

## Our Finite World

Exploring how oil limits affect the economy

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### Understanding Our Pandemic – Economy Predicament

Posted on [May 13, 2020](#) by [Gail Tverberg](#)

The world's number one problem today is that the world's population is too large for its resource base. Some people have called this situation *overshoot*. The world economy is ripe for a major change, such as the current pandemic, to bring the situation into balance. The change doesn't necessarily come from the coronavirus itself. Instead, it is likely to come from the whole chain reaction that has been started by the coronavirus and the response of governments around the world to the coronavirus.

Let me explain more about what is happening.

#### **[1] The world economy is reaching Limits to Growth, as described in the book with a similar title.**

One way of seeing the predicament we are in is the modeling of resource consumption and population growth described in the 1972 book, *The Limits to Growth*, by Donella Meadows et al. Its base scenario seems to suggest that the world will reach limits about now. Chart 1 shows the base forecast from that book, together with a line I added giving my impression of where the economy really was in 2019, relative to resource availability.

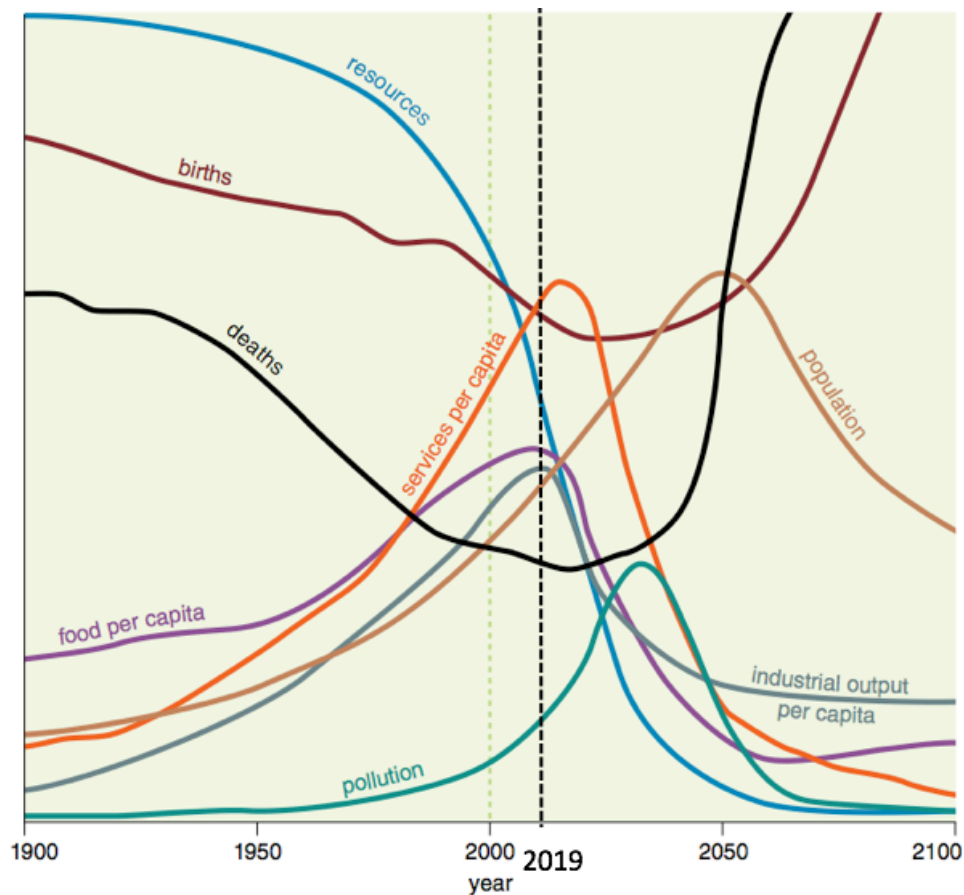


Figure 1. Base scenario from 1972 Limits to Growth, printed using today's graphics by Charles Hall and John Day in "[Revisiting Limits to Growth After Peak Oil](#)," with dotted line added corresponding to where the world economy seems to be in 2019.

In 2019, the world economy seemed to be very close to starting a downhill trajectory. Now, it appears to me that we have reached the turning point and are on our way down. The pandemic is the catalyst for this change to a downward trend. It certainly is not the whole cause of the change. If the underlying dynamics had not been in place, the impact of the virus would likely have been much less.

The 1972 model leaves out two important parts of the economy that probably make the downhill trajectory steeper than shown in Figure 1. First, the model leaves out debt and, in fact, the whole financial system. After the 2008 crisis, many people strongly suspected that the financial system would play an important role as we reach the limits of a finite world because debt defaults are likely to disturb the worldwide financial system.

The model also leaves out humans' continual battle with pathogens. The problem with pathogens becomes greater as world population becomes denser, facilitating transmission. The problem also becomes greater as a larger share of the population becomes more susceptible, either because they are elderly or because they have underlying health conditions that have been hidden by an increasingly complex and expensive medical system.

As a result, we cannot really believe the part of Figure 1 that is after 2020. The future downslopes of population, industrial production per capita, and food per capita all seem likely to be steeper than shown on the chart because both the debt and pathogen problems are likely to increase the speed at which the economy declines.

**[2] It is far more than the population that has overshoot limits.**

The issue isn't simply that there are too many people relative to resources. The world seems to have

- Too many shopping malls and stores
- Too many businesses of all kinds, with many not very profitable for their owners
- Governments with too extensive programs, which taxpayers cannot really afford
- Too much debt
- An unaffordable amount of pension promises
- Too low interest rates
- Too many people with low wages or no wages at all
- Too expensive a healthcare system
- Too expensive an educational system

The world economy needs to shrink back in many ways at once, simultaneously, to manage within its resource limits. It is not clear how much of an economy (or multiple smaller economies) will be left after this shrinkage occurs.

**[3] The economy is in many ways like the human body. In physics terms, both are dissipative structures. They are both self-organizing systems powered by energy (food for humans; a mixture of energy products including oil, coal, natural gas, burned biomass and electricity for the economy).**

The human body will try to fix minor problems. For example, if someone's hand is cut, blood will tend to clot to prevent too much blood loss, and skin will tend to grow to substitute for the missing skin. Similarly, if businesses in an area disappear because of a tornado, the prior owners will either tend to rebuild them or new businesses will tend to come in to replace them, as long as adequate resources are available.

In both systems, there is a point beyond which problems cannot be fixed, however. We know that many people die in car accidents if injuries are too serious, for example. Similarly, the world economy may "collapse" if conditions deviate too far from what is necessary for economic growth to continue. In fact, at this point, the world economy may be so close to the edge with respect to resources, particularly energy resources, that even a minor pandemic could push the world economy into a permanent cycle of contraction.

**[4] World governments are in a poor position to fix the current resource and pandemic crisis.**

In our networked economy, too low a resource base relative to population manifests itself in a strange way: It appears as an *affordability crisis* that leads to very low prices for oil. It also appears as terribly low prices for many other commodities, including copper, lithium, coal and even wholesale electricity. These low prices occur because too large a share of the population cannot afford finished goods, such as cars and homes, made with these commodities. Recent shutdowns have suddenly increased the number of people with low income or no income, pushing commodity prices even lower.

If resources were more plentiful and very inexpensive to produce, as they were 50 or 70 years ago, wages of workers could be much higher, relative to the cost of resources. Factory workers would be able to afford to buy vehicles, for example, and thus help keep the demand for automobiles up. If we look more deeply into this, we

find that energy resources of many kinds (fossil fuel energy, nuclear energy, burned biomass and other renewable energy) must be extraordinarily cheap and abundant to keep the system growing. Without “surplus energy” from many sources, which grows with population, the whole system tends to collapse.

World governments cannot print resources. What they can print is debt. Debt can be viewed as a promise of future goods and services, whether or not it is reasonable to believe that these future goods and services will actually materialize, given resource constraints.

We are finding that using shutdowns to solve COVID-19 problems causes a huge amount of economic damage. The cost of mitigating this damage seems to be unreasonably high. For example, in the United States, antibody studies suggest that roughly 5% of the population has been infected with COVID-19. The total number of deaths associated with this 5% infection level is perhaps 100,000, assuming that reported deaths to date (about 80,000) need to be increased somewhat, to match the approximately 5% of the population that has, knowingly or unknowingly, already experienced the infection.

If we estimate that the mean number of [years of life lost](#) is 13 years per person, then the total years of life lost would be about 1,300,000. If we estimate that the US treasury needed to borrow [\\$3 trillion dollars](#) to mitigate this damage, the cost per year of life lost is \$3 trillion divided by 1.3 million, or ***\$2.3 million per year of life lost***. This amount is utterly absurd.

This approach is clearly not something the United States can scale up, as the share of the population affected by COVID-19 relentlessly rises from 5% to something like 70% or 80%, in the absence of a vaccine. We have no choice but to use a different approach.

**[5] COVID-19 would have the least impact on the world economy if people could pay little attention to the pandemic and just “let it run.” Of course, even without mitigation attempts, COVID-19 might bring the world economy down, given the distressed level of today’s economy and the shutdowns experienced to date.**

Shutting down an economy has a huge adverse impact on that economy because quite a few workers who are in good health are no longer able to make goods and services. As a result, they have no wages, so their “demand” goes way down. If the economy was already having an affordability crisis for goods made with commodities, shutting down the economy tends to greatly add to the affordability crisis. Prices of commodities tend to fall even lower than they were before the crisis.

Back in 1957-1958, the Asian pandemic, which also started in China, hit the world. The number of deaths was up in the range of the current pandemic, relative to population. The estimated worldwide death rate was [0.67%](#). This is not too dissimilar from a death rate of 0.61% for COVID-19, which can be calculated using my estimate above (100,000 deaths relative to 5% of the US population of 330 million).

[Virtually nothing was shut down](#) in the US for the 1957-58 pandemic. When doctors or nurses became sick themselves, [wards were simply closed](#). Would-be patients were told to stay at home and take aspirin, unless a severe case developed. With this approach, the US still faced a short recession, but the economy was soon growing again. Populations seemed to reach herd immunity quite quickly.

If the world could somehow have adopted a similar approach this time, there still would have been some adverse impact on the economy. A small percentage of the population would have died. Some businesses might have needed to be closed for a short time when too many workers were out sick. But the huge burden of job loss by a substantial share of the economy could have been avoided. The economy would have had at least a small chance of rebounding quickly.

**[6] The virus that causes COVID-19 looks a great deal like a laboratory cross between SARS and HIV, making the likelihood of a quick vaccine low.**

In fact, Professor Luc Montagnier, co-discoverer of the AIDS virus and winner of a Nobel Prize in Medicine, [claims that the new coronavirus](#) is the result of an attempt to manufacture a vaccine against the AIDS virus. He believes that the accidental release of this virus is what is causing today's pandemic.

If COVID-19 were simply another influenza virus, similar to many we have seen, then getting a vaccine that would work passably well would be a relatively easy exercise. At least one of the vaccine trials that have been started could be reasonably expected to work, and a solution would not be far away.

Unfortunately, SARS and HIV are fairly different from influenza viruses. We have never found a vaccine for either one. If a person has had SARS once, and is later exposed to a slightly mutated version of SARS, the symptoms of the second infection seem to be worse than the first. This characteristic interferes with finding a suitable vaccine. We don't know whether the virus causing COVID-19 will have a similar characteristic.

We know that scientists from a number of countries have been working on so-called "gain of function" experiments with viruses. These very risky experiments are aimed at making viruses either more virulent, or more transmissible, or both. In fact, experiments were going on in Wuhan, in two different laboratories, with viruses that seem to be not too different from the virus causing COVID-19.

We don't know for certain whether there was an accident that caused the release of one of these gain of function viruses in Wuhan. We do know, however, that [China has been doing a lot of cover-up activity](#) to deter others from finding out what actually happened in Wuhan.

We also know that Dr. Fauci, a well-known COVID-19 advisor, had his hand in this Chinese research activity. Fauci's organization, the National Institute for Allergy and Infectious Diseases, [provided partial funding](#) for the gain of function experiments on bat coronaviruses in Wuhan. While the intent of the experiments seems to have been for the good of mankind, it would seem that Dr. Fauci's judgment erred in the direction of allowing too much risk for the world's population.

**[7] We are probably kidding ourselves about ever being able to contain the virus that causes COVID-19.**

We are gradually learning that the virus causing COVID-19 is easily spread, even by people who do not show any symptoms of the disease. The virus can spread long distances through the air. Tests to see if people are ill tend to produce a lot of false negatives; because of this, it is close to impossible to know whether a particular person has the illness or not.

China is finding that it cannot really contain the virus that causes COVID-19. A recent South China Morning Post article indicates that [roughly 14 million people are to be tested](#) in the Wuhan area in the next ten days to try to control a new outbreak of the virus.

It is becoming clear, as well, that even within China, the lockdowns have had a very negative impact on the economy. The Wall Street Journal reports, [China Economic Data Indicate V-Shaped Recovery Is Unlikely](#). Supply chains were broken; wholesale commodity prices (excluding food) have tended to fall. Joblessness is increasingly a problem.

**[8] If we look at deaths per million by country, it is difficult to see that lockdowns are very helpful in reducing the spread of disease. Masks seem to be more beneficial.**

If we compare death rates for mask-wearing East Asian countries to death rates elsewhere, we see that death rates in mask-wearing East Asian countries are dramatically lower.

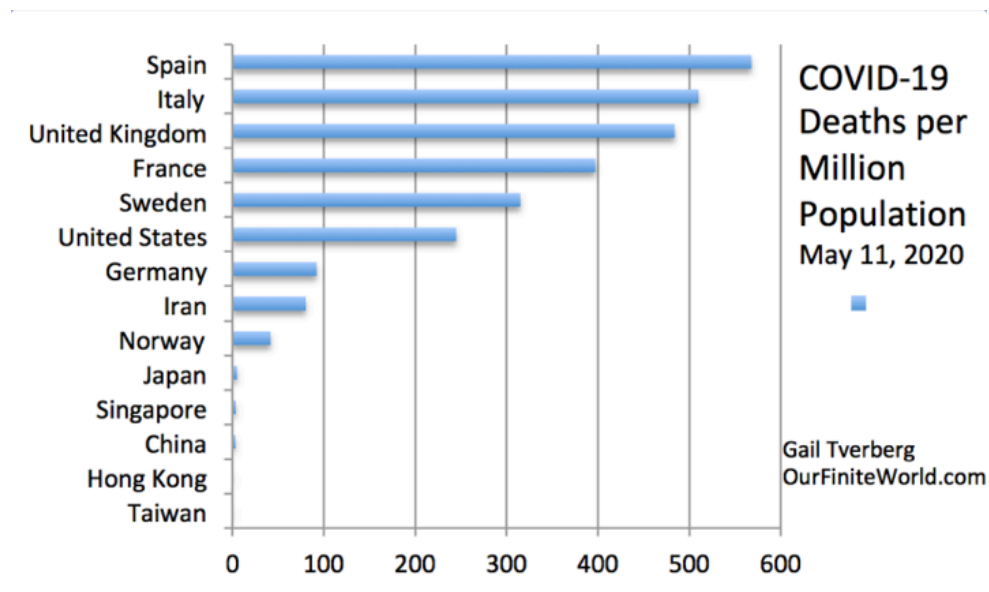


Figure 2. Death rates per million population of selected countries with long-term exposure to the virus causing COVID-19, based on Johns Hopkins death data as of May 11, 2020.

Looking at the chart, a person almost wonders whether lockdowns are a response to requests from citizens to “do something” in response to an already evident surge in cases. The countries known for their severe lockdowns are at the top of the chart, not the bottom.

In fact, a [preprint academic paper](#) by Thomas Meunier is titled, “Full lockdown policies in Western Europe countries have no evident impacts on the COVID-19 epidemic.” The abstract says, “Comparing the trajectory of the epidemic before and after the lockdown, we find no evidence of any discontinuity in the growth rate, doubling time, or reproduction number trends. . . We also show that neighboring countries applying less restrictive social distancing measures (as opposed to police-enforced home containment) experience a very similar time evolution of the epidemic.”

It appears to me that lockdowns have been popular with governments around the world for a whole host of

reasons that have little to do with the spread of COVID-19:

- Lockdowns give an excuse for closing borders to visitors and goods from outside. This was a direction in which many countries were already headed, in an attempt to raise the wages of local workers.
- Lockdowns can be used to hide the fact that factories need to be closed because of breaks in supply lines elsewhere in the world.
- Many countries have been faced with governmental protests because of low wages compared to the prices of basic services. Lockdowns tend to keep protesters inside.
- Lockdowns give the appearance of protecting the elderly. Since there are many elderly voters, politicians need to court these voters.

**[9] A person wonders whether Dr. Fauci and members of the World Health Organization are influenced by the wishes of vaccine and big pharmaceutical companies.**

The recommendation to try to “flatten the curve” is, in part, an attempt to give vaccine and pharmaceutical makers more time to work on their products. Is this really the best recommendation? Perhaps I am being overly suspicious, but we recently have been dealing with an opioid epidemic which was encouraged by manufacturers of Oxycontin and other opioids. We don’t need another similar experience, this time sponsored by vaccine and other pharmaceutical makers.

The temptation of researchers is to choose solutions that would be best from the point of their own business interests. If a researcher gets much of his funding from vaccine and big pharmaceutical interests, the temptation will be to “push” solutions that are beneficial to these interests. In some cases, researchers are able to patent approaches, even when the research is paid for by governmental grants. In this case they can directly benefit from a new vaccine or drug.

When potential solutions are discussed by Dr. Fauci and the World Health Organization, no one brings up improving people’s immunity so that they can better fight off the novel coronavirus. Few bring up masks. Instead, we keep being warned about “opening up too soon.” In a way, this sounds like, “Please leave us lots of customers who might be willing to pay a high price for our vaccine.”

**[10] One way the combination of (a) the activity of the virus and (b) our responses to the virus may play out is as a slow-motion, controlled demolition of the world economy.**

I think of what we are experiencing as being somewhat similar to a toggle bolt going around and around, moving down a screw. As the toggle bolt moves around, I picture it as being similar to the virus and our responses to the viruses hitting different parts of the world economy.



Figure 3. Image of how the author sees COVID-19 as being able to hit the economy multiple times, in multiple ways, as its impact keeps impacting different parts of the world.

If we look back, the virus and reactions to the virus first hit China. China's recovery is moving slowly, in part because of reduced demand from outside of China now that the virus is hitting other parts of the world. In fact, additional layoffs occurred after Chinese shutdowns ended, because it then became clear that some employers needed to permanently scale back operations to meet the new lower demand for their product.

Commodity prices, including oil prices, are now depressed because of low demand around the world. These low prices can be expected to gradually lead to closures of wells and mines extracting these commodities. Processing centers will also close, making these commodities less available even if demand temporarily rises.

As one country is hit by illnesses and/or shutdowns, we can expect supply lines for manufacturing around the world to be disrupted. This will lead to yet more business closures, some of them permanent. Debt defaults tend to happen as businesses close and layoffs occur.

With all of the layoffs, governments will find that their tax collections are lower. The resulting governmental funding issues can be expected to lead to new rounds of layoffs.

Natural disasters such as hurricanes, tornadoes, floods, earthquakes and forest fires can be expected to continue to happen. Social distancing requirements, inadequate tax revenue and broken supply lines will make mitigation of all of these disasters more difficult. Electrical lines that fall down may stay down permanently; bridges that are damaged may never be repaired.

Initially, rich countries can be expected to try to help as many laid-off workers as possible with loans and temporary stipends. But, after a few months, even with this approach, many individual citizens and businesses will likely not be able to pay their rent. Default rates on home mortgages and auto loans can be expected to rise for a similar reason.

We can expect to see round after round of business failures and layoffs of employees. Financial systems will become more and more stressed. Pensions are likely to default. Death rates will rise, in part from epidemics of



various kinds and in part from growing problems with starvation. In fact, in some poor countries, lower-income citizens are already having difficulty being able to afford adequate food. Eventually we can expect collapsing governments (similar to the collapse of the central government of the Soviet Union) and overthrown governments.

Longer-term, after this demolition ends, there may be some surviving pieces of economies. These new economies will be much smaller and less dependent upon each other, however. Currencies are likely to be less interchangeable. The remaining people will need to learn to make do with many fewer goods than are available today. It will be a very different world.

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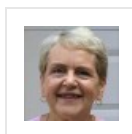
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**About Gail Tverberg**

My name is Gail Tverberg. I am an actuary interested in finite world issues - oil depletion, natural gas depletion, water shortages, and climate change. Oil limits look very different from what most expect, with high prices leading to recession, and low prices leading to financial problems for oil producers and for oil exporting countries. We are really dealing with a physics problem that affects many parts of the economy at once, including wages and the financial system. I try to look at the overall problem.

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### 3,868 Responses to *Understanding Our Pandemic – Economy Predicament*

**Harry McGibbs** says:

May 29, 2020 at 2:36 am

“The number of cars built in Britain last month plunged by 99.7pc as manufacturing collapsed due to the coronavirus lockdown.

“Just 197 cars were made according to stark industry figures that highlight the scale of the crisis in the automotive industry.”

<https://www.telegraph.co.uk/business/2020/05/29/car-production-grinds-halt-lockdown-britain/>

**Harry McGibbs** says:

May 29, 2020 at 2:37 am

“The £75bn car finance sector [UK] has... been running on a precariously thin tread for quite some time – and coronavirus could be the catalyst for an almighty skid.”

<https://www.telegraph.co.uk/business/2020/05/27/coronavirus-puts-75bn-car-finance-sector-tailspin/>

**Harry McGibbs** says:

May 29, 2020 at 3:00 am

[Supply chain issues not restricted to the US, of course.]

“Carmakers across the U.S. including Ford and General Motors restarted production last week with the coronavirus pandemic is receding, but bankruptcies among their suppliers could throw a wrench in the automotive industry’s plans.

“Car companies may be unable to churn out their automobiles at full capacity if the parts they need are not available. Compounding these vulnerabilities, automakers have in recent years moved away from stockpiling components in favor of using finely tuned supply chains to deliver parts at the exact moment when they are needed.”

<https://www.marketwatch.com/story/elevated-default-risk-among-auto-suppliers-threatens-to-upend-carmaker-production-2020-05-28>



**Gail Tverberg** says:

May 29, 2020 at 12:21 pm

People couldn’t really afford cars.

**Norman Pagett** says:

May 29, 2020 at 10:19 am

even those who profess not to drive are stuck in a society that can only exist by converting explosive force into rotary motion

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**Kim** says:

May 29, 2020 at 2:40 am

<https://www.federalreserve.gov/monetarypolicy/reservereq.htm>

Reserve Requirements

As announced on March 15, 2020, the Board reduced reserve requirement ratios to zero percent effective March 26, 2020. This action eliminated reserve requirements for all depository institutions.

**Harry McGibbs** says:

May 29, 2020 at 3:17 am

“The Federal Reserve is seriously considering yield-curve control as its next step to ease lending conditions and aid the US economic recovery, John Williams, president of the Fed’s New York branch, said Wednesday.

“The central bank has already moved past its previous policy playbooks to lift the economy through the coronavirus

crisis. Yield-curve control stands out as one of the few tools left untouched in the Fed's arsenal, and Williams suggested the authority could turn to such actions if additional relief is needed."

<https://markets.businessinsider.com/news/stocks/federal-reserve-yield-curve-control-coronavirus-economy-recession-stimulus-relief-2020-5-1029238847>

**Harry McGibbs** says:

May 29, 2020 at 3:25 am

"...the world economy has been frozen and the thaw will take too long to save the old system. Deflation will make the recovery situation worse and in the end how are we going to have deflation for long, after oceans of money have been injected into the system to avoid complete meltdown.

"Once the system is shocked back into life, then what? There will be a gap in output. Massive unemployment. A huge budget deficit... straight out of the text book for the conditions for hyperinflation."

<https://www.forbes.com/sites/investor/2020/05/28/hyperinflation-will-america-dodge-the-bullet/#1377e1e37947>



**Gail Tverberg** says:

May 29, 2020 at 12:46 pm

Push all yields to 0% or below?

**frankly step-by-step** says:

May 29, 2020 at 1:24 pm

Yes, that should be the way ahead.

I welcome that. It's the way out of capitalism. Out of the compulsion to grow. Out of the endless accumulation of wealth with few.

Why? More on that in a few days. This will be a slightly more complex post.

However, I believe that after the collapse, the negative interest must serve as the culprit.



**Matthew Krajcik** says:

May 29, 2020 at 2:13 pm

The need for yield is so old people can retire. In a world without yield, euthanasia might be the only solution.

**DJ** says:

May 29, 2020 at 2:16 pm

Why can't old people retire on the workers taxes?



**Matthew Krajcik** says:

May 29, 2020 at 3:23 pm

From a world with no surpluses, there cannot be much in the way of taxes. Most of the people here are expecting a much more massive collapse than I am. If it is 75%, think about having one quarter as much government as we have now, but also no private pensions, only government old age security that must come out of that 25%

pool.

**frankly step-by-step says:**

May 29, 2020 at 2:41 pm

Yes, let's take a look around Aristotle in antiquity.

“... interest loans and usury business are completely hated with the greatest right, because it draws the purchase directly from the money itself and not from what the money was invented for. After all, it was only to facilitate the exchange, but the interest increases it (the money) itself (the money) itself, hence the Greek name for ‘interest’ means ‘boy’, because the boy tends to be similar to its producers, and so it is Interest again money from the money. And after this, this kind of work is the most unnatural of all. “

**Norman Pagett says:**

May 29, 2020 at 4:36 pm

dyou mind?

My euthanasia plan is to be shot by a jealous husband on my 99th birthday

And her 25th

**frankly step-by-step says:**

May 29, 2020 at 11:28 pm

laugh

**Norman Pagett says:**

May 30, 2020 at 4:14 am

laugh not

a one time neighbour of mine WAS shot by a jealous husband

her own

She'd married an older man, who had a son her own age—I don't need to fill in the details

**frankly step-by-step says:**

May 30, 2020 at 7:53 am

to Norman Pagett

Perhaps such foolishness should be avoided at this age.

Difficult to predict how God would react if you knock on the door of heaven shortly thereafter.

The ten commandments still apply and one of them is: You shouldn't commit adultery.

**Norman Pagett** says:

May 30, 2020 at 8:18 am

oh I dunno

My gf always seems pleased when I haven't had a heart attack

unless she's faking it of course

**frankly step-by-step** says:

May 30, 2020 at 8:34 am

Yes, if so:

May the force be with you

**Norman Pagett** says:

May 30, 2020 at 10:57 am

weird

that's just what she keeps saying

**frankly step-by-step** says:

May 30, 2020 at 11:06 am

When we start to observe that certain types of events like to accumulate at certain times, we begin to understand the ancient Chinese, who had built all their medicine, philosophy, and even architecture and political science on a science of "coincidence". The old Chinese texts do not ask about cause and effect, but what is popular with what. The same idea can be found in astrology and in the oracle techniques of different cultures.

Carl Gustav Jung (Swiss psychiatrist and the founder of analytical psychology)

**Norman Pagett** says:

May 30, 2020 at 12:32 pm

and I'm supposed to be long winded?

**frankly step-by-step** says:

May 30, 2020 at 12:44 pm

If you want feedback, you have to live with the one you get.

As simple as that

**frankly step-by-step** says:

May 30, 2020 at 1:26 pm

And why should I deny myself the fun of flaunting my supposed education.

**Norman Pagett** says:

May 30, 2020 at 2:18 pm

flaunt away

the more brains the better



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**Gail Tverberg** says:

May 29, 2020 at 12:27 pm

Can reserve requirements become negative? This would seem to be the next step.

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**Harry McGibbs** says:

May 29, 2020 at 3:07 am

“Many economists believe that a recession is already underway. So do millions of Americans struggling with bills and job losses.

“While the ghosts of the 2008 financial crisis that sent inequality soaring to new heights in this country are still with us, it’s become abundantly clear that the economic disaster brought on by the Covid-19 pandemic has already left the initial shock of that crisis in the dust. While the world has certainly experienced its share of staggering jolts in the past, this cycle of events is likely to prove unparalleled.

“The swiftness with which the coronavirus has stolen lives and crippled the economy has been both devastating and unprecedented in living memory. Whatever happens from this moment on, a new and defining chapter in the history of the world is being written right now and we are that history.”

<https://www.commondreams.org/views/2020/05/28/here-comes-great-coronavirus-depression>

**Harry McGibbs** says:

May 29, 2020 at 3:08 am

“More than 40 million Americans have filed for unemployment over the last 10 weeks – a number of jobless the US has not seen since the Great Depression.

“The economic impacts of Covid-19 have been far and wide, hurting virtually every industry and leaving tens of millions of people without paychecks to pay the bills.”

<https://www.theguardian.com/business/2020/may/28/jobless-america-unemployment-coronavirus-in-figures>

**Harry McGibbs** says:

May 29, 2020 at 3:08 am

““Policy makers need to do more,” she said. “For example, a prolonged depression is virtually guaranteed without significant federal aid to state and local governments.

““We also must provide more funding to state unemployment insurance agencies to hire staff to speed up processing and to make improvements to websites and other administrative infrastructure.”

[https://www.marketwatch.com/story/a-prolonged-depression-is-virtually-guaranteed-without-significant-federal-aid-to-state-and-local-governments-2020-05-28?link=MW\\_latest\\_news](https://www.marketwatch.com/story/a-prolonged-depression-is-virtually-guaranteed-without-significant-federal-aid-to-state-and-local-governments-2020-05-28?link=MW_latest_news)

**Harry McGibbs** says:

May 29, 2020 at 3:09 am

“U.S. corporate profits fell 13.9% in the first quarter, the Commerce Department said Thursday. That is the largest decline since the fourth quarter of 2008 during the Great Recession. The decline is not annualized. Profits were \$1.84 trillion annualized in the first quarter, down from \$2.13 trillion in the last three months of 2019.”

<https://www.marketwatch.com/story/corporate-profits-drop-in-first-quarter-by-most-since-2008-great-recession-2020-05-28>

**Robert Firth** says:

May 30, 2020 at 3:22 am

Paragraph 1: more funding to state and local governments ...

Paragraph 2 ... to be spent hiring even more useless bureaucrats, time servers, and incompetent technicians.

Yes, that should work well.



**Gail Tverberg** says:

May 29, 2020 at 12:48 pm

“Reaction to the coronavirus” depression, really

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**Harry McGibbs** says:

May 29, 2020 at 3:13 am

“Health workers fear the pandemic’s economic shock will return Japan to 14 dark years from 1998 when more than 30,000 people took their lives annually.”

<https://uk.reuters.com/article/uk-health-coronavirus-japan-suicides/calm-before-the-storm-for-japan-suicides-as-coronavirus-ravages-economy-idUKKBN2350Co>

**Harry McGibbs** says:

May 29, 2020 at 3:14 am

“Japan’s factory output slid faster-than-expected and retail sales tumbled the most in more than two decades in April, as the coronavirus pandemic wrecked both foreign and domestic demand for the country’s autos and other manufactured goods.”

<https://in.reuters.com/article/us-japan-economy-output/japans-factory-retail-sectors-slump-as-pandemic-hits-auto-sector-idINKBN235003>

**Harry McGibbs** says:

May 29, 2020 at 9:10 am

“Japan’s April household spending likely tumbled at the fastest pace in decades, a Reuters poll showed on Friday, as the nation’s state of emergency to fight the spread of the coronavirus prompted people to stay

home and businesses to close.”

<https://uk.reuters.com/article/us-japan-economy-spending/japan-april-household-spending-seen-slumping-due-to-coronavirus-emergency-reuters-poll-idUKKBN2350LK>



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**Gail Tverberg** says:

May 29, 2020 at 12:50 pm

Japan’s economy was too weak before COVID-19 hit to withstand further contraction.

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**Harry McGibbs** says:

May 29, 2020 at 3:24 am

“Brazil is not just another emerging market economy; rather, it accounts for around half of South America’s overall output, and it currently ranks as the world’s eighth largest economy. It also is a highly indebted country with a government debt that now totals around \$2 trillion.

“With Brazilian debt being a major component of most emerging bond portfolios, a Brazilian economic crisis has the potential to roil world financial markets.”

<https://thehill.com/opinion/international/499817-brazils-dark-cloud-over-the-global-economy>

**Harry McGibbs** says:

May 29, 2020 at 3:37 am

“The examples of economic success in Latin America in recent years have suddenly been extinguished by the coronavirus, leaving the rest of the region without a beacon.

“Colombia, Peru and Chile, the locomotive trilogy that has most pushed the slight (very slight) growth of the block in the last five years in the face of Brazilian and Mexican sluggishness and the everlasting Argentine crisis, have been suddenly stopped by the advance of the coronavirus.”

<https://theunionjournal.com/the-virus-turns-off-the-three-economic-beacons-in-latin-america-economy/>



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**Gail Tverberg** says:

May 29, 2020 at 12:52 pm

There seem to be no growth countries in the world, any more.

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**Harry McGibbs** says:

May 29, 2020 at 3:27 am

“International tourism is set to fall by 70% this year, marking the sector’s biggest slump since records began in the 1950s, United Nations World Tourism Organization Secretary-General Zurab Pololikashvili told newspaper Handelsblatt.”

<https://uk.reuters.com/article/us-health-coronavirus-tourism/international-tourism-faces-biggest-slump-since-1950s-unwto-idUKKBN2341Mo>



**Harry McGibbs** says:

May 29, 2020 at 3:28 am

“LATAM Airlines and Avianca Holdings survived the Great Depression, but just a few weeks of quarantines forced both companies into bankruptcy, marking Latin America as the world’s top spot for airline financial ruin...

“Their bankruptcy filings this month are now set to have a ripple effect on United Airlines and Delta Air Lines, whose untimely bets on the future of Latin American air travel could cost them billions.”

<https://uk.reuters.com/article/us-health-coronavirus-latam-airlines-ana/latin-america-grabs-world-spotlight-for-airline-bankruptcies-idUKKBN2341NV>

**Harry McGibbs** says:

May 29, 2020 at 3:36 am

“Nearly 13,000 Boeing workers, mostly in the US, are set to lose their jobs in the coming weeks, as cuts at the American aerospace giant take effect.

“More layoffs are expected...”

<https://www.bbc.co.uk/news/business-52827377>

**Harry McGibbs** says:

May 29, 2020 at 3:37 am

“EasyJet will slash 30% of its staff as the company warns flight demand will not fully recover until 2023.

“The company, which has been hit hard by coronavirus, said it will launch an employee consultation process on proposals to reduce staff numbers.”

<https://www.standard.co.uk/business/easyjet-to-slash-staff-by-30-as-it-warns-business-wont-fully-recover-until-2023-a4452676.html>



**Gail Tverberg** says:

May 29, 2020 at 12:53 pm

Only 70%?

**DJ** says:

May 29, 2020 at 2:20 pm

Jan – mid march was 20% of the year 😊



**Gail Tverberg** says:

May 29, 2020 at 8:36 pm

Good point!

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**Harry McGibbs** says:

May 29, 2020 at 3:42 am

“From call centers to hotels to airlines, India’s key services industries have come to a standstill during the coronavirus outbreak, dragging the economy into possibly its worst recession on record.

“Businesses providing services of everything from technology to travel and trade were the first to be hit when the government took unprecedented steps to lock down the nation...”

<https://www.bloomberg.com/news/articles/2020-05-28/india-s-key-growth-engine-grinds-to-halt-in-sign-of-deep-slump>

**Harry McGibbs** says:

May 29, 2020 at 3:46 am

“The Financial Stability and Development Council (FSDC) chaired by Indian finance minister Nirmala Sitharaman on Thursday cautioned that the pandemic poses a serious threat to the stability of the global financial system as the ultimate impact of the crisis and the timing of recovery is uncertain at this point of time...”

“Covid-19 has thrown the global economy into its worst recession since the Great Depression in the 1930s, and India is no exception. Domestic economic growth is expected to contract for the first time in forty years in 2021.”

<https://www.livemint.com/politics/policy/virus-crisis-a-serious-threat-to-global-financial-system-11590693384959.html>

**Harry McGibbs** says:

May 29, 2020 at 3:47 am

“Sri Lanka is facing the worst financial crisis in the country’s history due to the economic curbs imposed after the coronavirus outbreak...”

““We are facing the worst foreign exchange crisis in history,” Bandula Gunawardena, who is the minister for Information and Communication and the government’s spokesperson, said.”

<https://www.outlookindia.com/newscroll/sri-lanka-facing-worst-financial-crisis-due-to-covid19-induced-economic-curbs-minister/1848945>



**Gail Tverberg** says:

May 29, 2020 at 12:55 pm

India was not doing well before all of this happened. For example, auto sales were falling.

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**Harry McGibbs** says:

May 29, 2020 at 3:58 am

“President Donald Trump said he would hold a news conference “on China” on Friday, but he offered no details as to what he would say.

“Even without any details, Trump’s announcement Thursday at the White House was enough to send markets tumbling.”

<https://www.cnbc.com/2020/05/28/trumps-china-press-conference-could-mark-end-of-cautious-approach-to-beijing.html>

**Harry McGibbs says:**

May 29, 2020 at 3:58 am

“The U.S. Special Representative for Iran on Wednesday reiterated that maximum economic pressure on Iran would prevent Tehran from acquiring nuclear weapons.

““Because of our pressure, Iranian leaders have come to a decision: either negotiate with us or manage the economic collapse,” Brian Hook, U.S. Special Representative for Iran, told reporters at a State Department special briefing.”

<https://en.radiofarda.com/a/brian-hook-to-iran-negotiate-or-manage-economic-collapse-/30639161.html>

**Harry McGibbs says:**

May 29, 2020 at 3:59 am

“The U.S. Justice Department accused North Korea’s state-owned bank of evading U.S. sanctions laws and charged 28 North Korean and five Chinese citizens in its largest crackdown on North Korea sanctions violations.”

<https://in.reuters.com/article/usa-northkorea-sanctions/u-s-indicts-north-koreans-accuses-state-owned-bank-of-evading-sanctions-idINKBN2350B6>

**Harry McGibbs says:**

May 29, 2020 at 7:06 am

“China will attack Taiwan if there is no other way of stopping it from becoming independent, one of the country’s most senior generals said on Friday, in a rhetorical escalation from China aimed at the democratic island Beijing claims as its own.”

<https://www.msn.com/en-gb/news/world/attack-on-taiwan-an-option-to-stop-independence-top-china-general-says/ar-BB14KSTZ?fbclid=IwARoogAoFS2OM3ATZakZpj3NKR0GlaIwNY7yy2ovlxBjSH5HP4wv3-bTxPhU>

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**Yoshua says:**

May 29, 2020 at 4:02 am

“These THUGS are dishonoring the memory of George Floyd, and I won’t let that happen. Just spoke to Governor Tim Walz and told him that the Military is with him all the way. Any difficulty and we will assume control but, when the looting starts, the shooting starts. Thank you!”

Trump

Twitter flagged this tweet for breaking their rules on glorifying violence.

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**Chrome Mags says:**

May 29, 2020 at 4:07 am

<https://www.jpost.com/health-science/could-coronavirus-re-infection-be-possible-within-six-months-629575>

‘COVID-19 immunity lasts only six months, reinfection possible – study’

“It was recently suggested that recovered individuals should receive a so-called ‘immunity passport,’ which would allow them to relax social distancing measures,” the authors explained. “However, as protective immunity may be lost by six months post infection, the prospect of reaching functional herd immunity by natural infection seems very unlikely.”

Did you read that last part? Herd immunity unlikely. Not too much of a surprise as this virus is from the same family of viruses as the common cold.

**Yoshua says:**

May 29, 2020 at 6:21 am

My immunity is non existent.

Well...I just have to experience the collapse with fever delirium.



**Gail Tverberg says:**

May 29, 2020 at 8:08 am

It sounds like this was a study of coronaviruses in general, since this one hasn't been around very long. This one, in theory, might be better. We don't know yet.

There was another study I saw that seemed to say that antibody levels sometimes didn't rise very rapidly to a protective level. The study seemed to indicate that it took until 40 days after the symptoms started to get the antibody level to a consistently high level. This would also tend to keep herd immunity down.



**Matthew Krajcik says:**

May 29, 2020 at 9:58 am

If you let the virus rip through, you can get to short term herd immunity, which is what seems to have happened in European states where the new cases have fallen precipitously. However, the virus is likely endemic now, we will probably have COVID season to go along with flu season every year.