

InnovationLabs White Paper #5 in the Series

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Introduction

This is the fifth in the InnovationLabs series of Covid-19 white papers.

As we discussed in the previous papers, even if your organization had a sound strategy in place in January 2020, events since March have probably made it entirely irrelevant, and you likely need to start over. But what would your new strategy entail, given the massive unknowns that still linger, and the shifts we have been confronted with throughout this period?

The previous four papers focused, each in turn, on assessing what was happening as the Covid crisis unfolded from March 2020 through June 2020.

Our purpose here is to now consolidate what we've learned during the last 6 months to now look forward in three time horizons:

Short Term, 2020 – 2021 Medium Term, 2022 – 2025 Long Term, 2026 – 2040

We particularly want to identify the key forces that are shaping the future, and to consider the major risks and opportunities.

We hope that this thought experiment will help you to see the important patterns, and help you to design actions and initiatives that will enable you, your organization, and your family, to navigate through a future that is certain to be highly turbulent, and likely to be very challenging.



Setting the Scene

Because of the high degree of unpredictability we face, each of the prior papers applied the scenario planning technique to consider what might be coming and how best to deal with it.

For our first white paper in March, when everything seemed completely up in the air, we looked at eight major uncertainties that were urgent questions at that time, including the deadliness of Covid, how long it would circulate in society, treatments and vaccines, and the economic. political, possible and social consequences of a prolonged crisis. We considered five sets of scenarios, and developed a series of observations regarding possible futures that might emerge based on what we knew at that time.

The key point, of course, was that although the administration was downplaying the seriousness of the situation and promising a return to normalcy by summer, this seemed entirely implausible, and we recommended that leaders prepare themselves and their organizations for

long term disruption. (As the Woodward tapes revealed last week, Trump was simply lying, and knew from the outset that the virus was deadly and would constitute a prolonged threat.)

By mid-April the situation was considerably clearer because so much had occurred since March. The second white paper thus explored what was then becoming obvious, that this was going to be a very long-lasting and deep disruption. We again recommended that leaders take strong actions to protect their firms.

The third white paper in May was focused on the economy, and raised the question as to whether we're heading into merely a recession, or into a full-on depression. We looked at the continuing health risks of Covid, and the continuing economic risks of social distancing. The evidence by then suggested we would get at minimum a severe recession, and we thus advised leaders to reconsider their business models in that light.

The fourth paper in June explored how to manage successfully given a period of prolonged crisis and uncertainty, and proposed the practice of





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developing "strategy as a learning system" rather than an intermittent meeting-type event. To survive and thrive amid the growing chaos, a constant focus on learning and adaptation will be necessary.

All four white papers are available for download here.

And now here we are, about six months into the crisis, and while there are still massive unknowns, there's a lot that we do know, and so as we noted above, this white paper will take a detailed look at three future time horizons, our short, medium, and long term futures.

A Note on Politics

Some readers of the first four white papers were critical of us for including politics among the topics discussed, but only because we were critical of the Trump administration. They told us that criticizing Trump would alienate some readers. While this is no doubt true, in our view politics is at the very center of the Covid crisis, and to omit it from the discussion here would make the resulting analysis nearly useless. Covid will be a central issue in America's November election, and the outcome of the election will in large measure shape America's response to the ongoing health and economic crises, and thus have huge impact on our future. Thus, a spoiler alert: If you are Trump supporter, you will not find much here to validate your choice.

The Short Term, 2020 – 2021: Debating the Social Contract

Following from the previous four papers, the approach we take here is to identify what scenario planners refer to as the "driving forces of change." These are the ones we believe to be the most important or influential factors. They are by definition also highly uncertain, which means that their outcomes are unpredictable.

By considering which way things might go with those driving forces, we are enabled by this type of logic to consider various possibilities, which helps us to avoid locking in on a single anticipated future. That is, we avoid making predictions that have a high probability of being wrong, and instead base our strategies on the awareness of many possible futures.

For the short term, then, what are the key driving forces of change that we ought to consider?

Prior to early March of this year, that is, prior to explosion of Covid-19 cases in the US, the 2020 American presidential election was shaping up as a political contest that would be defined by Donald Trump's handling of the US economy and his socially divisive rhetoric and policies. The Democratic candidate, at that point in time as yet undecided, would have to forge a broad coalition of progressives, moderates, and cultural identities to have any chance to win the election against Trump's loyal and entrenched base of support.

But Covid has fundamentally changed the dynamics of the election, and now it's clear that the election, just 6 weeks from now, will be a referendum on Trump's handling of Covid, and his handling of the US social crises that have arisen in the wake of renewed social and racial discord. Black Lives Matter, a voice faintly heard early in the year, has become a prominent rallying cry for civil justice.



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In our fourth white paper we proposed the idea that the Covid crisis itself contributed to the reemergence of Black Lives Matter, because it fundamentally altered the mindset of the American people. The abrupt shift of lifestyles due to Covid lockdowns and quarantines awakened people all over the world to the needs and vulnerabilities of their neighbors, bringing about renewed a heightened sensitivity to social ties and mutual responsibility. This shift of social mindset occurred in a subtle but certainly noticeable way, and when the string of killings by police occurred in the US, these events contrasted so strongly with the Covid-inspired sense of community, that the moral outrage was felt not only in the Black community, but by entire communities, and not just in the US, but globally. "Everyone is riveted ... the murder of George Floyd has gripped the psyche of white Americans like nothing I've seen in my lifetime," noted Darren Walker, head of the Ford Foundation (who is Black).

This sense of outrage reflects the broad but fundamental idea of the "social contract." This concept, now centuries old, suggests that there is an underlying set of rules that governs any society to which its citizens and institutions are mutually bound, in some cases by law, but also and perhaps more importantly, by norm or custom. These are the accepted rules for how we behave with one another, and how citizens relate to their government.

The issue that Black Lives Matter raises is of course what form the social contract should take with respect to race relations and civil rights, and this is indeed the same question that the countervailing force of white supremacy addresses. The two simply have utterly opposing views as to what the contract should be.

Taken together with other current trends, it's clear that the upcoming election is thus in large part going to be a referendum on the American social contract. As the American political left and right have very different ideas about how society ought to function, and about what the social contract is and ought to be, this is the crux of the election debate.

The issues about which the two sides have widely divergent views is long, including civil rights, immigration, the border wall, access to health care, reproductive rights, policing and criminal justice, access to education, the role of wealth in society, the distribution of wealth and the sharing (or not) of economic success, and society's responsibility to address climate change.

In the absence of a normally-functioning economy, this slate of social and cultural issues has moved to the forefront of the political campaign, and the campaigning and advertising in the final weeks will certainly be a battle of contrasting visions, with the social contract as the dominant although largely unspoken theme.

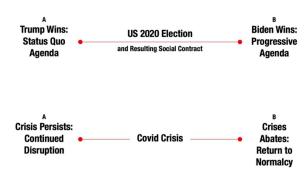
The outcome of the election is certain to have enormous influence on what kind of society we get for the following few years, not only in the US but worldwide, and thus we have to consider the election itself as a major driving force that will shape the short term future.

A Trump re-election is a victory for preserving the status quo, or more accurately, for regressing, while a Biden election is a victory for progressive change. These lead to vastly different futures, and thus the result of the election will clearly mark an inflection point.

The other major short term driver is the progression of the Covid crisis itself. Dr. Anthony Fauci suggested this week that he expects the pandemic to end by the end of 2021, another 15 long months from now. If he's right that the measures to combat it are going to be required for that long, then the economic dislocation will continue to grow to a level far greater than what America's leaders and citizens are presently prepared to cope with.

Hence, the length of time for which Covid persists is the other major driving force. If it ends soon then we shift to recovery, albeit a recovery that will look quite different depending on who is in the White House. But if it persists for a year or more as Dr. Fauci suggests, then we'll have continuing and deepening social and economic dysfunction, almost certainly an economic depression.

This is how we visualize these two driving forces.



The Two Key Drivers of Short Term Change 2020 – 2021 (US-centric Perspective)

Using our familiar 2x2 form of visualization, using these possibilities we get four possible worlds.



(If you are not familiar with this way of thinking about the future, please take a look at our first white paper, which explains the scenario planning technique applied here.)

- 1. The Trump agenda is summarized as "Build the Wall." The wall along the border with Mexico is intended to isolate the US and restrict immigration, and of course it's a symbol of Trump's entire agenda, which is intended to build a protective wall around America's privileged society. In a world where the Covid crisis is abating, he's free to focus on instituting that agenda.
- The Biden agenda if Covid abates is summarized as "Rebuilding Society," which would include a renewed focus on social justice and significant changes to the social contract to promote a more equitable society.
- 3. If Covid persists, Biden's focus will be on a much more proactive role for government.
- 4. And we can safely assume based on what we have seen from Trump over the last six months that should Covid persist, his focus will be probably on avoiding blame for what would be a period of extreme and increasing social and economic hardship.

Having framed these four possibilities, all four of which have to be considered possible and plausible as of today, it's important to be aware that whichever side loses the election will be incensed.

Trump himself has threatened to deny the validity of the election, but only if he loses, and to stay in office no matter what the election result is. He has been preparing his ardent supporters for this possibility since 2016, and if he does indeed lose both the popular and Electoral College votes, then we must be prepared for a strange, possibly violent, and certainly highly disturbed social

situation throughout the US from November 2020 through and beyond the inauguration of Biden, which would occur January 20, 2021.



The intense political battle that has arisen just during the past week due to the death of US Supreme Court Justice Ruth Bader Ginsburg will be a preview of what we should expect in the post-election period.

If Trump loses, he and the Republican-controlled Senate will try to push through a highly reactionary set of laws and policies during that three-month, lame duck transition period, including of course a very conservative replacement for Justice Ginsberg. If he wins, on the other hand, exactly the same thing will happen, just a bit more slowly, as the Republicans will interpret his victory as a mandate to move American government and society further to the right.

If Biden wins, then we must expect that inauguration day, Wednesday, January 20, 2021, will be highly contentious. There will certainly be protests, and violence is entirely possible; already many right wing partisans have made violent threats, and some of them may follow through to action.

And no matter who wins, the repercussions will echo throughout 2021, and in conjunction with the progression of the Covid situation this will largely define the situation of American society.

An interesting nuance that has not been much discussed is the possibility that Trump will be reelected, but that the US Senate will switch from Republican to Democratic control. In that situation the following two years will be a dysfunctional political stalemate setting up a Constitutional battle for power.

For the purposes of our short term perspective, then, it's clear that these are the two forces that will shape the terrain, and that no matter what happens that terrain will not be smooth.

Hence, we are entering a period during which America will be entirely self-obsessed, focused on its internal battles, and this has considerable significance geopolitically, as other governments may try to take advantage of American's selfpreoccupation to make moves of significance.

Already both China and Russia are engaged in interfering in the US election and sowing further discord among the American people (which is obviously easy to do at present given the partisan divide, combined with the power of social media to broadcast divisive messages), and either may try to seize this opportunity to further their own geopolitical aims. If either were to do so, this would then test the resolve the EU and its capacity and willingness to take greater role in geopolitics in the absence of US leadership.

In summary, a US domestic crisis of political succession could lead to a geopolitical crisis or crises driven by opportunist aggressors, and if this were to occur, it would then further disrupt global stability and lead to increased fear and insecurity globally. It's a downward spiral.

The net result of all this: Prepare for a turbulent ride.





The Medium Term, 2022 – 2025: The Climate, the Energy Industry, and Technology

No matter who wins the 2020 election in the US, the domestic political situation will remain highly contentious throughout the 2022 – 2025 period. The losers will remain angry, perhaps irate, while the winners will try to push through an agenda which the other side loathes.

Thus, we can be sure that the 2024 election will have the same intensity and partisan nature as we are experiencing in 2020, and social discord and conflict over the definition of the social contract will undoubtedly continue to preoccupy America.

The very interesting question, which is really unanswerable today, is whether over the longer term America chooses the path advocated by the Trump right, which has clear overtones of authoritarianism and white supremacy, or the path advocated by the centrist or progressive left. They certainly lead to quite different outcomes.

And while it is very painful to be an American living in the midst of this struggle, it is also important to note that variations on the same debate are now occurring in a great many nations – in Poland, Hungary, Turkey, Brazil, India, Russia, the Philippines, Indonesia, and China, plus the US, among others. Authoritarian or pseudo-authoritarian leaders are in power and pushing their societies away from the ideals of democratic capitalism.

Thus, we seem to have arrived at a historic fork in the road.

During the next decade, humanity will be deciding, through the political processes of its nations, the future path of their national governments, and this will have overwhelming

impact on the future path of global society and the global economy.

Meanwhile, Covid may still be with us, and it thus remains an unpredictable driving force for the foreseeable future. It's also important to note that there are many other coronaviruses already existing in the animal kingdom, any of which could cross into the human realm and put us into another pandemic situation. Certainly we would be better prepared to cope the next time around, but still the cost in lives could be high, and the negative impacts on the economy very damaging.

In addition to these two issues, for the medium term we also need to consider three additional driving forces of change, Geopolitics and economics as we have noted, plus Climate, and Technology.

As the political question of left vs right persists, the geopolitical and economic situations will also remain unsettled, with ongoing disturbances and disputes among the major powers of China, Russia, and the EU and many other nations.

We are economically interdependent as a global economy, but locally we argue a lot. Should any of these arguments get more heated, as the border dispute between India and China has done recently, then the impact will be felt globally.

Another driving force to consider is the climate. As I write this, huge sections of the American west are experiencing a fire apocalypse, while the Caribbean region and the American Gulf coast are coping with frequent hurricanes, and record high temperatures have been reported around the world. Is this normal climate variation, or the manifestation of systemic climate change caused by excess CO2 from fossil fuels?

Evidence for the latter is now definitive, 97% of climate scientists are in agreement, and if these weather events continue into 2021, 2022, and beyond, which as of now is what we must expect, then society will have accept the inevitability of



the need for a fossil free future, with all of the economic upheaval which that entails.

But the transition to a low or no-fossil economy may take decades, and even if we were to completely stop exhausting waste CO2 into the atmosphere today, it would probably be decades before the climate returned to the calm and predictable behavior of the mid twentieth century, if indeed it ever does. Hence, we should expect the violent weather to continue regardless of how quickly we stop using fossil fuels; but if we continue to use fossil fuels as we do today then we virtually assure that large portions of our planet will become entirely uninhabitable. The social, economic, and human costs will be immense.

For our purposes here, then it seems reasonable to expect that during the period from 2022 to 2025 we will learn with near certainty how badly it's going to go with the climate over the long term, whether it will be the return to a calmer climate, or a descent into persistent global climate warming calamity.

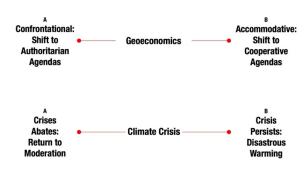
While that's all happening – politics, Covid, geoeconomics, and climate – technology will meanwhile continue along its path toward domination of the economy. Indeed, one of the interesting side stories of the Covid crisis has been the arrival of still more robots into the workforce, which are notably not susceptible to respiratory infections.

If the pace at which the economy adopts technology continues to accelerate, and there is every reason to expect that it will, and if technology continues to be a major disruptive force, which we should also expect, then this will of course have immense impact throughout the economy.

This could well lead to change at the structural level, with the daunting prospect of significant technology-induced displacement and unemployment. Whether the use of robots will

lead to mass unemployment or "merely" to a shifting of the workforce toward more value-creating activities has always been a subject of debate; by 2025 we will know with considerable confidence what's going to happen from 2025 onward.

To address these unknowns, we crafted a second scenario based on the axes of geoeconomics and climate. The short term scenario we discussed above will still be relevant in the middle term future, and these two together will help to illuminate the medium term perspective.



The Two Key Drivers of Medium Term Change

With these two axes of Geoeconomics and Climate Change, we get four quite different worlds.

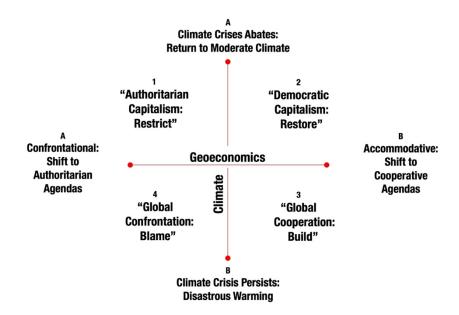
- 1. A highly restrictive Authoritarian Capitalism describes the likely outcome if the climate crisis abates but authoritarian politics prevails.
- 2. Democratic Capitalism is the alternative, and foretells a focus on restoration of civil society.
- 3. If climate change persists and worsens, the accommodative geoeconomics strategy is to cooperate and rebuild.
- 4. If climate change persists and worsens, the authoritarian strategy is to confront and blame.

Again, as of today all four possibilities seem plausible.



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Here, then, is what we may expect by 2026:

- The US political situation will continue to be highly polarized.
- The continued presence of Covid and/or a successor pandemic is entirely unpredictable.
- The geopolitical situation will remain disrupted.
- The climate may be in total upheaval, or it may be merely just "bad."
- Technology will continue reshaping the economy in fundamental ways.

In summary, by 2026 we expect the same as we did for 2021: a highly turbulent situation.

And as much as we might wish to, we cannot really give credence to a scenario in which these problems have magically gone away. So, as we noted above, it's clear that the coming years will be difficult and demanding ones for families, for businesses, and indeed for all of society.

If the state of affairs continues in this dark hue, then the doomsayers and apocalypse forecasters will have much to complain about, and as their forecasts about the impending collapse of civilization will become more frequent, they'll also have progressively more evidence to back up their claims.

This will in turn have the effect of reinforcing the populists, nationalists, and authoritarians, as they will, much like today, proclaim themselves the only ones capable of restoring order. Despite their rhetoric, however, their policy choices will mostly make the situation worse.





The Long Term, 2026 – 2040: Fundamental Economic Transformation

This does not suggest a happy beginning to our longer-term horizon. Will society be a total mess by 2026, or merely struggling to deal with a compounded set of problems?

Against this backdrop, we will look at the long term by focusing on what seems as of now to be nearly certain, the impending global economic transformation.

Although this transformation is not widely discussed, when you consider the evidence then it's quite apparent that a major shift is already upon us.

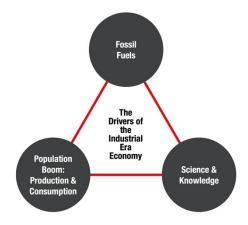
We say this with a high degree of confidence prtly because it was the subject of two of our recent books, the 700 page *Foresight and Extreme Creativity* and more modestly-sized *The Big Shift.* In both books we examined the underlying logic and provided a massive amount of evidence from more than 200 reference sources explaining the logic.

The gist of these works is that the unprecedented economic expansion which occurred from 1800 until 2000 was enabled by three factors: fossil fuels, science, and the population boom.

Fossil fuels of course multiply human and animal labor a million-fold, and their adoption enabled the development of our mass production / mass consumption economy.

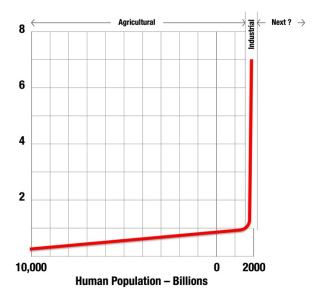
Science provided the knowledge upon which technological and social progress was based.

And the population boom provided a steady stream of new laborers to work in the production system, and the new consumers to buy its outputs.



We can also visualize this in these graphs:

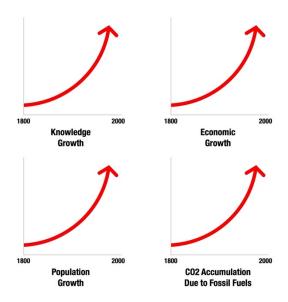
The Population Graph shows the period from 10,000 BC to 2000, twelve thousand years of history, to scale. That dramatic hook in the graph is of course the transition to the Industrial Revolution and the creation of the modern economy.



The Industrial Era can also be depicted in the following four graphs showing knowledge growth, economic growth, population growth, and CO2 accumulation from the period 1800 to 2000. They are all exponential trends, the amazing two-



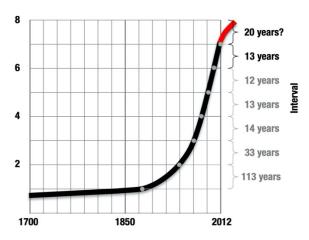
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The Industrial Era in 4 Graphs

century run of growth leading up to the present day.

However, what would happen if there is a major shift in any of these trends? Then perhaps the system would be obliged to change its structure. And if two of them shifted?



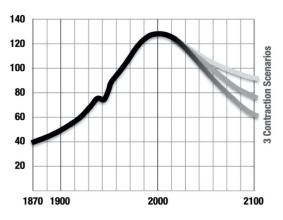
World Population – Billions The Growth Rate Slows

And that's the news: as of the beginning of the 21st century, the population boom is indeed coming to an end, as we see with the graph labeled "The Growth Rate Slows."

The interval from 7 to 8 billion is going to be about 20 years, and as long as the slowing trend continues, the population boom will invert and a population contraction will result.

We've all been so heavily conditioned by 5 decades of warnings about the population explosion that most of us have missed the change in this trend, but it is in fact evident in the population statistics of dozens of nations, whose populations are already contracting.

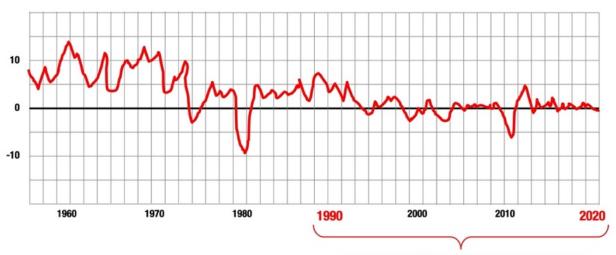
Perhaps the most notable of these is Japan, where the population has already peaked, and by the end of the current century is expected to total 60 to 90 million, far lower than its peak population of 125 million.



Japanese Population - Millions

And the evidence linking population stabilization and decline with a shift in economic structure is also strong in Japan, where you may know that the country has been fighting economic stagnation since 1990. Despite three decades of concentrated effort by the government to boost the economic growth rate, and despite an unemployment rate that is close to zero, Japan's economy continues to stagnate. (Note that "stagnate" is defined according to the standards of the industrial economy, wherein growth is mandatory.)





Coverging toward 0% growth with 2% unemployment

Japanese Economy

Real GDP % Change, Year over Year

The same phenomenon is being experienced in many countries now – population contraction leading to economic stagnation. According to current trends, overall global population growth will cease within 20 to 30 years, at which point the population will begin declining, and the example of Japan is showing economists what occurs in modern capitalism when it does.

You may of course be wondering why this is happening, and the answer is urbanization. As families move from rural farming communities to cities, they tend universally to have fewer children. Families of 4 to 6 children are common among farmers but rare among city dwellers, where none, one, or two children is common.

You may also know that migration into the world's cities has been steady for many decades, and as of now more than 50% of the world's population is urbanized, hence the decline in the global birth rate.

As we expect that the global population will peak and begin to decline well before mid-century, we can thus foresee that the capitalist system itself will by necessity undergo a transformation due to the convergence caused by fundamental change to all four of the structural factors of the industrial economy. We could go on with more detailed explanations for many pages, but hopefully the point is made. The Industrial Economy is ending due to the convergence of these four forces:

- The end of the population explosion, which is already occurring;
- The arrival of the next wave of knowledge-based advanced technology, which is well under way;
- The likelihood of a worsening climate crisis, which seems to be occurring now;
- And thus the end of the fossil fuel era, which will certainly occur when (and if) fossil fuels are accepted as the cause of climate change, which as of today is also highly likely to happen soon.

Thus, the familiar Industrial economy will come to an end, for without the fuel of masses of young and willing workers and the consumption needs of masses of young families, the economic foundation that created the 20th century boom will not prevail.



In its place we will experience the very stressful transition to a much different economy. And while the period of transformation will be very difficult, what we emerge into on the other side could well be something we will appreciate.

We Are Here:
"The Big Shift"

1700

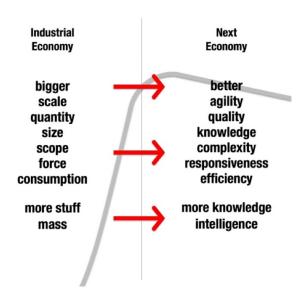
1850

2000

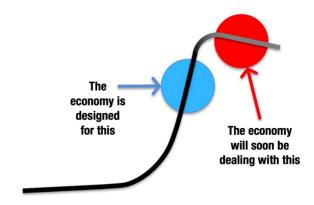
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The Turning Point
Which Is Were We Are Right Now

It is not guaranteed, but it is entirely possible that we could shift from an economy of mass production to quality production, and shift from energy intensity to energy efficiency.



If this was all going to happen in the far distant future it would be a matter of interesting speculation and some good fiction, but as we see in Japan, in fact the transition has already begun. The last time a transition of this magnitude occurred, between about 1780 and 1850, the world's economy was transformed, although in the early stages few could see clearly what the result would be. Nevertheless, as events unfolded



Transformation of the Economy

throughout the 1800s, the world's ways of living, working, and thinking changed fundamentally.

And we are now embarking on a similar transition, except that this one will occur much faster, and because the world economy is now fully integrated across all nations, the impact will be globally simultaneous. We have labeled it "The Big Shift," and used that as the title of one our recent books.

As Alvin Toffler's forecasted "Future Shock," it will instead become "Present Shock," and it will affect all of us.

Which brings us back to politics. Times of rapid and fundamental change are difficult on societies, and this is particularly true when populists and authoritarians seize the moment on the promise of a return to the past.

And this is why the current political situation is so telling – because at the moment the populists and authoritarians are indeed in control in most of the world's major powers. To come to power they have made promises that they cannot fulfill, and in power they are altering the structures of their societies toward more blame of the "others," less tolerance of diversity, and more concentration of powers in their own hands.

Which brings us, in turn, to note that we must now distinguish between two quite different forms of capitalism, that which economists refer to as state capitalism or authoritarian capitalism, and a quite different form which may be called liberal capitalism or humanist capitalism. While both are based on competition and trade, they foster quite different social forms, and when they are spread widely, they lead to much different types of society. This is indeed a major expression of the social contract, and thus the American election of 2020 is a partisan political battle that is also a harbinger of the political contests that we will see globally for the better part of the coming decade.

If the authoritarian model predominates, it is quite easy to foresee a dystopian world of haves versus have-nots, a massive concentration of wealth in the hands of a very few, alongside massive poverty.

On the other hand, it's also possible to foresee a social contract based on a sense of shared destiny and shared responsibility. In the US and elsewhere, these two versions of the contract lead to fundamentally different social situations, but as of today there is no way to know which will emerge, or indeed if it will be something else entirely, according to an entirely different social and economic logic.

While we cope with these uncertainties, as strategists we must also keep in mind the possibility of pure wild cards, unknowable calamities of the future. These could include large scale war, complete economic collapse, technocollapse, mass-scale fundamentalist terrorism, a revolution or takeover by the robots, a meteor strike, or some other unpredictable mass-scale disaster, any of which could disrupt civilization, wreck the economy, and destroy our hope for a positive future.

And So ...

Are you thoroughly discouraged at this point?

We were, when we first reflected on what we had learned here. So it would be quite understandable if you were too, because where all this leads, unfortunately, is not feeling all that positive about the future. Indeed, it looks largely painful and discouraging. We can see a positive end point, but the process of getting there does not look so smooth or easy.

Does this way of thinking seem overly pessimistic? And are we overlooking legitimately optimistic outcomes and situations? Perhaps that is the case, but frankly it takes a pretty strong imagination to see all these calamities turning out favorably by the late 2020s and beyond.

And in any case, the prudent leader and strategist is wise to anticipate worse or worst-case outcomes, while it is certainly naïve and dangerous to expect and plan for only the best.

Having said all that, then there are some concise insights to take away from our discussion of these three future time scales, the short, medium, and long term:

Acceleration

The process of change is accelerating, which leaves less time to evaluate options, less time to make crucial decisions, and less to time see how things are going to work out before you have to make choices. Consequently, you must prepare.

Preparation

Scenario planning is highly recommended, as it can help you to understand the patterns of change and to develop effective contingency plans for a wide range of possible outcomes. It also helps you to get beyond narrow thinking or excessive optimism.



Scenario planning is certainly not the only technique you might apply, but whatever you choose to do to get prepared, don't procrastinate.

Risks

Whether you address the future through scenario planning, conventional strategic planning, or any other approach, what you must get a firm grasp on is risk. What are the risks that your organization faces given the changes that may occur, and how can best prepare to meet those risks?

Leadership

Strong leadership will be essential. Organizations with weak leaders will likely not survive these turbulent times.

Opportunities

As there are major threats coming, so also are there great opportunities. Organizations that develop new business models, new applications of technology, and new services that address and mitigate the problems that are brought about by fundamental social and economic change will find new ways to serve and to profit.



Innovation Comes to the Fore

As we have noted, we approach these white papers as thought experiments, and when we start organizing the data we have collected and looking for the patterns to write about, we usually don't know what the outcome is going to be. It is a discovery process, and the bleakness that we've uncovered here thus comes to us as a bit of a surprise.

But we should not also overlook the opportunities, which will be enormous. To understand them as they arise and to take advantage of them as they mature is squarely in the realm of innovation, and this situation particularly presents an opportunity for business model innovators.

At the macro level, as the economic structure shifts in the coming years, the relative values of various types of assets will also shift. For example, in an era of worsening climate change, fossil fuel assets still in the ground will lose value because of the likelihood that they'll never be extracted, refined, or sold. Hence, the balance sheets of the major oil companies will implode, along with their stock values, and those holding these securities will suffer losses, which will cascade through the economy then affecting various layers of creditors. What will start as a small pothole in the road will quickly expand into a major sinkhole, swallowing up assets of many types, and the entire road will soon disappear.

What response should the fossil fuel companies make, along with the petrostates? They have to innovate; there is simply no other option. The oil companies will have to pivot to other forms of energy; of course they're already doing that. Those that do so first will learn fastest, and be in a much better position when the hammer finally falls. It will be more difficult for the petrostates, but they will also have to pivot. And of course they too know this; for decades the Middle Eastern nations



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have been working to develop new industries, although to date their success has been limited.

Another example of an abrupt economic shift is provided by the Covid crisis and real estate. Shopping malls went from flourishing to abandoned nearly overnight, and so did office towers. Pivoting these assets to new uses will be slow and expensive, and the financial repercussions of asset write-downs will again cascade through the economy, affecting asset owners, their creditors, and their users.

This leads us to recognize that in a time of transition as we are now entering, business models that are asset-heavy will have a much harder time than models that are asset-light. Of course this reinforces the astronomical valuations that tech companies have seen lately, because technology assets, particularly those that are software-based, are much easier to pivot to new uses and new ways to create value.

But what happens when the pool of passengers dries up abruptly, as occurred with Covid? Uber adroitly pivoted to its Uber Eats business model, and while it was by no means a smooth transition and the company's overall revenue dropped precipitously, its delivery revenues increased 122% from 2019 to 2020.

This is not to suggest that only asset-light companies will thrive in the future, but nevertheless the contrast is pretty clear, and the pressure on the asset-heavy industries will certainly be more intense. This is a strong message for investors, as well as for leaders; both should be looking very closely at innovation portfolios and at emerging business models to discern how the economic structures are evolving, where the opportunities may be, and how they can develop and take advantage of them. The opportunities will be abundant, as will the risks.

ASSET TYPES

CAPITAL INTENSIVE

Oil

Mining

Heavy Manufacturing

Transportation

Hardware Tech (Chips)

Real Estate

ASSET HEAVY

ASSET LIGHT

Software Tech
Fintech
Finance
Sharing Economy
Social Media
Professional Services

BUSINESS MODELS

ASSET HEAVY
CAPITAL INTENSIVE

Walmart

Hertz/Avis

Hilton/Marriott

Blockbuster

Intel

Lenovo

CASH FLOW INTENSIVE

Amazon/Alibaba

Uber/Didi

Airbnb

Netflix

Microsoft

Facebook

ASSET LIGHT

Uber offers a good example of this. It is first of all a very asset-light business, given that it leverages the sharing economy and its massive pool of drivers, who own their own cars. Uber merely plays the role of connector between drivers and passengers.



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Conclusion

The primary conclusion of the 4th white paper bears repeating, as the message it delivered is reaffirmed here as quite relevant. The argument of that paper was that the process of developing strategy in a time of turbulence such as we are living in today must shift from an intermittent, event-based process that occurred, typically, once at year at the leadership planning retreat, to a continuous process of learning and adaptation.

If the degree of turbulence that we see in the more challenging scenarios depicted here is even close to correct, then the requirement for ongoing attention to planning and strategy becomes mandatory. As the caption notes, *the game has changed*, *so the way you play the game must also change*.

•••

We hope that you have found the ideas presented here useful, and as always, we welcome any feedback or questions you may have about what we've written in this paper, and in an of the previous ones as well.

Contact us at feedback@innovationlabs.com.

The New Approach to Strategy: Strategy as a Learning System

Old Way		New Way
Situation changes periodically	\rightarrow	Situation may change daily (& hourly)
Once-a-year strategy offsite event	\rightarrow	A continuous strategy conversation & process
Executive team does the strategy	\rightarrow	Entire business ecosystem engages in strategic dialog
We largely follow formulas and templates	\rightarrow	It's a fluid learning process
Strategy is set and then followed	\rightarrow	Execution of strategy adjusts on a near-constant basis
Plans are agreements and artifacts	\rightarrow	Planning is process and a conversation
Meeting face to face	\rightarrow	Occasionally face to face, but often remote and virtual
We can anticipate a measure of stability	\rightarrow	We know to expect major turbulence
Centralized decisionmaking	\rightarrow	Distributed decisionmaking
Hierarchical organization	\rightarrow	Networked organization
Business built around stability	\rightarrow	Business built around adaptation
Focus on business execution	\rightarrow	Focus on business learning to enable adaptive execution
Products and services innovation	\rightarrow	Products and services innovation yes, but also business model innovation

The net result: The game has changed, the way you play the game must also change.

Strategy is now a learning system.



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Postscript: Interesting Data

A collection of data gleaned from recent publications that inform or illustrate many of the key points made in this paper.

The US Election

"In June 2020 a bipartisan group of campaign veterans, elected officials, journalists and academics convened by the Transition Integrity Project set about war-gaming four different possible results for the US 2020 election. In all four scenarios, the role playing produced levels of gamesmanship and tumult beyond anything seen in recent American elections." (And why would it be necessary to conduct an exercise like this? Precisely because of Mr. Trump's threats.) *The Economist*, September 5, 2020.

Speculating on the outcome of the impending election and its aftermath is now a rather large cottage publishing industry. Lawrence Douglas' recent book title is a disturbing portent: Will He Go? Trump and the Looming Election Meltdown in 2020.

Appearing on Trevor Noah's *The Daily Show*, Dr. Anthony Fauci, the nation's top infectious disease expert, noted, "we are in such a divisive state in society that everything tends to get politicized. It is unfortunate because this is purely a public health issue." *UPI*, September 22, 2020. (It should be noted that this level divisiveness is not a bug, it's a feature. That is, it's an explicit strategy of the American political right to pick a fight about any and everything, as part of its ongoing struggle against change. Newt Gingrich initiated this approach in 1994, and the Republican Party has followed it effectively since then. For more on this, see Langdon Morris' book *Winning the War for America*.)

Covid

The results of Covid destroyed more than \$23 trillion in global market value simply between February and March 2020. *The Economist*, March 21, 2020.

There are presently more than 160 known coronaviruses that exist in the animal kingdom which could become zoonotic, i.e., mutate to infect humans. Between 1940 and 2004, 330 new diseases emerged, of which about 130 originated in wildlife. *The Economist*, June 27, 2020.

"Mental health professionals say that no single event since the second world war has left so many people in so many places traumatized at once" as has Covid. *The Economist*, August 29, 2020.



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An estimated \$2 trillion in previously planned business travel will not occur this year. *The Wall Street Journal*, August 11, 2020.

The International Air Transport Association says that 2020 will be "the worst year in the history of aviation." *The Economist*, July 4, 2020.

As of July 2020, 23.4% of mortgage-backed loans extended to hotels were delinquent at least 30 days, amounting to \$20.6 billion. That compares with \$1.15 billion in pre-pandemic delinquent loans. *CNN*, August 19, 2020.

One-third of New York City's small business are likely to shut permanently. *The New York Times*, August 5, 2020.

"Covid is a 50-state natural disaster," says Mark Hamrick, chief economist at Bankrate. *The Atlantic*, April 12, 2020.

Projections from the US Congressional Budget Office suggest that the US economy may not return to its pre-Covid form until 2028. *The Economist*, July 11, 2020.

Projections from the city of New York suggest that employment there will not return to pre-Covid levels until 2024. In the mean time, the city's fiscal situation is one of "absolute gloom and uncertainty." *The Economist*, June 13, 2020.

European leaders have agreed to joint borrowing on an unprecedented scale, issuing bonds maturing in 2058. The Economist notes that this would have been "unimaginable just six months ago." *The Economist*, July 25, 2020.

Due to Covid, "... a profound shift is taking place in economics of the sort that only happens once in a generation. The pandemic marks the start of a new era. Its overriding preoccupation will be exploiting the opportunities and containing the enormous risks that stem from a supersized level of state intervention in the economy and fiscal markets." *The Economist*, July 25, 2020.

Race

"Everyone is riveted ... the murder of George Floyd has gripped the psyche of white Americans like nothing I've seen in my lifetime," notes Darren Walker, head of the Ford Foundation (who is Black). ... He adds, "The unprecedented convergence of health, economic and social crises has happened in a way that I am left feeling



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hopeful about corporate America realizing the potential of greater diversity."

The Economist, June 13, 2020.

About one third of America's Black male youth born in 2001 will spend time in jail or prison during their lives, compared with 6% of white male youth. *The Economist*, June 11, 2020.

Population

"The most important driver of any economy is the working-age population." Ruchir Sharma, Foreign Affairs, May/June 2020.

About 50,000 people leave Serbia every year. Projections suggest that Bulgaria will have 39% fewer people by 2050 than it did in 1990. *The Economist*, August 22, 2020.

The birth rate in England and Wales is 1.65 children per woman of childbearing age, far below the replacement rate of 2.1. Germany's rate is 1.6, while in France it is 1.85. Without immigration all these countries will lose population. *The Economist*, July 25, 2020.

China Tobacco is owned by the Chinese government. It paid 1.2 trillion yuan in taxes in 2019, 6% of all government revenues. (1.2 tr yuan = \$171 billion). *The Economist*, July 25, 2020. (Ergo, the government is killing the citizens for the tax money, probably a losing proposition when you consider the resulting higher health care costs. This is not a sustainable national model.)

"Following the pandemic is like watching the climate crisis with your finger on the fast-forward button." *The Economist*, May 23, 2020.

Many mature economies now combine features of Japan's: "greying populations, faltering growth, high public debt and stubbornly low inflation. 'We are probably all Japanese now,' joked Jacob Funk Kirkegaard of the Peterson Institute for International Economics." *The Economist*, September 5, 2020.

The paradox of an aging society as explained by the current situation in Italy: "Youngsters do not find jobs because of high labor taxes. The taxes exist to pay pensions for the parents, who then support the unemployed children." *The Economist*, May 30, 2020.

Energy Industry

"Energy was the worst performing sector of the S&P 500 Index in four of the past six years. Norwegian oil firm Equinor devoted



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about 8% of capital spending in 2019 to renewables; Shell devoted about 2%. And the market value of the Spanish firm Iberdrola that builds wind and solar farms has surpassed Equinor and Italy's oil firm Eni." *The Economist*, May 30, 2020.

"In June Royal Dutch Shell slashed the value of its global energy asset holdings." *The Economist*, July 4, 2020.

In 2016, Muhammed bin Salman, ruler of Saudi Arabia, produced a plan called "Vision 2030" to wean the Saudi economy off oil. "But 2020 has become 2030" says a consultant to the government. Oil revenues in the Mideast and North Africa fell from more than \$1 trillion in 2012 to \$575 billion in 2019. *The Economist*, July 18, 2020.

Texas, the historical home to the US oil industry, now gets 20% of its electricity from wind. It ranks fifth in the world in terms of wind energy production. And one of the fastest-growing job categories in the US is "wind turbine technician." *The Economist*, March 14, 2020.

"India and China have made plans to turn away from coal and toward cleaner alternative energies, while in South Korea, it was recently announced that 30 coal fired power plants will be closed by 2034, and wind and solar generating capacity tripled by 2025. Japan plans to close 100 coal fired plants by 2030, and Bangladesh is in the process of cancelling 13,000 megawatts of coal power plants it had previously planned to build." The headline of the story was "Is This the Final Nail in Coal's Coffin?" *Oilprice.com*, September 17, 2020.

Climate Change

"Most Chinese experts agree that climate change is making southern China's weather more volatile and will reduce farming and industrial output. 'In the past, China focused on the engineering approach, building more dams, more dykes, and higher banks. But the government has realized this is like an arms race with nature that we can't really win." *The Economist*, July 18, 2020.

A new study by a team of 60 scientists suggests that continuing use of fossil fuels will lead to the melting of the ice sheets in Greenland and Antarctica, which could raise sea levels by up to 15 inches / 38 cm by 2100. *Space.com*, September 21, 2020.

Technology

There are more than 2.4 million robots presently at work in factories around the world. *The Economist*, August 29, 2020.



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America's five giant technology firms, Alphabet (Google), Amazon, Apple, Facebook, and Microsoft together compose 22% of the S&P 500's value. In 2020 they have generated returns of 35%, against - 5% for the other 495 firms in the index. *The Economist*, August 8, 2020.

Economics

The distinction between authoritarian capitalism and humanist capitalism is described by Branko Milanovic in his 2019 book *Capitalism Alone: The Future of the System that Rules the World.* (He refers to "humanist capitalism" as "liberal capitalism.")

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