## Negative Case

### Framework

#### I value morality. The standard is maximizing well being.

#### All moral obligations revolve around potential consequences of actions

Sam Harris (NYT Bestselling author, BA in phil from Stanford, PhD in neuroscience from UCLA). The Moral Landscape: How Science Can Determine Human Values. 5 October 2010. p3. <http://notabenoid.com/book/22437/73890?Orig_page=3>

Here is my (consequentialist) starting point **all questions of value** (right and wrong, good and evil, etc.) **depend upon the possibility of experiencing such value. Without potential consequences at the level of experience**—happiness, suffering, joy, despair, etc.—**all talk of value is empty.** Therefore, **to say that an act is morally necessary**, or evil, or blameless, **is to****make** (tacit) **claims about its consequences in the lives of conscious creatures** (whether actual or potential). I am unaware of any interesting exception to this rule.Needless to say, **[For example,] if one is worried about pleasing God or His angels, this assumes that such** invisible **entities are** conscious(in some sense) and **cognizant of human behavior** It also generally assumes **[and] that it is possible to suffer their wrath or enjoy their approval**, either in this world or the world to come. **Even within religion**, therefore, **consequences and conscious states remain the foundation of all values.**

#### Utilitarianism comes first –approaches can *only* be ethical when they consider externalities.

Chandler ‘14

(David Chandler is Professor of International Relations at the Department of Politics and International Relations, University of Westminster – “Beyond good and evil: Ethics in a world of complexity” – International Politics, Vol. 51, No. 4 (2014), pp.441-457 – #CutWithKirby - Available at: http://www.davidchandler.org/wp-content/uploads/2014/10/International-Politics-Evil-PUBLISHED-2.pdf)

Self-reflexive ethics redistribute responsibility and emphasize the indirect, unintended and relational networks of complex causation. Collective problems are reconceived ontologically: as constitutive of communities and of political purpose. This is why many radical and critical voices in the West are drawn to the problems of 'side effects', of 'second-order' consequences - of a lack of knowledge of the emergent causality at play in the complex interconnections of the global world. The more these interconnections are revealed, though the work of self-reflexivity and self-reflection, the more ethical authority can be regained by governments and other agents of governance. We learn and learn again that we are responsible for the world, not because of our conscious choices or because our actions lacked the right ethical intention, but because the world's complexity is beyond our capacity to know and understand in advance. The unknowability of the outcomes of our action does not remove our ethical responsibility for our actions, it, in fact, heightens our responsibility for these second-order consequences or side effects. In a complex and interconnected world, few events or problems evade appropriation within this framing, providing an opportunity for recasting responsibility in these ways. The new ethics of indirect responsibility for market consequences can be seen (observed) clearly in the idea of environmental taxation, both state-enforced through interventions in the market and as taken up by both firms and individuals. The idea that we should pay a carbon tax on air travel is a leading example of this, in terms of governmental intervention, passing the burden of such problems on to 'unethical' consumers who are not reflexive enough to consider the impact of package holidays on the environment. At a broader level, the personalized ethico-political understanding that individuals should be responsible for and measure their own 'carbon footprint' shifts the emphasis from an understanding of broader inter-relations between modernity, the market and the environment to a much narrower understanding of personal indirect responsibility, linking all aspects of everyday decision making to the problems of global warming (see, for example, Marres, 2012). The shared responsibility for the Breivik murders is not different -ontologically - from the societally shared responsibility for global warming or other problematic appearances in the world. Through our actions and inactions we collectively constitute the frameworks in which others act and make decisions -failing to raise our voice against 'borderline racism' or extremism in a bar makes us indirectly responsible for acts of racism or extremism in the same way that failing to save water or minimize air travel makes us indirectly responsible for the melting polar ice caps.

### Contention One: Innovation

#### **Pharma innovation is high now but regulation has the power to gut it.**

Tusk 20, [Bradley, Tusk is a graduate of the University of Pennsylvania where he received his BA in 1995.[13] He has a JD from the University of Chicago Law School, 4, 5-14-2020, "In defense of Big Pharma, the innovation engine we love to hate," Fast Company, https://www.fastcompany.com/90504726/in-defense-of-big-pharma-the-innovation-engine-we-love-to-hate]/ISEE

Nobody doubts that inequality is baked into this incentive structure—that the same profit motive that makes the U.S. pharmaceutical industry the best in the world also leads to unjust outcomes, especially for the poor. Nor is it a secret that American R&D effectively subsidizes Europe. The question is whether that system can be reformed in a way that doesn’t endanger innovation. Sally Susman, Pfizer’s head of corporate affairs, recently came on my podcast to talk about Pfizer’s efforts to develop a vaccine for COVID-19. She confidently said that a vaccine could be available by Q4 of this year. But even attempting that has required Pfizer to shift a great number of resources toward new research areas. If they succeed, they’ll have to radically transform their manufacturing process to produce the vaccine. LET’S BE CLEAR—DRUG MAKERS ARE NOT SAINTS. IF PFIZER DEVELOPS AN EFFECTIVE VACCINE, THEY’LL BENEFIT FROM IT FINANCIALLY AND REPUTATIONALLY.” Let’s be clear—drug makers are not saints. If Pfizer develops an effective vaccine, they’ll benefit from it financially and reputationally, as they should. But they’re only in a position to dedicate their resources to creating a vaccine because they already have an immense, full-scale infrastructure of scientists, researchers, factories, labs, protocols, lawyers, and everything in between. That infrastructure is costly. It exists because some nongeneric prescription drugs are very expensive. Those revenues don’t just pay executive salaries—they also fund the 9 out of 10 drug trials that fail. Demagoguery is easy. I spent 15 years working directly in government and politics before becoming a venture capitalist. I know a lot about demagoguery firsthand because I’ve engaged in it countless times. But if half the policies I called for in press releases had ever been implemented, we’d be years away from a vaccine right now, not (hopefully) months. We’d lose millions of lives, instead of hundreds of thousands. The economic cost to society would last for generations. Some may argue that we should nationalize the drug companies and have government handle all research, development, drug trials, and manufacturing. I’m not convinced. In my four years as deputy governor of Illinois, in my time at New York’s city hall under Mike Bloomberg, and in my time in the U.S. Senate working for Chuck Schumer, I developed a true appreciation for the things government does well (national defense, public health, redistributing resources, emergency management, and law enforcement, among others) and the things it does poorly (almost everything else). Government-led drug manufacturing would be about as well funded and administered as most public housing, school systems, and public hospitals. In the face of a pandemic, that’s not a risk I’m willing to take. None of this excuses bad behavior by Big Pharma or any industry when they do something wrong. But pretending that any industry can withstand any amount of regulation and still be able to do what we need them to do, when we need them to do it, is worse than wrong. It’s intellectually dishonest. And right now, dishonesty is the last thing we can afford.

#### **Intellectual property is key to pharma companies**

Yarza ND, [Claudio, Partner, Assurance Life Sciences & Pharma Practice Leader, PwC Israel, Partner, Assurance Life Sciences & Pharma Practice Leader, PwC Israel "Intellectual property protection," PwC, https://www.pwc.com/il/en/pharmaceuticals/intellectual-property-protection.html]/ISEE

Intellectual property (IP) is a pharmaceutical or biotech company’s most valuable resource, and its protection is a key to that company’s future success. Recent challenges over patents for HIV drugs has reminded the industry that progress is still needed in balancing the opposing forces of innovation through protection of IP rights, versus the provision of affordable drugs for the developing world. Pharmaceuticals companies must face the daily challenge of creating value through the exploitation of IP rights, but avoiding considerable reputational harm. This situation was well illustrated in South Africa during the late 1990s when the balance between IP protection and the urgent needs of patients were not aligned. Since then, companies have become more aware of the potential damage that can be caused by too strict an interpretation of IP rights. Working in collaboration with national governments, trans-national organisations such as the WHO, and non-governmental organisations such as the Bill and Melinda Gates Foundation, pharmaceuticals companies have begun to find ways through the minefield of IP protection in less developed countries, and most now have donation schemes for drugs to treat diseases such as leprosy and HIV. In relatively strong emerging markets such as China and India though, additional issues prevail. Multinational pharmaceuticals companies require and expect IP rights to be strictly enforced in countries where there are countless local manufacturers with the ability to produce cheap counterfeit copies of patented drugs, which often find their way back to western markets. At the same time, the implementation and enforcement of IP laws in India and China is improving. Combined with the ability to leverage lower cost expertise, on the whole, these countries are still very much an opportunity rather than a threat. Nevertheless, companies need to be aware of and able to manage the considerable risks of doing business there. Closer to home, drug patents are coming under increased attack from generics companies who believe they have identified a weakness in the IP protecting a product. For instance, in 2004 a major ulcer treatment drug was the subject of a patent challenge in the US by a generic manufacturer just three years after its launch. With the generics industry consolidating and becoming more aggressive, pharmaceutical companies are facing more rigorous and frequent challenges to their intellectual property monopolies and growing pressure internally to bring the realisation of value in R&D forward, without compromising standards or regulatory compliance.

#### Pharma Innovation prevents Extinction – checks new diseases.

Engelhardt 8, H. Tristram. Innovation and the pharmaceutical industry: critical reflections on the virtues of profit. M & M Scrivener Press, 2008 (doctorate in philosophy (University of Texas at Austin), M.D. (Tulane University), professor of philosophy (Rice University), and professor emeritus at Baylor College of Medicine)

Many are suspicious of, or indeed jealous of, the good fortune of others. Even when profit is gained in the market without fraud and with the consent of all buying and selling goods and services, there is a sense on the part of some that something is wrong if considerable profit is secured. There is even a sense that good fortune in the market, especially if it is very good fortune, is unfair. One might think of such rhetorically disparaging terms as "wind-fall profits". There is also a suspicion of the pursuit of profit because it is often embraced not just because of the material benefits it sought, but because of the hierarchical satisfaction of being more affluent than others. The pursuit of profit in the pharmaceutical and medical-device industries is tor many in particular morally dubious because it is acquired from those who have the bad fortune to be diseased or disabled. Although the suspicion of profit is not well-founded, this suspicion is a major moral and public-policy challenge. Profit in the market for the pharmaceutical and medical-device industries is to be celebrated. This is the case, in that if one is of the view (1) that the presence of additional resources for research and development spurs innovation in the development of pharmaceuticals and med-ical devices (i.e., if one is of the view that the allure of **profit is one of the most effective ways not only to acquire resources but productively to direct human energies** in their use), (2) that given the limits of altruism and of the willingness of persons to be taxed, the possibility of profits is necessary to secure such resources, (3) that the allure of profits also tends to enhance the creative use of available resources in the pursuit of phar-maceutical and medical-device innovation, and (4) if one judges it to be the case that such innovation is both necessary to maintain the human species in an ever-changing and always dangerous environment in which new microbial and other threats may at any time emerge to threaten human well-being, if not survival (i.e., that such innovation is necessary to prevent increases in morbidity and mortality risks), as well as (5) in order generally to decrease morbidity and mortality risks in the future, it then follows (6) that one should be concerned regarding any policies that decrease the amount of resources and energies available to encourage such innovation. One should indeed be of the view that the possibilities for profit, all things being equal, should be highest in the pharmaceutical and medical-device industries. Yet, there is a suspicion regarding the pursuit of profit in medicine and especially in the pharmaceutical and medical-device industries.

### Contention 2: Buisneess Confidence

#### Growth high now – dependent on business investment and spending

Mutikani 21 (Lucia Mutikani, Economics correspondent @ Reuters, “U.S. corporate profits soar in second quarter; economic growth raised”, August 26, 21, Reuters, https://www.reuters.com/business/us-second-quarter-economic-growth-revised-slightly-higher-weekly-jobless-claims-2021-08-26/)//babcii

The level of GDP is now 0.8% higher than it was at its peak in the fourth quarter of 2019. The upward revisions to last quarter's GDP growth reflected a slightly more robust pace of consumer spending and business investment than initially estimated. Demand was driven by one-time stimulus checks from the government to some middle- and low-income households. The Federal Reserve has maintained its ultra-easy monetary policy stance, keeping interest rates at historically low levels and boosting stock market prices. Stocks were trading lower. The dollar [(.DXY)](https://www.reuters.com/quote/.DXY) rose against a basket of currencies. U.S. Treasury prices were mostly lower. Consumer spending, which accounts for more than two-thirds of the U.S. economy, appears to be cooling. Credit card data suggests spending on services like airfares, cruises as well as hotels and motels has been slowing. "This is a speed bump due to the interaction of Delta and supply-side constraints," said Michelle Meyer, chief U.S. economist at Bank of America Securities in New York. "We still believe the foundation for the economy is solid and all signs point to strong underlying demand." Bank of America Securities has slashed its GDP growth estimate for the third quarter to a 4.5% pace from a 7.0% rate. Growth is expected to pick up in the fourth quarter, in part driven by businesses replenishing inventories, which were drawn down in the first half of the year to meet the strong demand. Overall, economists expect growth of around 7% this year, which would be the strongest performance since 1984. Though the boost from fiscal stimulus is waning, demand remains underpinned by a strengthening labor market. A separate report from the Labor Department on Thursday showed initial claims for state unemployment benefits rose 4,000 to a seasonally adjusted 353,000 for the week ended Aug. 21. Adjusting the data for seasonal fluctuations is tricky around this time of the year, a task that has been complicated by the pandemic. That could account for the increase in applications last week. Unadjusted claims dropped 11,699 to 297,765 last week.

#### **The affirmative crushes business confidence**

Moffitt 21 [Debroah June 29 2021"Biotech Community Responds to Intellectual Property Debate," https://www.cslbehring.com/vita/2021/biotech-community-responds-to-intellectual-property-debate]/ISEE

Led by industry group, BIO, almost 300 biotech CEOs signed a joint statement that argues against waiving intellectual property rights related to COVID-19 vaccines – a proposal put forth by the World Trade Organization that it says would speed vaccinations in poorer countries. The companies want to help bring COVID-19 vaccines to the world, but say the waiver of intellectual property rights would not solve the vaccine problem in poorer countries. Instead it would exacerbate the situation, fueling “a long contentious global negotiation” and leading to more “vaccine nationalism,” according to the statement. Such a move also would put stress on an already strained global supply chain by shifting resources away from companies that are already collaborating in global partnerships. Further, waiving IP rights could destabilize the industry’s ability to innovate and attract investors, the CEOs said. “Intellectual property is the foundation of our sector. It is responsible for creating the global biotech network that responded so quickly to the COVID crisis in the first place,” the statement says. “It is what gives investors the confidence to fund companies with long time horizons and high risks.” CSL Limited CEO Paul Perreault was among the CEOs who signed the statement alongside leaders from Pfizer, Moderna, Johnson & Johnson and others around the world. BIO CEO Dr. Michelle McMurry-Heath, along with BIO’s state affiliates and the International Council of Biotechnology Associations, led the effort to issue the statement titled “Declaration from Members of the World’s Biotechnology Sector on Global Access to COVID Vaccines & Treatments and the Role of Intellectual Property.” In it, the CEOs made three additional points: Our sector must continue to play a constructive, proactive part in developing COVID solutions and the global manufacturing capacity to produce them. We support strong, collaborative efforts like those endorsed by the G-20 to address the global imbalances in access to COVID vaccines and treatments. Current estimates are that existing global vaccine manufacturers will produce more than 11 billion doses of COVID vaccines in 2021, and significantly more in the first part of 2022. Through cross-geographic and cross-functional teams, CSL is working with AstraZeneca to produce COVID-19 vaccines in Australia. During the pandemic, BIO tracked metrics on the industry’s response. It tallied 950 global R&D projects and 250 partnerships to improve manufacturing capability. In a social post, BIO called the statement “an extraordinary sign of unity.” The kind of intellectual property at issue “helped ensure the type of global cooperation and partnerships that are driving companies, countries, and manufacturers to quickly scale up the production.”

#### Business confidence is tied to economic growth

Sarah Chaney Cambon 21, Reporter on The Wall Street Journal's Economics Team, BA in Business Journalism from the University of North Carolina-Chapel Hill, “Capital-Spending Surge Further Lifts Economic Recovery”, Wall Street Journal, 6/27/2021, https://www.wsj.com/articles/capital-spending-surge-further-lifts-economic-recovery-11624798800

Business investment is emerging as a powerful source of U.S. economic growth that will likely help sustain the recovery.

Companies are ramping up orders for computers, machinery and software as they grow more confident in the outlook.

Nonresidential fixed investment, a proxy for business spending, rose at a seasonally adjusted annual rate of 11.7% in the first quarter, led by growth in software and tech-equipment spending, according to the Commerce Department. Business investment also logged double-digit gains in the third and fourth quarters last year after falling during pandemic-related shutdowns. It is now higher than its pre-pandemic peak.

Orders for nondefense capital goods excluding aircraft, another measure for business investment, are near the highest levels for records tracing back to the 1990s, separate Commerce Department figures show.

“Business investment has really been an important engine powering the U.S. economic recovery,” said Robert Rosener, senior U.S. economist at Morgan Stanley. “In our outlook for the economy, it’s certainly one of the bright spots.”

Consumer spending, which accounts for about two-thirds of economic output, is driving the early stages of the recovery. Americans, flush with savings and government stimulus checks, are spending more on goods and services, which they shunned for much of the pandemic.

Robust capital investment will be key to ensuring that the recovery maintains strength after the spending boost from fiscal stimulus and business reopenings eventually fades, according to some economists.

Rising business investment helps fuel economic output. It also lifts worker productivity, or output per hour. That metric grew at a sluggish pace throughout the last economic expansion but is now showing signs of resurgence.

The recovery in business investment is shaping up to be much stronger than in the years following the 2007-09 recession. “The events especially in late ’08, early ’09 put a lot of businesses really close to the edge,” said Phil Suttle, founder of Suttle Economics. “I think a lot of them said, ‘We’ve just got to be really cautious for a long while.’”

Businesses appear to be less risk-averse now, he said.

After the financial crisis, businesses grew by adding workers, rather than investing in capital. Hiring was more attractive than capital spending because labor was abundant and relatively cheap. Now the supply of workers is tight. Companies are raising pay to lure employees. As a result, many firms have more incentive to grow by investing in capital.

Economists at Morgan Stanley predict that U.S. capital spending will rise to 116% of prerecession levels after three years. By comparison, investment took 10 years to reach those levels once the 2007-09 recession hit.

Company executives are increasingly confident in the economy’s trajectory. The Business Roundtable’s economic-outlook index—a composite of large companies’ plans for hiring and spending, as well as sales projections—increased by nine points in the second quarter to 116, just below 2018’s record high, according to a survey conducted between May 25 and June 9. In the second quarter, the share of companies planning to boost capital investment increased to 59% from 57% in the first.

“We’re seeing really strong reopening demand, and a lot of times capital investment follows that,” said Joe Song, senior U.S. economist at BofA Securities.

Mr. Song added that less uncertainty regarding trade tensions between the U.S. and China should further underpin business confidence and investment. “At the very least, businesses will understand the strategy that the Biden administration is trying to follow and will be able to plan around that,” he said.

#### Decline cascades---nuclear war

Dr. Mathew Maavak 21, PhD in Risk Foresight from the Universiti Teknologi Malaysia, External Researcher (PLATBIDAFO) at the Kazimieras Simonavicius University, Expert and Regular Commentator on Risk-Related Geostrategic Issues at the Russian International Affairs Council, “Horizon 2030: Will Emerging Risks Unravel Our Global Systems?”, Salus Journal – The Australian Journal for Law Enforcement, Security and Intelligence Professionals, Volume 9, Number 1, p. 2-8

Various scholars and institutions regard global social instability as the greatest threat facing this decade. The catalyst has been postulated to be a Second Great Depression which, in turn, will have profound implications for global security and national integrity. This paper, written from a broad systems perspective, illustrates how emerging risks are getting more complex and intertwined; blurring boundaries between the economic, environmental, geopolitical, societal and technological taxonomy used by the World Economic Forum for its annual global risk forecasts. Tight couplings in our global systems have also enabled risks accrued in one area to snowball into a full-blown crisis elsewhere. The COVID-19 pandemic and its socioeconomic fallouts exemplify this systemic chain-reaction. Onceinexorable forces of globalization are rupturing as the current global system can no longer be sustained due to poor governance and runaway wealth fractionation. The coronavirus pandemic is also enabling Big Tech to expropriate the levers of governments and mass communications worldwide. This paper concludes by highlighting how this development poses a dilemma for security professionals.

Key Words: Global Systems, Emergence, VUCA, COVID-9, Social Instability, Big Tech, Great Reset

INTRODUCTION

The new decade is witnessing rising volatility across global systems. Pick any random “system” today and chart out its trajectory: Are our education systems becoming more robust and affordable? What about food security? Are our healthcare systems improving? Are our pension systems sound? Wherever one looks, there are dark clouds gathering on a global horizon marked by volatility, uncertainty, complexity and ambiguity (VUCA).

But what exactly is a global system? Our planet itself is an autonomous and selfsustaining mega-system, marked by periodic cycles and elemental vagaries. Human activities within however are not system isolates as our banking, utility, farming, healthcare and retail sectors etc. are increasingly entwined. Risks accrued in one system may cascade into an unforeseen crisis within and/or without (Choo, Smith & McCusker, 2007). Scholars call this phenomenon “emergence”; one where the behaviour of intersecting systems is determined by complex and largely invisible interactions at the substratum (Goldstein, 1999; Holland, 1998).

The ongoing COVID-19 pandemic is a case in point. While experts remain divided over the source and morphology of the virus, the contagion has ramified into a global health crisis and supply chain nightmare. It is also tilting the geopolitical balance. China is the largest exporter of intermediate products, and had generated nearly 20% of global imports in 2015 alone (Cousin, 2020). The pharmaceutical sector is particularly vulnerable. Nearly “85% of medicines in the U.S. strategic national stockpile” sources components from China (Owens, 2020).

An initial run on respiratory masks has now been eclipsed by rowdy queues at supermarkets and the bankruptcy of small businesses. The entire global population – save for major pockets such as Sweden, Belarus, Taiwan and Japan – have been subjected to cyclical lockdowns and quarantines. Never before in history have humans faced such a systemic, borderless calamity.

COVID-19 represents a classic emergent crisis that necessitates real-time response and adaptivity in a real-time world, particularly since the global Just-in-Time (JIT) production and delivery system serves as both an enabler and vector for transboundary risks. From a systems thinking perspective, emerging risk management should therefore address a whole spectrum of activity across the economic, environmental, geopolitical, societal and technological (EEGST) taxonomy. Every emerging threat can be slotted into this taxonomy – a reason why it is used by the World Economic Forum (WEF) for its annual global risk exercises (Maavak, 2019a). As traditional forces of globalization unravel, security professionals should take cognizance of emerging threats through a systems thinking approach.

METHODOLOGY

An EEGST sectional breakdown was adopted to illustrate a sampling of extreme risks facing the world for the 2020-2030 decade. The transcendental quality of emerging risks, as outlined on Figure 1, below, was primarily informed by the following pillars of systems thinking (Rickards, 2020):

• Diminishing diversity (or increasing homogeneity) of actors in the global system (Boli & Thomas, 1997; Meyer, 2000; Young et al, 2006);

• Interconnections in the global system (Homer-Dixon et al, 2015; Lee & Preston, 2012);

• Interactions of actors, events and components in the global system (Buldyrev et al, 2010; Bashan et al, 2013; Homer-Dixon et al, 2015); and

• Adaptive qualities in particular systems (Bodin & Norberg, 2005; Scheffer et al, 2012) Since scholastic material on this topic remains somewhat inchoate, this paper buttresses many of its contentions through secondary (i.e. news/institutional) sources.

ECONOMY

According to Professor Stanislaw Drozdz (2018) of the Polish Academy of Sciences, “a global financial crash of a previously unprecedented scale is highly probable” by the mid- 2020s. This will lead to a trickle-down meltdown, impacting all areas of human activity.

The economist John Mauldin (2018) similarly warns that the “2020s might be the worst decade in US history” and may lead to a Second Great Depression. Other forecasts are equally alarming. According to the International Institute of Finance, global debt may have surpassed $255 trillion by 2020 (IIF, 2019). Yet another study revealed that global debts and liabilities amounted to a staggering $2.5 quadrillion (Ausman, 2018). The reader should note that these figures were tabulated before the COVID-19 outbreak.

The IMF singles out widening income inequality as the trigger for the next Great Depression (Georgieva, 2020). The wealthiest 1% now own more than twice as much wealth as 6.9 billion people (Coffey et al, 2020) and this chasm is widening with each passing month. COVID-19 had, in fact, boosted global billionaire wealth to an unprecedented $10.2 trillion by July 2020 (UBS-PWC, 2020). Global GDP, worth $88 trillion in 2019, may have contracted by 5.2% in 2020 (World Bank, 2020).

As the Greek historian Plutarch warned in the 1st century AD: “An imbalance between rich and poor is the oldest and most fatal ailment of all republics” (Mauldin, 2014). The stability of a society, as Aristotle argued even earlier, depends on a robust middle element or middle class. At the rate the global middle class is facing catastrophic debt and unemployment levels, widespread social disaffection may morph into outright anarchy (Maavak, 2012; DCDC, 2007).

Economic stressors, in transcendent VUCA fashion, may also induce radical geopolitical realignments. Bullions now carry more weight than NATO’s security guarantees in Eastern Europe. After Poland repatriated 100 tons of gold from the Bank of England in 2019, Slovakia, Serbia and Hungary quickly followed suit.

According to former Slovak Premier Robert Fico, this erosion in regional trust was based on historical precedents – in particular the 1938 Munich Agreement which ceded Czechoslovakia’s Sudetenland to Nazi Germany. As Fico reiterated (Dudik & Tomek, 2019):

“You can hardly trust even the closest allies after the Munich Agreement… I guarantee that if something happens, we won’t see a single gram of this (offshore-held) gold. Let’s do it (repatriation) as quickly as possible.” (Parenthesis added by author).

President Aleksandar Vucic of Serbia (a non-NATO nation) justified his central bank’s gold-repatriation program by hinting at economic headwinds ahead: “We see in which direction the crisis in the world is moving” (Dudik & Tomek, 2019). Indeed, with two global Titanics – the United States and China – set on a collision course with a quadrillions-denominated iceberg in the middle, and a viral outbreak on its tip, the seismic ripples will be felt far, wide and for a considerable period.

A reality check is nonetheless needed here: Can additional bullions realistically circumvallate the economies of 80 million plus peoples in these Eastern European nations, worth a collective $1.8 trillion by purchasing power parity? Gold however is a potent psychological symbol as it represents national sovereignty and economic reassurance in a potentially hyperinflationary world. The portents are clear: The current global economic system will be weakened by rising nationalism and autarkic demands. Much uncertainty remains ahead. Mauldin (2018) proposes the introduction of Old Testament-style debt jubilees to facilitate gradual national recoveries. The World Economic Forum, on the other hand, has long proposed a “Great Reset” by 2030; a socialist utopia where “you’ll own nothing and you’ll be happy” (WEF, 2016).

In the final analysis, COVID-19 is not the root cause of the current global economic turmoil; it is merely an accelerant to a burning house of cards that was left smouldering since the 2008 Great Recession (Maavak, 2020a). We also see how the four main pillars of systems thinking (diversity, interconnectivity, interactivity and “adaptivity”) form the mise en scene in a VUCA decade.

ENVIRONMENTAL

What happens to the environment when our economies implode? Think of a debt-laden workforce at sensitive nuclear and chemical plants, along with a concomitant surge in industrial accidents? Economic stressors, workforce demoralization and rampant profiteering – rather than manmade climate change – arguably pose the biggest threats to the environment. In a WEF report, Buehler et al (2017) made the following pre-COVID-19 observation:

The ILO estimates that the annual cost to the global economy from accidents and work-related diseases alone is a staggering $3 trillion. Moreover, a recent report suggests the world’s 3.2 billion workers are increasingly unwell, with the vast majority facing significant economic insecurity: 77% work in part-time, temporary, “vulnerable” or unpaid jobs.

Shouldn’t this phenomenon be better categorized as a societal or economic risk rather than an environmental one? In line with the systems thinking approach, however, global risks can no longer be boxed into a taxonomical silo. Frazzled workforces may precipitate another Bhopal (1984), Chernobyl (1986), Deepwater Horizon (2010) or Flint water crisis (2014). These disasters were notably not the result of manmade climate change. Neither was the Fukushima nuclear disaster (2011) nor the Indian Ocean tsunami (2004). Indeed, the combustion of a long-overlooked cargo of 2,750 tonnes of ammonium nitrate had nearly levelled the city of Beirut, Lebanon, on Aug 4 2020. The explosion left 204 dead; 7,500 injured; US$15 billion in property damages; and an estimated 300,000 people homeless (Urbina, 2020). The environmental costs have yet to be adequately tabulated.

Environmental disasters are more attributable to Black Swan events, systems breakdowns and corporate greed rather than to mundane human activity.

Our JIT world aggravates the cascading potential of risks (Korowicz, 2012). Production and delivery delays, caused by the COVID-19 outbreak, will eventually require industrial overcompensation. This will further stress senior executives, workers, machines and a variety of computerized systems. The trickle-down effects will likely include substandard products, contaminated food and a general lowering in health and safety standards (Maavak, 2019a). Unpaid or demoralized sanitation workers may also resort to indiscriminate waste dumping. Many cities across the United States (and elsewhere in the world) are no longer recycling wastes due to prohibitive costs in the global corona-economy (Liacko, 2021).

Even in good times, strict protocols on waste disposals were routinely ignored. While Sweden championed the global climate change narrative, its clothing flagship H&M was busy covering up toxic effluences disgorged by vendors along the Citarum River in Java, Indonesia. As a result, countless children among 14 million Indonesians straddling the “world’s most polluted river” began to suffer from dermatitis, intestinal problems, developmental disorders, renal failure, chronic bronchitis and cancer (DW, 2020). It is also in cauldrons like the Citarum River where pathogens may mutate with emergent ramifications.

On an equally alarming note, depressed economic conditions have traditionally provided a waste disposal boon for organized crime elements. Throughout 1980s, the Calabriabased ‘Ndrangheta mafia – in collusion with governments in Europe and North America – began to dump radioactive wastes along the coast of Somalia. Reeling from pollution and revenue loss, Somali fisherman eventually resorted to mass piracy (Knaup, 2008).

The coast of Somalia is now a maritime hotspot, and exemplifies an entwined form of economic-environmental-geopolitical-societal emergence. In a VUCA world, indiscriminate waste dumping can unexpectedly morph into a Black Hawk Down incident. The laws of unintended consequences are governed by actors, interconnections, interactions and adaptations in a system under study – as outlined in the methodology section.

Environmentally-devastating industrial sabotages – whether by disgruntled workers, industrial competitors, ideological maniacs or terrorist groups – cannot be discounted in a VUCA world. Immiserated societies, in stark defiance of climate change diktats, may resort to dirty coal plants and wood stoves for survival. Interlinked ecosystems, particularly water resources, may be hijacked by nationalist sentiments. The environmental fallouts of critical infrastructure (CI) breakdowns loom like a Sword of Damocles over this decade.

GEOPOLITICAL

The primary catalyst behind WWII was the Great Depression. Since history often repeats itself, expect familiar bogeymen to reappear in societies roiling with impoverishment and ideological clefts. Anti-Semitism – a societal risk on its own – may reach alarming proportions in the West (Reuters, 2019), possibly forcing Israel to undertake reprisal operations inside allied nations. If that happens, how will affected nations react? Will security resources be reallocated to protect certain minorities (or the Top 1%) while larger segments of society are exposed to restive forces? Balloon effects like these present a classic VUCA problematic.

Contemporary geopolitical risks include a possible Iran-Israel war; US-China military confrontation over Taiwan or the South China Sea; North Korean proliferation of nuclear and missile technologies; an India-Pakistan nuclear war; an Iranian closure of the Straits of Hormuz; fundamentalist-driven implosion in the Islamic world; or a nuclear confrontation between NATO and Russia. Fears that the Jan 3 2020 assassination of Iranian Maj. Gen. Qasem Soleimani might lead to WWIII were grossly overblown. From a systems perspective, the killing of Soleimani did not fundamentally change the actor-interconnection-interaction adaptivity equation in the Middle East. Soleimani was simply a cog who got replaced.