

Future Surprises That Could *Shock* *the World*

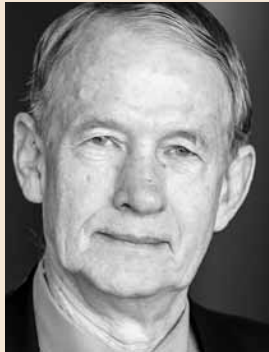
First it was the 2008 global financial crisis. Then the Arab Spring. Then Brexit. International conventional wisdom always seems unaware of the big changes about to unfold. There are in the present few facts about the future. Ten years ago, for example, who would have predicted surprise developments such as negative interest rates, the potential breakup of the European Union, the Donald Trump/Bernie Sanders effect, drones, the use of driverless cars, the rise of ISIS, the myriad uses of artificial intelligence and big data, U.S. energy independence, the emergence of the Zika virus, or the rate at which robots are taking away jobs. *TIE* asked more than fifty top thinkers to look ahead ten years at what outside-the-box developments could shock the world.

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The breakup of the European Union. The greater concentration of power in the offices of presidents and policymakers.

GARY CLYDE HUFBAUER

Reginald Jones Senior Fellow, Peterson Institute for International Economics

Not for me to speculate about drones or clones. Both will deliver surprises in the decade ahead, along with artificial intelligence, robots, magic materials, and cures for cancer.

Closer to my realm is the impending clash between economics and politics. It is questionable whether democracy as we know it can survive—if the next decade delivers the economic forecasts of Robert Gordon (meager productivity growth) and Larry Summers (secular stagnation).

“Democracy as we know it” means that dozens of voices must say “yes” before reforms that raise living standards can be implemented. It takes very few “no’s” to stop the wheels of progress. This asymmetry is true for every form of public infrastructure—metro systems, airports, highways, bridges, transmission lines, and pipe lines. It is true for international trade. It is true for business taxes. It is true for educational reforms at all levels. And it is certainly true for entitlement reform.

Activists cherish our democratic systems that enable them to press the “no” button. At the national level, however, the resulting failure of economic progress creates a platform for voices offering drastic and misguided solutions. Stop the immigrants! Block the imports! Break up the banks! Medicare for all! Guaranteed individual incomes! Brexit!

One likely surprise from the clash is further breakup of the European Union. Also possible is greater concentration of power in the offices of presidents and prime ministers, enabling them to slash through obstacles that limit economic progress. If China powers ahead to 2026 while Europe, Japan, and North America stagnate, the “end of history” could be a Chinese model of authoritarian government.



The Trump-Brexit phenomenon will have destroyed the “common good.”

W. BOWMAN CUTTER

Senior Fellow and Director, Economic Policy Initiative, Roosevelt Institute

*“Things fell apart. The centre did not hold. Mere anarchy was loosed upon the world...”
—William Butler Yeats (with apologies)*

As we look back on the chaos of the last quarter-century, the year 2016 comes into focus both as the canary in the mine and as an early prime mover.

The two seminal events of that year—the candidacy and then election of Donald Trump and Brexit—both signaled and began a process of decline that unwound all of the progress of the post-World War II creation, to use former Secretary of State Dean Acheson’s term. Trump was not quite the “extinction event” he was feared to be, but it was a “damn close thing” and he was an utter disaster as president. He set the United States and to some degree the world on a course from which we may never recover. Of significance way beyond his catastrophic policies, his trashing of every value for which, at its best, America stood initiated a long ugly era in which our public life became not much more than feudalistic thuggery. Brexit, for its part, kicked off in Europe and then around the world a process of disintegration in which the center not only did not hold, it disappeared.

Three themes defined this era: disintegration; aggressive, nativistic populism; and a contempt for the “common good.” And the three complemented each other.

Disintegration and nativistic populism drove each other as international organizations collapsed and region after region demanded separate status.

Then, as these same forces precluded almost any intergroup compromise and governments, capacity to perform declined, politics became entertainment, and the very idea of a common good became impossible to sustain.

What surprised us all was the end of a belief in progress. We see ourselves today in a zero-sum world in which every gain is perceived as someone else's loss. We'll get out of this cycle, but it will take another generation.



Nationist, interest-group-driven politics will have become ever more combative.

DAN MAHAFFEE
Vice President and Director of Policy, Center for the Study of the Presidency & Congress

So often in public policy and politics, changes that seem sudden often were the result of slow-moving trends that were too gradual to provoke an immediate response. Like the proverbial frog in the pot, the gradual increase in temperature isn't noticed.

Tomorrow's surprise in politics will be a shift in political alignment that upends the political spectrum in western democracies. Ten years from now and beyond, political parties will not exist in terms of the right-versus-left debate over the size and role of government as we understood it for much of the twentieth and early twenty-first centuries. Instead, the debate will be between those who advocate a far more global vision, and those that push for a more nationalist vision for the nation. In many countries, this will result in a greater divide between "globalist" cities and "nationalist" rural and industrial areas.

The "globalists" will view free trade, international markets, and free flows of information and individuals as vital aspects of an increasingly cosmopolitan, globalized world. The "nationalists" will seek to protect markets, avoid the instability seen with the wider world, and distrust the leaders in business and politics with global experience and vision. The early stages of this are seen via Trump, Brexit, and other far-right and far-left parties in Europe. Their rallying cry may be best exemplified by Michael Gove's statement during the Brexit campaign, "People in this country have had enough of experts."

This will challenge the political structures of many nations and will likely result in the fragmentation or realignment of many political parties. As a result, politics

that is less about national vision and increasingly about group interest will likely be more combative, even by today's standards.



Japan will be the world's infrastructure leader.

ANDREW DEWIT
Professor, School of Economic Policy Studies, Rikkyo University

A decade ago, Japan was the developed world's basket case. And so it remains, desperate exuberance for "Abenomics" having given way to dismay at seemingly tepid structural reforms. Yet structural reform is in fact accelerating, especially in disaster resilience. A decade from now, Japan could be the global leader in disaster-resilient critical infrastructure, which includes transport, energy, water, waste, and telecoms.

Critical infrastructure is the core of the built environment and will be the focus of massive investment over the coming decades. Research by the Cities Climate Finance Leadership Alliance suggests that \$93 trillion worth of low-carbon, climate-resilient infrastructure needs to be built by 2030. The required volume of resilient infrastructure greatly exceeds the present \$50 trillion value of all global infrastructure.

There are two major reasons Japan is positioned to lead in this business. First, its "National Resilience" program is bigger and better organized than counterpart initiatives in North America, the European Union, China, and elsewhere. Japan's March 11, 2011, disasters were not only history's costliest; they also taught Japan's public and private sectors an unforgettable lesson about the vulnerability of centralized power systems and other critical infrastructures. Japan has therefore become a world leader in collaborative planning and building resilience. Including both public and private sector spending, Japan's resilience program totaled over ¥24 trillion (US\$220 billion) in 2013 and is projected to grow dramatically by 2020.

A second reason is that Japan has taken a strong role in opening up international lending. In November 2015, Japanese Prime Minister Shinzo Abe announced new

measures to allow the Japan International Cooperation Agency to undertake sub-sovereign loans. These measures will help cities and other sub-sovereign actors in the developing world access direct financing for resilient infrastructure. A lot of it will be built by the Japanese.



*The Bank of Japan
will go bankrupt.
The yen will lose
its status as
legal tender.*

TAKESHI FUJIMAKI

Member, House of Councillors of Japan, and former Tokyo Branch Manager of Morgan Guaranty Trust Company of New York

The Bank of Japan goes bankrupt and a new Bank of Japan which is truly independent from the government will be established in ten years.

The Japanese government will issue ¥152 trillion of JGBs this fiscal year. Of this, the Bank of Japan will buy ¥120 trillion. Though the government denies it, this is clearly monetization of debt.

It is said that the Bank of Japan will stop its bond buying operation when the CPI reaches 2 percent. However, the government will insist that it continue to buy JGBs and print money. Otherwise, Japan will become like Greece, whose central bank could not help the government. The euro is allowed to be printed only by the European Central Bank and not by the central bank of Greece.

I expect a battle between the government and the Bank of Japan to break out.

The Japanese government will strongly pressure the Bank of Japan to continue to buy JGBs. If an institution that buys 80 percent of the supply stops buying, then any market, including JGBs, will definitely collapse. It would mean that the government will not be able to conduct the auction at a reasonable level, and thus will not be able to execute its budget.

This will lead the government to change the law and make the Bank of Japan no longer independent from the government.

If this happened today, then Bank of Japan Governor Haruhiko Kuroda would leave his position in protest. Governor Kuroda may exit from abnormal monetary

easing without hurting his personal reputation, but the Bank of Japan cannot leave the abnormal monetary easing. There is no exit for it.

Under this scenario, the Bank of Japan will have to continue to buy JGBs forever even though CPI is above 2 percent. Money will be falling from the sky, which could lead to hyperinflation in Japan.

As a result, no one will have confidence in JGBs, of which the Bank of Japan holds a huge amount, nor in the money the Bank of Japan prints. The Bank of Japan will go bankrupt and a New Bank of Japan will be established.

The yen will lose its status as legal tender and a New Yen will be issued.

This is the same story as how the Reichsbank, the old German central bank which monetized debt, went bankrupt, and how the new central bank, the Bundesbank, which is perfectly independent from the government, was established.

History will repeat itself.



*Big potential trouble
in North Korea.*

DANIEL SNEIDER

Associate Director for Research, Shorenstein Asia-Pacific Research Center, Stanford University

Predictions of the collapse of the North Korean regime are usually dismissed as comparable to the warnings of Chicken Little. But unlike the children's fairy tale, the sky may fall on Kim Jong Un and his brutal state, with potentially widespread consequences. Visitors to the North Korean capital of Pyongyang in the last few years have been mesmerized by the ability of the young dictator to ruthlessly consolidate personal power. So far, he has managed to deliver guns, of the nuclear variety, and butter, especially Chinese consumer goods to buy the loyalty of the capital's elite.

Underneath the veneer of stability, trouble has been brewing. The economic uptick in recent years has slowed, if not reversed. Food production is down. Revenue from sales of coal and iron ore, priced well below world prices, has sharply declined as Chinese demand slows. The

regime, fearful of losing internal control, resists full-scale Chinese-style market reforms. New international sanctions target the flow of hard currency through the international banking system to Kim and his entourage.

A collapse of authority in Pyongyang, triggered by economic crisis, would potentially upturn the entire region. Beijing cannot easily let its client state, and the buffer it provides against American power, disappear. The American-allied South Korean government would feel compelled to fill any vacuum of power in the North, and with it could come the U.S. military. American attempts to engage Beijing in contingency planning for such a scenario have been repeatedly rebuffed. Without a plan, Americans and Chinese could find themselves staring at each other across the Yalu river again, more than sixty years after that same situation brought the two countries to war. Meanwhile, Japan would be alarmed by the prospect of a unified Korea, perhaps still in possession of the North's nuclear arsenal.



China will become highly religious.

CHONG-PIN LIN

Former Deputy Defense Minister, Taiwan, and Professor, National Defense University

China under the atheist communist rule will become the world's most populous country of believers. By 2030, its Christian population will reach 247 million, overtaking the United States as the largest Christian country in the world, according to Professor Yang Fenggang at Purdue University in 2014.

The teaching of Confucius, who was "struggled down" by Mao Zedong during the Great Cultural Revolution in the late 1960s, is enjoying a revival since China's President Xi Jinping began publicly promoting the classics in late 2014. Chinese schools, somewhat embarrassed, have been borrowing textbooks from Taiwan where Confucianism has been preserved.

Xi displayed a fascination with Buddhism in the early 1980s when working at the county level in Hebei Province, according to *Der Spiegel* on December 10,

2010. His wife is a devout Tibetan Buddhist, which is an open secret. His mother is a Buddhist, and his father was friendly with the Dalai Lama, according to a December 17, 2014, Reuters report.

Though not officially blessed by the Communist Party, Buddhism has become fashionable top-down in the society. Jiang Zeming, the former President of China, often recited sutras from memory in public. The Buddhist population in China has grown 60 percent since 2010 to 400 million. Recently, the return of the Dalai Lama to China has been conjectured since Professor Jinwei of the Central Party School in Beijing, once headed by Xi from 2002 to 2007, so suggested openly in Hong Kong in June 2013.

In May 2013, Xi unprecedentedly received Patriarch Kirill I of the Russian Orthodox Church. Pope Francis since assuming the papacy in 2013 has repeatedly expressed his goodwill to Xi. Beijing-Vatican negotiations on establishing diplomatic relationship have been ongoing since 2014.

At least partially utilitarian in motives, Xi may see religions helpful in stabilizing an overly materialist and therefore disharmonious society, and useful in enhancing China's international image.



China by default will gain a greater Asian role.

DOUGLAS PAAL

Vice President for Studies, Carnegie Endowment for International Peace

The United States is demonstrating a strong trend toward diminished global and regional leadership. This is being accelerated by the dissolution of familiar sources of political and institutional stability in key corners of the world, often unwittingly abetted by U.S. decisions.

In Asia, this means a much greater role for China, by default, in the affairs of its neighbors, well before China has cultivated the habits of mind and behavior appropriate to that role and well before its neighbors will be ready to accept it. Messianic terrorism is not in the Asian cards, but localized conflicts, mass migrations, and social and economic instability are. These could feed off the still-strong

cultural differences among Asian nations and the region's traditional resistance to integrative institutions.

This will be sad and completely unnecessary, as Asians still and long will welcome an intelligently executed U.S. balancing function against the influence of China. It will be due to the failure of the American political class to reshape itself, rejuvenate the economy, prioritize defense spending, and organize and implement an effective grand strategy for the new era. Of course, Americans still have the option of pulling together to prevent all this from happening.



China's economic failure will continue to harm the world economy.

DEREK SCISSORS

Resident Scholar, American Enterprise Institute

It shouldn't be much of a shock at this point: China is headed toward stagnation. The government will report whatever it wants, of course, but the process began several years ago and continues unabated. Without far more powerful pro-competitive reform than has been discussed, much less implemented, the 2020s will see essentially no growth in net Chinese wealth.

A key aspect of this may be more surprising—the middle-class Chinese consumer is not coming to the world's rescue. Consumption growth will increasingly be curbed by indirect but sharpening financial confiscation by the state. This is needed to control the enormous quantity of debt being accumulated at state-owned corporates/banks. Some sectors, health-related in particular, will still do extremely well as China ages.

Another implication is that the Indian economy will consequently receive far more attention and at least some undue praise. As China flags and Europe and Japan remain stalled, the search for a global growth engine to supplement North America (hopefully) naturally turns to India. And it may continue to look good in comparison to everyone else. Even an improbably successful India, though, will not be large enough or rich enough to carry the weight of the world. China's failure to reform will harm the world economy for years to come.

Finally, the politics. Stagnation does not in fact spell doom for the Party; it has survived far worse than a middle-income trap with Chinese characteristics. Economic weakness will create some of the conditions for serious domestic unrest. But it will require considerably more—such as an internal Party conflict breaking into the open—for unrest to actually ignite. China will likely be stable, big, and important. It just won't really be growing.



Russia will be in greater trouble.

ANDERS ÅSLUND

Senior Fellow, Atlantic Council

The former Soviet Union looks like a powder keg ready to blow up. The International Monetary Fund foresees anemic growth of 1 percent both this and next year, but it can get much worse.

Russia, Kazakhstan, Azerbaijan, and Turkmenistan are petrostates, suffering badly from the halving of oil prices since June 2014. Most of the twelve former Soviet republics are either outright kleptocracies or pervasively corrupt states. In addition, Russia has been hard hit by Western financial sanctions since July 2014, and its protectionist Eurasian Economic Union is raising walls instead of promoting mutual trade.

As money runs out, the population is given the biggest beating. Russia's real wages and retail sales slumped by 10 percent last year, while GDP contracted by only 3.7 percent. These declines continue somewhat mitigated this year. For how long will people accept this sharp deterioration in their standard of living? Disinformation and repression are not enough.

Those who do not accept the stagnation are the elites. Russia is going through the greatest purge of its security agencies since April 2001. Three top state enterprise managers have been sacked. One has been sentenced to prison for embezzlement, and another is being prosecuted. More is to come. Meanwhile, the president's cronies are enriching themselves ever more. This elite struggle looks explosive, and it is even worse in Kazakhstan, where former

Prime Minister Serik Akhmetov has been sentenced to ten years in prison for corruption.

All these countries have salvaged their current account through hefty devaluation of about half, but that also means that their GDP in dollar terms has fallen by half. The tensions are likely to boil over in a few countries.



U.S.-Russian relations will further deteriorate.

MATTHEW ROJANSKY

Director, Kennan Institute, Woodrow Wilson International Center for Scholars

Although thousands of nuclear weapons have been eliminated under various arms control agreements over the past several decades, Russia and the United States remain locked in a suicide pact dubbed “mutually assured destruction,” with the capability to destroy one another and the entire planet in a matter of hours. It is only thanks to stupendous good luck that these horrific weapons have not been used in anger for seven decades. On more than one occasion, accidents, false alarms, and provocations have combined with bitter enmity and deep distrust to push Moscow and Washington to the nuclear brink.

Now and in the years ahead, the risk that a U.S.-Russian military crisis will cascade into nuclear war is higher than it has been since the Cold War’s darkest chapters. U.S. and Russian forces are not only being deployed in ever-greater concentrations around new East-West flashpoints such as the Baltic Sea and the Black Sea, but the two sides are also conducting overlapping military operations, such as in the skies over Syria. The past year has witnessed a dozen or more “close calls” involving warships and aircraft and it is only a matter of time before the increasing numbers of ground forces in close proximity to one another join the fray. In an atmosphere of mutual hostility, distrust, and reciprocal isolation, any of these incidents could all too easily escalate into the first direct U.S.-Russian military conflict of the post-Cold War era, which would surely raise the specter of a full-blown nuclear crisis.



LAWRENCE J. KORB
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MIKE WACKENREUTER
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The fall of the House of Saud.

Of all the developments with the potential to “shock” the world over the next decade, the fall of the House of Saud—and with it, the Middle East as we have known it since World War II—appears to be the most likely. The Saudi regime’s hold on power has always been tenuous, dependent as it is on both the military support of the United States and the clerical support of the Wahhabi religious establishment. That such a strange marriage has endured for so long is of course a testament to the power of the massive oil wealth the Kingdom of Saudi Arabia possesses.

Or should we say “possessed?”

With oil prices remaining at near-record lows, and a global energy revolution focused on renewable sources well underway, the threat to the Kingdom and its underlying socioeconomic foundation appears increasingly mortal.

To its credit, the Kingdom of Saudi Arabia, led by the young reformer Mohammed bin Salman (King Salman’s son, now third in the line of succession), appears to recognize the dire position it finds itself in. Under his “Vision 2030” plan, the Saudi government is undertaking a remarkably ambitious effort to reform its economy, beginning with the trimming of its bloated public sector, which employs approximately two-thirds of Saudi workers. With nearly half of the Saudi population under twenty-five, however, such an ambitious reform effort is likely to produce significant social and economic dislocation, thereby straining the fabric of the Saudi body politic further even as it seeks to mend it.

With no choice but to reform, and the perils of reform increasingly evident, the House of Saud appears to be living on borrowed time.



In Asia, U.S. foreign policy will become more hardnosed. In the Middle East, a rotation from military intervention toward balanced economic engagement.

MANSOOR DAILAMI

Former Manager, Emerging Global Trends Team, World Bank Group

Identifying potential shocks in the next ten years necessitates examining structural imbalances in the global economic and political systems. International payment imbalances, an area of much scholarly debate, do not qualify, as they tend to trigger equilibrating forces. The rise of populist sentiment in the West, though concerning, seems unlikely to jeopardize established political institutions. And while the growing economic and political weights of emerging economies are powerful forces for change, these economies are too tightly linked to globalization to disrupt the international system. This leaves the role of U.S. foreign policy—in particular, balancing contradictory calls for projecting political power with pursuing economic liberalism—as the key source of consequential global surprises.

While the United States continues its unipolar command of international politics, it operates in a multipolar economic sphere. This distinction has been largely missed in the literature. But multipolarity in world economics is defined not only in terms of multiple global growth poles, but in trends such as the rise of multinational companies from the South and internationalization of the renminbi.

How do these observations dovetail with predictions of global surprises over the next ten years?

In Asia, U.S. policy will face its greatest strategic challenge in China. As renminbi internationalization cements China’s footprint in the international monetary system and the Asian Infrastructure Investment Bank and “One Belt, One Road” initiative expand the country’s economic orbit, competition over global resources, markets, and technology will intensify. In adjusting to these unfolding developments, U.S. foreign policy will become more hardnosed.

In the Middle East, where oil, the Arab-Israeli conflict, and religious extremism have long restrained the region’s true economic potential, there will be a rotation in the nature of U.S. power from military intervention toward balanced economic engagement. Key catalysts will be the

landmark Iran nuclear deal and the massive reconstruction of war-torn Iraq, Syria, Libya, and Yemen. Financing will come largely from petrodollars against a backdrop of a tightening global oil market, where oil prices will ratchet up to close to \$ 65 a barrel within a decade.



President Paul Ryan strikes the Grand Bargain.

RUDOLPH G. PENNER

Institute Fellow, Urban Institute, and Former Director, Congressional Budget Office

It seems totally implausible, but in 2026, after years of dysfunction, the Congressional budget process began working as its 1974 designers intended. A budget resolution specifying targets for total spending, revenues, and the deficit was passed for the first time since fiscal year 2016, and all appropriations bills were completed before the coming of the new fiscal year for the first time since fiscal year 1997.

Congress was forced to become more responsible because the American economy was in the doldrums. The deficit was over 10 percent of GDP and draining away a substantial portion of national savings. Foreigners, having lost confidence, were no longer helping by buying Treasury securities. Interest rates soared, and the interest bill on the debt was absorbing 20 percent of revenues. Meanwhile, other countries were prospering. Europe grew rapidly after the breakup of the European Union freed member countries from oppressive regulations originating in Brussels. Even Russia grew briskly after Putin was deposed in 2023 and a new Reform Party managed to curb corruption and exile the oligarchs.

In the United States, it appeared as though Congress was on the verge of a bipartisan budget deal that would fix fiscal policy once and for all. Republicans seemed ready to accept a Democratic proposal for a value-added tax, and Democrats seemed likely to reluctantly accept a slowdown in the rate of growth of Social Security and Medicare benefits. President Ryan was fond of quoting President Reagan’s remarks regarding the 1983 bipartisan Social Security reform. As Reagan then said, “[The]

essence of bipartisanship is to give up a little to get a lot... I think that we've got a great deal."



U.S. fiscal policy will be more like Sweden, Finland, and Denmark's fiscal policies.

JARED BERNSTEIN

Senior Fellow, Center on Budget and Policy Priorities, and former Chief Economist and Economic Adviser to Vice President Joe Biden

With the strong caveat that American economists, myself very much included, have great difficulty forecasting next month's employment growth, here's a stab at what U.S. fiscal and social policy could look like a decade from now.

When it comes to taxing and spending on social protections, pre-school education, youth employment, and other broad family supports, the United States lags behind other social democracies. For example, according to OECD data, the poverty line before taxes and transfers is near 30 percent in the United States, which is surprisingly close to that in Sweden (26 percent), Finland (32 percent), and Denmark (25 percent). But after their much more ambitious social welfare programs kick in, poverty is 9 percent, 7 percent, and 5 percent, respectively, in the three countries noted above, yet 18 percent in the United States.

It may be wishful thinking (or nightmarish, depending on your orientation), but I predict, based on a number of trends, that the U.S. fiscal system may look more like these others ten years hence. First, a growing share of the electorate is aware that the relentless rise in income inequality here has proved somewhat resistant to our traditional set of policy responses. Second, most low-income, non-disabled people are now at least somewhat connected to the labor market, but many are stuck in low-wage jobs, that is, they're playing by the rules but failing to get ahead. Third, the argument that generous work supports hurt growth is increasingly rejected. Fourth, and perhaps of greatest influence, the U.S. electorate is increasingly young, minority, non-married, and immigrants—constituents likely to be more supportive than the older, white population of a broader, "Bernie Sanders"-type role for government in the economy.

This tension over an expanded role for government in pushing back more forcefully against market- and policy-driven inequalities has been growing for years here. Over the next decade, an evolving, left-leaning electorate may resolve it.



U.S. growth could be faster than expected.

GLENN HUBBARD

Dean and Russell L. Carson Professor of Finance and Economics, Columbia Business School, and former Chairman, U.S. Council of Economic Advisers under President George W. Bush

Yogi Berra famously mused that "it's tough to make predictions—especially about the future." Virtually no one would have predicted ten years ago that an economic recovery could be so sluggish for so long.

Indeed, this last surprise has led many economists to conclude that growth is dead. "Secular stagnation" is the view of some—chronically insufficient aggregate demand. Others worry about "headwinds" to aggregate supply from demographic trends and gaps in skills. These legitimate concerns have formed the basis of a slow-growth consensus. That is precisely where we are likely to be surprised—for the better.

I say this for three reasons. First, significant shifts in productivity growth are easy to see in the data after they have occurred, but are hard to predict. We have abundant evidence that many firms across most industries are not at the productivity frontier, and many businesspeople see very substantial productivity gains to be had in technological change going forward. The second is the low-hanging fruit from public policy to boost productivity—tax reform and regulatory reform—that offers large gains. Business tax reform, at least, should be possible in a compromise with supporting work—whoever is elected president. Finally, with regard to hours worked, we can boost work by older workers by reducing payroll taxes, and we can boost work generally with wage supports and reductions in implicit marginal tax rates arising from social programs.

A resumption of faster growth has broad implications—for living standards generally and for populist trends to the extent that work supports make these gains broadly felt. Better growth would also reverse the trend in capital markets toward very low rates of interest. That this scenario is so widely discounted while being so conditionally important makes it one to watch.



There could be more bubbles, weaker growth, and strained fiscal accounts.

MAREK DABROWSKI

Non-Resident Scholar, Bruegel, CASE Fellow, CASE - Center for Social and Economic Research, Warsaw, and Professor, Higher School of Economics, Moscow

Indeed, several dramatic developments of the last decade came as a surprise to policymakers while some of them could be predicted. This concerns, for example, the global financial crisis of 2007–2009, which resulted from the excessively loose U.S. monetary policy and lax financial regulations. In turn, few decades of fiscal imprudence had to lead to the sovereign debt crisis in Greece and resulting eurozone contagion. The Arab Spring was the consequence of decades of oppressive dictatorships, slow growth, and widespread social exclusion in the Arab region. There is also a causality link between bloody conflicts in Syria, Iraq, and Libya and the recent refugee influx to Europe.

Of course, predicting the exact scenario and timing of each crisis is rather impossible, but the high probability of adverse shocks should not be overlooked. Responsible policymaking should be prepared for various scenarios and have respective tools and sufficient resources to respond in advance to potential threats. Unfortunately, the contemporary politics driven by media performance and opinion polls has abandoned long-term strategic perspective and concentrates on day-to-day management. Unpopular decisions are postponed, sometimes indefinitely. Unsolved budget problems do not leave resources for timely response to emerging risks.

Looking ahead, one can consider various negative scenarios. For example, the continuation of ultra-loose

monetary policy increases probability of new financial bubbles. The rapid increase in public debt in many advanced economies (think about Japan, France, or Italy) can lead to a large-scale sovereign debt crisis. The decline in working-age population in Europe and East Asia (including China) will reduce potential economic growth and add strains to fiscal accounts. The inability of mainstream political parties to address strategic policy challenges will further encourage their populist challengers.

Let us hope that at least some of those risks will not materialize and the mainstream politics in democratic societies will regain capacity to address long-term strategic challenges in timely manner.



Negativity will remain a central problem.

BENJAMIN M. FRIEDMAN

William Joseph Maier Professor of Political Economy, Harvard University

President Obama made progress on some economic issues during his time in office, most obviously pushing through a key economic stimulus bill right at the outset of his administration and then arranging for health insurance for (so far) an additional twenty million Americans. What remains for the next president to accomplish?

During Obama's presidency, the country made little or no progress on longstanding issues like tax reform and assuring the long-term viability of Medicare in the face of spiraling costs. The U.S. financial system remains too large, too expensive, and too risky. Although Obama took some limited steps toward arresting the relentless widening of economic inequality—raising top-bracket tax rates, extending the earned-income tax credit, and expanding the child tax credit, for example—this year's election campaign in both parties shows that the American public remains deeply unsatisfied. The issue has to be at the top of any new president's challenges.

Most importantly, the pace of improvement in America's productivity—how much the nation produces per person, or per worker, or per hour worked—has been

slowing for the past four decades. With more rapid growth, many of today's economic challenges, especially widening inequality, would seem less worrisome; but with stagnating productivity, the resulting frustrations are rising toward boiling points. We know fairly little about how to boost an economy's productivity growth, although some identifiable measures would clearly help. Rebuilding the nation's physical infrastructure, restructuring education especially in the early grades, providing pre-kindergarten to more "at risk" students, and restoring the government's shrunken funding for research are all good choices. All cost money, but all are worthwhile.

The challenge for Obama's successor is not just to persuade but to demonstrate to an increasingly dissatisfied citizenry that these problems are not unsolvable.



It will turn out everyone will be better off.

STAN VEUGER

Resident Scholar, American Enterprise Institute

It is 2026, and the calm day-to-day of democratic politics reigns supreme. Ten years after the global financial crisis, steady improvements in standards of living coupled with a slow erosion of overhanging debt have engendered a return to normalcy. Far-right parties and their appeals to ethnic pride were on the upswing just a decade ago; largely ostracized by polite society and plagued by incompetence, they now struggle to maintain traction. On the opposite side of the political spectrum, the repeated failures of overbearing central planning appear to have prompted the demise of the Syrizas, Podemos, and Bernies of this world.

The signs were not obvious at first. During the decade following the 2007–2009 shock, wage growth was long limited and uneven. Self-inflicted policy mistakes lengthened and deepened the Great Recession, especially in Europe. This, in turn, inspired unrest, produced significant policy uncertainty, and hampered effective action. Middle-class incomes started rising only after populist revolts had started making significant electoral gains throughout the West. Has the tide turned completely? No

one knows, of course, what the future will bring. Rapid technological progress continues to make life harder to plan for than many would like, but a broad consensus is forming that it can ultimately make everyone better off.

We really dodged a bullet there.



Britain will have been the big winner.

PETER J. WALLISON

Arthur F. Burns Fellow in Financial Policy Studies, American Enterprise Institute, and author, Hidden in Plain Sight: What Really Caused the World's Worst Financial Crisis and Why It Could Happen Again (2015)

Barring an asteroid hit, a major earthquake in California, or some other unpredictable event, the only sensible way to predict the future is to project it from current trends, modified by likely political decisions. Ten years from now, then, the European Union will have largely disbanded, the per capita income in the United States will be roughly what it is today but possibly more equally distributed, and London will be the world's financial center.

Brexit will cause Britain to radically modify its policies on trade, regulation, and taxation. To counter the initial negative effects of leaving the European Union, the Conservative Party now in control of the British government has already proposed to attract investment by reducing corporate taxes.

When finally free of EU controls, Britain will also liberalize its trade policies. Within five years, it will apply for membership in the North American Free Trade zone, as well as other free trade agreements to which the United States is a party.

The success of reduced taxation will also induce the British Conservatives to enact substantial financial deregulation. This will attract financial firms to London rather than New York, where the Dodd-Frank Act—and its current suppression of financial and economic growth and innovation—will still be in force.

The success of Britain's policies in producing economic growth, new employment, and expanding trade will

induce other EU members to break with Brussels and the euro to join the growing free trade area.

In the United States, the sharp philosophical divide between conservatives and progressives will impede any reforms, although the conservatives will be able to prevent withdrawal from any existing free trade pacts and progressives will be able to prevent any liberalization of tax or regulatory policies. As a result, the United States will continue in an era of slow growth until the success of the British policies changes the views of the voting public.



*A new generation
could reform
Europe.*

MIROSLAV SINGER
Former Governor, Czech National Bank

Outside-the-box forecasting is by definition an exercise in futility, though one can try to predict significant surprises. In today's increasingly tense world, less favorably perceived democracies, and increasing inequalities, most forecasters expect more negative surprises from upcoming political developments.

In contrast, we benefit from developing technologies, enabling creation of virtual universes. Though statistics cannot measure the true extent of value added by this, effects are generally positive. For example, the lessening desirability of private cars brings lower auto industry output, but consider that for the first time in history we can engage in personal eye-to-eye communication without the necessity of travel—a significant productivity improvement. Progress in sciences dramatically enhances our ability to control and manage the life processes of plants and animals. This is bound to induce increases in our capability to create and efficiently use food products, and thus to free more human resources in the currently predominantly agricultural economies of Africa and Latin America. Add improved education, especially in information technology, allowing more of these populations to participate in technical development sectors, and positive surprises should arise.

Technological progress will certainly also change the ways we organize political processes. Regarding

Europe, which the world currently observes with both envy for its affluence and amazed contempt for its inability to deal with near-existential threats, I would like to remind readers that most potentially negative scenarios have previously been expressed. Thus, they hardly represent true outside-the-box thinking. I propose a vision of a new generation of energetic, charismatic, accessible, yet sober and pragmatic politicians reforming Europe in ways the population accepts, approves, and understands. That would also enable Europeans not to view technological development and the changing world as threatening, as many do today, but as presenting opportunities equal to those of Europe's greatest historical eras. True outside-the-box vision, isn't it?



*A European
revival.*

MARTIN HÜFNER
Chief Economist, Assenagon Asset Management

The mainstream thinking today is that Europe has its best times behind it. At best it will manage to muddle through in the coming years. At worst it will fall apart. It therefore would be a great surprise, not to say a shock, if in ten years' time there is a revival of Europe. Nevertheless, I believe that this could come true.

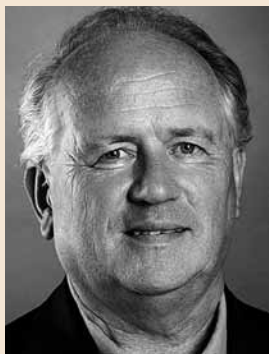
Why? The great mistake in the past decades was that European political integration was never a goal in itself but came along through the backdoor of economic cooperation. Every progress in the union had its origin in the economic field, be it the customs union, the economic union, the currency union, or the single market. Politicians hoped that these institutions would in the end lead to member countries growing also politically closer together. But that did not happen. On the contrary, not only the European Defense Union was vetoed. The draft of a European constitution was also refused. The political cohesion in Europe today is smaller than it was twenty or thirty years ago.

This asymmetry between economics and politics is an essential part of the European malaise, if not its main cause. It was one of the reasons for the Brexit. It

encourages the rise of populist anti-European parties all over the European Union. It lies at the heart of the bad feelings of many citizens *vis-à-vis* Brussels. It explains the harsh critique that is voiced especially in Germany against any form of transfer union. If it continues, Europe is bound to fall apart.

It could however come differently. It could be that Europe turns the corner and directly targets political integration in the future. This seems highly improbable today. Nobody can imagine a political union in Europe. But it is not impossible. Brexit thereto paved the way as Britain always opposed any efforts in that direction. A political union will not be possible with all the remaining twenty-seven members. It should possibly begin with a cautious rapprochement of France and Germany. The others could group around in the form of concentric bands. It will not encompass the whole spectrum of politics. It could start with defense, security, and foreign policy. Social policy comes last. And it will not happen immediately, but needs a long time to have the necessary trust between the partners grow.

Europe as a political union would be a different animal from the one we know today. It would be better rooted in the minds of the people. It could develop functioning democratic institutions. It would be a true alternative to the national state. It would be more stable. Not the least is the political union over the longer time the precondition for the persistence of the common currency. And it makes—as is the case in national states—redistribution between the partners more acceptable for the citizens. It would be similar to the Arab Spring, perhaps a European Spring. Hopefully, it would last longer.



The death of the European idea.

HEINER FLASSBECK

Director, Flassbeck-Economics, and Former Director, Division on Globalization and Development Strategies, United Nations Conference on Trade and Development

The next ten years will be the European decade. However, it will not be a decade of European power and glory but of mourning the passing away of

the great European idea. Europe is in bad shape already. Europe has not recovered at all from the fallout of the Great Recession that was triggered by the global financial crisis. Unemployment is high, growth is missing, and deflation is looming. Even worse, inside the European monetary union a big rift has emerged between a huge and mercantilist Germany and smaller peripheral powers, including France and Italy. The disequilibria in trade, originating in German wage dumping since the beginning of EMU, have gone far beyond the bearable for most of those countries with Mediterranean coastlines.

Despite a straightforward diagnosis and easy to implement therapies, Germany and some smaller Northern partners insist on economic orthodoxy in terms of government-led austerity and belt tightening for the whole economy. This is not going to change anytime soon as the majority of the parties in the German parliament are convinced that the German way is without alternative. Neither France nor Italy have political leaders on the left that would be able and willing to challenge German leadership.

Hence, the challenge will come from the extreme right. Their program will not only end German dominance and leadership, it will destroy the remains of the political Europe that is left after the Brexit. The dangers are imminent. Nationalist attitude and ideology, as experienced in the past, will not stop with the destruction of Europe but will question democracy in one go. The late Umberto Eco, the great Italian writer, in his essay “Eternal Fascism,” found that “The Cult of Action for Action’s Sake” is one of the main ingredients of nationalistic “solutions.” The foreseeable failure of right-wing governments to overcome the economic malaise will trigger new action and new anti-intellectualism until the point of no return to democracy has been reached.

I do not say that this is unavoidable. But it is highly probable if those who are able to see the dawning of the age of no return do not act swiftly and vigorously to overcome the European deadlock. In principle, Europe as an idea can be restored by going back to reasonable national monetary and economic regimes as well as by going forward towards a full political union. The biggest threat is standstill at a high level of misery because it is exactly this kind of standstill that will foster “The Cult of Action for Action’s Sake.”



The surprise would be that the central bankers for once got it right.

PHILIPPE RIÈS

Writer, Médiapart, and author, *Asian Storm: The Economic Crisis Examined (2000)* and *Le jour où la France a fait faillite (The Day France Went Bankrupt, with Philippe Jaffré), 2006*

As baseball legend Yogi Berra once sensibly noted, “It is hard to make predictions, especially about the future.” That’s even more so now that the future is not what it used to be.

For instance, the future used to have a price. But not anymore. Thanks to the apprentice sorcerers running the show at major central banks, Kuroda, Yellen, Draghi, and consort, the price of risk discounted against time is now zero or negative in some key constituencies. By most estimates, some ten trillions of government debt, and some corporate as well, are trading worldwide at negative interest rates for up to ten years and even beyond. In other words, while you used to pay to borrow, you are now paying to lend. As we know, the rationale behind that lunacy is to stop people saving and make them spend. Well, Japan has been at it for more than two decades, with very little success. Any clue?

The future used to be about “progress.” Tomorrow is another day, and will be better than today. Again, not anymore. For large swaths of the middle class in advanced countries, living standard stagnation has been on their plates for decades. They look with great concern to the future of their children and they don’t like at all what they see. Ironically, the only mitigation came for the very powerful deflationary forces unleashed by the globalization of capitalism (by itself a deflationary regime) after the fall of the Berlin Wall and the integration of China and other emerging economies. With stagnant wages, shrinking pensions, and declining returns on savings, you would think lower consumer prices are most welcome. Not so, say the wise guys (and girl) at the central banks. Deflation, that is the real danger and we will spend the saver’s money to the last dollar (or euro, or yen) to fend it off.

You know why? Because deflation is a spiral, so they say. Waiting for lower prices, people will stop spending. Therefore, companies will stop investing. And the whole economy will gyrate down the kitchen sink. And that’s so

true. The last time I went to check in Japan, in March of this year, they were all driving immaculately kept good old Corollas from the 1980s and 1990s, watching television on bulky cathode ray tube screens and chatting through old-style shell-type analog telephones made by the likes of NEC and Panasonic. Just kidding!

All through the Great Moderation, for which they took undue credit, central bankers completely missed the implication of the deflationary trends in terms of credit expansion and debt build up by all sort of economic agents, from national governments to college students, when inflation is not there anymore to take care of the debtors. Asleep at the helm, they watched over the most extraordinary expansion of liabilities during peacetime in human history. Faced with the bill in 2008, they decided to play “double or quits.” That is to flood the planet with liquidity in the (as of today) vain hope of kickstarting the wrecked engine of inflation.

So what would really shock the world in the coming ten years would be to see those wise people get it right for a change. And inflation coming back with a vengeance. Looking at their track record though, it is unlikely they can succeed on their own. It would require a massive exogenous shock like a war in North East Asia, the collapse of the Gulf kingdoms, or a dislocation of economic and social order in China. But, as Yogi Berra would say...



The body politic will return to something recognizable as maturity in conflict resolution and decision-making.

STEPHEN AXILROD

Author, *The Federal Reserve: What Everyone Needs to Know (Oxford University Press, 2013)*

The development I have in mind is a return to something recognizable as maturity in conflict resolution and decision-making in our complex, overlapping socio-political-economic world. That would really represent a breakout from the narrow, unpleasant little box that now seems to contain the process.

Maturity in decision-making seems to have been in full retreat for some time now. So what I envision is a return from near chaos to behavior that might be represented

by a reasonable kind of box with dimensions that provides ample space for reasoned discussion. But what can cause that? Naïve as it may sound to our sophisticated ears, it can happen because a healthy society (the basic assumption here of course), just like a fundamentally healthy body, tends to cure itself of ills so that it can satisfactorily continue on.

Such an evolution in the world's body politic will be seen over the years ahead as it reacts against the recent onrush of harmful blows that have seriously threatened its sustainability. Some blows are very obvious, such as ISIS and the even less organized uses of outrageous inhuman terror. But others are far subtler, like the failure to deal rationally with the credit crises in the United States and Europe partly because certain economic and social policies such as budget balance and avoidance of moral hazard in helping banks turned out to be unduly limiting factors in an extreme situation.

While the government and central banks did much to alleviate the crisis and keep it from becoming a total disaster, in the end they were perceived in the public eye as falling short. Confidence was lost, and not fully regained. And in its wake, ordinary people came to face other difficult problems like immigrant eruptions and unpredictably rapid technological change that destroyed jobs. Much of the public became aroused at the unfairness of it all, and sought change, any change.

Still, I believe the body politic is even now showing signs of producing antibodies to cure itself. The Brexit vote has been a real shock to the world and especially of course to the ability of the United Kingdom to see itself as reasonably whole; a second wind of some sort seems in the works. The persisting sluggishness of advanced economies in the aftermath of the credit crises has finally tended to resurrect an appreciation, or at least a tolerance, of fiscal activism on the part of some politicians. And while nationalism and indeed localism have been rejuvenated (for good reasons in some cases), it is slowly dawning on supporters, no matter how heady they may now feel, that today's world is not yesterday's and it probably never can be.

I believe the body politic will continue its attempts to return to a healthier state, and that will become evident in certain broad indicators over time—for instance, a shift in the distribution of income to less inequality both within and among nations. On more specific institutional questions, the European Union is likely to continue on with both more cohesion in the regulatory apparatus but also more flexibility in the management of boundaries and trade.

I have so far said nothing about monetary policy. Since the credit crisis broke out, the major central banks have focused, virtually laser-like, on keeping the economy highly liquid and long-term interest rates low. But

in the process they have continued to retain trillions upon trillions of dollars and euros in assets in official accounts even as the credit crisis has long since faded into the background. This has tended to keep major financial markets relatively thin, weak, and inexperienced and unable to reflect potential changes in economic fundamentals.

The markets are afraid to move without the implied consent of the main central banks, and the central banks seem reluctant to release either themselves or the market from the prison of their own huge debt holdings, not to mention their always-dubious economic projections. That rigidity seems to carry with it the main risk in the years ahead of some sort of crisis, inconsistent with the broader tale I have envisioned, as the U.S. Federal Reserve, for one, belatedly attempts to return to a “normalcy” long overdue while the market attempts to provide funds to help the economies grow into a more healthful state.



A modern version of the class-driven revolutions that followed 19th-century industrialization and urbanization.

RICHARD JERRAM
Chief Economist, Bank of Singapore

There is not much benefit in an economist speculating about potential technology-driven surprises, at least we understand comparative advantage (and it is not in tech). In any case, my concerns are not about surprises coming from progress, but about the potential for regression. This could come in two areas.

First, the collapse of the post-war order and return to competitive nation states. One aspect of this would be greater conflict in trade relations—perhaps driven by discriminatory tax regimes, regulations, or investment policies rather than explicit import tariffs. More seriously, there could be military conflict, as the world struggles to accommodate the rise of China, while the fragmentation of Europe is another threat. Of course autarky would also kill any chance of a coordinated approach to global warming, the consequences of which would further increase the scope for tension between states.

Second, maybe the system will become ripe for a modern-day version of the class-driven revolutions that followed the industrialization and urbanization of the nineteenth century. Political tensions driven by rising inequality are already evident and current democratic structures seem to offer no redress to a significant minority. Our aging demographics argue against an old-fashioned popular uprising, but the constrained resources of the state could limit its ability to respond. Marxist revolution in the United States? Probably not, but the general availability of weaponry leaves plenty of room for disorder.



The social, political, financial, and economic structure is unlikely to survive.

BERNARD CONNOLLY
CEO, *Connolly Insight, LP*

Sometimes a surprise is the continuation of underlying trends whose implications have not been fully recognized. Their likely outcome is the disappearance of what is left of democratic capitalism.

The big macroeconomic problem is the secular global downward trend both in real long rates and in productivity growth, the results of Fed mistakes in the mid-1990s and the imposition of monetary union in Europe. The eager take-up of 100-year sovereign bonds at extremely low rates makes sense for funds if this trend continues. But it implies a complete re-think of the role of finance and threatens to bring extreme social disruption and intensified intergenerational economic conflict. The alternative is a very deep global recession.

Political trends look just as bad. “Democracy” is being replaced by the rule of a *nomenklatura*. Contempt for democracy—and strenuous attempts to destroy *demoi*—is of course most apparent in the nature of the European Union and in the horrible likelihood of further-deteriorating intercommunal relations there. But things are only marginally better in, for instance, the United States, where the likely next president, Hillary Clinton, may enter office with a 65 percent unfavorability rating. In this respect, too, the alternative is not reassuring.

One glimmer of light is Brexit. But not everyone has the courage of the Bulldog Breed, or at least of its older generations. And the *nomenklatura* and its clients are buying for the people’s voice to be ignored.

Worst of all, the young throughout the West have been brainwashed into a bigoted, intolerant proto-totalitarianism. Universities are no longer centers of free expression but are vast factories of “political correctness.” One’s anguished fear is that the choice for the world will increasingly be limited to one between 1789 and 1984. One way or another, the social, political, financial, and economic structure is unlikely to survive.



European populist parties will continue to strengthen. The Islamic Republic of Iran will be overthrown.

DANIEL PIPES
President, *Middle East Forum*

I foresee two surprise developments in my areas of study: First, as indicated by the half of Austrians who recently voted for the Freedom Party’s candidate for president, a rebellion is underway in Europe against permissive immigration and multiculturalism. Expect to see populist parties implement tough policies *vis-à-vis* Muslim populations, who will respond with anger and violence. Steady low-grade civil insurrection will follow, leading eventually to larger-scale clashes. In the end, Muslims in substantial numbers, finding Europe uncongenial, will abandon it for Muslim-majority countries. I call this the “separation of civilizations.”

Second, the Islamist movement appears to be strong and growing, spanning a wide range of tactics from the fanatical murderousness of the Islamic State’s caliphate to the increasing authoritarianism of Turkey’s elected President Erdogan. But, I predict, the movement will have much weakened in a decade. Two reasons mainly account for this decline: Islamists are ever more inclined to engage in internecine strife (such as in Syria); and Muslim populations generally reject Islamist strictures when they experience these (think of Egyptians under Morsi). The overthrow of the Islamic Republic of Iran will culminate this decline, leading to a post-Islamist era.



Western institutions will continue to deteriorate, interest rates will remain low, and capital will continue to be misallocated.

REUVEN BRENNER

Repap Chair, Desautels Faculty of Management, McGill University

World population increased from one to seven billion within a century, in some countries faster than in others, and some ethnic groups growing faster than others. Political institutions did not adjust to these dramatic changes either in the dozen or so “Western-type” countries, or in the rest of the world. In Islamic countries, it is even misleading to talk about “political institutions,” as within them Islam is not a mere “religion,” but swamps politics and laws, as “Islam” never went through the separation of powers Western Europe did—bloodily—starting a thousand years ago. When mired in atavistic ideas and institutions, the consequences have always been wars, terror, political instability, widespread corruption, and people on the move. I made these observations few decades ago, and I believe these events will go on.

Just two decades ago, the United States and Western societies were held up as models to emulate. This is less so now, as the West weakened its institutions upon which its success was based. While once these were societies based on the principle of “everything allowed—unless explicitly prohibited” (drawing on a civic sense of responsibility) versus the rest of the world which lived by the principle of “everything was prohibited—unless explicitly allowed,” the West has moved closer to the second kind of society during the last two decades. Recent political movements in the West suggest discontent with this trend, but it appears a fifty-fifty proposition whether or not it would be reversed.

The low interest rates support these assessments: They imply that no country with significant clout pursues policies conducive to creating risk-taking cultures. For that, drastic decentralization of accessing capital would be needed, less credit being allocated (directly or indirectly) by governments. At present, even the West is doing the opposite. Interest rates can stay low because of expectations of such continued misallocation of credit around the world; it also allows governments to escape default while

continuing their atavistic spending. The rates stayed low during 1940–1951 too, as I explained in *TIE*’s pages few years ago (Fall 2013), drawing parallels.



Spreading postmodernism will lead to a cascade of institutional failure.

ADAM GARFINKLE

Editor, The American Interest

By nature and definition, that which is supposed to be surprising cannot be reliably anticipated or it would necessarily not be much of a surprise, except of course to the very obtuse. Moreover, discrete surprise events rarely drive what turns out to be history, which is better thought of as a multi-dimensional video rather than snapshots of individual events cobbled together. Major consequences often result from a cascade of causality where second- and third-echelon knock-on effects are more important than any original event-inflection “point.”

That said, I can offer up one discrete event and one causal cascade.

The discrete event is a meteor hit on the earth. In a way, we’re due. We’ve spent billions of dollars over the years plumbing the far reaches of the galaxy, but comparatively little inventorying near-earth orbit. It’s not as sexy. The really sad part is that we could, under many imaginable circumstances, actually do something about a meteorite headed our way if we had enough time to prepare. That would be one helluva surprise, if anyone were left alive to remark on the event.

The causal cascade I will call “The Enlightenment, R.I.P.” Modernity, defined as a specific mode of thinking and being, is ending. The three key components of Enlightenment modernity—the ascent of individual agency, the detachment of the arts from ecclesiastical or generally religious aegis, and a teleology positing the twinning of material and moral progress—are waning even in the Western cradle of their birth. Spreading postmodernism is stripping the mythology bare for all to see, and there’s no such thing as a functional used belief system. The result will be a cascade of institutional failures, the fraying of social contracts ultimately based on these components,

and outbreaks of para-religious premillennarian violence in and of course beyond the cultural West.

Unless of course the meteorite hits first.



The United States will increasingly work around the UN, the IMF, and the WTO.

WILLIAM BROCK

Former United States Trade Representative and former U.S. Secretary of Labor

Faced with the fact that present international institutions lack the ability to make an effective and expeditious response to rapidly developing problems around the globe, the United States will be compelled to form very new, far more focused, and far more limited alliances outside of and in addition to those institutions. The result will be a diminished interest in and support of existing institutions.

The pace of change—technological, biological, social, environmental, and economic—has accelerated to the point where it has exceeded the capacity of most if not all international institutions and most if not all individual governments to respond to developing challenges without often exacerbating the matter they seek to address. In the eyes of those they purport to serve, they are inept or worse. The result is an increasingly frustrated, impatient, and angry general public, which has lost respect for and confidence in the institutions of government and in the rule of law. The demand for more aggressive domestic leaders willing to take direct action will become almost irresistible.

World leaders will exert enormous efforts to utilize existing international institutions to avert trouble, but in times of immediate peril, it will become increasingly clear that they lack the ability to prevent an imminent slide into global chaos.

The United States, faced by these threats, will begin to form a number of dramatically new and different alliances, including some with former adversaries, but each fully independent of present institutions such as the United Nations, the International Monetary Fund, and the World Trade Organization. They will be created to prevent impending crises, but also to create the capability to deal quickly with specific concerns, including terrorism,

of course, but equally with imminent challenges ranging from cyber-security disruptions to trade wars—before the damage gets out of control.

That, at least, will be the hope.



The continuing collapse of free trade will hit our standard of living.

BOB MCTEER

Former President, Federal Reserve Bank of Dallas

Free trade has always been a hard sell to the job losers. They don't care about comparative advantage or jobs created by exports, nor what economists or other elites think.

Nothing new here. What's new is that both presidential candidates have gone nuts on trade. I hear no voices of reason. No Bastiats telling us to close the blinds.

No doubt more people will be working in four to eight years, but they'll be working lower on the food chain. The surprise will be if anyone figures out what happened to our standard of living.



The unleashing of another golden age of globalization.

GARY KLEIMAN

Senior Partner, Kleiman International Consultants

Another golden era of globalization should be unleashed toward 2025 after current trade, investment, and financial fragmentation and malaise run their

course by end-decade. Poorer developing and frontier economies as opposed to middle-income emerging ones will have the closest cross-border links, with a new generation of business and government leaders in the vanguard departing from previous discredited official and commercial models. This shift will be prompted in part by scientific breakthroughs offering cheap substitutes to a wide range of agricultural, energy, and mining commodities, and the establishment of world-class universities and research centers as educated professionals stay in place after earlier overseas outlets were closed to them due to anti-migrant and refugee backlash. Free trade arrangements will be the norm in the absence of elaborate formal treaties and the World Trade Organization, which will fade from the scene. Currency blocs will emerge with a new common unit despite the mixed euro experience, and *de facto* continental and global lenders of last resort and money should appear to supplant the International Monetary Fund and SDR in those roles. Africa and the Middle East will enter the financial sector mainstream, with country operating and regulatory combinations creating banks, stock exchanges, and bond markets that are among the world's largest.

Today's big emerging economies will drive the 2025 versions of the Bretton Woods institutions and their successors, although the current BRICS and Asian Infrastructure Banks will be overtaken by new iterations. They will manage breakthroughs in the global public goods agenda on the environment, diseases, and poverty reduction with their effects felt most deeply in industrialization and social policy. These topics will continue to be covered by another team in charge of this magazine in some form, although with affordable, pioneering space travel also imminent it may be renamed *The Interplanetary Economy*.



Globalization will be unwound.

DESMOND LACHMAN

Resident Fellow, American Enterprise Institute

Accustomed as we are to seventy years of uninterrupted globalization, it is difficult for us to imagine that globalization can be unwound to devastating effect

for the global economy. Yet that is precisely what happened in the aftermath of the first world war after a hundred years of globalization. And sadly, that is what could very well happen again over the next few years.

There are three interrelated reasons for deep pessimism about globalization's future. First, populism with a distinctly anti-globalization and anti-elitist tinge is already on the march in the United States and across Europe. Second, years of highly aggressive and unorthodox monetary policies in the world's major economies have given rise to asset price bubbles and the gross misallocation of capital around the world. The unwinding of those bubbles is all too likely to lead to many more years of subpar global economic growth that will only put wind into populist parties' sails.

Third, especially after Brexit, the unravelling of the euro is now an accident waiting to happen. When that does occur, major economic and political aftershocks must be expected to reverberate across the world.

Hopefully, these gloomy prognostications about globalization will not materialize. However, all of the clues seem to be pointing in the opposite direction.



The collapse of globalization. The festering of a global financial crisis.

DIANA CHOYLEVA

Chief Economist, Enodo Economics, and co-author, The American Phoenix: And Why China and Europe Will Struggle After the Coming Slump (2011)

The world has failed to make globalization work, causing tectonic shifts in its economic and political structure. The situation is not beyond remedy, but tomorrow's surprise is likely to be how quickly the free movement of capital, trade, and people unravels. Looking back in ten years' time could well reveal Brexit to have been the first nail in the coffin of globalization.

The shocks that deepened globalization over the past three decades brought a tremendous improvement for vast parts of the world—the collapse of communism in the Soviet bloc, China's accession to the World Trade Organization, and rapid technological progress.

The problem is that free global markets clash with sovereignty and national identity. Popular revolts in the West are understandable. But it is more difficult to forgive the failure of those in power, especially after the global financial crisis, to grasp how interconnected the world had become.

Central bankers and other policymakers should have focused on how the key driving forces in the global economy fit together and what that meant for their economy. Instead, over the past couple of decades, they have continued to view the world through the narrow prism of their own countries, taking the rest of the world as an external influence and choosing their policies accordingly.

Different thinking would have produced choices that could have helped the world amplify and spread the benefits of globalization better. Instead, a destructive economic and financial crisis was spawned and allowed to fester. The world economy is far from being fully back on its feet.

To make globalization work, we need an internationally coordinated policy where not only the borrower economies bring their overall debt to sustainable levels but also the saving gluttons act to reduce their malign savings excess. Instead, the world has plunged into a currency war, but no one wins from competitive devaluation when global demand is weak because of excessive savings, as remains the case today. Unfortunately, a global policy response just seems too difficult to achieve in today's political climate.



It's possible, though not certain, that climate change could be less severe than expected.

JOHN M. DEUTCH
Institute Professor, Massachusetts Institute of Technology, and former Undersecretary, U.S. Department of Energy

Global leaders may be exercising collective self-deception by spreading alarm about the catastrophic dangers of climate change. Scientists have made a compelling case that anthropogenic emissions of greenhouse gases inevitably contribute to global warming. However, climate sensitivity, which reflects the transformation of greater atmospheric concentration of emissions into higher temperatures, and their climate impacts involve processes that are enormously complex, with many

subtle feedback effects, and thus is subject to great uncertainty. Political leaders often speak with much greater certainty than scientists do about dramatic consequences such as extreme weather events, droughts, and migration.

Why is the impact of climate change on human society and natural ecosystems so uncertain? The most important reason is the difficulty in predicting its time scale, geographical distribution, and severity, compounded by the uncertainty about the ability of human and natural systems to adapt to these changes. Economists struggle to develop methods and models that can determine the “damage function” that describes the net of costs and benefits, both over time and across different regions, as the world reacts to global warming. A proper “damage function” is necessary to establish the “social cost of carbon,” which should shape expectations about climate outcomes and influence climate policy.

New technology may lead to advances that reduce emissions and therefore the inventory of greenhouse gases in the atmosphere. The uncertain natural variation in solar radiative forcing and climate geodynamics can and will also influence consequences of climate change. The best strategy may be to shift some of the costs of mitigation today to investing more in research and development and adaptation for tomorrow.

If climate change turns out to be less severe than is currently expected, it would indeed be a big surprise for many. In the meantime, we should support scientific inquiry to gather evidence to narrow uncertainties, and avoid excessive zeal that focuses on extreme outcomes.



Taxing climate pollution instead of productivity will be a societal breakthrough.

DEBORAH GORDON
Senior Associate and Director, Energy and Climate Program, Carnegie Endowment for International Peace, and co-author, “A Smart Tax: Pricing Oil for a Safe Climate” (2016)

Carbon will be taxed on a global scale. This policy transformation will start in the United States, despite current hurdles from both political parties. Canada and Mexico will follow the United States. This makes

sense since 80 percent of oil consumed in the United States is now sourced from within North America and the vast majority of petroleum products refined in the United States are consumed on this continent.

But it won't stop here. The United States and Canada will lead the way for other nations to establish carbon markets. Taxing climate pollution instead of productivity will be a societal breakthrough.

The burning question remains: Will the United States design a smart tax that prices fossil fuels individually based on carbon emissions, or issue a blunt tax on fossil fuels? Pricing fossil fuels—especially oil—for a safe climate is most effective if the tax differentiates among the very different chemical entities that today all go by the name “a barrel of oil.” It must also account for greenhouse gas emissions along the entire oil supply chain: production, refining, transport, and end product use. And it must apply to ancillary byproducts, like petroleum coke and residual oils, that do not fuel the transport sector.

A grand bargain that ultimately makes a U.S. carbon tax politically attractive will include: (1) eliminating the need for the increasingly unpopular and perennially thwarted gas tax before it hits its 2032 centennial mark; (2) spreading climate responsibility fairly to the myriad of oil supply chain stakeholders—from producers to refiners and truckers to airlines and motorists to manufacturers; (3) spending a portion of its proceeds to fund rebates to lower- and middle-class Americans; and (4) cutting the corporate income tax. While this policy will start with oil, it will eventually spread to other fossil fuels, leading to sought-after regulatory relief for gas and coal.



Healthcare will confront the free market.

DEAN BAKER
Co-Director, Center for Economic and Policy Research

Prescription drugs presently sell at outlandish prices. Sovaldi, the hepatitis C drug, has a list price of \$84,000 for a three-month course of treatment. Many of the new cancer drugs sell for hundreds of thousands of dollars for a year's treatment.

These prices are absurd. These drugs are almost invariably cheap to produce. High-quality generic Sovaldi is available in India for less than \$500 for a three-month course of treatment. Drugs sell at these ridiculous prices because the government grants drug companies patent monopolies. And these monopolies create all the corruption and economic distortions that would be expected from a massive government intervention in the market. Think of a 10,000-percent tariff—that is roughly what we are talking about with drug patents.

The justification for patent monopolies is that drug companies need to recover their research costs. Suppose that the government funded the research upfront so there were no costs to recover. Then the new cancer drugs would sell for a few hundred dollars for a year's treatment. Patients would no longer face huge battles with their insurance companies to pay for expensive drugs, nor risk depleting savings on large copayments. And the whole world could benefit from these low prices so charities such as the Gates Foundation and the Clinton Foundation could focus on health care instead of making drugs affordable.

The free market could apply more broadly in health care. If research costs were paid upfront, then medical devices such as MRIs would also be cheap as would all the various blood tests now available. Doctors could prescribe the best tests available without considering costs.

There is a lot to be said for a free market. Perhaps in ten years we will be brave enough to start applying it in health care and get away from patent monopolies.



Health risks will continue to be ignored. ISIS will have faded.

KEVIN G. NEALER
Principal, Scowcroft Group

Health threats in the form of pandemics aren't a surprise for the global economy, because they are inevitable. What qualifies as surprising is that the international community remains stunningly under-resourced to respond to them. Congress's inaction on a modest Zika funding measure is evidence that health risks don't become retail politics until it is too late. The entire WHO

budget remains flat and its contingency funding for global emergencies is just \$228 million, half what it was in 2013. Information sharing and coordination among governments remains weak. The tacit learning from Ebola, MRSA, and other outbreaks is that they are hyped as threats. That is true until it is not. The Congressional Budget Office estimates a severe pandemic would shave 4.25 percent off of U.S. GDP; even a mild outbreak could cut U.S. growth by 1 percent and cost \$3 trillion worldwide.

The unexpected contraction of ISIS could reduce terrorists' tax on global growth. Prudent planners assume the loss of the "caliphate" means terror risk of the kind experienced in Europe, Turkey, Bangladesh, and Indonesia becomes the new normal. But it is equally possible that the loss of its refuge and most of its revenue deprives ISIS of recruitment, funds, and energy. The late 1970s and early 1980s saw a convulsion of terrorist threats from groups like the Baader-Meinhof Gang, Red Brigade, Red Army Faction, and Black September. Despite predictions they would persist and expand, each withered to nothing. What's different about ISIS? It doesn't enjoy support from a superpower as an instrument of Cold War brinkmanship. In fact, ISIS has antagonized every government on the planet, and regional actors as diverse as Israel, Iran, and Saudi Arabia. There may be no big peace dividend if ISIS disappears, but that result would require adaptation of U.S. and global security policies that have governed since 9/11.



Demographics will become a dominant challenge.

HENRY J. AARON

Bruce and Virginia MacLaury Senior Fellow, Brookings Institution, and Co-Editor, Coping With Methuselah: The Impact of Molecular Biology on Medicine and Society (Brookings, 2004)

Even if demography is not destiny, it is important. Both fertility and mortality rates have been coming down. These trends have offsetting effects on population size, but reinforcing effects on population aging.

Few observers expect fertility rates in rich countries again to reach the replacement rate, 2.1 births per woman.

Most expect fertility rates in poor and middle-income nations to keep on falling.

The decline in mortality rates has been remarkably stable over long periods. The trends have been interrupted only by temporary upward deviations (the early twentieth-century influenza epidemic) or localized increases (Europe during the world wars, Russia under the Soviets, Cambodia and Rwanda under genocidal regimes). Mortality fell remarkably in Japan following World War II. In the United States, life expectancy has risen about one year every ten years for several decades.

Trends in mortality rates have been stable because they are subject to many uncorrelated influences. But, as is said in the financial world, past performance is no guarantee of future results. The challenge is to know whether positive or negative "shocks" are more likely.

Potential life-shortening shocks include growing resistance of pathogens to antibiotics, effective use of pathogens by terrorists, and (regionally) global warming.

Life-lengthening shocks would most likely come from medical advances. Scientists at Johns Hopkins University, consulted by the Social Security Administration for SSA's demographic assumptions, do not expect such surprises. But major advances that slow senescence and stop or slow degenerative conditions are plausible.

Major extension of life could be a civilization-changing advance. But like most such advances, it would generate large, and mostly unstudied, effects on public and private finances, labor markets, and family relations. Such a development would raise profound ethical and political questions, particularly if the ways to lengthen lives could only be purchased at high cost.



Ten years from now we'll all have doppelgangers.

MARTIN C. LIBICKI

Richard Keyser Distinguished Professor of Cyber Studies, U.S. Naval Academy

Ten years hence, it is entirely possible that most individuals here and in other developed countries will have virtual doppelgangers: agents that live in agent-based simulations designed to behave as you do, constructed in

order to test your reaction to events (both virtual and real) for the purpose of testing advertising, political campaigns, and propaganda. The ability to build increasingly realistic simulations will result from a confluence of: our ever-thickening trail of interactions *vis-à-vis* the Web and apps; ever-more densely spaced surveillance instruments (such as cameras, microphones, your and other people's smartphones); data flows from the Internet of Things; increasingly subtle hence undetectable ways by which such data can be acquired from their original owners (you, web portals, and so forth); cloud-based storage and processing; and artificial intelligence. These simulations, whose fidelity will improve as new data is constantly acquired, will be generated for national intelligence agencies, cloud-hosted Web services, and third parties looking to sell (because there may be many such sellers, there may be many subtly different doppelgangers). If and when this happens, it may not be a surprise. The real surprise may occur when people realize that even a highly accurate simulation of every participant in a market or conclave does not find black swans very well. This would be because certain macro-behaviors that give rise to black swans—people reacting to people reacting *ad infinitum*—arise from the butterfly effect wherein minute differences in contingent behavior cannot be resolved through personal simulation.



It could turn out that Brexit and ISIS are extensions of historical disputes in world history.

YOSHIHIRO SAKAI

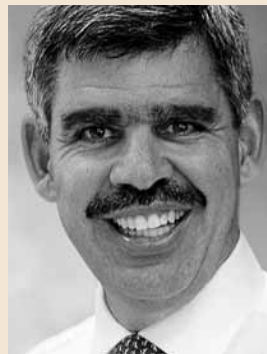
Special Advisor and Visiting Professor, Chubu University

The incidents that could not have been anticipated ten years ago can be classified roughly into two groups. The first, “making the impossible possible,” entailed the growth of human knowledge and technological innovation in the natural sciences, with the advent of driverless vehicles, drones, and Big Data. Most of these were prophesied decades ago in animated cartoons and science fiction movies. For instance, “Astro Boy,” serialized in Japan from 1952, is a futuristic story that, of its own accord, forecasted technologies that play an active part in the twenty-first century, including humanoid robots.

The second group is “a repeat of the past.” It is conceivable that Brexit and ISIS—issues that are, at their core, defined by their regions, in this case the United Kingdom, mainland Europe, and the Fertile Crescent—are extensions of historical disputes in world history. While human knowledge temporarily brings about peace and prosperity by controlling nature and human emotion, this was not self-evident. At this point, it seems that “universal truths” such as geography and race have returned with a vengeance.

Technological innovation has amplified the influence of one incident. Similar to how the 1998 Russian financial crisis spread to the rest of the world in the blink of an eye, the Arab Spring and the global financial crisis also spilled over to other places. On the other hand, with nations having upgraded self-defense technologies and having made available to individuals technologies that once took priority, we are witnessing the return of the nineteenth century “rise of nationalism” in a more radical form. This is the decentralization of the world.

With that, is it reasonable to consider what kind of technologies and what kind of world will come to fruition? President Obama’s Nobel lecture mention of nuclear conflict was an accomplishment, with the people considering the realization of a nuclear-free world. It is conceivable that as technological innovation progresses, human knowledge could deepen even further. Nevertheless, given that ten years is a long time, it is unknown what will truly happen.



The surprise will be if governments and corporations can keep up with political change and technology.

MOHAMED A. EL-ERIAN

Chief Economic Advisor, Allianz; Chair, President Obama’s Global Development Council; and author, The Only Game in Town: Central Banks, Instability, and Avoiding the Next Collapse (2016)

The biggest surprise for me would be if we did not see an even faster pace by which prior-improbables and unthinkable turn into realities. And this for a simple reason.

Decision-making in too many public and private sector entities around the world continues to lag the demands

placed on them by technological advances, mobility, individual empowerment, and the desire by more people to have a greater say in their own and collective destinies. The resulting adaptation challenges are compounded by the legacy of years of sluggish growth, an alarming increase in the “inequality trifecta” (of income, wealth, and opportunity), political polarization, and greater strains on social cohesion.

In the years ahead, we are likely to see many more surprises. Some will be due to the consequences of political fragmentation, overly partial policy responses that have excessively relied on central banks, and the unpleasant likelihood that too many years of disappointing growth and artificial finance will break things. Others will reflect technological disruptions that, powerfully driven by advances in artificial intelligence and machine learning, have now entered the “second half of the chess board” that involves astoundingly rapid and far-reaching changes.

Indeed, the biggest surprise would be if companies and especially governments were finally able to catch up with the realities on the ground and thus be in a better position to improve the balance of “benefits, costs, and risks.”

At the most basic level, this requires them to do a much better job in enhancing both agility and resilience; and to do so, they will need to overcome forces of historical inertia while adopting much more open mindsets that acknowledge blind spots and actively seek to deal with harmful unconscious biases.



We'll see the crackup of the artificial state.

MICHAEL LIND

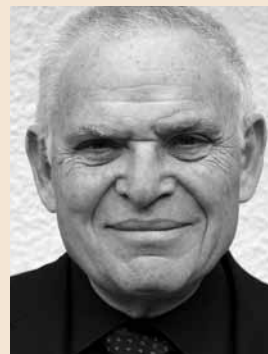
Co-Founder, New America Foundation, and author, The American Way of Strategy: U.S. Foreign Policy and the American Way of Life (2006)

The single most consequential surprise that could create regional or global turmoil is the violent crack-up of a multinational state into successor states.

The Balkan Wars of the 1990s resulted from the violent dissolution of Yugoslavia into seven successor states: Bosnia and Herzegovina, Croatia, Slovenia, Macedonia, Serbia, Montenegro (which broke off from Serbia in 2006),

and Kosovo (which seceded from Serbia in 2008). Russia's interventions in Georgia and Ukraine are an aftershock of the crack-up of the Soviet Union in 1991 into fifteen successor states: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. Prolonged, bloody ethnic war in Sudan led to the independence of South Sudan in 2011. The misguided U.S. policy of regime change, whether by direct war or proxy war, in Iraq, Libya, and Syria has accelerated the decomposition of those artificial multinational states into more ethnically homogeneous entities, including the would-be caliphate ISIS. Peaceful dissolutions like the “velvet divorce” of the Czech Republic and Slovakia are all too rare.

Many of the world's most populous and unstable countries are artificial creations of former European empires. The consequences of the crack-up of countries such as Pakistan or Nigeria along ethno-national lines would extend far beyond their borders and could lead to the intervention of great powers, perhaps on opposing sides. Like the implosions of Yugoslavia, the Soviet Union, Iraq, Libya, and Syria, future crack-ups might be dismissed as unlikely—until they occur.



Major structural change will come from the realm of technology.

EDWARD N. LUTTWAK

Senior Associate, Center for Strategic and International Studies

Outside-the-box developments that could “shock” the world are one thing; outside-the-box developments that could change the world are quite different. One can enliven a dinner party by soliciting suggestions about unexpected “shocking” events, but after hearing the resulting imaginings nothing useful is likely to be learned. When it comes to world-changing events, however, it is not true that nothing useful can be predicted about these “unknown unknowns” because there is one very critical thing that can be predicted—to wit, that while all sorts of exciting or alarming developments may come from the realm of politics, structural changes of global importance

can only come from the realm of technology, even if their expression must eventually be political.

At the present time, for example, politics in both Europe and the United States are belatedly expressing the consequences of the IT revolution that has caused 1,000 changes good, wonderful, terrible, or merely nasty—but one of them happens to be the impoverishment of routine workers of all kinds, both manual and clerical, in production and distribution alike, which in turn is changing income distribution in ways that weaken elite-directed moderate parties of both the center-right and the center-left, while strengthening anti-elite “populist” parties.

The too-easy to predict (and hence disqualified for present purposes) next tech revolution is of course the advent of genetic engineering within human embryos, which you or I might commission (costs might fall as low as \$79.99) to ensure beauty and intelligence in our grandchildren, but which Kim Jong-un of North Korea will use to procreate an obedient population, which by 2050 (when he will still be 66) should be ready to kill off all pre-engineered North Koreans except for himself to yield the perfect dictatorship. Yes, ladies and gentlemen, science is a wonderful thing—and if there is one thing that all agree (but for oddball me), it is that we need more of it.



In the digitalized world, privacy will be a major headache.

EV EHRlich

President, ESC Company, and former U.S. Undersecretary of Commerce, 1993–1997

The surprises of the future are not the underlying trends but how people react to them. And that’s why digital privacy will rise to prominence.

Just as pollution was inherent in the industrial economy, amassing information about “you” is inherent in the information economy—both are the “shadow” of how the dominant technology creates wealth. Moreover, the market power of the monopolies that stand astride the Information Age—starting with Google and Facebook—rests on databases that know who, what, and where you are, and more.

This intrusiveness will spiral as embedded and mobile technology burgeons. And just as people objected to giving up environmental amenities, they will soon refuse to accept intrusion as the new price of progress. An inevitable massive data breach or hacking event (see the television drama “Mr. Robot”) will be the 1948 Donora Inversion of privacy. Database restrictions will be put in place: “jubilee” (data erasure) protections will be commonplace; the “Internet of things” will be harder to promote. And blockchain-fueled, Bitcoin-like, anonymous “money” will rival sovereign currency and, perhaps one day, limit monetary policy tools.

“Privacy over profits” is the kind of “us versus them” slogan that appeals to both the Trump right and Sanders left. (Imagine Trump going after Democrat-leaning Google and Facebook on this score.) Right now, millennials are “data sharers,” but when they age, will that change? One would hope that broad and balanced privacy standards and “opt-in” agreements, and trust-building intermediary institutions, would allow people to monetize their privacy and manage the tension while preserving Big Data’s social (such as public health) benefits and addressing the issue of (always a step ahead) criminality. That would be the rational response. So are the universal basic income, the carbon tax, and the dollar coin. Good luck.



A lot more political disruption, violence, and conflict.

DAVID M. JONES

Author, Understanding Central Banking: The New Era of Activism (Routledge, 2013), and Executive Professor, Florida Gulf Coast University

While it is difficult to pinpoint an outside-the-box development ten years from now, it is possible to envision generally unfavorable patterns and trends. There is likely to be, for example, heightened global political and event risk. These factors are likely to overshadow macroeconomic events and policies. Previously, we have experienced favorable circumstances involving post-Cold War peace and prosperity facilitated by European peace and unity, the 1978 economic reforms in China, and the crumbling of the Berlin Wall in 1989

which led to a doubling of the global labor supply and the spread of free market capitalism worldwide which pulled billions of people out of poverty.

However, the future ten years from now could well be fraught with contrasting political disruption, violence, and conflict. Specifically, I foresee Russia conquering Ukraine and attacking the Baltic states, a Muslim uprising in Europe, and a breakup of the European Union following the surprise British exit. Moreover, I expect Iran to become a major nuclear power, threatening Israel and kicking off an uncontrollable arms race in the Middle East, culminating in an all-out war between the Sunni countries led by Saudi Arabia versus the Shiite countries led by Iran. Ultimately, I anticipate more violent attacks on western democracies by ISIS and its ideological mutations promoting extreme Islamic terrorism, possibly involving dirty atomic suitcase bombs and biological warfare. The only protection for the increasingly inward-looking United States from this rising tide of global political violence will be a strong defense and important energy independence made possible by technological advances in hydraulic fracturing and horizontal drilling, and the continuing profound information technology revolution centered in Silicon Valley. Finally, China will become the dominant power in Asia, emphasizing political and military power grabs instead of economic growth and development.



Public backlash against technology and income inequality will worsen. Global institutions will weaken.

HONGYI LAI

Associate Professor, School of Politics and International Relations, University of Nottingham

On the technological front, robots and automation (driverless cars and even airplanes) will play a visible role in our economic and social life. First, automated machines (such as driverless cars, small flying vehicles for daily commuting, and small mobile vehicles for delivery) will play an important role in daily work and lives. Additionally, robots will gradually replace laborers in undertaking dangerous, heavy lifting, repetitive, and fast-paced tasks, and possibly jobs that do not require complex interaction and

communications with humans. This may help economies with aging populations (such as Japan, China, and Europe) to improve productivity. In addition, human-like sexually attractive dummies and robots will change profoundly the families and relations between genders. It may lead to the rise of single-person “families” (SPFs), even childless SPFs and slower population growth in developed economies. Surrogate mothers may be in demand as some of the SPFs may seek children without a sexual partner.

Politically, anti-establishment sentiments, populism, and nationalism may become more prominent. The income gaps around the world, especially in the developed and emerging economies, become more visible, partly aggravated by the slowdown of the world economy. They result in public backlashes against the economic and political establishments. Likewise, regional integration schemes (such as the European Union and the Trans-Pacific Partnership) and international regimes such as the International Monetary Fund, the World Bank, and the World Trade Organization will be subject to criticisms and see their influence decrease. In addition, as the emerging economies approach high-income status, their populations will demand a greater voice on the world stage and resent the perceived “biased” portrait and limited influence of their nations in the world. The consequential populist foreign policies could lead to rising tension between the existing and the emerging powers and even among the emerging powers.



Political authoritarianism will collapse.

HAROLD JAMES

Professor of History and International Affairs, Princeton University, and co-author of The Euro and the Battle of Ideas (2016)

The surprise will be the collapse and the discrediting of political authoritarianism. Currently, many countries in the world are moving in an authoritarian direction, and the new leaders speak about illiberal democracy. The most powerful figures in this regard have notable differences—Vladimir Putin, Recep Tayyip Erdogan, and Xi Jinping do not really live in the same intellectual universe—but they all

share in a critique of conventional liberal democracy. Some are trying to influence the outcome of democratic processes elsewhere: in particular, in the case of Putin's patronage of Marine Le Pen and the Russian Wikileaks involvement to discredit Hillary Clinton and make Donald Trump the next U.S. president.

There are precedents for the authoritarian turn in the 1920s and 1930s, in Europe as well as in Asia and South America. But in the past, the authoritarian turn was discredited by political, moral, humanitarian, and incidentally also economic catastrophe. It's hard to be quite precise about the nature of the future catastrophe, but the broad lines are already clear. My prediction of a surprise is that the authoritarian regimes fail to deal with a major challenge, and the turn to authoritarianism is reversed once more.

So what challenges will authoritarianism fail to solve? It won't be able to offer a convincing answer to the question of environmental degradation and climate change that will become pressing, especially in southern and tropical countries. The "illiberal democrats" will look more focused on short-term objectives such as economic growth at the expense of the environment than old-style liberal democrats. Second, pure authoritarianism is likely to be poor in appealing to younger people, who will see the autocrats much as many young people today see democratic politicians: tied to particular interests and inflexible in adapting to a world in which information is increasingly accessible.



The big surprise could be positive developments.

NORMAN A. BAILEY
Professor of Economics and National Security, National Security Studies Center, University of Haifa

A *Apocalypse Now* was a movie based on Joseph Conrad's novel *Heart of Darkness*. Over the last ten years, economic, political, and social commentary could mostly be classified under that heading, starting with Fred Ikle's *Annihilation from Within* in 2006. Since then, Armageddon has been announced by such works as *Capital in the Twenty-First Century*, *Twilight of Abundance*, *No Humans Need Apply*, *Narconomics*, *Blood Year*, and more.

In the Spring 2016 issue of *TIE*, nine out of a total of fourteen articles announced the imminent arrival of economic, social, and political catastrophe. Some of the titles: "Don't Trust the European Union," "Disaster Avoidance," "Europe's Coming Civil War?," "The Return of 'Irrational Exuberance'," "A False Sense of Global Security?" and my own "A Global Witches' Brew."

Ever-greater concentration of wealth, ever-greater indebtedness, ever-greater degradation of the middle and working classes, criminal syndicates, terrorist organizations, money laundering, cyber-threats and cyber-thefts, and rampant corruption everywhere. Brexit, the National Front, Trump and Sanders. Scientific and technological paradise and a socio-economic inferno.

Apocalypse now.

Given this background, what completely unexpected events could take place in the next ten years?

The emergence of competent, visionary leadership in the Western world.

The collapse of theocratic totalitarianism in Iran and elsewhere and of secular totalitarianism in North Korea and elsewhere.

The democratization of China without civil war.

Return of the concepts of individual responsibility, rule of law, equality of opportunity (not of results) and of education as the process of the socialization of youth in civilized behavior.

Finally, the widespread adoption of meaningful measures to expand capital ownership among the population as a whole, through such mechanisms as employee stock ownership plans and community investment trusts. In the United States, passage of a "Capital Homesteading Act."

Nirvana now. Unexpected indeed.



The future is simply not predictable.

HANNES ANDROSCH
Former Finance Minister and Vice-Chancellor of Austria

The future will always be subject to uncertainty. The sages and prophets of old were very conscious of this, and nothing has really changed right up to the

economists of our times. The unknown unknowns will always remain unknown, and for all time. For this reason, the future is simply not predictable.

Nevertheless, mankind has always been imbued with a sense of predestination and has wanted to know what the future had in store; to be able to confront, or avoid, danger; to be able to take advantage of opportunities; to be able to adapt to situations which might arise. In ancient times one beseeched the gods for some sign, or posed questions of the oracle; up to our time, we consult astrologers (for example, Ronald Reagan) as they are believed to be able to predict the future on the basis of the constellation of heavenly bodies. These have remained a vain hope.

Far from succeeding in predicting the unknown, quite the opposite has happened. Only too often have developments, which were perfectly predictable, been ignored. The financial crisis is but one of a list of striking examples, from the tulip mania of the seventeenth century to the sub-prime crisis of 2007.

The same applies to many disruptive political developments and events, which are frequently the result of a failure to analyze complex associations adequately, or the result of dogged refusal to accept reality. Even though the future is not predictable, it still makes sense to project trends and to work out their implications, along with a strategy for adjusting to them.

Consider some examples. The global population will continue to grow, but with an increasingly uneven continental distribution. The population of Europe is projected to stagnate; it will actually decline in Russia and Japan, while the population of Africa is forecast to double by the year 2050 from its current level of 1.1 billion inhabitants. Should this materialize, every fifth citizen of the Earth will live in Africa by the middle of this century, with all that implies, not least for Europe! The process of urbanization, which commenced as a consequence of the industrial revolution, will continue in all probability. By the middle of the current century, 70 percent of the global population will live in urban conglomerations, with all the opportunities and problems which that entails.

But not only is the world population growing, it is also continuing to age. In the past two hundred years, life expectancy in the developed countries has more than doubled from forty years to over eighty years, and could soon approach the hundred-year barrier. This development is likely to confront us with a completely different array of problems, all requiring solutions.

The use of fossil fuels as a source of energy has left a deep imprint on the development of our planet over the past 250 years. While this has been associated with many uses and benefits, it also produced incalculable environmental problems. This has to change, so that

environmental degradation is contained within socially desirable limits, and climate change due to human intervention is prevented. The prohibition of chlorofluorocarbons and the consequential reduction in the ozone hole over the Antarctic shows that this is indeed possible. In the future, sustainability must be a core value. This applies to the procurement and use of raw materials, with sand suitable as a building material and industrial silicon included, as well as the securing of food supplies, with the guarantee of an adequate supply of clean water. Scientific and technical progress will continue in a multifaceted process. This will present us with tremendous opportunities providing we are well-prepared to use the possibilities which arise.

An essential part of this is the progress of technical breakthroughs, which started with the steam engine and continues into the future. This includes the “internet of things,” from big data to robotics, algorithms, artificial intelligence. It will affect all areas of our daily lives and will have a major impact on the world of work. This means that to achieve meaningful objectives, we will rely increasingly on correlations rather than causality. If we are to meet the challenges of this new environment, we will need to adapt our system of education and professional training, and the sooner the better.

Finally, there are any number of geopolitical changes, which are clearly identifiable and which we will need to come to terms with. After many decades of a bipolar world characterized by the Cold War, but also a phase of decolonization and a brief phase of American global dominance, we now have a world with an increasing multi-polarity, but lacking a corresponding system for ensuring peaceful stability with which to confront the numerous pockets of inflammable and explosive potential which exist.

It starts with the so-called “Ring of Fire,” an arc of crisis zones located close to Europe, which stretches from the Middle East to North Africa. It would include large tracts of the African continent, as well as high-risk regions in Eastern Europe where populist-nationalist tendencies threaten stability. Then we have the enfeebled European Union, scarcely recovered from the existential crisis of its currency, before being hit by the no-confidence crisis that is Brexit, a throbbing Achilles heel which is Greece, a tottering Italian banking crisis and the completely unresolved refugee problem.

The entire Islamic world is suffering hefty convulsions and is in turmoil. The South China Sea and North Korea embody the potential to become major threats to international peace and stability. These are regional circumstances which, in spite of their complexity and interdependence, could give rise to crises which are not unforeseeable. They must be handled with flexibility and pragmatism in order to prevent explosions. This is very much a matter of human responsibility. ◆