.
- Baird, Robert P., “How Utah’s tech industry tried to disrupt coronavirus testing,” *New Yorker*, June 13, 2020, at <https://www.newyorker.com/tech/annals-of-technology/how-utahs-tech-industry-tried-to-disrupt-coronavirus-testing>.

- Banerjee, Neela, Lisa Song, and David Hasemyer, "Exxon: The road not taken," *Inside Climate News*, September 16, 2015, at <https://insideclimatenews.org/content/Exxon-The-Road-Not-Taken>.
- Banerji, Gunjan, "Why Is the stock market rallying when the economy Is so bad?," *Wall Street Journal*, May 8, 2020, at <https://www.wsj.com/articles/why-is-the-stock-market-rallying-when-the-economy-is-so-bad-11588974327>.
- Beauchamp, Zack, "Rex Tillerson has been fired. Experts say he did damage that could last 'a generation'," *Vox*, March 13, 2018, at <https://www.cnbc.com/2019/03/07/the-road-to-exxons-buybacks-is-paved-with-billions-in-asset-sales.html>.
- Begley, Sharon, "With ventilators running out, doctors say the machines are overused for Covid-19," *STAT News*, April 8, 2020, at <https://www.statnews.com/2020/04/08/doctors-say-ventilators-overused-for-covid-19/>.
- Bergin, Tom, and Robin Respaut, "How Moderna executives are cashing in on Covid-19 vaccine stock speculation," *Reuters*, July 2, 2020, at <https://www.reuters.com/article/us-health-coronavirus-moderna-pay-insigh/how-moderna-executives-are-cashing-in-on-covid-19-vaccine-stock-speculation-idUSKBN2433AH>.
- Berkshire Hathaway Inc., *2019 Annual Report*.
- Beyerstein, Lindsay, "The staggeringly complicated ethics of ventilating coronavirus patients," *The New Republic*, April 10, 2020, at <https://newrepublic.com/article/157262/staggeringly-complicated-ethics-ventilating-coronavirus-patients>.
- Blake, Aaron, "Rex Tillerson on Trump: 'undisciplined, doesn't like to read,' and tries to do illegal things," *Washington Post*, December 7, 2018, at <https://www.washingtonpost.com/politics/2018/12/07/rex-tillerson-trump-undisciplined-doesnt-like-read-tries-do-illegal-things/>.
- Blake, Aaron, "The Trump administration just changed its description of the national stockpile to jibe with Jared Kushner's controversial claim," *Washington Post*, April 3, 2020, at <https://www.washingtonpost.com/politics/2020/04/03/jared-kushner-stands-trump-proceeds-offer-very-trumpian-claim-about-stockpiles/>.
- Blest, Paul, "Deborah Ross criticizes Richard Burr's 2012 vote against the STOCK Act, which banned insider trading for members of Congress," *IndyWeek*, August 31, 2016, at <https://indyweek.com/news/archives/deborah-ross-criticizes-richard-burr-s-2012-vote-stock-act-banned-insider-trading-members-congress/>.
- Bolten, Joshua, and Ken Bertsch, "Restricting stock buybacks will hurt the economy," *New York Times*, March 4, 2019, at <https://www.nytimes.com/2019/03/04/opinion/sanders-stock-buybacks.html>.
- Bordeaux, Margaret, Beth Cameron, and Jonathan Zittrain, "Testing is in the brink of paralysis. That's very bad news," *New York Times*, July 16, 2020, at <https://www.nytimes.com/2020/07/16/opinion/coronavirus-testing-us.html>.
- Boselovic, Len, "McGinnis takes over as Respiroics chief in a heartfelt move," *Pittsburgh Post-Gazette*, November 17, 1994.
- Broder, John M., "A call to triple U.S. spending on energy research," *New York Times*, June 9, 2010, at <https://www.nytimes.com/2010/06/10/business/energy-environment/10gates.html>.
- Business Roundtable, "Business Roundtable CEOs are responding to Covid-19," at <https://www.businessroundtable.org/covid-19>.
- Business Roundtable "Statement on Corporate Governance," September 1997, at <http://www.ralphgomory.com/wp-content/uploads/2018/05/Business-Roundtable-1997.pdf>.

- Business Roundtable, “Business Roundtable redefines the purpose of a corporation to promote ‘an economy that serves all Americans’,” Business Roundtable press release. August 19, 2019, at <https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans>.
- Callahan, Patricia Sebastian Rotella, and Tim Golden, “Taxpayers paid millions to design a low-cost ventilator for a pandemic. Instead, the company is selling versions of it overseas,” *ProPublica*, March 30, 2020, at <https://www.propublica.org/article/taxpayers-paid-millions-to-design-a-low-cost-ventilator-for-a-pandemic-instead-the-company-is-selling-versions-of-it-overseas>.
- Callahan, Patricia, and Sebastian Rotella, “A company promised cheap ventilators to the government, never delivered and is now charging quadruple the price for new ones,” *ProPublica*, April 8, 2020, at <https://www.propublica.org/article/a-company-promised-cheap-ventilators-to-the-government-never-delivered-and-is-now-charging-quadruple-the-price-for-the-new-ones>.
- Callahan, Patricia, and Sebastian Rotella, “Congress is investigating whether a ventilator company is gouging the U.S.—and why the government is letting it happen,” *ProPublica*, April 16, 2020, at <https://www.propublica.org/article/congress-is-investigating-whether-a-ventilator-company-is-gouging-the-us-and-why-the-government-is-letting-it-happen>.
- Cameron, Beth, “I ran the White House pandemic office. Trump closed it.” *Washington Post*, March 13, 2020, at https://www.washingtonpost.com/outlook/nsc-pandemic-office-trump-closed/2020/03/13/a70de09c-6491-11ea-acca-80c22bbee96f_story.html.
- Canham, Matt, “As swine flu grows, states must plan for worst, Leavitt says,” *Salt Lake Tribune*, April 27, 2009.
- Chee, Foo Yun, and Niklas Mika, “Philips in \$5 billion Respiroics deal,” *Reuters*, December 21, 2007.
- Chung, Heidi, “The richest 1% own 50% of stocks held by American households,” *Yahoo! Finance*, January 17, 2019, at <https://finance.yahoo.com/news/the-richest-1-own-50-of-stocks-held-by-american-households-150758595.html>.
- Coleman, Clayton, and Emma Dietz, “Fossil Fuel Subsidies: A Closer Look at Tax Breaks and Societal Costs,” Environmental and Energy Study Institute, July 2019, at https://www.eesi.org/files/FactSheet_Fossil_Fuel_Subsidies_0719.pdf
- Coll, Steve, “Rex Tillerson, from a corporate oil sovereign to the State Department,” *New Yorker*, December 11, 2016, at <https://www.newyorker.com/news/news-desk/rex-tillerson-from-a-corporate-oil-sovereign-to-the-state-department>.
- Coll, Steve, *Private Empire: Exxon Mobile and American Power*, Penguin Books, 2012.
- Crow, David, “Medtronic: the tax inversion that got away,” *Financial Times*, January 27, 2015, at <https://www.ft.com/content/ddcd9ad6-a5cf-11e4-ad35-00144feab7de>.
- Dale, Daniel, “Fact check: Trump claimed he was left ‘no ventilators.’ His administration just confirmed he had more than 16,000,” *CNN*, June 24, 2020, at <https://www.cnn.com/2020/06/24/politics/fact-check-trump-16000-ventilators-stockpile-obama/index.html>.
- Davidoff Solomon, Steven, “In deal to cut corporate taxes, shareholders pay the price,” *New York Times*, July 14, 2014.
- Dayen, David, “Unsanitized: Covidien’s story is corporate America’s story,” *The American Prospect*, March 30, 2020, at <https://prospect.org/coronavirus/unsanitized-covidien-story-corporate-america-ventilators/>.

- Dealbook, “Two funds put Philips in spotlight,” *New York Times*, December 10, 2007, at <https://dealbook.nytimes.com/2007/12/10/two-funds-put-philips-in-spotlight/>.
- Denver Post Editorial Board, “Editorial: Trump is playing a disgusting political game with our lives,” *Denver Post*, April 9, 2020, at <https://www.denverpost.com/2020/04/09/coronavirus-editorial-trump-gardner-polis-supplies/>.
- DiChristopher, Tim, “The road to ExxonMobil’s long-awaited stock buybacks is paved with asset sales,” *CNBC*, March 7, 2019, at <https://www.cnbc.com/2019/03/07/the-road-to-exxons-buybacks-is-paved-with-billions-in-asset-sales.html>.
- Drucker, Jesse, “The tax-break bonanza inside the economic rescue package,” *New York Times*, April 24, 2020, at <https://www.nytimes.com/2020/04/24/business/tax-breaks-wealthy-virus.html>.
- EHS Today Staff, “3M will import 166 million respirators from China,” *EHS Today*, April 8, 2020, at <https://www.ehstoday.com/ppe/article/21128174/3m-will-import-166-million-respirators-from-china>.
- Estes, Adam Clark, “America’s emergency medical stockpile is almost empty. Nobody knows what happens next,” *Vox*, April 7, 2020, at <https://www.vox.com/recode/2020/4/3/21206170/us-emergency-stockpile-jared-kushner-almost-empty-coronavirus-medical-supplies-ventilators>.
- Estill, Jerry, “Bowen pledges to protect the rights and dignity of AIDS victims,” *Associated Press*, June 5, 1987.
- Executive Office of the President of the United States, “Playbook for Early Response to High-Consequence Emerging Infectious Disease Threats and Biological Incidents,” at <https://assets.documentcloud.org/documents/6819268/Pandemic-Playbook.pdf>.
- Feiner, Lauren, “Warren and Harris introduce Senate bill to crack down on price gouging during the coronavirus pandemic,” *CNBC*, April 10, 2020, at <https://www.cnbc.com/2020/04/10/coronavirus-price-gouging-bill-from-warren-fights-price-gouging.html>.
- Fernandez, Manny, Michael Shear, and Abby Goodnough, “Dallas hospital alters account, raising questions on Ebola case,” *New York Times*, October 3, 2014, at <https://www.nytimes.com/2014/10/04/us/containing-ebola-cdc-troops-west-africa.html>.
- Ferré-Sadurní, Luis, and Thomas Kaplan, “He had never sold a ventilator. N.Y. gave him an \$86 million deal,” *New York Times*, May 8, 2020, at <https://www.nytimes.com/2020/05/08/nyregion/ventilators-fema-coronavirus-cuomo.html>.
- Filkins, Dexter, “How Rex Tillerson wrecked the State Department,” *New Yorker*, November 30, 2017, at <https://www.newyorker.com/news/news-desk/how-rex-tillerson-wrecked-the-state-department/>.
- Fitzpatrick, Dan, “Respironics is sold to Dutch firm,” *Pittsburgh Post-Gazette*, December 22, 2007, at <https://www.post-gazette.com/business/businessnews/2007/12/22/Respironics-is-sold-to-Dutch-firm/stories/200712220110>.
- Ford, Tiffany, Sarah Reber, and Richard V. Reeves, “Race gaps in COVID-19 deaths are even bigger than they appear,” *Brookings*, June 16, 2020, at <https://www.brookings.edu/blog/up-front/2020/06/16/race-gaps-in-Covid-19-deaths-are-even-bigger-than-they-appear/>.
- Fried, Ina, “Apple launches \$100 million racial justice initiative,” *Axios*, June 11, 2020 at https://www.axios.com/apple-launches-100-million-racial-justice-initiative-bb2ac090-f311-428d-95e5-c1963708ac5b.html?utm_campaign=organic&utm_medium=socialshare&utm_source=twitter

- Ganesan, Vasantha, "Philips: Healthcare segment growth on track," *Business Times*, July 22, 2006; "Philips doubles profit forecast as it announces reorganization," *Associated Press Newswires*, September 10, 2007.
- Gibney, Alex, "Slumlord Millionaire," *Dirty Money*, 2020 (Season 2, Episode 3). *Netflix*, at <https://www.netflix.com/title/80118100>.
- Global Biodefense Staff, "Next-generation ventilators needed for pandemics," *Global Biodefense*, September 22, 2014, at <https://globalbiodefense.com/2014/09/22/next-generation-ventilators-needed-pandemics/>.
- Goldenberg, Suzanne, "ExxonMobil gave millions to climate change-denying lawmakers despite pledge," *The Guardian*, July 15, 2015, at <https://www.theguardian.com/environment/2015/jul/15/exxon-mobil-gave-millions-climate-denying-lawmakers>.
- Gore, D'Angelo, "Trump inherited more ventilators than have been distributed," *FactCheck.org*, June 22, 2020, at <https://www.factcheck.org/2020/06/trump-inherited-more-ventilators-than-have-been-distributed/>.
- Hebert, H. Josef, "As gas prices soar, Congress presses oil chiefs on big profits," *Associated Press*, April 1, 2008.
- Heisler, Yoni, "Whatever became of Microsoft's \$150 million investment in Apple?" *Engadget*, May 20, 2014.
- Heroux Pounds, Marcia, "Dennis Kozlowski, former Tyco CEO who went to prison, back in M&A business," *South Florida SunSentinel*, January 11, 2017, at <https://www.sun-sentinel.com/business/fl-dennis-kozlowski-life-after-prison-20170111-story.html>.
- Hogan, Bernadette, "Cuomo blames ventilator shortage on competition with FEMA, states," *New York Post*, March 31, 2020, at <https://nypost.com/2020/03/31/cuomo-blames-ventilator-shortage-on-competition-with-fema-states/>.
- Hopkins, Matt, and William Lazonick, "The Mismeasure of Mammon, Uses and Abuses of Executive Pay Data," Institute for New Economic Thinking Working Paper No. 49, August 29, 2016, at <https://www.ineteconomics.org/research/research-papers/the-mismeasure-of-mammon-uses-and-abuses-of-executive-pay-data>.
- Hopkins, Matt, and William Lazonick, "Who Invests in the High-Tech Knowledge Base?" Institute for New Economic Thinking Working Group on the Political Economy of Distribution Working Paper No. 6, September 2014 (revised December 2014), at <http://ineteconomics.org/ideas-papers/research-papers/who-invests-in-the-high-tech-knowledge-base>.
- <http://www.ralphgomory.com/wp-content/uploads/2018/05/Business-Roundtable-1997.pdf>.
- Huang, Hsin-Chan, Ozgur M. Araz, David P. Morton, Gregory P. Johnson, Paul Damien, Bruce Clements, and Lauren Ancel Meyers, "Stockpiling Ventilators for Influenza Pandemics," *Emerging Infectious Diseases*, 23, 6, 2017: 914-921, at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5443432/>.
- Hufford, Austen, "N95 mask makers ramp up production to meet U.S. Covid-19 demand," *Wall Street Journal*, July 17, 2020, at <https://www.wsj.com/articles/n95-mask-makers-ramp-up-production-to-meet-u-s-covid-19-demand-11594987201>.
- Humer, Caroline, and Ransdell Pearson, "Obama's inversion curbs kill Pfizer's \$160 billion dollar Allergan deal," *Reuters*, April 5, 2016, at <https://www.reuters.com/article/us-allergan-m-a-pfizer/obamas-inversion-curbs-kill-pfizers-160-billion-allergan-deal>.

- [.idUSKCN0X21NV#:~:text=NEW%20YORK%20\(Reuters\)%20%2D%20U.S.,stop%20tax%20Ddodging%20corporate%20mergers.](#)
- Hunnicut, Trevor, and Jonathan Stempel, “Warren Buffett is now Apple’s third biggest shareholder—and he wants to own more,” *Financial Post*, May 7, 2018, at <https://business.financialpost.com/investing/rpt-wrapup-3-buffett-craves-more-apple-shares-endorses-its-buybacks>.
- Intrepid Investment Bankers LLC, “Intrepid Investment Bankers LLC Advises Newport Medical Instruments, Inc. in its Sale to Covidien plc,” *PRNewswire*, May 1, 2012, at <https://www.prnewswire.com/news-releases/intrepid-investment-bankers-llc-advises-newport-medical-instruments-inc-in-its-sale-to-covidien-plc-149748365.html>.
- Jackson, Jr., Robert J., “Letter on stock buybacks and insiders’ cashouts,” *Harvard Law School Forum on Corporate Governance*, March 8, 2019, at <https://corpgov.law.harvard.edu/2019/03/08/letter-on-stock-buybacks-and-insiders-cashouts/>.
- Jacobson, Ken, “Whose corporation? Our corporation!” in Lynn Parramore ed., *Corporations for the 99%*, *Alternet*, at http://www.theairnet.org/files/research/lazonick/alternet_ebook_corps3.pdf.
- Jacobson, Ken, and William Lazonick, “A License to Loot: Opposing Views of Capital Formation and the Adoption of SEC Rule 10b-18,” *The Academic-industry Research Network Working Paper*, forthcoming.
- Johns Hopkins University Coronavirus Resource Center, June 23, 2020, at <https://coronavirus.jhu.edu/map.html>.
- Kahn, Chris, “Exxon earns \$11 billion in first quarter and defends itself against calls to end subsidies,” *Associated Press*, April 28, 2011.
- Kaplan, Peter, “U.S. House panel backs bioterror remedies bill,” *Reuters News*, May 15, 2003.
- Kastrenakes, Jacob, “Apple Launches \$100 million Racial Equity Justice Initiative,” *The Verge*, June 11, 2020 at <https://www.theverge.com/2020/6/11/21287999/apple-racial-equity-justice-initiative-amount-cook-lisa-jackson>.
- Kendzior, Sarah, *Hiding in Plain Sight: The Invention of Donald Trump and the Erosion of America*, Flatiron Books, 2020.
- Kenen, Joanne, “U.S. senators urge doubling of bioterror funds,” *Reuters News*, November 15, 2001.
- Kennon, Joshua, “How Warren Buffett became one of the wealthiest people in America,” *The Balance*, March 19, 2020, at <https://www.thebalance.com/warren-buffett-timeline-356439>.
- Klink, Steve, “Philips statement on its ongoing collaboration with HHS and BARDA,” Philips press release, March 31, 2020, at <https://www.usa.philips.com/a-w/about/news/archive/standard/news/articles/20200331-philips-statement-on-its-ongoing-collaboration-with-hhs-and-barda.html>.
- Kloet, Stefan, “Philips buys Visicu to further grow healthcare ops,” *Dow Jones Newswires*, December 18, 2007.
- Kulish, Nicholas, Sarah Kliff, and Jessica Silver-Greenberg, “The U.S. tried to build a new fleet of ventilators. The mission failed,” *New York Times*, March 29, 2020, at <https://www.nytimes.com/2020/03/29/business/coronavirus-us-ventilator-shortage.html>.
- Lazonick, William, “Apple’s ‘Capital Return Program’: Where Are the Patient Capitalists?,” *Institute for New Economic Thinking Perspectives*, November 13, 2018, at <https://www.ineteconomics.org/perspectives/blog/apples-capital-return-program-where-are-the-patient-capitalists>.

- Lazonick, William, "Buybacks: From Basics to Politics." AIR Special Report, The Academic-Industry Research Network, August 15, 2015, at <http://www.theairnet.org/v3/backbone/uploads/2015/08/Lazonick-Buybacks-Basics-to-Politics-20150819.pdf>.
- Lazonick, William, "How greedy corporations are destroying America's status as 'innovation nation'," *Roosevelt Institute*, July 28, 2011, at <https://rooseveltinstitute.org/how-greedy-corporations-are-destroying-americas-status-as-innovation-nation/>.
- Lazonick, William, "Innovative Enterprise and Sustainable Prosperity," *The Academic-Industry Research Network*, January 18, 2019, at <http://www.theairnet.org/v3/backbone/uploads/2019/03/Lazonick-IESP-20190118.pdf>.
- Lazonick, William, "Innovative Enterprise or Sweatshop Economics? In Search of Foundations of Economic Analysis," *Challenge*, 59, 2, 2016: 65-114.
- Lazonick, William, "Innovative Enterprise Solves the Agency Problem," Institute for New Economic Thinking Working Paper No. 62, August 2017, at <https://www.ineteconomics.org/research/research-papers/innovative-enterprise-solves-the-agency-problem>.
- Lazonick, William, "Is the Most Unproductive Firm the Foundation of the Most Efficient Economy? Penrosian Learning Confronts the Neoclassical Fallacy," Institute for New Economic Thinking Working Paper No. 111, January 2020, at <https://www.ineteconomics.org/research/research-papers/is-the-most-unproductive-firm-the-foundation-of-the-most-efficient-economy-penrosian-learning-confronts-the-neoclassical-fallacy>.
- Lazonick, William, "Labor in the Twenty-First Century: The Top 0.1% and the Disappearing Middle Class," in Christian E. Weller, ed., *Inequality, Uncertainty, and Opportunity: The Varied and Growing Role of Finance in Labor Relations*, Cornell University Press, 2015: 143-192.
- Lazonick, William, "Numbers Show Apple Shareholders Have Already Gotten Plenty," *Harvard Business Review*, October 16, 2014, at <https://hbr.org/2014/10/numbers-show-apple-shareholders-have-already-gotten-plenty>.
- Lazonick, William, "Profits Without Prosperity: Stock Buybacks Manipulate the Market and Leave Most Americans Worse Off," *Harvard Business Review*, September 2014, at <https://hbr.org/2014/09/profits-without-prosperity>.
- Lazonick, William, "Stock Buybacks: From Retain and Reinvest to Downsize-and-Distribute," *Brookings*, April 17, 2015, at <https://www.brookings.edu/research/stock-buybacks-from-retain-and-reinvest-to-downsize-and-distribute/>.
- Lazonick, William, "The Functions of the Stock Market and the Fallacies of Shareholder Value," Institute for New Economic Thinking Working Paper No. 58, July 20, 2017, at <https://www.ineteconomics.org/research/research-papers/the-functions-of-the-stock-market-and-the-fallacies-of-shareholder-value>.
- Lazonick, William, "The real cost of America's global tax dodgers," *Salon*, August 19, 2011, at https://www.salon.com/2011/08/18/global_tax_dodgers/.
- Lazonick, William, "The Value-Extracting CEO: How Executive Stock-Based Pay Undermines Investment in Productive Capabilities," *Structural Change and Economic Dynamics*, 48, 2019: 53-68.
- Lazonick, William, "We stopped Pfizer's tax dodge, now let's end the buybacks," *Institute for New Economic Thinking Perspectives*, April 8, 2016 at

- <https://www.ineteconomics.org/perspectives/blog/we-stopped-pfizers-tax-dodge-now-lets-end-the-buybacks>.
- Lazonick, William, "What Apple Should Do with Its Massive Piles of Money," *Harvard Business Review*, October 20, 2014, at <https://hbr.org/2014/10/what-apple-should-do-with-its-massive-piles-of-money>.
- Lazonick, William, and Jang-Sup Shin, *Predatory Value Extraction: How the Looting of the Business Corporation Became the US Norm and How Sustainable Prosperity Can Be Restored*, Oxford University Press, 2020.
- Lazonick, William, and Ken Jacobson, "How stock buybacks undermine sustainable prosperity," *The American Prospect*, March 19, 2019, at <https://prospect.org/economy/stock-buybacks-undermine-sustainable-prosperity/>.
- Lazonick, William, and Mary O'Sullivan, "Maximizing Shareholder Value: A New Ideology for Corporate Governance," *Economy and Society*, 29, 1, 2000: 13-35, at <https://www.tandfonline.com/doi/abs/10.1080/030851400360541>.
- Lazonick, William, and Matt Hopkins "GM's Stock Buyback Is Bad for America and the Company," *Harvard Business Review*, March 11, 2015, at <https://hbr.org/2015/03/gms-stock-buyback-is-bad-for-america-and-the-company>.
- Lazonick, William, and Matt Hopkins, "Corporate executives are making way more money than anybody reports," *The Atlantic*, September 15, 2016, at <https://www.theatlantic.com/business/archive/2016/09/executives-making-way-more-than-reported/499850/>.
- Lazonick, William, and Matt Hopkins, "If the SEC Measured CEO Pay Packages Properly, They Would Look Even More Outrageous," *Harvard Business Review*, December 22, 2016, at <https://hbr.org/2016/12/if-the-sec-measured-ceo-pay-packages-properly-they-would-look-even-more-outrageous>.
- Lazonick, William, Mariana Mazzucato, and Öner Tulum, "Apple's Changing Business Model: What Should the World's Richest Company Do with All Those Profits," *Accounting Forum*, 37, 4, 2013: 249-267.
- Lazonick, William, Matt Hopkins, and Ken Jacobson "What We Learn About Inequality from Carl Icahn's \$2 Billion Apple 'No Brainer'," *Institute for New Economic Thinking Perspectives*, June 6, 2016, at <https://www.ineteconomics.org/perspectives/blog/what-we-learn-about-inequality-from-carl-icahns-2-billion-apple-no-brainer>.
- Lazonick, William, Matt Hopkins, Ken Jacobson, Lenore Palladino, Mustafa Erdem Sakinç, and Öner Tulum, "4 Ways to Eradicate the Corporate Disease That Is Working the Covid-19 Pandemic," *Institute for New Economic Thinking Perspectives*, March 23, 2020, at <https://www.ineteconomics.org/perspectives/blog/4-ways-to-eradicate-the-corporate-disease-that-is-worsening-the-covid-19-pandemic>.
- Lazonick, William, Mustafa Erdem Sakinç, and Matt Hopkins "Why Stock Buybacks Are Dangerous for the Economy," *Harvard Business Review*, January 7, 2020, at <https://hbr.org/2020/01/why-stock-buybacks-are-dangerous-for-the-economy?ab=hero-subleft-2>.
- Lazonick, William, Öner Tulum, Matt Hopkins, Mustafa Erdem Sakinç, and Ken Jacobson, "Financialization of the U.S. Pharmaceutical Industry," *Institute for New Economic Thinking Perspectives*, December 2, 2019, at <https://www.ineteconomics.org/perspectives/blog/financialization-us-pharma-industry>.

- Lazonick, William, Philip Moss, and Joshua Weitz, "How the Disappearance of Unionized Jobs Obliterated an Emergent Black Middle Class," Institute for New Economic Thinking Working Paper 125, June 2020, at <https://www.ineteconomics.org/research/research-papers/how-the-disappearance-of-unionized-jobs-obiterated-an-emergent-black-middle-class>.
- Lazonick, William, Philip Moss, and Joshua Weitz, "There Can Be No Equality Without a Dramatic Renewal of Employment Opportunity for All American Workers," *Institute for New Economic Thinking Perspectives*, July 16, 2020, at <https://www.ineteconomics.org/perspectives/blog/there-can-be-no-equality-without-a-dramatic-renewal-of-employment-opportunity-for-all-american-workers>.
- Lazonick, William, Philip Moss, and Joshua Weitz, *Fifty Years After: Black Employment in the United States Under the Equal Employment Opportunity Commission*, Institute for New Economic Thinking, 2020 (forthcoming).
- Ledley, Fred, Ekaterina Cleary, Zoë Folchman-Wagner, and Matthew Jackson, "Big Pharma Wants to Pocket the Profits from a COVID Treatment You Already Paid For," *Institute for New Economic Thinking Perspectives*, July 7, 2020, at <https://www.ineteconomics.org/perspectives/blog/big-pharma-covid-profits>.
- Lee, Michelle Ye Hee, John Wagner, and Teo Armus, "Sen. Richard Burr, head of powerful committee, sold large amount of stocks before sharp declines in market," *Washington Post*, March 20, 2020.
- Letter from James Lee, FDA, to Colleen Witt, Respiroics, announcing 510k approval (510k no. K181166) for the Trilogy Universal Ventilatory, July 18, 2019, at, https://www.accessdata.fda.gov/cdrh_docs/pdf18/K181166.pdf.
- Levin, Peter, Eric Gebbie, and Kristine Qureshi, "Can the Health-Care System Meet the Challenge of Pandemic Flu? Planning, Ethical, and Workforce Considerations," *Public Health Reports*, 122, 5, 2007: 573-578, at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1936949/>.
- Liken. Liken to assume Vice Chairman role," *PR Newswire*, October 2, 2003.
- Linsey McGoey, *No Such Things as a Free Gift: The Gates Foundation and the Price of Philanthropy*, Verso, 2016.
- Lutz, Eric, "Trump and Tillerson feud over who is 'dumber than a rock': Why not both?" *Vanity Fair*, May 23, 2019, at <https://www.vanityfair.com/news/2019/05/trump-tillerson-feud-over-who-is-dumber-than-a-rock>.
- Mak, Tim, "Weeks before virus panic, intelligence chairman privately raised alarm, sold stocks," *NPR*, March 19, 2020, at <https://www.npr.org/2020/03/19/818192535/burr-recording-sparks-questions-about-private-comments-on-covid-19>
- Mann, Brian, "Doctors and dentists still flooding the .S. with opioid prescriptions," *NPR*, July 17, 2020, at <https://www.npr.org/2020/07/17/887590699/doctors-and-dentists-still-flooding-u-s-with-opioid-prescriptions>.
- McKay, Jim, "Seeking change, Respiroics chose entrepreneur of new CEO," *Pittsburgh Post-Gazette*, August 20, 1999.
- McKinley, Jesse, and Shane Goldmacher, "How Cuomo, once on sidelines, became the politician of the moment," *New York Times*, March 24, 2020, at <https://www.nytimes.com/2020/03/24/nyregion/governor-andrew-cuomo-coronavirus.html>.
- Meckler, Laura, and Cory Boies, "Senate rejects attempt to end oil subsidies," *Wall Street Journal*, March 29, 2012.
- Mencimer, Stephanie, "Jared Kushner had one job: Solve America's supply crisis. He helped private companies instead." *Mother Jones*, May 20, 2020, at

- <https://www.motherjones.com/politics/2020/05/jared-kushner-had-one-job-solve-americas-supply-crisis-he-helped-private-companies-instead/>.
- Micah Maidenbergl, “Fewer products, localized production—companies seek supply-chain solutions,” *Wall Street Journal*, April 26, 2020, at <https://www.wsj.com/articles/coronavirus-disrupted-supply-chains-that-companies-are-still-fixing-11587893401>.
- Mickle, Tripp, and Yoko Kubota, “Time Cook and Apple bet everything on China. Then the coronavirus hit,” *Wall Street Journal*, March 3, 2020, at <https://www.wsj.com/articles/tim-cook-and-apple-bet-everything-on-china-then-coronavirus-hit-11583172087?mod=searchresults&page=1&pos=4>.
- Newmarker, Chris, “Honeywell, 3M to ramp up N95 face masks production,” *Mass Device*, March 23, 2020, at https://www.washingtonpost.com/politics/inside-americas-mask-crunch-a-slow-government-reaction-and-an-industry-wary-of-liability/2020/04/02/b3155e2a-6f85-11ea-aa80-c2470c6b2034_story.html.
- Obituary, “Elizabeth (Liz) Ann Sanborn,” *Los Angeles Times*, July 28, 2011, at <https://www.latimes.com/socal/daily-pilot/news/tn-dpt-sanborn-20110728-story.html>.
- Odets, Walt, “Ronald Reagan presided over 89,343 deaths to AIDS and did nothing,” *Literary Hub*, July 22, 2019, at <https://lithub.com/ronald-reagan-presided-over-89343-deaths-to-aids-and-did-nothing/>.
- Office of Budget, National Institutes of Health, at <https://officeofbudget.od.nih.gov/>.
- Olenick, Michael, “Shareholder Value Theory: Milton Friedman Redux,” *Innowiki*, December 28, 2019, at <https://innowiki.org/2019/12/28/shareholder-value-theory-milton-friedman-redux/>.
- Olson, Bradley, “Q&A: What to know about Rex Tillerson’s ties to Russia,” *Wall Street Journal*, January 11, 2017, at <https://www.wsj.com/articles/q-a-what-to-know-about-rex-tillersons-ties-to-russia-1484130604>.
- Ordoñez, Franco, “N.C. Sen. Burr defends ‘no’ vote on insider trading act,” *McClatchy*, February 7, 2012, at <https://www.mcclatchydc.com/news/politics-government/article24723682.html>.
- Oyedele, Akin, “If you want to work in Berkshire Hathaway’s Omaha office, start looking for another job,” *Business Insider*, February 27, 2016, at <https://www.businessinsider.com/berkshire-hathaway-omaha-office-staff-2016-2>.
- Palladino, Lenore, “Do corporate insiders use stock buybacks for personal gain?” *International Review of Applied Economics*, 34, 2, 2020: 153-174, at <https://www.tandfonline.com/doi/abs/10.1080/02692171.2019.1707787>.
- Palladino, Lenore, “The \$1 Trillion Question: New Approaches to Regulating Stock Buybacks,” *Yale Journal of Regulation*, 36, 2018: 89-105, at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3274357.
- Patnaik, Subrat, “ExxonMobil, Tillerson agree to cut all ties,” *Reuters*, January 3, 2017. <https://www.reuters.com/article/exxon-mobil-tillerson/exxon-mobil-tillerson-agree-to-cut-all-ties-idINKBN14O09J>.
- Peterson-Withorn, Chase, “What you need to know about commerce secretary pick Wilbur Ross, Trump’s billionaire pal,” *Forbes*, November 20, 2016, at <https://www.forbes.com/sites/chasewithorn/2016/11/29/what-you-need-to-know-about-likely-commerce-secretary-wilbur-ross-trumps-billionaire-pal/#47c54af31213>.
- Pizzi, Richard, “HHS funds ventilators for public health emergencies,” *HealthcareITNews*, September 23, 2014, at <https://www.healthcareitnews.com/news/hhs-funds-ventilators-public-health-emergencies>.

- Pradhan, Rachana, “White House left states on their own to buy ventilators. Inside their mad scramble,” *Kaiser Health News*, June 15, 2020, at <https://khn.org/news/white-house-left-states-on-their-own-to-buy-ventilators-inside-their-mad-scramble/>.
- Quarterly Form 13F-HR, *D. E. Shaw & Co*, CIK# 0001009207, EDGAR, Securities Exchange Commission, at <https://www.sec.gov/cgi-bin/browse-edgar?CIK=0001009207&owner=exclude&action=getcompany&Find=Search>.
- Ramsay, John, Investors Exchange LLC, letter to Brent J. Fields, Securities Exchange Commission, March 27, 2018, at <https://www.sec.gov/rules/petitions/2018/petn4-722.pdf>.
- Reed, Vita, “Newport Medical sees local, global growth with ventilators,” *Orange County Business Journal*, May 8, 2011, at <https://www.ocbj.com/news/2011/may/08/newport-medical-sees-local-global-growth-ventilato/>.
- Sammon Alexander, “It’s Steve Mnuchin’s economy now,” *The American Prospect*, April 1, 2020, at <https://prospect.org/economy/its-steve-mnuchins-economy-now-coronavirus-bailout/>.
- Sanger, David E., Zolan Kanno-Youngs and Nicholas Kulish, “A ventilator stockpile, with one hitch: Thousands do not work,” *New York Times*, April 1, 2020, at <https://www.nytimes.com/2020/04/01/us/politics/coronavirus-ventilators.html>.
- Schnirring, Lisa, “Sebelius lauds pandemic partnerships,” *Center for Infectious Disease Research and Policy, University of Minnesota*, February 17, 2010, at <https://www.cidrap.umn.edu/news-perspective/2010/02/sebelius-lauds-pandemic-partnerships>.
- Schumpeter, Joseph A., *The Theory of Economic Development*, Harvard University Press, 1934 (first published in German in 1911).
- Schwartz. Donald, “Proxy Power and Social Goals--How Campaign GM Succeeded,” *St. John’s Law Review*, 45, 4, 1971: 764-771, at https://scholarship.law.stjohns.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&http_sredir=1&article=3327&context=lawreview.
- Schwartz, Lyn Alden, “First liquidity, then solvency,” *Seeking Alpha*, May 19, 2020, at <https://seekingalpha.com/article/4348831-first-liquidity-solvency>.
- Serkez, Yaryna, “Who Is most likely to die from the coronavirus?” *New York Times*, June 4, 2020, at <https://www.nytimes.com/interactive/2020/06/04/opinion/coronavirus-health-race-inequality.html?referringSource=articleShare>.
- Sharma, Rakesh, “Medtronic avoids U.S. taxes while saddling shareholders with a hefty tax bill,” *TheStreet*, January 28, 2015, at <https://www.thestreet.com/investing/medtronic-avoids-us-taxes-while-saddling-shareholders-with-a-hefty-tax-bill-13024863>.
- Squawk Alley, “Buffett: Stocks driven by companies reinvesting,” *CNBC*, August 30, 2018, at <https://www.cnn.com/video/2018/08/30/buffet-stocks-driven-by-companies-reinvesting.html>.
- Steen, Michael, “Philips buys Respironics for 3.6bn.,” *Financial Times*, December 21, 2007.
- Steen, Michael, “Philips in 5bn share buy-back,” *Financial Times*, December 19, 2007.
- Stewart, Emily, “The economy is in free fall. So why isn’t the stock market?” *Vox*, May 6, 2020, at <https://www.vox.com/covid-19-coronavirus-economy-recession-stock-market/2020/5/6/21248069/stock-market-economy-federal-reserve-jerome-powell>.
- Strickler, Laura, “Massive drug companies pursuing \$50 billion deal to avoid opioid trial,” *NBC News*, October 16, 2019, at <https://www.nbcnews.com/health/health-news/three-major-drug-distributors-talks-settle-opioid-claims-18-billion-n1067311>.
- Swaine, Jon, “Federal government spent millions to ramp up mask readiness, but that isn’t helping now,” *Washington Post*, April 3, 2020, at <https://www.washingtonpost.com/investigations/federal-government-spent-millions-to-ramp-up-mask-readiness-but-that-isnt-helping-now/>.

- [up-mask-readiness-but-that-isnt-helping-now/2020/04/03/d62dda5c-74fa-11ea-a9bd-9f8b593300d0_story.html](https://www.reuters.com/article/us-philips-buyback/philips-plans-7-2-billion-share-buyback-idUSWEB095020071219).
- ten Wolde, Harro, "Philips plans \$7.2 billion share buyback," *Reuters*, December 19, 2007, at <https://www.reuters.com/article/us-philips-buyback/philips-plans-7-2-billion-share-buyback-idUSWEB095020071219>.
- The Editors, "The new swine flu," *New York Times*, April 27, 2009, at <https://www.nytimes.com/2009/04/28/opinion/28tue1.html>.
- tkb Group, "at <https://www.tokibo.co.jp/tokibo-en>.
- Toosi, Nahal, "Tillerson scales back State Department restructuring plan," *Politico*, February 7, 2018, at <https://www.politico.com/story/2018/02/07/tillerson-state-department-restructuring-downsizing-397612>.
- Tulum, Öner, and William Lazonick, "Financialized Corporations in a National Innovation System: The US Pharmaceutical Industry," *International Journal of Political Economy*, 47, 3-4, 2018: 281-316.
- Tulum, Öner, Innovation and Financialization in the US Biopharmaceutical Industry, doctoral dissertation, Faculty of Economics, University of Ljubljana, June 2018.
- U.S. Centers for Disease Control and Prevention, "2009 N1N1 Pandemic (H1N1pdm09 virus)," Centers for Disease Control and Prevention, at <https://www.cdc.gov/flu/pandemic-resources/2009-h1n1-pandemic.html>.
- U.S. Centers for Disease Control and Prevention, "Severe Acute Respiratory Syndrome (SARS)," *Centers for Disease Control and Prevention*, December 6, 2017, at <https://www.cdc.gov/sars/index.html>.
- U.S. Department of Health and Human Services "HHS Announces New Ventilator Contracts, Orders Now Totaling Over 130,000 Ventilators," HHS Press Release, April 13, 2020, at <https://www.hhs.gov/about/news/2020/04/13/hhs-announces-new-ventilator-contracts-orders-now-totaling-over-130000-ventilators.html>.
- U.S. Department of Health and Human Services, "HHS Announces Ventilator Contract with GM under Defense Production Act," HHS Press Release, April 8, 2020, at <https://www.hhs.gov/about/news/2020/04/16/hhs-announces-ventilator-contract-with-gm-under-defense-production-act.html>.
- U.S. Department of Health and Human Services, "HHS Announces Ventilator Contract with Philips under Defense Production Act," HHS Press Release, April 8, 2020, at <https://www.hhs.gov/about/news/2020/04/08/hhs-announces-ventilator-contract-with-philips-under-defense-production-act.html>.
- U.S. Department of Health and Human Services, "HHS Announces Ventilator Contract with GE Under Defense Production Act," HHS Press Release, April 16, 2020, at <https://www.hhs.gov/about/news/2020/04/16/hhs-announces-ventilator-contract-with-ge-under-defense-production-act.html>.
- U.S. Department of Health and Human Services, "HHS Deputy Secretary Alex Azar joins Governor Sebelius at Kansas planning pandemic summit," *PR Newswire*, May 31, 2006.
- U.S. Department of Health and Human Services, "HHS Pandemic Influenza Plan," *Department of Health & Human Services*, November 2005, at <https://www.cdc.gov/flu/pandemic-resources/pdf/hhspandemicinfluenzaplan.pdf>.
- U.S. Department of Health and Human Services, "HHS Secretary statement on World AIDS Day," *U.S. Newswire*, December 1, 1997.

- U.S. Department of Health and Human Services, “National Health Security Strategy of the United States of America,” Department of Health & Human Services, December 2009, at <https://www.phe.gov/Preparedness/planning/authority/nhss/Documents/nhss0912.pdf>.
- U.S. Department of Health and Human Services, “Pandemic and All Hazards Preparedness Act,” *Department of Health & Human Services*, at <https://www.phe.gov/Preparedness/legal/pahpa/Pages/default.aspx>.
- U.S. Department of Homeland Security, “History,” *Department of Homeland Security*, at <https://www.dhs.gov/history>.
- U.S. Homeland Security Council, “National Strategy for Pandemic Influenza,” *The White House*, November 2005, at <https://www.cdc.gov/flu/pandemic-resources/pdf/pandemic-influenza-strategy-2005.pdf>.
- U.S. Homeland Security Council, “National Strategy for Pandemic Influenza: Implementation Plan,” *The White House*, May 2006, at <https://www.cdc.gov/flu/pandemic-resources/pdf/pandemic-influenza-implementation.pdf>.
- U.S. National Governors Association, “Preparing for a Pandemic Influenza: A Primer for Governors and Senior State Officials,” *National Governors Association Center for best Practices*, June 2006, at <https://www.nga.org/wp-content/uploads/2020/02/Pandemic-Influenza-Primer.pdf>.
- U.S. White House, “President delivers State of the Union address,” *The White House*, January 29, 2002, at <https://georgewbush-whitehouse.archives.gov/news/releases/2002/01/20020129-11.html>
- U.S. White House, Project BioShield: Progress in the war on terror,” *The White House*, July 21, 2004, at <https://georgewbush-whitehouse.archives.gov/infocus/bioshield/index.html>.
- Voyles Pulver, Dinah, and Erin Mansfield, “Rare look at stockpile handouts shows which states got ventilators, masks amid coronavirus,” *USA Today*, April 10, 2020 at <https://www.usatoday.com/story/news/investigations/2020/04/10/rare-look-stockpile-shows-which-states-got-supplies-amid-covid/5126900002/>.
- Wallack, Todd, “Covidien plans to incorporate in Ireland, exit Bermuda Mansfield firm says move will help growth,” *Boston Globe*, December 24, 2008.
- Wan, William, “America is running short on masks, gowns, and gloves. Again.” *Washington Post*, July 8, 2020, at <https://www.washingtonpost.com/health/2020/07/08/ppe-shortage-masks-gloves-gowns/>.
- Warmbrodt, Zachary, “Mnuchin secrecy on bailout sparks rift with Congress,” *Politico*, June 12, 2020, at <https://www.politico.com/news/2020/06/12/mnuchin-secrecy-bailout-rift-congress-315940>.
- Webster, Katherine, “Tyco to pay \$3 billion to settle shareholders’ lawsuit,” *Insurance Journal*, May 17, 2007, at <https://www.insurancejournal.com/news/national/2007/05/17/79793.htm>.
- Webster, R. G., Y. Guan, L. Poon, S. Krauss, R. Webby, E. Govorkovai, and M. Peiris, “The Spread of the H5N1 Bird Flu Epidemic in Asia in 2004,” in C. J. Peter and Charles H. Calisher, eds., *Infectious Diseases from Nature: Mechanisms of Viral Emergence and Persistence*, SpringerLink, 20: 117-129, at https://link.springer.com/chapter/10.1007/3-211-29981-5_10.
- Weiner, Rachel, William Wan, and Abigail Hauslohner, “Long delays in getting test results hobble coronavirus response,” *Washington Post*, July 12, 2020, at https://www.washingtonpost.com/health/long-delays-in-getting-test-results-hobble-coronavirus-response/2020/07/12/d32f7fa8-c1fe-11ea-b4f6-cb39cd8940fb_story.html.

- Whalen, Jeanne, “Medtronic gets big cut in repatriation taxes after move to Ireland,” *MarketWatch*, September 28, 2015, at <https://www.marketwatch.com/story/medtronic-gets-big-cut-in-repatriation-taxes-after-move-to-ireland-2015-09-28>.
- Whalen, Jeanne, Rosalind S. Helderman, and Tom Hamburger, “Inside America’s mask crunch: A slow government reaction and an industry wary of liability,” *Washington Post*, April 2 2020, at https://www.washingtonpost.com/politics/inside-americas-mask-crunch-a-slow-government-reaction-and-an-industry-wary-of-liability/2020/04/02/b3155e2a-6f85-11ea-aa80-c2470c6b2034_story.html.
- Wolff, Edward, “Household Wealth Trends in the United States, 1962 to 2016: Has Middle Class Wealth Recovered?” National Bureau of Economic Research Working Paper No. 24985, November 2017, at <https://www.nber.org/papers/w24085.pdf>.
- World Health Organization, “Experimental therapies: growing interest in the use of whole blood or plasma from recovered Ebola patients (convalescent therapies),” *World Health Organization*, September 26, 2014, at <https://www.who.int/mediacentre/news/ebola/26-september-2014/en/>.
- Yglesias, Matthew, “Elizabeth Warren has a plan to save capitalism,” *Vox*, August 15, 2018, at <https://www.vox.com/2018/8/15/17683022/elizabeth-warren-accountable-capitalism-corporations>.