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The Coronavirus Pandemic

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Someone said to me a long time ago that every illness is there to teach you something. If you don't figure out what it is and learn from it, you'll get many more opportunities to get educated.

My focus will be on what the coronavirus outbreak needs to teach us. If we don't learn soon, there will be many more opportunities which may present lessons that we don't want to embrace.

Today, the coronavirus outbreak around the world takes the headlines and main stories in every media outlet there is. We have an infodemic of bad news. E.O. Wilson the famous entomologist at Harvard, someone who studies insects, said "We are drowning in information but lacking in wisdom." I hope to give you some wisdom.

What is certain is that poorer people will have worse infections and be more likely to die. We know that poorer people have poorer functioning lungs. Studies around the world have shown that richer people have healthier lungs, independent of whether they smoke or live in polluted areas. This relationship, poorer people doing more poorly, is called the social gradient in health. It is there for most health conditions. We ignore it at our peril. I will continue to highlight that concept as it is the most important fact to know about our health.

Notice the collective phrase "we ignore it at our peril" the words we and our peril. Not I ignore it at my peril. We are more likely to become infected if we have more poor people, especially those who have no paid sick-leave or other benefits so they have to go to work if they are going to pay their bills. A large fraction of Americans are one paycheck away from eviction. Almost three quarters of American adults making \$35,000 or less a year would have great difficulties meeting an unexpected \$1000 expense.

Because we don't have social or economic safety nets in this country the way other rich nations do, for that reason alone we are more likely to get infected. While those more poor are more vulnerable, even those of us more well-off are at risk.

In my years of trying to understand how different populations achieve different levels of health I've had to understand history in broad swaths since our origins as a species. I will begin there and bring us up to the present to understand what the coronavirus pandemic is here to teach us.

Humans have been around in an essentially modern form for a few hundred thousand years. For most of that

time we lived in primitive societies as hunter-gatherers, or forager-hunters or cave-dwellers, whatever term you prefer. From all we know about this period, we didn't gather in groups of more than a hundred or so, lived in pristine environments, and moved around to where food was available. Most of our diet was plant-based, as women gathered nuts and berries for a few hours a day and men went off for a hunt every few weeks. That left a great deal of time for socializing. We became adept at telling stories and mythologizing. Marshall Sahlins, author of *Stone Age Economics*, pointed out that hunter-gatherers were the original leisure time society. He also noted, "The world's most primitive people have few possessions, but they are not poor. Poverty is not a certain small amount of goods, nor is it just a relation between means and ends; above all it is a relation between people. Poverty is a social status. As such it is an invention of civilization. It has grown with civilization ... as an invidious distinction between classes."

Hunter-gatherers had sufficient food, reasonable shelter and some security.

Profound changes occurred in human society with the advent of agriculture. Diets changed dramatically. Typically, one waited until a cereal crop was harvested and then ate that until the next crop of something else became available. Occasional meat was consumed. There were considerable regional variations. Diets became monotonous, that is you ate the same thing over and over again as that was what was available. You spiced it up if you had spices which were then as precious as gold or diamonds are today. Remember the spice wars.

Agriculture required much more labor than the gathering of food and hunting. To achieve this, women became producers of the labor force as fertility increased. That is, women bore more children, and became subservient to men. By contrast, hunter-gatherers were gender egalitarian. Then men and women worked together. Such societies were often matriarchies. By bearing more children in agricultural societies women were more likely to die in childbirth.

What was striking was the discovery that our health declined with the so-called progress of agriculture. Deaths became more common, whether in childbirth or from dietary deficiencies through lack of variety in foods consumed, or from infectious diseases. As we lived close to domestic animals, in more crowded conditions, viruses,

bacteria and parasites jumped from the cows, pigs and fowl onto humans and became adapted to live on or within us. Most of the infectious diseases that plague us today have come to us from domestic animals and the wild creatures we live in close proximity to facilitated by crowding. Tuberculosis came from bovines, smallpox from rats, a disease now eradicated, a great success story, influenza from swine and avian sources. Our feared coronavirus likely began in bats in Wuhan, China, where they were kept alive in markets because some people like to buy live meat and then kill it.

The bats in Wuhan live in various cave dwellings producing melting pots making mixing of viral strains easy. You don't have to live near these bats to become infected as they are sold live in markets which is a common spillover event there. We have had a number of viral-born outbreaks including SARS in 2002, and Ebola in 2014. Expect that there will be many more coronavirus outbreaks in the future through this process.

Hunter-gatherers were egalitarian and shared scarce resources such as meat from hunting. If someone got a smaller portion of meat it would be the hunter since he had skills to get more. With agriculture a hierarchy emerged. One man could say I'm your lord or master. You must build me a castle in which to store the food you grow for me. You must go to war to defend me and my stored resources. While hunter-gatherer bands had occasional skirmishes with neighboring groups, often in regards to jealousy over women, real wars only came about with the transition to agriculture.

The transition from the paleolithic to the neolithic, from hunter-gatherer societies to agricultural ones, resulted in a decline in human health. I was shocked when I learned this about twenty years ago but the evidence is solid. Lives became shorter as mortality increased because we had more infectious diseases, and there was less caring and sharing among us as inequality increased. Famines became common as crops failed. One way to measure our health decline is that our height declined. Measuring long bones in human skeletons and dating them showed that their legs shortened with the progress of agriculture.

As human populations increased in numbers and required resources from the natural environment to sustain them, deforestation began. As we cut down forests for fuel, lumber and fodder, we destroyed the habitat for many wild animals forcing them to live closer to us in our farms and cities. Bats would roost in trees and backyards.

You know how we have destroyed natural habitats all over the planet. Ebola outbreaks in Central and West Africa are more likely to occur where there has been recent deforestation. Mosquitos carrying malaria are twice as common in deforested areas as in intact forests. That is the first lesson COVID-19 has to teach us. We must reforest. Wild species are facing extinctions as has been

well-documented. Remaining animals will come into repeated human contact to plague us as the bats where our current infections began. Lesson one: stop destroying natural habitat and begin reparations to nature.

Why has this happened, namely destroying our natural habitat and allowing coronavirus to spread? Consider our economic system.

Capitalism is based on the pursuit of profit which naturally leads to many forms of exploitation including that of the natural environment. To get to that let's look at economic inequality which is another illness we must learn from.

Economic inequality goes in cycles. The gap between the rich and the rest of us is extreme today and a marker of something seriously wrong. Oxfam, in its annual report before the Davos meetings, where the richest and most powerful on the planet met in January, said that last year the world's billionaires, only 2153 people, had more wealth between them than the bottom 4.6 billion people on the planet. While this inequity is being discussed more than in the past, there is little effort to decrease it.

There are various ways of decreasing economic inequality. Recall the Biblical Four Horsemen of the Apocalypse. One man rides a white horse representing conquest, the next a red horse indicative of war, famine is portrayed by the black horse and plague is the pale horse.

A pandemic of an infectious disease is a historically proven way to level the economic peaks and valleys around the globe. When the black death or the plague swept through centuries ago, many people died. There weren't enough people remaining to do the work required in agriculture or building huge cathedrals. The survivors had to be paid more, or, since this was mostly before wage work, they needed better conditions and sustenance.

Economic historians studying 'real wages' of urban unskilled workers in Europe and the Levant from the 1300s to the late 1700s showed plague-related rises in wages and then drops afterwards.

What else can decrease the huge gap between the rich and poor around the world besides a record pandemic caused by coronavirus? Consider the economic impacts of this infection. The stock market today is incredibly volatile. Is this a result of the virus or something more fundamental? Economic up and down-turns are an enduring feature of capitalism. They are built into the fundamental process.

The last crisis of capitalism was back in 2008-9 with the global banking disaster. Predicting the next upheaval in the markets is a common news story. Not whether but when. Such recessions typically cycle every five to ten years. We are overdue for a big financial crisis. Given the instability of capitalism, coronavirus may be just the perturbation required to create volatility. Hence, we need to rethink capitalism.

Bernie Sanders calls himself a socialist. Socialism is a tough concept to describe in today's political arena. Let me try. The diverse, complex, concept called socialism came into being as an alternative to capitalism mostly in 19th century Europe where there was rampant exploitation. Dichotomies such as slave/master, serf/lord, subject/king and employee/employer lead to protests that framed socialism. There was no single concept that socialism represented. Main elements were that there be minimal domination of one individual or social group over another and that all humans should have access to economic resources, knowledge and political power.

Karl Marx is an intimate part of socialist discourse. That capitalism exploits surplus value in society is now widely understood. It was clear to me back in the 1970s when I worked for a company based in San Francisco started by an entrepreneur doctor that garnered 30 contracts to staff emergency departments in hospitals around California. As an emergency physician working in Los Banos I was paid \$16 dollars an hour while the hospital paid the company \$50 per hour. With thirty contracts throughout the state, for every hour the company netted over a thousand dollars an hour. These profits led the owner of the start-up to buy a bank in San Francisco after the year I worked for him. The surplus value of my labor enabled one person to reinvest the proceeds by buying a bank. Banks of course, create money. I was a worker and he was a capitalist.

Another form is exploiting the value of the natural environment. Many of you know about economic externalities, namely the factors that are not considered in market transactions. If you deforest and create an environment facilitating the transmission of viruses as described above, when you sell that tree, the cost of dealing with the resulting coronavirus pandemic, which in today's situation will be trillions of dollars, is not one of the costs of doing business. Of course, that tree was cut down before we knew about the threat. But we have known about deforestation being a major risk that results in global warming. But it is convenient to not consider this factor in deciding on a price for wood products because that might cut into profits.

There are huge externalities in pretty-well all market transactions that we ignore at our peril. It doesn't have to be that way. Some European car manufacturers include the price of recycling the purchased car after it is no longer drivable. Many industries pollute very heavily. One way to address this is to have increased taxes on such industries. But if anything, our current government has seriously cut taxes on industries whether they pollute or not. However, a pollution tax would stimulate such industries to adopt cleaner production. If we are going to have a market-based economy, then the price of a product needs to factor in these negative externalities.

It may seem as if I am straying from coronavirus but capitalism is the promoter of this pandemic. I want to expose the weakness of capitalism in the United States. Let's begin to see this by considering the capabilities of dealing with the infectious epidemic in America.

Recall what happened in China. While officials denied the seriousness for a period after the outbreak, they then quickly quarantined large parts of the country making transmission of the virus more difficult. The number of new cases there have peaked and are successfully declining. Our response has been more haphazard. First there was denial from the White House and little or no evidence of any leadership. At the same time the media began a frenzy fanning our fears. Instilling fear is a great way to control people. The Roman emperor Lucius Accius's maxim was: *Oderint Dum Metuant*, let them hate so long as they fear. Rather than have a national policy as in other countries, it has been left to states, cities, companies, schools, and other crowd gathering situations to decide what to do.

I won't go over details today as there will be much more in the news every day. What is clear is that there is serious economic disruption.

With the 2009 crisis the banks were bailed out by the federal government who said that the banks were too big to fail. The total value of the bailouts globally was in the trillions of dollars. Meanwhile many ordinary folk lost their homes. Capitalism used socialism for the rich to get over the crisis. Many of the rest of us are still suffering the effects, but not the rich and powerful.

Assuming that there will be many people infected with the virus in the United States let's see how capitalism and inequality will respond. We will need health care services for those who come down with this scourge. We spend more on medical care than the rest of the world combined. In the U.S. the costs of health care worked out to be over \$11,000 per person in 2018. Medical care represents a sixth of our total economy. Yet some 30 million people lack access to medical insurance and have to pay out of pocket. Even some of those with insurance have large co-pays making it likely they will delay or avoid seeking care when it is necessary.

Testing people to determine if they are infected with SARS-CoV-2, the virus that causes COVID-19 is required to direct the response. South Korea, which has had many infected people, has testing rates of 3000 per million people there at a time that we had tested only 5 per million. The initial tests rolled out here were not accurate. It is likely that testing people at low cost is just not profitable for the companies involved. Another reason for not testing is that our president didn't want us to look bad. Other countries in this situation have produced many testing kits. Because of American Exceptionalism, namely we are the

superpower, we have refused offers of test kits from Germany or the United Nations.

Also, there isn't the sense of solidarity required to produce enough kits for necessary tests especially if the process is not profitable. Our system of health care delivery is profit-care. The industry has been very lucrative. Costs for anything here, be it drugs, or procedures or hospitalization or tests and investigations are the highest in the world by a huge margin. There is talk of competition in a capitalist system driving down costs. Mostly that is a joke.

In a capitalist system when there is high demand for a product then you can raise the price for higher profits. Or you could increase production and keep the price from rising. Given our current coronavirus situation with the huge demand for masks, hand sanitizers and other products, which are mostly made overseas, there is little chance of increasing our supply of them. With hand sanitizers no longer on the shelves here we see price gouging. A number of states have laws preventing this kind of rapaciousness. Washington, my state, is not one of them, but the attorney general has said they will investigate price gouging. Don't hold your breath. The same tactic happens in natural disasters and other calamities. Prices go up. Those most vulnerable can't pay. Let's address why the United States is so unprepared for this situation.

To begin with we have dismantled the factors that produce health in a society. Health seems like a nebulous individual concept. The World Health Organization defines health as a state of complete physical, mental and social well-being and not merely the absence of disease. For a country or society it is more relevant to look at who is alive and who is dead. As an emergency physician the easiest diagnosis for me to make in the ER was that someone was dead. Hard to fake. Early on looking at population health I decided mortality measures were the best indicators of a country's health. All rich countries record when someone is born and when they die. You can then easily calculate mortality rates in childhood, in adolescence, adulthood, and old age. And also from specific conditions such as from child birth-related causes. And then consider average length of life, or life expectancy.

Hopefully it is no surprise to most of you that we die younger and have worse health than those in all the other rich nations as well as a considerable number of poorer ones. I coined the phrase Health Olympics a couple of decades ago. In the 1950s we could boast of being in the top 5 countries or even number one on various indicators such as deaths of women in childbirth. For life expectancy in 1995 we ranked 24th but in 2018 using the same UN country data, we have dropped to 36th behind a number of much poorer countries. If you don't believe me go to our Central Intelligence Agency's world rankings website

where we stand even worse as they count tiny populations such as Monaco that the UN doesn't. If we eradicated our leading killer, heart disease, we still wouldn't be the longest-lived country. That makes us dead first among many nations.

Because our health is not so good to begin with, we are more vulnerable to the effects of the virus.

The question I hope you are asking is why are we not so healthy? The usual suspects aren't the reason. Not our diet, nor smoking, nor the lack of exercise. Yes, they matter, just not so much. The longest-lived country, Japan, has more than twice as many men smoking per capita as we do. For some reason smoking harms men less in Japan than here. The same is true for other countries. Namely the country in which you live matters for your health more than your personal behaviors.

What matters? To begin with early life lasts a lifetime. Namely about half of our health as adults is programmed in the first thousand days after conception. As you go from the erection to the resurrection, the early period is what needs to be protected to be healthy. How is that done? Raising a child is hard work as you parents know. It is more difficult to do if you don't have the time or money to do it well. The U.S. is one of two countries worldwide that doesn't have a nationally mandated paid parental leave program. That is if you are a working, pregnant women you aren't entitled to time off with pay as a national policy. The only other country in this situation globally is Papua New Guinea, half of a big island north of Australia. All other countries give you time that varies, maybe 12 weeks to 2 or more years with pay to get on the right foot with your infant or your child. Day care is free or heavily subsidized in many other countries. A former student of mine moved to Montreal, Canada with a baby. Child care in Quebec costs \$8 a day there.

An important principle in understanding health is that poorer people have poorer health. It is a wake-up call if you haven't heard it before. Countries with a great deal of poverty will have worse health for that reason alone. We have the highest rates of poverty of all rich countries, and especially of child poverty. While it depends on the poverty measure, we can say with assurance that at least a quarter of U.S. children grow up in poverty. Yet, the United States is the richest and most powerful country in world history.

Another factor strongly linked with health is economic inequality. More unequal nations impose stress and frustration on their people. Many studies link income inequality to various health outcomes including mortality measures and various social outcomes. These includes mass shootings, something we have come to expect daily headlines on. Counties with high income inequality and with large wealth present there can expect more mass shootings than more equal counties. Given our record

income inequality, which I won't detail as you are all aware of, good health cannot be expected.

I know what you are thinking: I have white skin, a college education, exercise and don't engage in bad behaviors and see my doctor regularly so those admonitions don't apply to me. They do apply to you. That is one of the most challenging ideas to get my students to understand. If it were not true, then surely some of the longest-lived people would reside here. The oldest old at any one point in time are almost always in Japan. Not here.

Let's talk about why a social safety net is critical. A country's government collects taxes and has those resources to spend on what is decided upon. Our government accrues about 30% of our economy through taxation and delegates those funds to various expenditures. The number varies among nations. In Sweden it is about 55%. Ours is the lowest among rich countries.

A substantial portion of government revenue is spent on the military. We can question whether this is a good idea. I know it won't help us fight the novel coronavirus epidemic. Ludicrous to even consider that. Our military won't protect us.

Consider social spending. Governments spend this in ways that are supposed to benefit the people. Some studies suggest that we spend as much on social spending as the other rich countries.

Let's explore a paper published on March 5 in the *New England Journal of Medicine*, a leading medical publication, titled: "Social Spending to Improve Population Health— Does the United States Spend as Wisely as Other Countries?" To gain wisdom I critically evaluate articles in academic journals that are peer reviewed. That means that several experts read over and evaluate each submission. The editor, based on these reviews, decides whether to publish the paper or not. While this system is not perfect, it is better than most of the 'alternative facts' or 'fake news' out there.

I have been teaching about the impact of social spending on health for over a decade. Many studies point out that social spending matters more for health than spending on medical care. The authors point out that we have worse health than many other countries, something I have pointed out in many other talks broadcast on Alternative Radio.

Where does our social spending go? Mostly on old folk for pensions and residential services for the elderly. We don't spend much for families via child allowances, maternity and parental leave, early childhood education and payments to single-parents who are usually very financially strapped. We spend little on sickness payments, disability benefits, and rehabilitation services. Similarly, for unemployment compensation and housing assistance.

All the research points out that spending in the earlier years is much more effective in producing health than

spending in old age. As Frederick Douglass, the escaped slave and abolitionist pointed out 150 years ago, "it is easier to build strong children than repair broken men." But we have a huge industry repairing broken men and women that we don't want to tamper with.

If we had the average, not the best, level of social spending of the other rich nations we would be one of the world's healthiest countries. Social spending is an investment in health while medical care spending treats what results when we don't have the best social spending perspective.

Recently attention has been paid to so-called deaths of despair in the U.S. This refers to deaths in adulthood, specifically ages 45 to 54 where white mortality has not been declining as in other rich nations, nor as among African Americans. These people in their prime of life are less likely to have gone to college which didn't matter as much when they were youngsters. You could achieve the American Dream working on an assembly line. Now you despair, blame yourself, and die from suicides, alcohol consumption and opioids. We consume more than half the world's opioids as we try to self-medicate this despair. Those who are of Latin origin, I now use the term Latinx since it is gender neutral, have better health than non-Latinx whites. Although they tend to be poorer than their counterparts, they have more social support within their culture. Social support among families and within them is a substitute for government social spending. But even that has its limits.

So the realities in the United States are that we have less social support than before. We have so many people unable to pay an unexpected expense, or to be off work for any length of time. We have brought this upon ourselves collectively as we didn't protest tax cuts for the wealthy. The initial costs of the 2017 tax cut legislation were estimated to be one and a half trillion dollars but now are more likely to cost four or five times that before the current outbreak. Economic inequality has made our society more fragmented than ever before and much less trusting. Now we are incredibly vulnerable to COVID-19.

Let's take Italy as an example, a country that has more coronavirus infections and more deaths than we have. To begin with they have universal health care, namely everyone can access medical care without having to pay out of pocket. By contrast many in this country, even with Obamacare, find it is a huge cost for co-pay or the full price if they are not covered by insurance. These are of course poorer folk, the ones more likely to get infected with corona and also not able to take time off work as they have no sick-leave benefits. They can't absorb the costs of being out of work.

They will work at supermarkets at check-out counters when sick or will be flipping burgers in the fast food joint when you go there. Or they will be serving you in the

restaurant. Recall the minimum wage for tipped workers is \$2.13 per hour. They try to be nice to us as they prepare and serve our food, but when you are sick this harder and more likely to result in a lower tip. Go figure. Now many restaurants are closing so these workers will be out of a job. There is good unemployment insurance as well as generous paid sick leave in Italy and 26 days of paid vacation and national paid holidays which number 11 per year.

Then there is the Italian government's new policy, which is a large support package to help businesses who have lost income and to help families affected by the coronavirus. European countries are providing tax breaks and extending deadlines for tax payments and other important measures. In France the government announced that for families who can't find child care because of the epidemic, they can stay home with children who must be quarantined and still receive full pay.

Where is the money going to come to pay for all this on a continent already hit with austerity. Countries say they will take on increased debt. That is what you do in a crisis. Spend money or lose your life.

What can we learn from China where COVID-19 started? One astute doctor, Li Wenliang, at Wuhan Central Hospital in Hubei noticed something unusual about a few very sick patients in late December 2019. He tried to call attention to the situation, but he was 'rehabilitated.' He later died from the infection becoming a martyred hero there. Attempts were made to influence Xi Jinping, China's president on January 7. He demurred and the outbreak was only announced two weeks later. Then large parts of China were quarantined and it is fair to say that the outbreak there peaked and now numbers of new cases are declining. There the virus has been somewhat contained. Had actions been taken sooner the situation would be better today.

The branch of the federal government charged with protecting our health, the Centers for Disease Control and Prevention, CDC, have faced huge budget cuts in the current administration. The parent Department of Health and Human Services has similarly become impotent. While there are well-meaning people there their efforts are not what is required.

What can I say at this point as someone living near where most of the deaths in the U.S. have occurred at this point? First there is no reason to panic. We tolerate a great number of unnecessary deaths in this country. As an example, had our life expectancy been increasing at the rate it was before 2014 when it started to decline, we would have about 100,000 fewer deaths last year or about 273 deaths averted every day. Of course, we don't know about these statistics. They've not been widely reported.

Based on what is known in China young people seem less likely to get the infection. The most vulnerable are older folk, and those with compromised immunity. A

general policy today would be to avoid crowds in confined spaces. That is why I am now teaching using online technology. We had a class a few days ago with almost a hundred students that went very well. We have no evidence that wearing a mask protects from infection. If you have an infection and are coughing and sneezing, then wearing a mask makes sense.

We can learn about infections from our history. A hundred and twenty years ago tuberculosis was a leading cause of death in this country. In 1900 it is estimated that 194 out of every 100,000 Americans died from TB or about two tenths of one percent. There were no drugs to treat it and no vaccine. Starting in 1900 death rates from TB dropped precipitously. Why? States opened sanatoriums where those with the disease could be housed in sylvan surroundings and given good food. When these were opened in Minnesota deaths rates plummeted.

In the late 1940s when antibiotic treatment was available 80% of the drop-in deaths to the present had already occurred. This was a form of quarantine, namely isolating those infected and take good care of them, so they wouldn't pass the condition on to others. This was a good example of useful social spending. Despite powerful drugs to treat TB, it is still with us, present mostly in the poorer segments of our society. There have been over 500 deaths from TB here last year and almost ten thousand cases. This is still a leading killer elsewhere as TB is thought to infect a quarter of the world's population and cause over ten million deaths a year. The U.S controlled TB with social spending.

The same is true for immunizations or vaccinations. Take measles which is now easily preventable with an immunization although cases are resurging here as there are anti-vaxers who don't get the vaccine. If we look at England where deaths from measles in children have been recorded going back to 1850, the same picture is seen as with TB. Large numbers of deaths occurred until around 1900 and then they dropped precipitously. By the time the immunization was available in 1968 there were almost no deaths from measles in England. The reason relates to social spending as people's standard of living improved, they had the National Health Service, and social welfare policies there provided housing and jobs. I am not advising you to avoid the MMR vaccine. Measles cases are now resurging here.

Something else to consider is how vulnerable our country has become as we have outsourced production through globalization. Almost nothing we possess is now made in America. That includes the medicines produced by Big Pharma, our very profitable pharmaceutical companies. Although these companies package drugs that are then sold, at high cost, in pharmacies across the country, the ingredients, if not the actual pills themselves, are produced overseas, mostly in India and you guessed it,

China. Before the coronavirus arrived, there was substantial concern that because of our deteriorating trade relations with that country, China could weaponized its drug sales to us and increase our vulnerability. One expert suggests that if China shut the door on exports of medicine and their key ingredients and raw material to the U.S. our hospitals and clinics would cease to function in a few months if not days.

What is clear is that while corporations are making astronomical profits by outsourcing production and labor to poor countries, many of which have totalitarian governments such as China, it leaves us on unsteady ground. China is an especial favorite for corporate investors because we know their repressive government will insure production quotas. Or will they now?

What is required to sustain the current form of globalization is a level of cooperation among nations that is fast disappearing. Just as we are ever more focused on individual pursuits in America, so do other nations not want to be our poodles. Recall Prime Minister Tony Blair in the U.K. was called President George W Bush's poodle for supporting our invasions of Afghanistan and Iraq. This is another aspect of the increasing inequality world-wide as Oxfam has shown.

The same is true in the United States, namely increasing inequality is driving cooperation apart as we retreat into our political tribes. These are tough times.

Yogi Berra is supposed to have said that making predictions is difficult, especially about the future. What can we expect? Expect coronavirus infections to appear across the country. Those most vulnerable will be older folk with chronic diseases and compromised immunity. The mortality rate will be difficult to assess without making tests more widespread as there appears to be many asymptomatic infections, i.e., people have the virus but don't show any signs of it. Current models suggest there may be 200,000 to 1.7 million deaths.

Hospitalization may be required for perhaps ten percent of those infected but we have a substantial shortage of hospital beds, especially in comparison to other rich nations. In the worst-case scenario, expect death rates for those infected of .1 to 2%.

Treatments for those infected will not be based on clinical trials for a considerable period of time. Expect ad hoc treatments with a variety of anti-viral drugs. Even a rush to produce a vaccine will take close to a year if it is successful. Note that we don't have an immunization against HIV/AIDS or malaria and that's not for lack of trying.

Our non-system of health care will be severely stressed. We aren't training the number of health care workers we need at the competence necessary. I've been having discussions with doctors practicing today that worries me. They have become super specialized. Hardly

any doctor in urban settings treating outpatients cares for them directly when hospitalized. This is now delegated to hospitalists, a new breed that works only inside the hospital. There are nocturnists who work nights, proceduralists who carry out what regular doctors used to do in the hospital. Nurses now start most intravenous lines. Doctors don't do enough of these procedures to maintain their skills. I used to walk doctors and medical students in training to do minor surgery and placing chest tubes or do an awake endotracheal intubation or do a spinal tap in the emergency department. This doesn't happen much anymore.

The profit-care system of delivering medical care will also be stressed as those who are sickest won't be able to pay for their care. Such a shock is an opportunity to move to a system of health care for all. Naomi Klein wrote *Shock Doctrine: The Rise of Disaster Capitalism* in 2007. There is no reason why we can't use the coronavirus shock to make progressive changes.

John Kingdon, of the University of Michigan, in his landmark book: *Agendas, Alternatives, and Public Policies* noted that for a dysfunctional social system to change in this country, it was not enough to have a problem that attracts popular and political attention, nor to have major players agree on a refined and feasible solution. In the U.S. there needed to be a transforming political event, such as a war, a natural disaster or, guess-what, the coronavirus pandemic to push through required changes. This doesn't have to be new. Franklin Delano Roosevelt proposed an Economic Bill of Rights in 1944. This would have guaranteed employment, food, closing and leisure with enough income to support them. Alas, he died before it could become reality.

To reflect on where we stand now. The coronavirus epidemic has resulted from global greed to increase profits in the capitalist system through deforestation that provided the opportunity for the virus to be transmitted to humans. The lack of global cooperation has made it difficult to muster the required defenses which would require caring and sharing made impossible by our great economic inequality. We are especially vulnerable in the U.S. The way forward is through organization, we have to work together. COVID-19 will change our political debates and challenge democracy in this country. The perspective we must take through the electoral process is to understand why we have come to this crisis. The reasons go back to various forms of exploitation. To counter this we must organize or die.

Coronavirus infection, COVID-19 is here to teach us that we need to produce a more egalitarian society. We need economic and social safety nets. We need the right kind of social spending that helps the most vulnerable. We will survive this crisis but if we don't learn from it, we will

have many more future opportunities that are likely to have worse impacts.

For information about obtaining CDs, mp3s, or transcripts of this or other programs, please contact:



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