



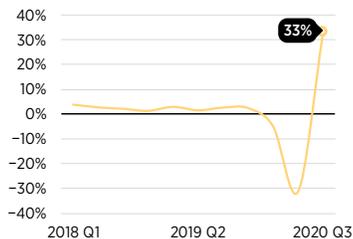
THE ECONOMIC SITUATION

December 2020

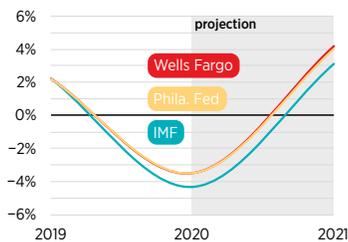
Bruce Yandle

KEY ECONOMIC STATISTICS

Current Quarterly GDP Growth



Projected Annual GDP Growth



Daily Gold Spot Price (1/1/2020–11/30/2020)



The arrival of December often signals a time of reckoning.¹ This December, it could be a time to take a hard look at the closing year's activity, consider key events and issues, and offer thoughts on the prospects for the year ahead. Writing that sentence is easy, though; following through is challenging. Indeed, the year now ending, beset as it was and is by the devastating coronavirus that turned the tables on the economy and an extremely contentious presidential election, defies any straightforward summary.

The year 2020 was a roller-coaster year, and the ride has not ended. The year began at a time of relative strength. Although owing to trade wars and low growth in productivity and the size of the labor force, GDP growth was weakening as 2019 was closing. Even so, the national 3.5 percent unemployment rate for December 2019 defined a post-1953 low point. Household income growth, too, had hit new high ground.² Indeed, across a five-year period ending in 2019, record-breaking growth occurred in median household income for Americans generally and for each of the nation's major demographic groups.³ I offer more on this later.

But then, as the coronavirus pandemic expanded worldwide, the shutdowns came, life was disrupted, millions were taken ill in the United States, and hundreds of thousands died. Global GDP growth collapsed. Along the way, as the US 2020 economic tally was taken, first-quarter GDP, which was just beginning to show coronavirus effects, came in with a negative annual growth rate of 5 percent. Setting a new loss record, second-quarter growth fell at an annual rate of 31.4 percent. Then, with massive federal transfers of more than \$4 trillion underway and with the market economy naturally rebuilding itself, the roller-coaster economy zoomed the other way.

The first estimate for 2020's third quarter, which arrived on October 29, showed GDP growth accelerating at an annual rate of 33.1 per-

cent.⁴ According to the Bureau of Economic Analysis (BEA), consumer spending—boosted by the vast number of dollar transfers provided by federal programs—was the growth driver. Meanwhile, the coronavirus surged. Along with all this, America voted in November to determine who would occupy the White House for the next four years. President-elect Joe Biden won the battle, by most counts, and is now preparing to assume the mantle in January. But as I write, there are still suits challenging the election results brought by President Donald Trump waiting to be settled. Meanwhile, Biden is moving forward with his transition.

In the remaining sections of this report, I focus next on the current overall picture and the prospects now emerging for inflation. The section explains the implications for the future economy. After that section, I turn to trade, the Trump White House's efforts to control the economy, and the prospects now for opening the trade gates wider. The section ends with a discussion of US export growth and what might happen there.

The next section looks more closely at 2019's previously mentioned amazing growth record for median household income, considers the policies that may have contributed to that record, and then speaks to new growth prospects and a fundamental human motivation that helps to bring stronger economic performance. Yes, the section ends with a discussion of *The Little Engine That Could*. Once again, the report places a spotlight on a state or territory. Here we look closely at Puerto Rico and assess the island economy's situation and prospects. Finally, the report ends with Yandle's Reading Table and two book reviews.

THE ECONOMY AND INFLATION

The recent mostly happy news from the BEA about the third quarter's rocketing 33.1 percent annualized

GDP growth is surely something to cheer about.⁵ It certainly was for President Trump—before the election, at least—who saw the good news as evidence that his economic guidance is working, and that his reelection prospects might be brightened.⁶ However, former Vice President Biden saw things differently. He felt that the numbers disguised future low growth unless, of course, he was given the opportunity to guide the ship of state. Now, with his hand ready to take the helm, President-elect Biden and his team may have to deal with an inflation bug. Before I get into that, though, I'll look again at the GDP report's sunnier side.

According to the BEA, consumer spending was the growth driver in the third quarter. Construction activity, especially home building, was also moving with a full head of steam, and manufacturing was on the rise, though struggling to keep supply chains moving. Encouragingly, some measures of consumer confidence continued to stay in the green.⁷ Although not large enough to offset the combined negative numbers from the first and second quarters, the third quarter's recovery was substantial. Even so, on the basis of this first estimate, the economy was still 3.5 percent smaller than it was at the end of 2019.⁸ The latest employment data confirm that in spite of the quarterly gains, America has a slowing economy. There were 245,000 jobs gained in November, and that number reflects the sixth consecutive month with lower gains reported.⁹

What about Inflation?

What about that inflation bug? The BEA-maintained personal consumption expenditure (PCE) price index shot skyward in the third quarter, rising 3.7 percent, compared to a decrease of 1.6 percent in 2020's second quarter. Where I come from, that's called inflation!

Generally speaking, when the price level for goods and services increases, one should expect to see interest rates rise too. Lenders are savvy; they want to be compensated for lost dollar purchasing power when borrowers pay off their loans. Right on cue, on October 29, when the BEA provided the rocketing GDP growth announcement, the yield on the 10-year Treasury note moved north.¹⁰

Does this mean inflation is on the way? Is there other evidence to consider? Along with the inflation–interest rate relationship, economists keep an eye on the interest rate yield curve, a graphical portrayal of Treasury yields from the shortest to the longest maturity. When the gap between the 10-year Treasury note and the short-term, 91-day Treasury bill widens, the yield curve becomes steeper, and inflation becomes more likely. In recent months, the spread between short-term and long-term debt has been rising.¹¹

In a search for evidence of inflation expectations, we might look in one more place: What is happening to the price of gold? Investors in precious metals earn no interest but hope for rising metal prices. Rising interest rates make it costlier to hold gold and other precious metals. When the BEA posted its GDP announcement, the price of gold headed south.¹²

What I am describing here are blips on an economist’s computer screen, which together make a case for rising inflation. More evidence is

necessary before we make it a firm expectation for 2021, but we must still be a bit concerned. Rising inflation means rising interest rates, and rising interest rates place a heavy burden on countries that engage in huge deficit-finance episodes, of which America is.

Will the Election Affect 2021 GDP Growth?

As the election was underway, I was asked what difference in 2021 GDP growth might one expect depending on who wins the presidential election. My answer was straightforward: expect no difference; barring outbreak of war, famine, and surging pestilence, the cookies for 2021 are already in the oven.

So, what are national forecasters saying for the year ahead and beyond? In table 1, I provide real GDP growth forecasts from the *Wall Street Journal* panel of economists, from the Federal Reserve Bank of Philadelphia, and from Wells Fargo. These are for the fourth quarter of 2020 and for the years 2020, 2021, and 2022. Keep in mind that, to my knowledge, none of these forecasts explicitly takes account of the timing for the distribution of a virus vaccine or the probability of another extensive economic shutdown that would sharply affect GDP growth. I take the numbers for what they are, the best estimates the various parties could make given their current knowledge.

Table 1. Real GDP Growth Estimates (Percentage)				
	Q4 2020	2020 (AVERAGE)	2021 (AVERAGE)	2021 (AVERAGE)
Philadelphia Fed	4.0	-3.5	4.0	3.0
<i>Wall Street Journal</i>	4.0	-2.6	3.4	2.3
Wells Fargo	2.8	-3.5	4.2	2.8

Sources: “Fourth Quarter 2020 Survey of Professional Forecasters,” Federal Reserve Bank of Philadelphia, November 16, 2020, <https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/spf-q4-2020>; “Economic Forecasting Survey,” *Wall Street Journal*, November 1, 2020, <https://www.wsj.com/graphics/econsurvey/>; Wells Fargo, *Weekly Economic and Financial Commentary*, December 4, 2020, <https://www08.wellsfargomedia.com/assets/pdf/commercial/insights/economics/weekly-commentary/weekly-20201204.pdf>.

GATEKEEPER CAPITALISM AND TRADE LIBERALIZATION

The Trump administration's September decision to remove a 10 percent tariff imposed in August on Canadian-produced aluminum—one put in place in spite of the then-just-completed United States-Canada-Mexico Agreement—may have been the result of election-year politicking, fear of Canada's threat to retaliate, or maybe, just maybe, momentary recognition that freedom to trade is more important than tariff revenues collected from the Americans who either directly or indirectly purchase aluminum products.¹³ Revisiting the decision provides an opportunity to consider the prospects for trade liberalization—domestic and international—which, should it occur, would mean a reversal of Trump administration trade policies that have prevailed since 2016.

The decision, announced in Washington and Ottawa, came with a caveat that the relaxation could be temporary and that the United States would monitor shipments and, if surges are detected, could reimpose the tariff. Canada advised that it would be watching too and that if the Americans again raised tariffs, it would retaliate.¹⁴

Trump's Gatekeeper Conceit

President Trump has engaged in gatekeeper capitalism through his entire term in office, embracing the notion that the White House holds the keys to the US economy and can marshal enough information to actually manage this massive economy from a Washington, DC, conference room. In 2016, the White House engaged in a failed campaign to impose border taxes to fund the US-Mexico border wall. The administration then pushed for and obtained tariffs on aluminum, steel, dairy products, timber, and a host of consumer goods. However, the gatekeeper notion extends beyond trade.

Whether mandating the sale of TikTok, strong-arming US manufacturers to produce ventilators that are then distributed by White House staff and not the market or further limiting the number of H-1B visas that can be issued to highly trained foreign individuals recruited by US firms in their efforts to expand production and create wealth, President Trump apparently believes that White House-assembled wisdom is superior to what is generated by the multitudes who together comprise the market process.

Regardless of a president's IQ and the collective intelligence and experience of a remarkable White House assembly of specialists, it is impossible for decision makers to account for the responses of hundreds of millions of economic agents when tariffs and other regulations are imposed. Indeed, rewarding important industries in an effort to make America great can backfire.

For example, tariffs on Canadian-produced aluminum affect Pittsburgh-based aluminum producer Alcoa's supply chain, which draws on products made in its own Canadian operation before being exported to US plants for final completion.¹⁵ Efforts to restrict the flow to US firms of highly educated foreign engineers and scientists, presumably as a payoff to US workers who want the same jobs, can simply lead to expansions of just-across-the-border high-tech Canadian firms that gladly accept the United States' gesture.¹⁶ Indeed, when faced with visa limitations, Washington-based Microsoft simply adds workers at its Vancouver operation. By doing so, Canada prospers, and the US economy loses.

Politicians in power positions are understandably tempted to become gatekeepers to America's marvelous economy. It is then that they become what Adam Smith calls "men of system," which is another way of saying that they see themselves as social engineers who can outguess the market:

The man of system, on the contrary, is apt to be very wise in his own conceit; and is often so enamored with the supposed beauty of his own ideal plan of government, that he cannot suffer the smallest deviation from any part of it. He goes on to establish it completely and in all its parts, without any regard either to the great interests, or to the strong prejudices which may oppose it.

He seems to imagine that he can arrange the different members of a great society with as much ease as the hand arranges the different pieces upon a chess-board. He does not consider that the pieces upon the chess-board have no other principle of motion besides that which the hand impresses upon them; but that, in the great chess-board of human society, every single piece has a principle of motion of its own, altogether different from that which the legislature might choose to impress upon it.¹⁷

Smith's warning applies to would-be legislative gatekeepers but applies equally well to presidents and their administrations. But having said this, what are the prospects that America's sitting president would walk away from protectionism and move in the direction of free markets? After all, the protectionism America is witnessing came about as a result of Trump campaign promises that were made to owners and employees of import-sensitive industries. President-elect Biden seems to be similarly inclined.

When 3,500 US Firms Call for Tariff Relief, Will the Next President Say Yes?

In late September, 3,500 US firms brought suit in the US Court of International Trade, seeking an end to the Trump administration's major tariffs on US imports from China.¹⁸ The move was

welcomed by those who support the pursuit of happiness through trade. Representing a diverse array of consumer goods producers and sellers (e.g., Ford Motor Company, Tesla, guitar manufacturers, Target, and Walgreens), the petitioners argue that the administration failed to justify the imposition of taxes (tariffs) on the basis of China's abuse of US intellectual property rights.

This argument implies that US consumers are being denied access to lower-priced goods in an effort to accomplish some other political goal.

Early in his 2015 campaign for the presidency, then-candidate Trump made high-profile promises to citizens of rust-belt states that, if elected, he would take steps to revitalize the generally decaying US steel industry, bring back manufacturing jobs to the former heavy-industry states, and even turn things around for US coal-producing states. Trump presented himself as being able to reverse the fortunes of blue-collar workers who still either hope for the return of their former good life or value a president who recognizes the importance of their former life.

Once in office, Trump attempted to make good on his promises by way of tariffs and other trade limitations. When faced with past challenges concerning his position as a gatekeeper who raises consumer prices by way of imposing tariffs, Trump pointed to the resulting billions of dollars of tariff-generated revenues that can be used to satisfy other citizen needs.¹⁹ But, as indicated by Federal Reserve data, owing to the flagging coronavirus economy and tariffs, US tariff revenues are now falling, not rising.²⁰ And while the annualized tariff flow of about \$58 billion is still above the 2017 pre-trade-war days, it remains the case that American consumers bear the burden of tariffs placed on goods that cross US borders to satisfy Americans' own demand. In that

sense, higher tariff revenues are an indirect measure of lost consumer well-being.

Setting aside discussion of the burden placed on ordinary Americans—partly in the name of assisting their blue-collar brethren in older industrialized states—what can one say about Trump’s promises? Did he deliver? Unfortunately for all concerned, including the 3,500 industry leaders who seek to escape the tariff burden, current data suggest that things have remained pretty much the way they were in steelmaking and coal-producing America. A recent *Reuters* summary indicates that “nationally, the U.S. steel industry has been shedding jobs for the past year—since before the economic turndown caused by the Covid-19 pandemic—and employs 1,900 fewer workers than when Trump took office.”²¹ The *Reuters* piece goes on to report that, according to researchers at the University of California, Davis, US manufacturing employment has fallen by 75,000 workers as a result of Trump-imposed tariffs on steel and aluminum and that, according to other reports, some 66 US coal producers have closed since 2016, bringing a 9 percent reduction in coal industry employment. The evidence suggests that the US industrial heartland has not been made better off by imposing tariffs or taxes on the rest of the nation in order to limit the consumption of foreign-made goods.

But what about the argument that the Chinese government has systematically abused the intellectual property rights of US firms, which choose to build manufacturing plants and in other ways operate on Chinese soil?²² Might it not still be desirable for the United States, as possible punishment, to put rocks in its harbors to keep out Chinese goods? Perhaps, but those investors are acting voluntarily, which suggests that in spite of the loss of secrets and patent protections, they believe that Chinese business arrangements are

still profitable. Otherwise, they would place their assets in friendlier or safer locations.

With Growing Opposition to Them, Why Do Tariffs Prevail?

If profit-maximizing firms continue to expand their Chinese operations even at the cost of losing control of intellectual property, and if tariffs generate higher prices paid by US consumers, and if 3,500 US firms are suing for tariff relief, then why might the next president continue to fight for the policy? Who could possibly benefit?

Consider that 2020 was an election year. US organized labor sees tariffs that protect certain jobs as a way to keep union wages higher than they would be otherwise. Thus, whereas Trump and his colleagues may say that they have been punishing China by raising US consumer prices, logic suggests that politicians are simply engaging in a time-honored effort to engage an always-contested group of voters.

Now one has President-elect Biden to consider. There are 3,500 American firms saying that they are opposed to tariffs, and maybe their blue- and white-collar workers will be better off if Biden reopens the gate to American prosperity. Biden, however, has made it clear that he will promote “buy American,” and will be tough on China, while also promising to reengage in multinational agreements.²³

Biden leaves no doubt in his position on organized labor. In his just-posted BuildBackBetter.com website, the president-elect indicates that he will push for legislation to make it easier for workers to organize and bargain collectively and that he will call for a union-backed \$15 national minimum wage. Biden also claims that he has a plan “to build a strong industrial base and [for] small-business-led supply chains to retain and create millions of good-paying union jobs in manufacturing and technology across

the country.”²⁴ That said, it is unclear how wide the gates to America will be allowed to reopen.

On November 9—a few days after the election, it should be noted—Germany began considering delaying retaliatory tariffs that were scheduled to take effect before the end of the year and is pushing the European Union to work to rekindle happier trade relationships with the United States.²⁵ Of course, trade is a two-way street. To get the world’s goods, America must export some of its own.

Selling More to the Rest of the World

So while the domestic economy is looking better and consumers are armed with an unusually large amount of cash—courtesy of the Coronavirus Aid, Relief, and Economic Security (CARES) Act, Paycheck Protection Program (PPP) loans, and other state and federal financial support—a complete return to solid pre-virus ground will require some help from the rest of the world.²⁶ In a word, US exports, like the overall economy, will have to claw their way out of the grave, and the prospects for that happening anytime soon are not very bright.

The problem to be faced here has two parts. First, US export growth reached a peak in the second quarter of 2018, well before the coronavirus pandemic, at about the time that the Trump administration tariffs began to hit the rest of the world. As expected, the rest of the world retaliated. Put another way, loss in world market activity was deliberate US policy. Addressing that part of the export loss requires a change in tariff policy, and that change requires revised White House thinking and time for the adjustment to take place. Export growth continued to head south after 2018 until the second part of the export problem hit, when the pandemic reduced world economic activity.

The US economy is now walking at a positive pace, but it is not trotting; much uncertainty

remains regarding both the progress of the virus and a vaccine. It will take better times in the rest of the world for the pace here to begin to feel more like normal times. And that is just one part of the GDP recovery puzzle that remains to be resolved. Other pieces of the recovery include actions taken in America that will reduce anxiety regarding full engagement with work, social life, and yes, having dinner with friends at a good restaurant.

2019, NEW LIFE IN THE CORONAVIRUS ECONOMY, AND THE LITTLE ENGINE THAT COULD

Sometimes, economic data are so good that the entire nation should pause, at least for a few minutes, and celebrate. This is clearly the case with the Census Bureau’s September 15, 2020, report on the 2019 US income growth for families and individuals.²⁷ Indeed, median income gains across the past five years are truly amazing. In fact, if one digs deeply into the report, and it’s worth a try, one finds that even income inequality fell a bit in 2019. What happened? Why the surging prosperity? And why aren’t the network commentators and keepers of the public conscience cheering the good news?

Yes, I know. That was 2019, and this is now, just 15 months later. Americans all understand, I guess, that more compelling news stories now leave little room to celebrate widespread prosperity. For some reason, bad news is far more interesting. After all, there’s the tragic coronavirus and constant reinterpretations of if and when some vaccine relief will arrive. It’s also an election year, with endless bitter criticism of opposing candidates and proposed policy positions. On top of all this there are horrible racial tensions in major cities, fires burning out of control in Western states, and hurricanes hitting the gulf coast.

The Right Kind of Nothing

But why the remarkable prosperity? Was it something government did? The Federal Reserve? Well, maybe. But the more compelling explanation for 2019's economic success has more to do with what government did not do. The fundamental explanation is just plain simple. Americans went back to work. Employment growth surged, the unemployment rate plummeted, and people created wealth the old-fashioned way: they earned it.

But didn't the government take meaningful actions to get all this going? Not really. The Trump administration decided to do less, not more. Instead of trotting out more command-and-control regulation to fortify the "national nanny" and direct economic activity, the Trump team cut back existing rules and issued hardly any new major ones. Instead of penalizing profit-making activity by raising the capital gains tax, the Trump led the way in cutting the tax. And instead of taking larger bites in taxes from wages and salaries, the Trump administration reduced the take.

Once again one learns that incentives matter. As though following Adam Smith's advice for sponsoring a simple system of liberty by having government provide defense, delivery of justice, and protection of property rights, all the while moving government to the side, the Trump administration did the right kind of nothing.

Of course, this is not the full report card, just an important part of it. The Trump team also thumbed its collective nose at Adam Smith's call for open borders, free trade, and easy movement of people. And, as discussed earlier, Trump himself seemed to enjoy playing gatekeeper capitalism by inserting Oval Office influence into corporate decision-making. But still, the 2019 economic record deserves meaningful recognition. One

should always celebrate these exceedingly rare times of thoroughgoing prosperity.

Shocking New Life Revealed in the Coronavirus Economy

When looking closer at the economy, one can be thankful that the economy is not simply being put back together exactly as it was. Countless never-say-die individuals and organizations are doing more than regluing the broken pieces of a fractured economic mosaic and hoping that Humpty Dumpty will function again. No, some are managing to repot themselves and their businesses in more promising fertile soil.

Evidence of this effort arrived in early October when the Department of Commerce released powerful new data on new business applications.²⁸ Eying the data is much like checking the lawn after broadcasting seed for winter grass to see if it is germinating. I am glad to say that a beautiful lawn may be part of the forecast. The most recent third-quarter 2020 data show applications reaching 1,566,000, a number substantially greater than the roughly 870,000 average for the previous four quarters and unlike anything seen in recent years.²⁹ No doubt about it, those September seeds have germinated.

But what might be driving this sudden birth of entrepreneurship? Does it have anything to do with the pandemic?

Unfortunately, the data do not say what may be motivating the new birth activity. That said, introspection and common sense may help. One knows that the coronavirus has redefined the timing and location of work. Millions of people who previously "went to work" every day are now stationed at home or in alternate workspaces. Along these lines, it could well be the case that children in the future will not ask, "When will Mommy be

home from work?” For many families, the question will no longer make sense.

The commonsense story goes like this: once having gotten off the commuting treadmill and organized workspace at home, some newly deployed workers have decided to contract with their former employers and with others as well. They decide to open businesses or to become a one-person firm. It may have been a part of background discussions for a long time. The virus’s shattering of Americans’ work habits may have fueled a fire that was already burning at a low level.

But then there’s another story, perhaps an accommodating one. The coronavirus caused the Small Business Administration (SBA) to create the PPP. With congressional funding, the PPP, from mid-April through August 8, 2020, made 5.2 million loans to operators of small businesses (and others) for a total of \$525 billion through 5,460 lenders.³⁰ Using high-speed, quick-approval lending procedures and under considerable political pressure to move the money, the SBA completed the loans in record time. As a result, some allege that the lending process was ripe for fraud and the quick formation of “small firms” to qualify for loans.³¹ On November 8, the *Wall Street Journal* reported that the SBA inspector general’s office said that there were “strong indicators of widespread potential abuse and fraud in the PPP.”³²

Aside from this very troubling darker story, the high level of new business startups suggests there is something special about America’s highly decentralized market economy. When disciplined by competitive lending activities undertaken by unsubsidized private lenders, this feature of America’s economy means that when hit by a severe shock—like it has faced in 2020—the economy doesn’t shatter like a stained-glass window might and then have to be reassembled in order

to function again. Instead, the market economy stumbles, absorbs the blows, readjusts, changes shape, and evolves in a new form. In many cases, workers must make very painful adjustments. However, when the lending process becomes part of an emergency government action intended to ease economic pain and hardship, the market economy, while still responding, can lead to a misallocation of resources that, in the long run, will be harmful to economic performance.

The Little Engine That Could Meets Coronavirus Tribulations

“What ideas and strategies do you suggest to assist small local businesses navigate through the economic strain of COVID reality?” The question stood at the top of a list assembled by my host during a recent Zoom-delivered economic outlook presentation to a Rotary club.

In my remarks, I talked about the coronavirus economy and how the pattern of economic activity was being driven by the vagaries of the virus itself. Coining the phrase “eddy-current economy,” I suggested that GDP growth seemed caught in a pattern of uncertainty, making it hard to determine if the economic tide was rising or falling. On the basis of my review of data that day, the bottom line suggested that one would see the end of this long recession around 2021’s second quarter.

Somehow it was easier for me to talk about employment growth, the surprisingly accelerating US construction sector, the still-serious challenges faced by the airline industry, and the almost-underwater condition of the accommodations sector than it was to offer up practical advice to small business owners who are struggling with costs that won’t go down and revenues that refuse to go up. After all, GDP, employment, and market analysis are an economist’s stock in trade.

But there the question stood, at the top of the audience-assembled list. It would not go away. I had asked for the questions, and I promised that I would address each one.

Reaching back to the previous century, when I was in the industrial machinery business, I told the Rotary members that in my 15-year experience in the 1950s and 1960s, my firm experienced its share of ups and downs too. Although the firm weathered some serious recessions, I had seen nothing like the virus. Back in those days, when told that a recession was on the way, I would try to respond by saying that given the choice, the business would not participate, that its competitors would have to face the tougher times alone.

Here's what I mean by that: experiencing a recession is to some degree a matter of choice, especially for small firms that can adapt quickly. Instead of going with the flow, my business team would go against the tide. We would extend our hours of service, improve our technical support, add new offerings to our lines of machinery, and, at the end of each workday, make one more customer contact after what we normally thought of

as our last one. Sometimes the strategy seemed to help. We kept the doors open in some rough times.

But in 2020, one finds an underlying, fundamental message that applies to coronavirus challenges and to all the others one faces in life. Individuals and their colleagues who believe in themselves and who—even while acknowledging short-term realities—refuse to be pessimistic about the future are more likely to succeed than those who wear sack cloth and ashes. This was the final thought that I tried to leave with the Rotarians that day.

So, what ideas and strategies do I suggest to assist small local businesses navigate through the economic strain of COVID reality?

I offer a sincere and straightforward answer: get a copy of Watty Piper's famous book, *The Little Engine That Could*, and read it—*aloud*. And if the opportunity presents itself, read the book to a grandchild, niece, or nephew.

"I think I can! I think I can!"—that strategy will help small business, large businesses, and everyone else navigate these troubled waters.

Pass the word.

STATE SPOTLIGHT: PUERTO RICO

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Each quarter, we select one state and analyze its economic and regulatory outlook. Last quarter, we put Oklahoma in the spotlight. This quarter, we're doing something a little different and looking at the territory of Puerto Rico.

Normally, we find nuance in the economic and regulatory data of a state that subtly counters certain common misconceptions about that state. This time around that's really not the case: Puerto Rico's economic outlook is largely pessimistic because of its major ongoing debt crisis.

The main island of Puerto Rico is the easternmost major island in the Caribbean Sea. With 3,515 square miles (sq. mi.) of land area, it is much smaller than fellow Caribbean islands Cuba (42,426 sq. mi.) and Hispaniola (29,418 sq. mi.) but about the same size as Jamaica (4,244 sq. mi.).³³ Compared with US states and other US territories, Puerto Rico is larger than Delaware; Rhode Island; Washington, DC; and the other four populated territories but smaller than Connecticut and the rest of the states.³⁴

Puerto Rico's 2020 population of around 3.2 million ranks 31st in a list of US states, right behind Connecticut but ahead of Iowa and plenty of sparsely populated Midwest states. Puerto Rico also has a smaller population than Cuba, the Dominican Republic, and Haiti (together around 11 million) but a larger population than Jamaica (around 3 million) and all other US territories (the closest of which is Guam, with 168,000 people). In population density, Puerto Rico's 835 people per square mile is comparable to Connecticut, Guam, and Jamaica (738, 809, and 708 people per square mile, respectively). Only a few states and Caribbean countries (Haiti, Massachusetts, New Jersey, Rhode Island, and some small island nations) are more densely populated.³⁵

Though the Puerto Rican population is relatively densely packed, it is shrinking rapidly. The island has hemorrhaged residents (mostly to the United States, where they have citizenship) looking for better economic opportunity since at least the 1960s. In fact, more Puerto Ricans now live in the mainland United States (4.1 million as of 2009) than on the Island.³⁶ This emigration has only accelerated in recent years as the economic devastation of Hurricane Maria in 2017 and the ongoing debt crisis make the United States a far more attractive option for many Puerto Ricans, especially those with college degrees.³⁷ The annual decrease in population has accelerated from -0.5 percent in 2009 to more than 4.0 percent in 2018.³⁸

SOME HISTORY

The native Taíno population of 30,000 to 60,000 settled the island sometime after the 7th century. Soon after the arrival of European explorers, it decreased rapidly as the result of disease and forced labor regimes brought by Spanish colonists in the subsequent decades. The dying indigenous population was quickly replaced by African slaves forced to work on sugar plantations. By the 1800s, a waning Spanish Empire seeking to stave off the sort of independence movements that had taken hold in its other colonies decided to drastically increase migration of Spanish colonists to the island, and it later granted Puerto Rico limited self-government.

The demographic result of these decisions is that the modern population of the island is 75 percent white (a category that includes Hispanic people), 12 percent black, and 0.5 percent American Indian, with the rest of the population identifying as some other ethnicity or combination of ethnicities. The influx of Spanish migrants in the 1800s may account for the lower relative proportion of black or African individuals as compared with those in neighboring countries such as Haiti or Jamaica, whereas the low proportion of individuals identifying as American Indian clashes with the reality that around 15 percent of the islanders are of American Indian descent genetically. Two other legacies of Spanish rule are the dominance of the Spanish language and of Roman Catholicism.³⁹

In 1899, as a result of its loss in the Spanish-American War, Spain ceded Puerto Rico, Guam, and the Philippines to the United States as colonies and relinquished sovereignty over Cuba. The US-subordinated government of Puerto Rico progressed from brief military rule to a system with a mix of elected and appointed government officials to a system with full popular elections for most government positions.⁴⁰ Along this path, US citizenship was extended to all Puerto Ricans in 1917,⁴¹ though attempts by Puerto Rican nationalists to gain independence were repeatedly quashed by the US government.⁴² In 1952, the current political status of Puerto Rico was established with the ratification of the Puerto Rican constitution. This constitution includes all of the main provisions of a typical state constitution but with one very important exception: Puerto Rico still falls under the Territorial Clause of the US Constitution. Therefore, the entire political system of the island is subordinate to the sovereignty of the US government; its right to make its own laws, the applicability of its own constitution

and bill of rights, and even the US citizenship possessed by its people are all based on US statutes that could in theory be repealed by Congress.⁴³

Other consequences of this status include the inability of Puerto Ricans to vote in US federal elections, Puerto Rico's lack of voting representation in Congress,⁴⁴ and the exemption of most Puerto Ricans from paying the federal individual income tax. Despite this unique status, the day-to-day administration of Puerto Rico at both a regional and federal level is not very different from that of the average state. The debate over whether to pursue statehood dominates Puerto Rican politics, but past referenda have not indicated a clear preference by the island's citizens for either statehood, continued (or modified) commonwealth status, or outright independence.

THE ECONOMY'S UNIQUE US LINK

Puerto Rico's unique political situation has affected its long-term economic development as the economy evolved from its dependence on sugarcane, coffee, and tobacco cultivation for the first few decades of US rule, starting in 1899. In 1917, the same law that extends US citizenship to Puerto Ricans also included a provision that exempted municipal bonds from all local, regional, and federal taxes. This law increased the attractiveness of Puerto Rican bonds for US investors and contributed to a policy of deficit spending that would come to haunt the island 100 years later in the form of the current debt crisis. After World War II, a collection of economic development projects collectively known as "Operation Bootstrap" were initiated by the US government and the Puerto Rico Industrial Development Company. These projects were heavily focused on industrializing the Puerto Rican economy and made extensive use of tax and trade incentives to do so.⁴⁵ This development strategy caused growth in Puerto Rico's GDP, manufacturing industry, and tourism industry for a while. However, labor competition from Latin America started to blunt the effect somewhat. These incentives were phased out from 1996 to 2006.

There are a few other important economic policies that help contextualize the island's current economic situation. In 1984, the US government prohibited Puerto Rico from filing for Chapter 9 bankruptcy.⁴⁶ US funding for Puerto Rican Medicare and Medicaid is significantly lower than for states with similar populations and tax contributions.⁴⁷ The Merchant Marine Act of 1920 (also known as the Jones Act) significantly increases export and import costs for Puerto Rico by prohibiting foreign-flagged, foreign-owned, foreign-built, and foreign-crewed ships from carrying cargo between American ports and thus transporting goods to and from Puerto Rico on the way to US ports.⁴⁸ Finally, the US government requires Puerto Rico to abide by national minimum wage laws. Given that the average income and worker productivity in Puerto Rico is so much lower than in the rest of the United States, this requirement prices many Puerto Ricans out of the labor market and may be a factor in the provinces' low employment rate.⁴⁹

Largely as a result of this tax incentive and industrialization-heavy method of development, Puerto Rico's economy is driven mainly by pharmaceutical, textile, chemical, and electronics manufacturing, followed by real estate and tourism in the service sector. Agriculture has gone from employing 43 percent of the workforce to employing less than 1 percent. Now the manufacturing and service sectors both account for nearly all employment (nearly 50 percent each).⁵⁰ Pharmaceuticals, chemicals, and medical and scientific equipment are likewise the main exports of Puerto Rico.⁵¹ Bureau of Labor Statistics location quotient data describe this general picture: protective service, maintenance, sales, office, social service, and production occupations are all more prevalent in Puerto Rico than in the United States on average, whereas engineering, business, science, transportation, management, construction, agriculture, and computer occupations are all less prevalent.⁵² This mix indicates that the manufacturing jobs in Puerto Rico tilt toward the lower-skilled end of the workforce.

Unfortunately, this development strategy did not quite generate educational results in Puerto Rico on parity with US states. The commonwealth's high school graduation rate of 70.9 percent is well below the US average of

86.0 percent and the lowest state rate of 74.0 percent (in Arizona). The college graduation rate of 23.1 percent and proportion of individuals with a college degree of 6.3 percent are also both below the respective US averages of 28.8 percent and 10.8 percent, though the proportion of Puerto Ricans with an associate's degree, at 8.9 percent, is above the national average of 7.8 percent.⁵³ There is evidence that the disparity in college degree holders is at least in part the result of out-migration by educated Puerto Ricans who cannot find a market for their knowledge on their home island.⁵⁴ These data come on top of disturbing evidence of the low quality of public education in the commonwealth.⁵⁵ A wave of school closures, owing to the effects of Hurricane Maria and the ongoing fiscal crisis, have prompted the commonwealth government to experiment with charter schools and a voucher system.⁵⁶

There is a misconception among some investors that Puerto Rico is a low-tax paradise. This stems from the lack of a federal income tax, the past history of massive federal tax incentives for corporations, and two current tax incentives that exempt certain corporate income and personal capital gains from commonwealth (but not federal) taxes.⁵⁷ These exemptions do indeed provide a good tax haven for wealthy US retirees, but they do not make Puerto Rico a low-tax society. The general corporate tax rate is 39 percent, the individual income tax rate is 33 percent, and the combined sales tax rate is 11.5 percent. Each of these rates is far above the average for US states.⁵⁸ Nonetheless, when added to property taxes and federal payroll taxes, the combined rate Puerto Rico pays is still lower than for the average state because of the overwhelming significance of the territories' exemption from federal income taxes. However, when the island's low average income is factored in, the relative tax burden faced by the average Puerto Rican is equal to or greater than the US average.⁵⁹

THE DEBT PICTURE

The Puerto Rican economy has always been a bit fragile. Some policies of the US government unambiguously have harmed the commonwealth's economy, whereas others have kick-started its industrial development in a single generation. Regardless of what the true balance of factors is, the commonwealth government made a series of unforced errors with regard to fiscal policy. Fueled by an investor market hungry for its federally tax-exempt bonds and the will of politicians who broke straight through two different procedural constraints on spending,⁶⁰ the Puerto Rican government (and state-run utility companies) has run major public deficits for at least a half century. The scale of debt has gotten to the point that the government is borrowing money to service its old debts. In 2014, several major credit agencies downgraded Puerto Rican bonds to junk status. In 2016, the US government set up a financial oversight board to handle and restructure Puerto Rico's debt. In the meantime, the economy has been in free fall.⁶¹

The severity of Puerto Rico's fiscal situation really cannot be understated. In a study from the Mercatus Center at George Mason University, "Ranking the States by Fiscal Condition," Puerto Rico ranks below all 50 states in every category of solvency. The report notes that, in 2014, Puerto Rico's long-term liabilities were 3.71 times larger than its assets, or \$16,646 per capita (five times the US average). Taxes were 16 percent of personal income (more than double the US average). On every measure of solvency, the commonwealth was at least two standard deviations below the US average. This is not mere budget or cash flow insolvency; the commonwealth is entirely underwater, without enough assets to pay off its debts except in the very long term and without the economic capacity to raise taxes.⁶²

These fiscal troubles are reflected in Puerto Rico's economic statistics. From 2017 to 2018, the real GDP growth rate for the United States was about 3 percent, following an average yearly growth rate of about 2 percent in the decade since the 2008 recession.⁶³ Over that same period, Puerto Rico's GDP contracted by nearly 5 percent, following an average yearly growth rate of around -1 percent in the preceding decade.⁶⁴ The effects of Hurricane Maria were the likely source of this extra severity, but Puerto Rico's economy had been in recession long before the hurricane hit. Puerto Rico's employment rate in September 2020 was actually its best in a two decades: at

8.4 percent,⁶⁵ it outperformed the dismal performance of 1999–2007, during which the unemployment rate was greater than 10 percent every year and peaked at 16 percent in 2010.⁶⁶ The territory’s youth unemployment rate has been more than double the US average over this period.⁶⁷ This unemployment data does not even include the people who have stopped looking for work entirely; Puerto Rico’s labor force participation rate of 40 percent is lower than any state and is a fraction of the US average of 61 percent.⁶⁸

Real GDP per capita and gross national income per capita tell a similar story. At \$32,871 and \$22,160, respectively (in 2019), they are far and away the lowest when compared to any US state.⁶⁹ In addition, 43.5 percent of Puerto Ricans are below the poverty line, a much higher proportion than any US state. The large disparities in GDP per capita and gross national income per capita indicate that the productivity of economic activity *in* Puerto Rico is much higher than the productivity *of* Puerto Rican residents (regardless of where they reside). It is likely owing to the prevalence of large productive manufacturing companies in the commonwealth, whose returns go just as much to US investors as to Puerto Rican citizens in the form of income.

These numbers, however, are the best for any country in the Caribbean or Central America. Indeed, Puerto Rico is classified as a high-income country by the World Bank. The idea that Puerto Rico does poorly by US standards but well by Latin American standards is significant. Considering the island’s history, this could even be considered an impressive achievement. Nonetheless, this achievement could have been ever greater without such a high volume of policy errors by the US and commonwealth governments alike. Whether it is the result of a recent and devastating hurricane, unequal access to Medicare funding, the loss of major federal tax subsidies after 2006, federal bankruptcy law, a high minimum wage, a big tax burden, inefficient public corporations, expensive federal shipping laws, a federal bond tax exemption that fueled investor appetite, decades of reckless government spending, or (most likely) some combination of those factors,⁷⁰ Puerto Rico is and has been in a severe debt and economic crisis that is putting some of its people into poverty and sending others away in droves.

PUERTO RICO’S REGULATORY OUTLOOK

Whereas Puerto Rico is not officially counted in State RegData,⁷¹ a dataset produced by the Mercatus Center, some information was collected as a special project for this report. Puerto Rico appears to have a structure similar to most US states with regard to legally binding text. The territory has both regulations and a collection of statutes that authorize the creation of regulations.

Mercatus researchers were unable to locate an official consolidation of Puerto Rican regulations but were able to locate a consolidation of Puerto Rican statutes. On the regulatory side, a table of contents for Puerto Rico’s regulatory code appears to have been produced by LexisNexis,⁷² a company that typically tracks the regulatory codes of multiple jurisdictions. However, there is no regulatory text included outside of the table of contents. Individual agency and department websites have small amounts of regulations related to Puerto Rico. An example of this is the Puerto Rico and US Virgin Islands division of the US Department of Transportation.⁷³ Piecing together and quantifying a complete regulatory picture from dozens of agencies and departments, though, would be a nearly impossible task.

On the bright side, a few sources, including LexisNexis and Casetext, provide complete sets of Puerto Rico’s statutes.⁷⁴ This body of legal text is similar to many of those containing US state statutes and typically contains legal text that authorizes agencies to directly regulate specific areas of the economy. Puerto Rico’s statutes include 34 titles that cover a range of topics. Some of these topics relate directly to different branches of the government (titles 2–4) such as the legislature and executive branches, whereas others refer to specific policy areas such as education, housing, or banking. The titles that refer to specific policy areas typically target specific agencies or agency heads. For example, title 24, “Health and Sanitation,” refers often to the secretary of health.

Whereas the researchers at the Mercatus Center have quantified Puerto Rico's statutes in a similar manner as they have with many state regulatory codes, these numbers should not be compared directly because they are referring to two different bodies of legal text. That doesn't mean that the numbers are meaningless, though. The quantification of a jurisdiction's statutes can provide insight into the regulatory scope that a government has over specific areas of the economy. Agencies and industries that appear more often in a set of statutes may very well be regulated more often or, at the very least, have the authority to be regulated more often.

Excluding repealed statutes that appear on both websites and throughout the 34 titles, Puerto Rico's statutes contain 6,581,320 words and 122,045 regulatory restrictions. Regulatory restrictions are legally binding terms such as "shall," "must," "may not," "prohibited," and "required." Title 13 contains the most words and restrictions, with 785,447 words and 12,686 restrictions. This is unsurprising, because title 13 is named "Taxation and Finance" and contains Puerto Rico's tax code. Using the North American Industry Classification System (NAICS) at the three-digit level, Mercatus researchers have analyzed Puerto Rico's statutes to determine which industries are associated with the most regulatory restrictions: national security and international affairs (NAICS 928) is associated with 10,902 restrictions, petroleum and coal products manufacturing (NAICS 324) is associated with 8,525, restriction, credit intermediation and related activities (NACIS 522) is associated with 6,449 restrictions, insurance carriers and related activities (NAICS 524) is associated with 3,304 restrictions, and utilities (NAICS 221) is associated with 2,560 restrictions.

FINAL THOUGHTS

Buffeted by hurricanes, debt, and heavy regulation, Puerto Rico faces a mixed outlook. Relative to comparable territories in its region, the US territory is doing well, but relative to US standards, the picture is bleaker. The prospects for future GDP growth are weak due to loss of population and low educational attainment, which together significantly determine real GDP. The territory's debt situation places an even darker cloud on the horizon, one that will likely be a constant source of US political intervention.

YANDLE'S READING TABLE

In *You're Hired!: Untold Successes and Failures of a Populist President*, University of Chicago economist Casey Mulligan recently relays his experiences as the Trump administration's chief economist on the Council of Economic Advisers (CEA) in 2018–2019 in a solid book that will appeal to a broad readership. Make no mistake about it: there is plenty here for economists who know Mulligan as one of the profession's leading applied public policy analysts, but there is a broader message about populism and Trumpian communications dynamics that a larger audience will appreciate. Economists will not be disappointed to learn that notions of supply and demand dominated CEA

conversations and written reports during Mulligan's White House stay. But political economists who may have wondered what it was like to be engaged in policy conversations with Trump himself and with other key participants in the revolving-door-dominated West Wing habitat will also welcome the candid nature of Mulligan's comments. These political economists, and others, will be more surprised, perhaps, to read his spirited defense of President Trump's management and governing methods. There is, according to Mulligan, method in what others might think to be madness in how President Trump articulates, alters, communicates, and finalizes policy positions. And those who may consider reading the book, which

I highly recommend, should not neglect to notice the book's subtitle: *Untold Successes and Failures of a Populist President*. I emphasize the word "populist."

Mulligan's book has 11 chapters and an important introduction and epilogue. Indeed, if one were scanning the volume in a bookstore trying to determine whether or not buy the book, I would recommend reading the epilogue; it lets one know that this is no ordinary book. I will return to this point later. But to offer thoughts on some of the book's principal content, let me give a quick review of some of the chapters, which may be read in any order one might wish.

The first chapter introduces the reader to President Trump's modus operandi as seen by Mulligan. What look like madness to the untrained eye is actually the president systematically engaging in rhetorical experiments when diving into a policy debate. A Trump experiment goes like this: the president, in consultation with advisers, considers what to do and then how to message the decision. Generally, taking an extreme position so that the matter will dominate the news cycle, the president announces the decision on Twitter and then watches the resulting fireworks. While watching and listening to reactions, the president may double down on his extreme position, revise it, or even reverse the position. But throughout the experiment, the president is intent on controlling the media, and according to Mulligan, Trump does this systematically and with aplomb.

As an example, chapter 1 tells about the president's early position opposing the Patient Protection and Affordable Care Act's individual mandate, a key part of the thousand-page legislation which, as Mulligan says, is the basis for "tens of thousand more pages of regulations."⁷⁵ Did the president read the act, study the technical analy-

sis and listen to economists debate the analytics, and then arrive at a position to take on the matter? No. He instinctively, it seems, felt the mandate was wrong, said so, broadcasted his position, and listened. Mulligan's point is simple: the president maintained his position and, along the way, some important analysts. For example, the Congressional Budget Office revised its position.

Chapter 1 mentions the prescription drug rebate rule, where the rebates drug companies provide to insurance companies must be based on their Medicare-determined revenues that reflect mandated prices, forming effectively a regulatory cartel instead of allowing market forces to determine prices and costs—another illustration of Trump's experimental approach. In this case, the rebate rule was supported by Secretary of Health and Human Services Alex Azar, a former health-care insurance executive, and his team, and it was opposed by CEA economists, who had a different proposal. Trump accepted neither proposal and instead called for the proposed rule to be placed on the internet for public comment. Once the comments were in and Trump was given a review of them, the president reconvened the debating parties to review their positions. I note that a later chapter is devoted to the rebate rule. Eventually, following lots of analysis and White House debate, the president ended the proposed rule.

Chapter 8 is one of my favorites because it addresses my chief complaint with respect to President Trump's economic policy actions. Trump has famously stated "I am a tariff man," and unfortunately, from my perspective, his actions support every word of it. My acid test for any aspiring president is to what extent he or she legalizes freedom to participate in markets. But instead of focusing on the social costs imposed on all of society when tariffs and quotas are used to protect politically

important interest groups, which he understands fully, Mulligan chooses to address the issue in a relative-to-what analysis. He compares the Trump protectionism record with that of the often market-celebrated Ronald Reagan. (I was a part of the Reagan administration when I served as Federal Trade Commission executive director, so I have a bit of firsthand experience on the matter.)

Mulligan shows how quotas and other quantitative limitations on imports of the sort Reagan used generate no revenue and impose far more social cost than do the tariffs and border taxes preferred by Trump. Throughout this chapter and others, the author reminds the reader that policy decisions are never made in classrooms with full use of blackboards and computers, but rather in crowded White House conference rooms and hallways where the tug and pull of special interest demands are fully evident. Pulling back the Oval Office curtain a bit, Mulligan describes head-to-head battles over tariffs when he engaged with Trump's anti-China, anti-free-trade adviser, Peter Navarro. Using the full strength of his Council of Economic Advisers influence—which seemed to matter—Mulligan was able to hold Navarro at bay in at least one tariff battle. But everyone knows that with Navarro's unyielding support, Trump continued to raise tariff-based costs on US consumers—and not just on Chinese imports. The president's use of tariffs has affected trade with Canada, France, Germany, and other major partners.

At the start of this review, I mentioned the importance of Mulligan's epilogue, which offers parting reflections on his time working in close quarters with President Trump and other administration leaders. He begins with a statement about populism: "Populism is a reaction to flawed governing by a small, unelected, and insulated ruling class. The small class size is evident from

the number and range of lead characters, both Democrat and Republican, that I had met in my professional life well *before* arriving at the White House."⁷⁶ Mulligan goes on to discuss this ruling class dominance and how, insulated from competing forces and assisted by a similarly dominated media, unelected appointees and career government executives can make relatively unchecked decisions that impose more costs than they generate in benefits. The author argues that it was a broad reaction expressed by ordinary Americans that led to Trump's election, and then it was Trump's loyalty to his base that led to what Mulligan and others consider to be an amazing revision in federal government activities. Regulations were pruned, taxes were cut, military activities were reduced, immigration was closed off considerably, and trade with foreign individuals, especially those in China, was cut. One gets the feeling that Casey Mulligan is honored and proud to have been a part of the effort, but that he in no way endorses each and every Trump decision.

Perhaps one has sensed it, or maybe not; but the next time people and their families or close friends gather around an outdoor fire and cook a meal and then, afterwards, share stories about life and, perhaps, hope for the future, they should know that they are engaging in a human-defining activity that has been ongoing for hundreds of thousand years or even longer. In his short (just 123 pages) but intellectually challenging book, *Genesis: The Deep Origin of Societies*, eminent biologist Edward Wilson tells about cooking, sharing stories, and other activities that help people to understand who they are and how, through the forces of evolution and natural selection, human beings—both as individuals and in groups—became Earth's dominant species. Be warned, though, that his comments about

the importance of cooking and sharing stories are more like a light footnote in a much deeper story. And be warned again that this human trait of cooking and enjoying happy times around a campfire must be considered along with another evolved trait, the human tendency to engage in violent warfare against competing tribes.

Well worth the effort and time to read more than once, which I suggest, *Genesis* will rest easily on a shelf with Richard Dawkins's *The Selfish Gene*, Robert Wright's *The Moral Animal*, Matt Ridley's *The Origins of Virtue*, and Jonathan Haidt's *The Righteous Mind*. Each of these contribute to man's understanding of how, though driven by primal forces to feather their own nests, human beings seem to flourish best when the gains from cooperation become embodied in ongoing community life.

Appealing to economists and other social scientists, Wilson focuses on multilevel natural selection and how "natural selection simultaneously operating at the level of the group, [affects] how well each group performs in competition with other groups."⁷⁷ His is a story of genetic change and how some changes lead to more effective performance and success in the struggle for life. Again, offering an appealing description for economists who are interested in how innovation emerges and is adopted across a population of firms and even industries, Wilson notes that mutation—a genetic change—occurs randomly in nature but that the larger competitive environment determines which mutations survive in the longer term.

In a sweeping discussion of billions of years of biological history, the author stakes out a six-step process that led to human dominance. The process begins with the origin of life, moves through stages that involve the development of complex cells, then steps to the origin of societies, which, I

should emphasize, later includes heavy discussion of termite and ants and ends with the origin of language. It is man's ability to make and record words that enables the human to learn about himself and to share knowledge with other species members. Thus, one sees the importance of cookout conversations. As Wilson puts it, "Humanity, gifted with an infinitely expanding language and the power of abstract thought, was able to visualize the steps that led to its own origin."⁷⁸

But then, given this sweeping power to reason, develop explanations of life, and communicate those explanations through stories, customs, and traditions, mankind, as Wilson sees it, has mistakenly interpreted the meaning of the multibillion-year story. "Everything, it has been argued, from the origin of life 3.8 billion years ago was meant for us. The spread of *Homo sapiens* out of Africa and round the habitable world was somehow pre-ordained. It was meant to establish our rule of the planet with the inalienable right to treat it as we please. That mistake, I suggest, is the true human condition."⁷⁹ This statement launches Wilson's examination of major transitions that led to the formation of sustainable human communities.

The critical discussion of transitions brings a beautiful insight that only a biologist would emphasize. For example, in discussing metamorphosis, Wilson points out that when a caterpillar, having eaten leaves on a plant, metamorphoses into a butterfly, the new creature then consumes nectar from the same plant.⁸⁰ The dramatic change in form enables the creature to have multiple feeding opportunities.

Wilson concludes his story with a short review of work that attempts to explain how socializing in groups is correlated with the growth of the human brain, which, incidentally, was accommodated by access to cooked meat. The tentative evidence

suggests that more social time led to larger brains. I end this review by going back to the beginning. A cookout with friends and family is a good idea. Don your mask and make it happen. You'll be glad you did, and so will they.

ABOUT THE AUTHOR

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NOTES

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