

CORONAVIRUS HANDBOOK



HE SAID,
SHE SAID

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PUBLIC CONSULTATION DRAFT



Holds a Professional Doctorate from the University of Sydney

This educational book is not for sale. It aims to support scholars who conduct research that challenges *status quo* echo chambers such as MK Ultra mind control fake universities such as the one above. Royalty free use of images are claimed under fair illustration purposes in education.

You may download a free copy of this book at www.thefreeschool.education. This exposure draft aims to receive feedback as a basis to publish a revised, first edition. You may e-mail the author at jay@journalistethics.com

CDC Center for Disease Control and Prevention

WHO World Health Organization

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Opinions in this book are those of its author. This writer is beholden to no interests. None. This text may contain accidental errors. It does not contain disinformation. Enough COVID-19 scam disinfo exists.

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Background

This book is about the Coronavirus COVID-19 'event'. It is an inventory of dominant news themes. Researchers may draw on these topics to conduct free inquiries into COVID-19.

This text contains six major sections beyond its global perspective introduction. The next part critically examines COVID-19 healthcare coding and treatment practices.

The third segment outlines critical thinking research skills that may aid free-willed COVID-19 news reporters.

Part Four examines geo-political undercurrents for the six main players: China, Italy, Iran, Korea, the UK, and Spain.

The penultimate component explores the alleged epicenter of the economic and human impact of COVID-19: America.

This book's summary explores four popular theories about the core who, what, when, where, why, and how riddles that torment those who try to decrypt the COVID-19 scam.



In a world of fake agency statistics, viral fake news, and fake university research, this tailored text aids readers who seek to synthesize the truth about COVID-19.

The text in this image explains the concept of 'viruses' from a bio-medical .gov perspective.

Summary

medlineplus.gov/viralinfections.html

Viruses are very tiny germs. They are made of genetic material inside of a protein coating. Viruses cause familiar infectious diseases such as the [common cold](#), [flu](#) and [warts](#). They also cause severe illnesses such as [HIV/AIDS](#), [smallpox](#), and [Ebola](#).

Viruses are like hijackers. They invade living, normal cells and use those cells to multiply and produce other viruses like themselves. This can kill, damage, or change the cells and make you sick. Different viruses attack certain cells in your body such as your liver, respiratory system, or blood.

When you get a virus, you may not always get sick from it. Your immune system may be able to fight it off. For most viral infections, treatments can only help with symptoms while you wait for your immune system to fight off the virus. Antibiotics do not work for viral infections. There are antiviral medicines to treat some viral infections. [Vaccines](#) can help prevent you from getting many viral diseases.

COVID-19

! WHAT YOU NEED TO KNOW

- COVID-19 is the disease caused by the new coronavirus that emerged in China in December 2019.
- COVID-19 symptoms include cough, fever, shortness of breath, muscle aches, sore throat, unexplained loss of taste or smell, diarrhea and headache. COVID-19 can be severe, and some cases have caused death
- The new coronavirus can be spread from person to person. It is diagnosed with a laboratory test.
- There is no coronavirus vaccine yet. [Prevention](#) involves frequent hand-washing, coughing into the bend of your elbow, staying home when you are sick and wearing a cloth face covering if you can't practice social distancing.

hopkinsmedicine.org/health/conditions-and-diseases/coronavirus

Lauren M. Sauer, M.S.

Information shown on the left is according to John Hopkins University (JHU). JHU is a co-mastermind of the planned epidemic response, Event 201, that transpired in New York City on October 18, 2019 (JHU, 2019). A remarkable coincidence.

Coronavirus COVID-19 is human-made. The details about who, what, when, where, why, and how exist at the Pirbright Institute's archives. Certain staff at Pirbright know these answers.

Coronavirus

patents.justia.com/assignee/pirbright-institute

Patent number: 10130701

Abstract: The present invention provides a live, attenuated coronavirus comprising a variant replicase gene encoding polyproteins comprising a mutation in one or more of non-structural protein(s) (nsp)-10, nsp-14, nsp-15 or nsp-16. The coronavirus may be used as a vaccine for treating and/or preventing a disease, such as infectious bronchitis, in a subject.

Type: Grant

Filed: July 23, 2015

Date of Patent: November 20, 2018

Assignee: THE PIRBRIGHT INSTITUTE

Inventors: Erica Bickerton, Sarah Keep, Paul Britton

This patent description above suggests that some entity planned to create a commercial revenue-earning vaccine using the Coronavirus. This theory is widely reported by independent news.

2 Patent Submission Date

2006/11/16 pubchem.ncbi.nlm.nih.gov/patent/US2006257852#section=Patent-Submission-Date

The patent shown above is not recent. It was filed on November 16, 2016.

4 Patent Abstract

pubchem.ncbi.nlm.nih.gov/patent/US2006257852#section=Patent-Abstract

An outbreak of a virulent respiratory virus, now known as Severe Acute Respiratory Syndrome (SARS), was identified in Hong Kong, China and a growing number of countries around the world in 2003. The invention relates to nucleic acids and proteins from the SARS coronavirus. These nucleic acids and proteins can be used in the preparation and manufacture of vaccine formulations, diagnostic reagents, kits, etc. The invention also provides methods for treating SARS by administering small molecule antiviral compounds, as well as methods of identifying potent small molecules for the treatment of SARS.

A patent for the Pirbright Institute's Coronavirus was lodged with the European Patent Office in 2015. The first page extract of this application appears below.

(19)  (11)  **EP 3 172 319 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent: 20.11.2019 Bulletin 2019/47

(21) Application number: 15750093.5

(22) Date of filing: 23.07.2015

(51) Int Cl.: **C12N 7/00**
A61K 39/00

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The first 6 pages of this document shown above appears in Annex 2.

You may download this 47-pages patent for free at <https://data.epo.org/gpi/EP3172319B1> .

Mr. Britton – Project Lead Vaccines Researcher www.pirbright.ac.uk/users/prof-paul-britton

Ms. Bickerton – Animal Vaccines Researcher www.pirbright.ac.uk/users/dr-erica-bickerton



The World Health Organization has apparently explained the origin of the name COVID-19 which it awarded to this newly recognized strain of the Coronavirus family. When I say newly recognized, I mean insofar as this virus became a phenomenon that has supposedly infected millions of people globally. This website captures this explanation.

Naming the coronavirus disease (COVID-19) and the virus that causes it

[who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)

Official names have been announced for the virus responsible for COVID-19 (previously known as “2019 novel coronavirus”) and the disease it causes. The official names are:

Disease

coronavirus disease
(COVID-19)

Virus

severe acute respiratory syndrome coronavirus 2
(SARS-CoV-2)

CO = Corona. VI = Virus. D=Disease. 19=2019 outbreak. COVID-19 is a member of the Severe Acute Respiratory Syndrome family (SARS). A global SARS pandemic outbreak of a different strand mainstreamed during 2003. Less than 10,000 people died from the 2003 SARS outbreak.

[www.ncbi.nlm.nih.gov › pmc › articles › PMC3329048](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3329048/) ▼

SARS, the First Pandemic of the 21st Century - NCBI

by JW LeDuc - 2004 - Cited by 8 - Related articles

The 2003 **outbreak** of severe acute respiratory syndrome (**SARS**) shocked the world as it spread swiftly from continent to continent, resulting in >8,000 infections, ...

Data below shows the highest COVID-19 casualty rates by country, as reported by the World Health Organization as at 22 April 2020. I list the top 5 casualties only.

[who.int/docs/default-source/coronaviruse/situation-reports/20200422-sitrep-93-covid-19.pdf?sfvrsn=35cf80d7_4](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200422-sitrep-93-covid-19.pdf?sfvrsn=35cf80d7_4)

Reporting Country/ Territory/Area [†]	Total confirmed † cases	Total confirmed new cases	Total deaths	Total new deaths	Transmission classification [§]	Days since last reported case
United States of America	776907	25634	37602	1718	Community transmission	0
Spain	204178	3968	21282	430	Pending	0
Italy	183957	2729	24648	534	Community transmission	0
Germany	145694	2237	4879	281	Community transmission	0
The United Kingdom	129048	4301	17337	828	Pending	0

A common theme among independent COVID-19 news reporters is a claim that the number of viral infections among the populace is far lower than other health crises that cause higher deaths *per capita* in 2020 and prior years. The season flu is cited as the classic example.

www.health.harvard.edu › diseases-and-conditions › co... ▼

COVID-19 basics - Harvard Health

Updated: April 17, 2020

5 days ago - As we continually learn more about **coronavirus** and **COVID-19**, it can help ... themselves and to **reduce** the chances of spreading the **infection** to others. ... So far, **influenza** has caused far more total deaths this **flu season**, both ...

As at 22 April 2020, the WHO reports that total COVID-19 infections in India are 19,984. This accounts for *circa* 0.001% of India's population of *circa* 1.5 billion. The overt and covert message promoted in discourses that cite such low percentages in India and other countries is that COVID-19 does not deserve its exaggerated/fake pandemic status.

[who.int/docs/default-source/coronaviruse/situation-reports/20200422-sitrep-93-covid-19.pdf?sfvrsn=35cf80d7_4](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200422-sitrep-93-covid-19.pdf?sfvrsn=35cf80d7_4)

India	19984	1383	640	50	Clusters of cases	0
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Mainstream corporate media have been propagating epidemic and pandemic panics on a regular basis during the new millennium. In all cases, the worst-case scenarios predicted by these news outlets never reached a tenth of the total casualties or fatalities forecast. Examples include:

- West Nile, 2003 (Virus, Epidemic – North America)
- Sudden Acute Respiratory Syndrome (SARS), 2003 (Virus, Pandemic)
- Bird Flu H5N1, 2005 (Influenza, Pandemic)
- Swine Flu H1N1, 2009 (Influenza, Pandemic)
- Ebola, 2014 (Virus, Epidemic - Africa)
- Zika, 2016 (Virus, Pandemic)

This discrepancy below between actual final outcomes and corporate fake news hysteria is a representative illustration. “One third” of the global populace was then *circa* 2.5 billion people.

Swine flu could affect third of world's population, says study Tue 12 May 2009

theguardian.com/world/2009/may/12/swine-flu-report-pandemic-predicted

Researchers say swine flu will spread around world within nine months, as UK confirms three more cases

The swine flu virus will infect a third of the world's population if it continues to spread at its current rate, scientists warned today, as three more cases were confirmed in the UK.

The 2009 “Swine flu” A(H1N1) pandemic started in Mexico where it caused severe illness in previously healthy adults and spread rapidly to over 214 countries and overseas territories or communities. Between 105 000 and 395 000 people are thought to have died. Even so, the world was relatively lucky: it turned out to be milder than some seasonal epidemics, which can kill twice that number.

who.int/influenza/spotlight

Less than 0.1% of the global populace have been infected by Swine Flu since 2009.

This article succinctly captures the sentiment that it is exceptionally difficult to interpret medical data to calculate the mortality rates and non-mortality rates of COVID-19 infections.

To summarize, we have (a) people who get COVID-19 and have reported; (b) people who get the SARS-CoV-2 virus and have reported, and who may not necessarily develop COVID-19 (although they are counted as if they have done so); (c) people who report because they fear they have the virus, but who test negative (so we assume they have not had the virus); (d) people who have the virus but do not report (meaning we can only estimate how many such people there are); and (e) people who have other conditions that could be mistaken for the virus and who do not report (meaning that counting them would skew our already uncertain estimate of virus cases that have gone unreported). nationalreview.com/2020/03/coronavirus-fatality-rate-computing-difficult/#slide-1

A dominant theme among those who question official COVID-19 narratives, is the observation that total deaths in sovereign nations and globe rates remain unchanged during 2020. This includes figures recorded during the March 1st to Mid-late April period, which appear to record the highest number of infections and deaths, prior to the so-called 'bending of the curve', *i.e.*, a

The lesser Limbaugh, Mark Levin, was one of the theory's earliest adopters. "I cannot find anywhere the definition of what it means to die from this virus," the BlazeTV and Fox News host said on March 30, suggesting that "heart failure, heart disease, a heart attack" may account for an "inflated" number of reported COVID-19 fatalities. "I will say something I do know," he added during the Blaze segment, "when these television stations and networks put on their screen the number of confirmed cases of the viruses and next to it the number of deaths, it is extraordinarily misleading." vanityfair.com/news/2020/04/fox-news-hosts-coronavirus-de

gradual decline in peak infections and deaths. Such *anecdotal* comments are immensely

popular on independent news channels that self-publish on sites like Twitter and YouTube. This thematic repetition of itself is somewhat noteworthy. However, hard data is rarely cited. This discussion aligns with the popular claim that COVID-19 statistics capture other chronic diseases.

World

This text complements this author's open-access (free) Deep State book series published since 2018. I propose two core arguments in this *corpus* of work. First, the powers that exert master covert control over this planet act at multiple levels above pitiful puppet parliaments. The House of Windsor Crime Family, for example, don't lower themselves to the chore of directly managing the skill congressman who they bribe and blackmail. They deploy handlers such as VAJA.

Second, the nature and degree of high-stakes local, regional, and global geo-political events are rarely what they seem. Fake news such as such CNN, BBC, Russia Times, and China's propaganda news monopoly are stage-managed by domestic so-called 'intelligence' agencies such as the MI6.

This author reasserts his claim that the most critical-stakes geo-political events can only be understood through a so-called 'Drain the Global Swamp' lens. The apex criminal power structures that manage this world have lost massive power since after January 20, 2017. In the Western realm, the major two competing powerbrokers belong to what this author cheekily terms infamous 'Reptilian Order' RO Club. The House of Windsor Royal Crime Family deploys its Committee 300 stooges, such as the Rockefeller Crime Family and their fake pharma genocide agenda. The Venetian Black Sun Nobility is based in Rome. The Rothschild Crime Family manage its imploding global SWIFT financial payments system. Beijing is supposedly the leader of the Eastern bloc. It is the arch business partner of the RO crime cartel. It is possible that Beijing is a puppet front of the RO crime cartel. Defenders of America's Constitution are their arch enemy. Constitutional supporters reject globalism and support America's freedom and sovereignty.

COVID-19 Geopolitical Context

GLOBAL WORLD ORDER IN FLUX: MAY 2020

Drain the global swamp coalition



**Martial Law President Donald Trump
Joint Commander-in-Chief USAF**

The Pentagon Shadow Government
General Mark Milley *et al.*

Patriots: American Constitution Defenders
2nd Amendment supporters; MAGA *et al.*



Petrodollar global system may be about to collapse.

BRICS trade war vs. USA



China (Intense)



Russia (Intense)

**One World Government Deep State Crime Cartel
European Black Sun Venetian Nobility**



1. The Vatican Executive, Jesuits *et al.*



2. Supranational state agencies:
Rogue Mossad, Bank for International Settlements,
Fake Jews Khazarian satanic Zionists (Rothchilds *et al.*)



3. Saxe-Coburg & Gotha inbred pedophilia Monarchy



Australia: Fake Steele dossier



Canada: Trudeau-Castro Communist Dynasty



House of Bussche crime family (Rogue CIA)
Rockefeller University genocidal fake pharma
Disney, Fox, CNN, Silicon Valley *et al.*



3. European Union - Führer Angela Merkel



French Monacan bankers: Grimaldi, Macron *et al.*



Fourth Reich Nazi Faction: Maxima *et al.*
Spanish, Belgian, Luxembourgian Royals *et al.*



NGOs: Money laundering, adrenochrome, child sex slaves.

1, 2 & 3 denotes rank; Direct descendants of Cain rank highest.

For those who don't think that a Deep State exists, please watch this televised press conference spearheaded by President Donald Trump on March 21, 2020.



USA: Chief US immunologist Fauci facepalms when Trump talks of "deep state"

Ruptly • 513K views • 3 weeks ago

Subscribe to our channel! rupt.ly/subscribe Dr. Anthony Fauci, Director and Infections Diseases, was ... of National Institute of Allergy

Verbatim transcript extract – President Trump to the Press:

*One thing, Secretary of State [Mike] Pompeo is extremely busy, so if you have any questions for him right now, could you do that? You know what I'd like you to do? I'd like him to go back to the State Department, or as they call it, the **Deep State** [emphasis added], if you don't mind.*

Celebrity fake news anchor Chris Cuomo and his wife were diagnosed with Coronavirus in early March 2020. Shortly after, Chris publicly demeaned his CNN role as personally unfulfilling.

www.washingtontimes.com › news › 2020 › apr › chris... ▼

Chris Cuomo rethinks CNN gig after coronavirus diagnosis ..

CNN's Chris Cuomo trashed his job Monday, saying he doesn't think it's worth his time
Victor Morton - The Washington Times - **Monday, April 13, 2020.**

Do you believe in the concept known as the 'Deep State'?

Is the Deep State global fake news mafia cartel being dismantled publicly, in real-time?

Information

Most embedded images and quotations in this book are sample evidence that are extracted out of a broader context. This writer aims to illustrate extracts that are representative of the broader body of evidence that he discusses. To annex every source would splurge this book into thousands of pages. I encourage readers to inspect a decent sized sample or all sources mentioned to freely draw their own conclusions about the fairness and accuracy of data citations.

Pandemic simulation exercise spotlights massive preparedness gap

hub.jhu.edu/2019/11/06/event-201-health-security/

Event 201, hosted by the Johns Hopkins Center for Health Security, envisions a fast-spreading coronavirus with a devastating impact

Katie Pearce / © Nov 6, 2019

Back in 2001, it was a smallpox outbreak, set off by terrorists in U.S. shopping malls. This fall, it was a SARS-like virus, germinating quietly among pig farms

Virtual reality is a fake world – by definition. This includes all forms of televised images and sounds spewed out from digital fantasy media such as movies, television and the internet.

Where can one turn to obtain the truth in a world of fake news, fake elite university research and fake government statistics? The answer may ‘lie’ (an interesting word) before our eyes. Lincoln Hospital and Brooklyn Hospital are not overflowing with patient queues. Quite the opposite. US Naval Ship ‘Comfort’, a floating hospital is docked at Pier 90 on the brim of Hell’s Kitchen. This prime part of New York City bears a spirited cooking type name.

This book invites fair, intelligent readers like you to critically question the authenticity of information about the Coronavirus Pandemic provided by the usual suspects: governments, limelight cash-cow fake universities and mainstream corporate media like Fox who control dominant narratives.

Do you automatically believe information published by medical research powerhouse Johns Hopkins University? Please freely reflect. Johns Hopkins was a lead player in Event 201. 201 was a planned pandemic (‘plannedemic’) media response event held in New York City on 18 October, 2019.

JHU refers to practicing its last major crisis in 2001. A year that changed the

world. Is this the coded meaning of Event 201? Or is it about UN Agenda 21? JHU, please explain.

A dominant theme in this book is the critical problem of misinformation (honest errors) and disinformation. Disinformation involves nefarious parties deliberately disseminating fake data.

This illustration below shows how it is difficult for laypersons without advanced medical training

U.S. Surgeon General
 @Surgeon_General

Seriously people- STOP BUYING MASKS!
twitter.com/Surgeon_General/status/1233725785283932160
They are NOT effective in preventing general public from catching #Coronavirus, but if healthcare providers can't get them to care for sick patients, it puts them and our communities at risk!
bit.ly/37Ay6Cm
7:08 AM · Feb 29, 2020 · Twitter for iPhone

to know
who/what to
believe. The U.S.
Surgeon
General publicly
advised that
medical masks
do not prevent

the community from contracting Coronavirus COVID-19. His office is a serious medical authority.

On 15 April 2020, New York's Governor issued an Executive Order that advised that all residents in New York State must wear a mask or face covering in public. Social distancing is mandatory.



Health

The Western health 'care' industry possibly murders more people over the long term than it rescues. Let's point the finger to the top and not scapegoat frontline medics who bravely do their best in a rigged system. Rockefeller University is a dubious 'Medical University'. You cannot earn a MD to qualify as a physician at Rockefeller. You cannot earn any healthcare registration at this shady institute that forever invents and promotes massively expensive drugs and vaccines.

Are Gates and Rockefeller using their influence to set agenda in poor states?

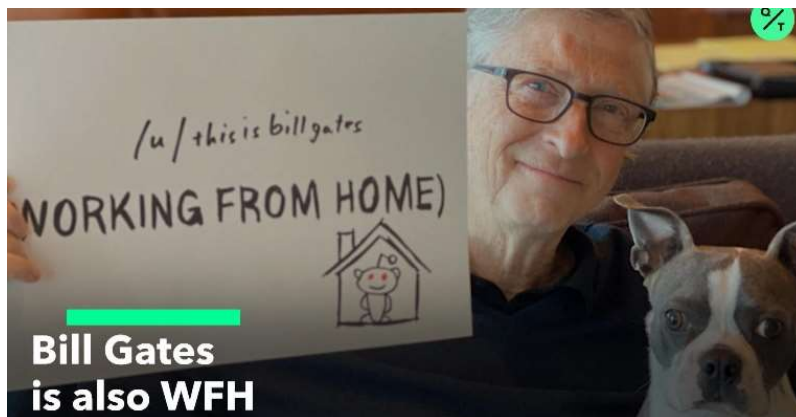
Study identifies Bill and Melinda Gates and Rockefeller foundations among rich donors that are close to government and may be skewing priorities

[theguardian.com/global-development/2016/jan/15/bill-gates-](https://theguardian.com/global-development/2016/jan/15/bill-gates-rockefeller-influence-agenda-poor-nations-big-pharma-gm-hunger)

[rockefeller-influence-agenda-poor-nations-big-pharma-gm-hunger](#)



This modest book explores ways in which fake news such as Bloomberg (2020)(below) may use codes to covertly communicate global messages. 'Self-isolation' may be code for house arrest.



Readers may access this web page to ascertain details about the COVID-19 testing procedure in America, as published by this Center for Disease Control and Prevention website.

COVID-19 Testing at Laboratories: Questions and Answers

cdc.gov/coronavirus/2019-ncov/lab/testing-laboratories.html

Updated March 10, 2020

Where do public laboratories get access to testing kits to detect the virus that causes Coronavirus Disease 2019 (COVID-19)?

What is the CDC's International Reagent Resource (IRR)?

What reagents do public health laboratories need to perform testing to detect the virus that causes Coronavirus Disease (COVID-19)?

How do clinicians get access to COVID-19 testing?


Where can additional information about laboratory testing guidance from CDC be found?

Where do clinical and commercial laboratories get access to testing supplies to detect the virus that causes Coronavirus Disease (COVID-19)?

Where do test developers get the genomic RNA needed to validate test performance for FDA?

What is the NIH's BEI Resources Repository?

[What is the CDC's International Reagent Resource \(IRR\)?](#)

The International Reagent Resource (IRR) was established by the Centers for Disease Control and Prevention (CDC) to provide registered users with reagents, tools and information for studying and detection of Influenza and other pathogens, including the SARS-CoV-2 virus that causes Coronavirus Disease 2019 (COVID-19). The IRR acquires, authenticates, and produces reagents that scientists need to carry out basic research and develop improved diagnostic tests, vaccines, and detection methods. By centralizing these functions within the IRR, access to and use of these materials in the scientific and public health community is monitored and quality control of the reagents is assured. The [International Reagent Resource](#)  is managed under a CDC contract by American Type Culture Collection (ATCC).

A common theme in sources that question COVID-19 data are the claim that COVID-19 medical tests are too broad as they mostly capture false positives. Tests merely indicate that the person may be COVID-19 positive. A further test is required to ascertain absolute confirmation. Please consider this analogy. Jane Doe is Blood Type A. John Doe, her husband, is also Blood Type A. Jane Doe gives birth to a baby 'Nelle' who is Blood Type A. The blood test of baby Nelle merely proves that John Doe is possibly the father. The only way to confirm with 99.999% accuracy that John Doe is Nelle's father is via a DNA test. Any fertile male who is Blood Type A and was living 9 months before Nelle's birth could be her biological father. Frozen sperm may be the source.

The same analogy applies for what are possibly unsubstantiated criticisms of the COVID-19 tests. Critics claim that COVID-19 Exosome tests should be followed up using a more rigorous set of laboratory cross-tests to confirm that this person is definitely COVID-19 positive. The Image below parrots this criticism. It can only be confirmed by suitably qualified biomedical scientists.

www.youtube.com › watch ▾ youtube.com/watch?v=I7pjYi2Wzal

SA should brace itself for a new normal: Prof. Karim SABC Digital News
855K subscribers

6 hours ago - The **Corona Virus** looks much the same as the "Exonomes" released by the cells. This is the reason that most **tests** show a **false positive**. ... The rates of all other deaths are going down bc **covid 19** fake deaths are going up ... people will **test** Positive because of the RNA found in the **Exosomes** our **testing** is ...

A false negative is the reverse. Articles that claim false negatives are common may be disinformation that aims to imagine COVID-19 infections as higher than reported. Please read widely and draw your own free-willed conclusions or some other outcome, such as inconclusive.

Hundreds of licensed, practicing Medical Officers have publicly rejected COVID-19 narratives propagated by corrupt Public Health agencies such as the World Health Organization. Dr. Rashid A. Buttar, an American Emergency Medicine Physician, is an example of a medical professional who explicitly rejects dominant media narratives. He cites Virology principles taught at Western medical schools and public health procedures. For example, he says that 'PCR Testing' is not suitable to test COVID-19. In his words, this test has a high risk of recording mostly false positives.

“There’s no virus, bacteria that leaps 13 feet” – Dr. Rashid A. Buttar (2020, 37:10).

blogs.scientificamerican.com/observations/why-social-med By Reuben Strayer on April 3, 2020

Nobody knows what to make of this, and this observation is so new that we don't yet know how patients who are "happily desaturated" will fare. But it is very disorienting, because we rely heavily on oxygen saturation to determine how sick our patients are. Some have speculated that the virus causes a change in the molecule that carries oxygen (a hemoglobinopathy) that could confound pulse oximetry. Others suggest that COVID-19 mimics physiology seen at high altitudes, or pulmonary decompression sickness, when a diver ascends to the surface too rapidly.

New York Emergency Physician Dr Reuben Strayer states that COVID-19 patients in New York City present symptoms

that are a closest match to Altitude Sickness. Extreme respiration difficulty is the dominant complaint. He repeatedly states that COVID-19 symptoms are “unprecedented”. The prominence of this respiratory symptom is not consistent with viral infections based on historical data.

State Senator, Dr (Physician) Scott Jensen may be the star witness smoking gun in the movement that rejects COVID-19 narratives propagated by endemically corrupt agencies such as the CDC, World Health Organization and virtually all governments. Dr Jensen claims that America's Medicare system financially incentivizes the classification of patients as COVID-19 positive.

"I would remind him that anytime health care intersects with dollars it gets awkward," Jensen said. [foxnews.com/media/physician-blasts-cdc-coronavirus-death-count-guidelines](https://www.foxnews.com/media/physician-blasts-cdc-coronavirus-death-count-guidelines)

"Right now Medicare has determined that if you have a COVID-19 admission to the hospital you'll get paid \$13,000. If that COVID-19 patient goes on a ventilator, you get \$39,000; three times as much. Nobody can tell me, after 35 years in the world of medicine, that sometimes those kinds of things [have] impact on what we do.

"Some physicians really have a bent towards public health and they will put down influenza or whatever because that's their preference," Jensen added. "I try to stay very specific, very precise. If I know I've got pneumonia, that's what's going on the death certificate. I'm not going to add stuff just because it's convenient."

Insider whistleblower testimony that claims medical officers are over coding the number of COVID-19 patients are rampant. This observation relates to America and beyond. For example, a popular theme, among a list of others, is the claim that doctors are automatically coding all patients as COVID-19 if the patient's symptoms are not obvious, such as two broken legs. This directive is imposed at a high level, such as the National Health Ministry.

[vanityfair.com/news/2020/04/fox-news-hosts-coronavirus-death-toll-inflated](https://www.vanityfair.com/news/2020/04/fox-news-hosts-coronavirus-death-toll-inflated)

Earlier in the Carlson segment, Hume warned that "lots of people are asymptomatic who may have other terrible diseases. And if everybody is being automatically classified...as a COVID-19 death, we're going to get a very large number of deaths that way, and we're probably not going to have an accurate count."

Ideally, people would have been tested before they died or after. But restrictions on tests and other considerations are preventing that in some cases.

Now, if someone died from pneumonia, respiratory distress or chronic obstructive pulmonary disease, and had exhibited coronavirus symptoms, their certificate will list COVID-19 as a presumed contributing factor, what's known as comorbidity.

Minnesota follows the lead of that federal agency and advised the state's medical community of the change in practice on Friday.

While some people and public health experts say it will provide a fuller picture of how lethal the disease is, others call it irresponsible and contend it will artificially inflate numbers.

The controversial issue of co-morbidity among those diagnosed with a COVID-19 death is a dominant theme among those who rationally discuss this crisis outside of the mainstream fake news media. Discussions around co-morbidity center

around chronic diseases that lead to death. Examples include Diabetes Melitus and Cardiovascular Heart Disease. Commentators take this analysis to a deeper level. They link these co-morbidities to the advanced age of most COVID-19 deaths at the local and global levels.

There is mass evidence that COVID-19 overwhelmingly kills the elderly. As of April 13, 2020, the youngest person to die from COVID-19 in Australia was aged 55 – among 17 deaths. The average age of these 17 fatalities was *circa* 77 years old.

Sumith Pramachandra is the youngest person to die from **Covid-19 related illness in Australia.** theguardian.com/australia-news/2020/apr/13/australia-coronavirus-victims-de

This British news article plays with words. It refers to quote “die from Covid-19 related illnesses”. It is not conclusive that COVID-19 was the sole or prime cause of death. This word weasel media phenomenon has been witnessed in several countries outside of Australia and the UK.

There are thousands of accounts in mainstream news media, alternative news and private testimonies that claim COVID-19 disproportionately affects demographics beyond advanced age. These reports are sketchy and inconsistent. They change over time and between nations and regions. This page merely makes references to this phenomenon to guide those who aim to freely research these stories. Images below are illustrations of dominant themes: gender and race.

www.washingtonpost.com › [health](#) › 2020/04/04 › coron...

across the United States, the coronavirus is killing more men ...

Apr 4, 2020 - U.S. state data are starting to show a picture that matches one of the **most** mysterious global trends. **Men** are dying more than women.

www.washingtonpost.com › [nation](#) › 2020/04/07 › coron...

The coronavirus is infecting and killing black Americans at an

Apr 7, 2020 - The emerging stark **racial** disparity led the surgeon general Tuesday to acknowledge in personal terms the increased risk for African Americans ...

Trends about gender may be explained by male reluctance to seek medical help. Racial disparities may have socio-economic foundations, such as the lack of affordable health insurance plans in America. These are merely speculation based on generic sociological principles. Please do not take them as fact. Some patterns are intersections, such as higher death rates in older men.

www.statnews.com › 2020/03/30 › what-explains-coro... ▼

What explains Covid-19's lethality for the elderly? - STAT

Mar 30, 2020 - **Covid-19** kills an estimated 13.4% of patients 80 and **older**, compared to ... elevated **risk** of serious illness and death from the new **coronavirus**: **Covid-19** kills ... sex-based differences in the **Covid-19** epidemic, with **elderly men** ...



Donald J. Trump
@realDonaldTrump

10:13 AM · Mar 21, 2020 · Twitter for iPhone

HYDROXYCHLOROQUINE & AZITHROMYCIN, taken together, have a real chance to be one of the biggest game changers in the history of medicine. The FDA has moved mountains - Thank You! Hopefully they will BOTH (H works better with A, International Journal of Antimicrobial Agents).....

The suitability of the drug Hydroxychloroquine to treat and cure COVID-19 patients is a top five theme in public discourses. President

Donald Trump has repeatedly stated that he is convinced that biomedical data proves that Hydroxychloroquine is among the cheapest, safest and most effective COVID-19 treatments. Hydroxychloroquine is an old drug. It was invented during the Second World War. Apparently,

cdc.gov/malaria/resources/pdf/fsp/drugs/hydroxychloroquine.pdf

You may access this 2 pages document in Annex 3.

What is hydroxychloroquine?

Hydroxychloroquine (also known as hydroxychloroquine sulfate) is an arthritis medicine that also can be used to prevent malaria. It is available in the United States by prescription only.

Supporters of Hydroxychloroquine to treat COVID-19 focus on cost and benefits. One pill costs

approximately 50 cents to develop. Vaccines typically costs more than USD\$200 per dosage. An ever-growing number of independent researchers question dubious universal vaccination agendas. They claim that vaccines contain toxic metals such as mercury and human-tracking nanochips. Governments are charged billions of dollars annually for vaccines that may be designed to reduce life expectancy. Such debates fall under the 'Criminal Big Pharma' umbrella.

texasmonthly.com/news/texas-anti-vaxxers-fear-mandatory-coronavirus-vaccines/

The anti-vaccine community, at large, believes that vaccines are a tool of government control that make big pharmaceutical companies rich and have side effects that can cause lasting damage. Sarah, a Benbrook mom who asked that her

Organizations

The World Health Organization may bear the most respectable proper noun in human history.

Global. Life-saving. Methodical. Is the truth found by inverting the WHO's name 180 degrees?

Those who follow world news closely know that the WHO does not automatically command respect among all political leaders and objectively informed commentators. To be fair, it is true that virtually all celebrity individuals and entities publicly attract glowing praise and scorn. These images aim to offer a preliminary avenue of inquiry for those who are new to this topic.

www.foxnews.com › [media](#) › [sen-tom-cotton-world-health-organization...](#)

Tom Cotton says WHO leader has 'reputation for corruption ...

1 day ago - The **World Health Organization** (WHO) is "in the pocket of China" and their relations must be investigated, Arkansas Republican Sen.

www.washingtonexaminer.com › [opinion](#) › [op-eds](#) › [world-health-or...](#) ▼

World Health Organization protects China instead of ...

Mar 11, 2020 - The **World Health Organization** is "getting tough" on the rapidly ... than a **corrupt** cabal of bureaucrats fiddling while the world burns (or coughs).



In this author's opinion, relatively few people – perhaps less than 1,000, truly comprehend the activities and standing of the WHO. These may include those who

have served this agency for a decade or longer, in multiple posts in several locations worldwide.

Obscurity

This section extends on prior discussions by exploring a body of evidence from a range of perspectives. The handful of illustrations in this section are merely evidence that may guide readers to question the accuracy of images, words and written statements that exist in the public domain and other sources about COVID-19. These tools may support your free-willed research into this virus. Analysis in this section translates to virtually all scholarly disciplines and public discussions. Information that you analyze in public spaces may be subjected to one more major compromises. The four major flaws in this list are: bias, errors, falsities and misleadingness.

I encourage readers to take a moment to reflect on the core assumption that underlies this book – that virtually all governments, elite universities and the WHO are corrupt entities at the Executive Governance level. Perhaps you harbor exceptions to this rule. For example, the Government of Bhutan may be an exception to this rule in someone’s free-willed beautiful mind.



Located across the road from the UN in Manhattan, the Bhutan Mission at Zip Code 10017 is home to the most exclusive embassy location in America and possibly the world. There is probably a story here for curious minds to discover. East greets West?

www.cnbc.com › 2016/09/22 › facebook-overestimated-key-video-ad... ▼

Facebook overestimated key video advertising metric: WSJ

Sep 22, 2016 - Facebook **hugely** overestimated the average viewing time for video ads on the social media site for two years, the Wall Street Journal reported.

Adjectives such as ‘hugely’ and ‘popular’ are subjective. Meaning may vary among individuals.

What are the statistics cited by CNBC in the body of this article?

Does CNBC’s secondary source court data citation align with the original judicial records?

Critical-thinking – Questioning data sources

Data principle	Explanation and theoretical illustration example
1. Bias	<p>Sources that are influenced or potentially influenced by a conflict-of-interest should be ignored or analyzed with extreme caution.</p> <p>Example: A cartel of Rockefeller University bio-scientists claim that a vaccine labelled Anti-COVID 19.33 will cure Coronavirus COVID-19.</p> <p>This scientific panel does not disclose that their research was funded by Microsoft. Bill Gates has guaranteed Rockefeller University \$800 million in donations by 2025 if more than five billion units of this vaccine are purchased by governments. This undisclosed statement is classifiable as a strong potential financial conflict-of-interest.</p>
2. Errors (accidental)	<p>Data sources that are influenced by factual errors in content and/or methodology should be ignored or analyzed with extreme caution.</p> <p>Example: A BBC World News reporter states that Coronavirus COVID-19 is a lethal strand of influenza. This is factually incorrect. COVID-19 is a virus. It does not belong to members of the influenza ‘family’ such as Swine Flu and Bird Flu.</p>
3. Falsities (deliberate)	<p>Data sources that supply content that is deliberately fake should be ignored in most cases or analyzed with extreme caution.</p> <p>Example: A Chinese Government official, posing as a Swiss based university bioscience researcher, falsely claims that she has proof that COVID-19 patient ground zero originated in Washington DC.</p>
4. Misleading	<p>Data sources that are influenced by misleading content should be ignored or analyzed with extreme caution.</p> <p>Example: CNN reports that Coronavirus COVID-19 poses a massive lethal threat to Italians because 90% of infected persons in Italy died within 48 hours. CNN does not report that 95% all infected people in Italy were aged over 75 years, were living in nursing homes, and had multiple pre-existing health problems such as advanced dementia.</p>

I refer to the unedited extract shown below. Media Matters is not owned by Fox News.

Fox News contributor: I'm seeing videos on Twitter of empty hospital parking lots

WRITTEN BY MEDIA MATTERS STAFF

PUBLISHED 03/30/20 9:20 AM EDT

Fox News panel questions how many deaths are really being caused by COVID-19 and whether hospitals are really full

mediamatters.org

/coronavirus-covid-19/fox-news-contributor-i-am-seeing-videos-twitter-empty-hospital-parking-lots



Can you find this interview on a direct Fox source such as a www.foxnews.com website?

Are Twitter, Facebook, and YouTube videos part of the so-called virtual reality world?

What is meant by the adjective-noun Computer Generated Imagery?

On March 25, 2020 fake news fibster CBS used footage of an Italian hospital to show supposed hospital activity in New York City. CBS was caught red-handed by savvy viewers. These observers noticed that CBS used the same footage on March 22, 2020 to report hospital activity in Italy.

[washingtonexaminer.com/news/cbs-news-blames-editing-mistake-after-footage-from-italian-hospital-appears-in-report-on-new-york-coronavirus-crisis](https://www.washingtonexaminer.com/news/cbs-news-blames-editing-mistake-after-footage-from-italian-hospital-appears-in-report-on-new-york-coronavirus-crisis)

Inquisitive social media users noticed that *CBS This Morning* aired footage on Wednesday during a report on Democratic New York Gov. Andrew Cuomo's response to the coronavirus pandemic that looked to be the same as footage from a recent Sky News report about a hospital in Bergamo, Italy.

"It was an editing mistake," a CBS spokesperson told the *Washington Examiner* when asked about the footage. "We took immediate steps to remove it from all platforms and shows."

The footage of the Italy-based hospital was presented as imagery from a hospital in New York, but the same clip was seen during a *Sky News* segment on Italian hospitals and the COVID-19 virus on March 22.



As reported by the *Washington Examiner*, CBS attributed this act to an “editing mistake”.

Do you think that social media activity is causing mainstream news outlets to be more accountable than they were prior to *circa* 2001?

What is meant by the adjective ‘leading question’?

ourworldindata.org/coronavirus

COVID-19

The number of confirmed cases or deaths reported by any institution – including the WHO, the ECDC, Johns Hopkins and others – on a given day does not represent the actual number of new cases or deaths on that date. This is because of the long reporting chain that exists between a

narratives
are tightly
controlled.

It is generally accepted that the World Health Organization is a leading authority for total casualties including survivors and fatalities. This site managed by Oxford University cites three authorities: WHO, Johns Hopkins University and the European Center for Disease Control (ECDC).

In March 2020, the Trump Administration announced that America's 'Center for Disease Control and Prevention' (CDC) was the nominated agency for reporting America's total COVID-19 infections. America's Vice President Mike Pence was nominated official White House spokesman.

[www.whitehouse.gov › briefings-statements › remarks-president-trum...](https://www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-and-cdc-2020-03-11/) ▼

Remarks by President Trump, Vice President Pence, and ...

Feb 27, 2020 - **And** I'm going to ask **Mike Pence** to say a few words. ... a public health emergency, **and** establishing the **White House** Corona[virus] Task Force are all ... Americans can find useful information at **CDC.gov/COVID19**. ... day denying **that** they are going to **appoint a** czar to run point on the **coronavirus** response.

In the Federal American context, any Federal public official who purposefully contradicts information about COVID-19 disseminated by Vice President Pence or the CDC may be considered a so-called whistleblower. Whistleblowing acts are usually detrimental to a person's career.

Are America's non-Federal jurisdictions collating and reporting their own COVID-19 data?

This link may offer a useful first reference point to answer the question above. See 'source' at:

www.michigan.gov/coronavirus/0,9753,7-406-98163_98173---,00.html

npr.org/sections/coronavirus-live-updates/2020/03/19/8182959
ties-admit-improper-response-to-coronavirus-whistleblower

Widely known as a whistleblower who spoke up about the outbreak in the city of Wuhan, China, the 34-year-old doctor was initially punished by local authorities. They said he was "spreading rumors" in early January, after he had tried to warn others about the emergence of the novel coronavirus that has now become a global pandemic.

Whistleblower, Dr Liu Zhiming of Wuhan, Hubei Province, China reportedly died from Coronavirus infection on February 18. His death is a major setback. This brave hospital medic was on the frontline of Emergency Department treatment in Wuhan prior to his fate.

This author located several examples of healthcare professionals around the world who

publicly challenge official government narratives about COVID-19. Examples include:

Dr. Jensen calls out 'ridiculous' CDC guidelines for coronavirus-related deaths

Minnesota State Senator and family physician Dr. Scott Jensen reacts to CDC guidance on declaring COVID-19 deaths.

Dr. Scott Jensen, a Minnesota family physician who is also a Republican state senator, told "[The Ingraham Angle](#)" Wednesday that the Centers for Disease Control and Prevention's (CDC) guidelines for doctors to certify whether a patient has died of [coronavirus](#) are "ridiculous" and could be misleading the public.

foxnews.com/media/physician-blasts-cdc-coronavirus-death-count-guidelines

Host Laura Ingraham read Jensen the guidelines, which say: "In cases where a definite diagnosis of COVID cannot be made but is suspected or likely (e.g. the circumstances are compelling with a reasonable degree of certainty) it is acceptable to report COVID-19 on a death certificate as 'probable' or 'presumed.'"

Readers may independently root out whistleblower accounts. As at mid-late April, high-profile whistleblowers who challenge official narratives are relatively rare. This list is slowly growing.

Wuhan

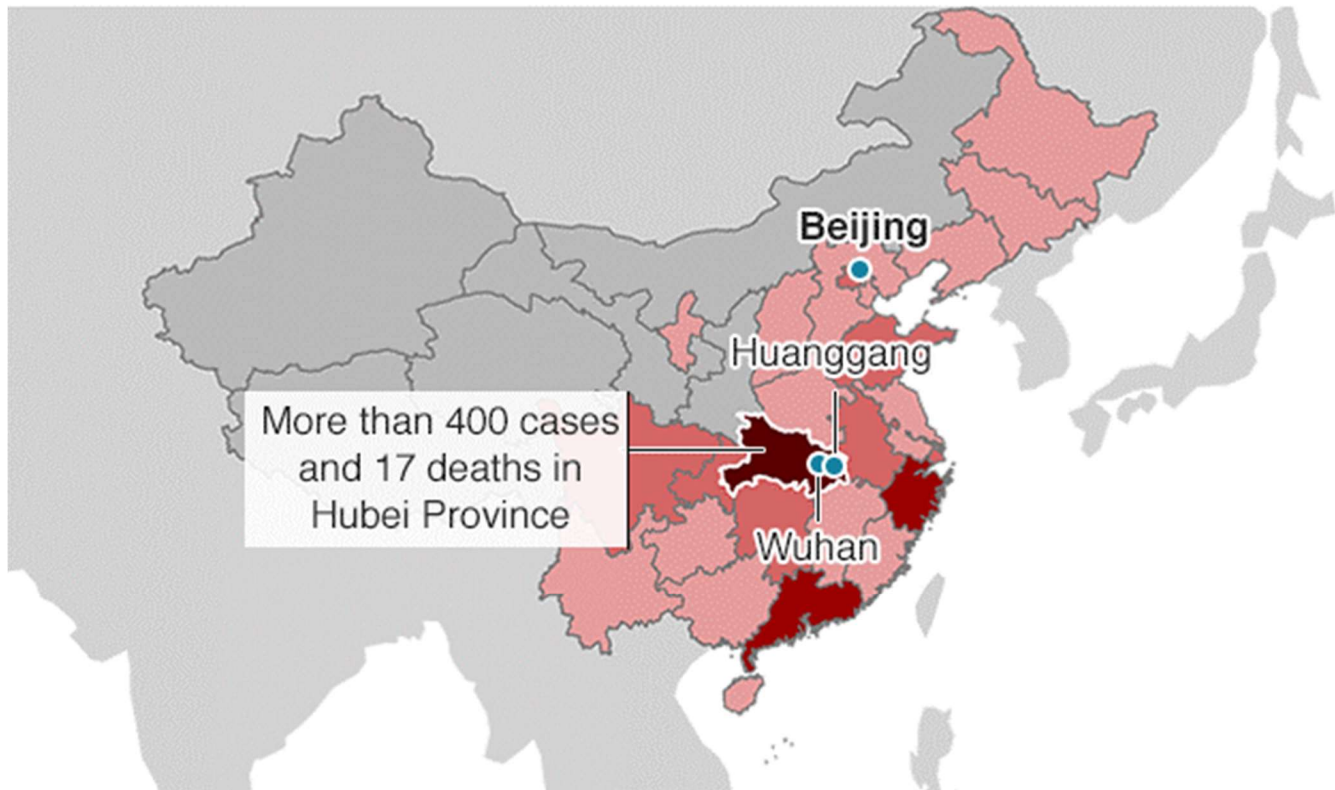
www.xinhuanet.com > english ▾

Central China province launches commercial 5G applications ...

Oct 31, 2019 - **Wuhan** City, the capital of Hubei, is expected to have 10,000 **5G** ... China Mobile Hubei Branch has **activated** 1,580 **5G** base stations in the city ...

Confirmed cases in China

■ No cases ■ 1 - 5 ■ 6 - 20 ■ 21 - 100 ■ More than 100



Source: China National Health Commission, BBC Research, 23 Jan



There is a strong perception globally that the Coronavirus COVID-19 outbreak originated in Wuhan, the capital of the Hubei Province in China. Beijing initially did not challenge this global perception during the first month or so after the earliest cases were reported by global news media. China's state-owned propaganda press monopoly labels the virus "outbreak" as "novel".

www.xinhuanet.com › english ▼

The Latest: China reports 571 confirmed cases of new ...

Jan 23, 2020 - ... a medical team to fight against the **novel coronavirus** outbreak in **Wuhan**, central China's **Hubei** Province, **Jan. 22, 2019**. (Xinhua/Cheng Min).

During January 2020, Beijing responded to the outbreak by building a massive hospital (*circa* 1000 beds) in Wuhan in around one week. Those diagnosed with COVID-19 were forcibly quarantined.

www.npr.org › 2020/02/24 › china-has-built-over-20-mass-quarantine-c...

China Has Built Over 20 Mass Quarantine Centers For ... - NPR

Feb 24, 2020 - KELLY: NPR has reported on how **hospitals** in **Wuhan** have been so ... some are **forced** to make tough choices even after **quarantine**.

Corporate mainstream fake news media such as CNN, and state-owned propaganda press such as the BBC widely reported that the world was closely "watching" Beijing's responses in Wuhan. The slants of these articles claimed that Beijing's interventions may be a model of best practice if/when the Coronavirus outbreak occurs in other nations.

www.sciencemag.org › news › 2020/03 › china-s-aggressive-measure... ▼

China's aggressive measures have slowed the coronavirus ...

Mar 2, 2020 - 2, 2020 , 4:50 PM ... The question now is whether the **world** can take lessons from China's ... and briefed journalists about its findings in **Beijing** and Geneva last week. ... all countries currently considering their **response** to COVID-19," says ... Chinese authorities also built two dedicated hospitals in **Wuhan** in ...

This author questions if the numerous references to China as a best practice model, in Western media during February 2020, was a predictive programming agenda that forebodes future actions in the West. Beijing instigated mass lockdowns in Wuhan. Residents in thousands of abodes were reportedly physically locked inside their residences. Government authorities welded their homes closed. Numerous reports claim that these welded homes were the ones that contained corpses.

www.reuters.com › [article](#) › [us-china-health-quarantine](#) ▼

Sealed in: Chinese trapped at home by coronavirus feel the ...

Feb 22, 2020 - **Hubei's** sealed management policy depends heavily on residential committees, ... over Lunar New Year now stuck far from their **homes** and livelihoods. ... **Wuhan**, the **Hubei** city hardest hit in the epidemic, says it will ensure food and ... Google data shines light on whether coronavirus **lockdowns** worldwide.

The World Health Organization declared COVID-19 a pandemic on March 11, 2020.

www.who.int › [WHO Director-General](#) › [Speeches](#) › [Detail](#) ▼

WHO Director-General's opening remarks at the media ...

Mar 11, 2020 - We have therefore made the assessment **that COVID-19** can be characterized as a **pandemic**. **Pandemic** is not a word to use lightly or ...



World Health Organization

Why does the WHO embed a twisted serpent reptile in the center of its official logo?

A strongly dominant theme in mainstream media, alternative news and other sources, such as political speeches, is the assertion that Beijing concealed and downplayed serious aspects of the Wuhan outbreak for approximately two months. This deception undermined the ability of national governments to assess the situation and close/restrict their national border movements.

www.bloomberg.com › [news](#) › [articles](#) › [china-concealed-extent-of-vi...](#) ▼

China Concealed Coronavirus Outbreak Extent: U.S. ...

Apr 1, 2020 - China has **concealed** the extent of the **coronavirus** outbreak in its country, ... The officials asked not to be identified because the **report** is **secret**, and they ... The outbreak began in China's Hubei province in **late** 2019, but the country ... homes in Hubei province have driven public doubt in **Beijing's reporting**.

This article above by Bloomberg is curious. Globalist fake news corporate media such as *The New York Times* virtually always support their arch national business partner, Beijing. This anti-China slant development may be tied to China's expulsion of Western journalists from China during March and April, 2020.

www.theguardian.com › [world](#) › [mar](#) › [china-to-expel-more-us-journ...](#) ▼

China-US standoff escalates as Beijing expels major US ...

Mar 17, 2020 - **New York Times**, Wall Street Journal and Washington Post **journalists** ... **China** will **expel** US **reporters** of three major US news outlets, in a hugely ... on **Chinese** state media organisations, classifying them as **foreign** missions.

The New York Times, *Wall Street Journal* and *Washington Post* were welcome in China so long as they parroted Beijing's official fake propaganda narratives. Beijing's expulsion of invited Deep State fake news giants such as *The Times* reiterates its brutal commitment to maintaining a monopoly control over fake news propaganda in China and beyond, where possible.

Many thousands of alternative news commentators link the mass deaths and casualties in Wuhan to the experimental rollout of the 5G cellphone data network that occurred on October 31, 2019. Many claim that 5G towers emit massive microwaves that can fry/kill human cells and tissue.

China's Massive Amount of Immunotoxic 5G Networking and ...

 <https://freepress.org/article/china's-massive-amount-immunotoxic-5g-networking-and...>

The two articles cited here are ironically titled, (1) "Huawei installs **5G** in **China** Hospital to fight **Coronavirus**," and (2) "Huawei builds **5G** in **Wuhan** Hospital, aims to indirectly fight the **Coronavirus**" as this might very well be the complete opposite of what they are indeed intending to do here.

According to numerous media reports, the British Government has informed its so-called free press that they are not permitted to link Coronavirus deaths to experimental 5G technologies.

www.theguardian.com › [media](#) › [apr](#) › [uk-media-outlets-told-not-to-p...](#) ▼

UK media outlets told not to promote baseless 5G coronavirus ...

Apr 2, 2020 - UK media outlets told not to promote baseless **5G coronavirus** theories ... that the rollout of **5G** phone technology in **Wuhan** was connected to ...

This scholarly article is an example that contextualizes discussions of COVID-19 and 5G.

smartech.gatech.edu › [bitstream](#) › [handle](#) › [LARGEST_UNETHICAL_...](#) 

THE LARGEST UNETHICAL MEDICAL ... - SMARTech

by RN Kostoff - 2020

Feb 15, 2020 - The external EMF (electromagnetic fields) from **microwaves** (and other sources) ... high-performance carrier frequency component of **5G radiation** (aka ... well, but the link of wireless **radiation** to the **coronavirus** pandemic is not ...

I encourage readers to independently seek out their own information about 5G technologies.

YouTube's algorithms may be censoring and deleting videos that mention '5G' in any context.

Mainstream corporate news articles that supposedly debunk the connection between 5G and the Coronavirus is among the top 10 examples of Mockingbird media narratives witnessed by humankind since after 9/11. Please check online to confirm this claim. Google's Artificial Intelligence search engine algorithms are designed to only promote stories that belittle the 5G-COVID-19 narrative. This is Google's first response to a 'Coronavirus 5G' search string. Its first three pages offer similar responses. CNN is America's most notorious globalist fake news agency.

www.cnn.com › 2020/04/08 › tech › 5g-coronavirus-conspiracy-theory...

The conspiracy linking 5G to coronavirus just will not die - CNN

2 days ago - As the spread of the **coronavirus** is proving difficult to contain, so too is the misinformation surrounding it. [google.com/search?q=coronavirus+5g&rlz=1C1NDCM_enUS743US743&toq](https://www.google.com/search?q=coronavirus+5g&rlz=1C1NDCM_enUS743US743&toq)

This is an example of a corporate Mockingbird media article that explicitly states that the 5G activation in Wuhan did not cause the Coronavirus COVID-19 outbreak. This media article propagates its blatant brainwashing agenda in its title. Most viewers never read beyond an article's title or the first few sentences. News publishers are aware of passive phenomenon.

www.dailymail.co.uk › news › article-8079177 › Coronavirus-myths-... ▼

Coronavirus myths debunked: it was not caused by 5G or a ...

Mar 5, 2020 - The **5G** network **did not cause** the **virus**. In recent days, a bizarre new conspiracy theories have circulated on social media claiming that **5G** ...

This article above may also be purposeful disinformation. The dominant theme in articles that link 5G to COVID-19 is the claim that deaths and casualties caused by 5G were falsely attributed to a virus outbreak. This bizarre article above, considers whether 5G radio waves created a virus. There are no precedents in history that link communications radio waves to virus creation.

Numerous (200 plus) independent researchers claim that total registered cellphone users in China dropped by *circa* twenty one million units during the first three months after the Wuhan Coronavirus incident became a globally reported main news event. Cell phone data registration figures were supposedly published by Chinese owned communications providers prior to March 2020. These articles are representative illustrations of hundreds of such claims.

www.bloomberg.com › [news](#) › [articles](#) › [china-s-mobil...](#) ▼

China's Mobile Carriers Lose 21 Million Users as Virus Bites ...

Mar 23, 2020 - **China's** wireless carriers are reporting **drops** in **users** as the **coronavirus** crisis cuts business activity, with **China** Mobile Ltd., the world's largest ...

www.ibtimes.sg › [china-hiding-covid-19-death-toll-21-...](#) ▼

Is China hiding COVID-19 death toll? 21 million cell phones ...

Mar 29, 2020 - 21 **million cell phone** accounts in **China** were cancelled after **coronavirus** ... This sudden **drop** suggests a very high **Coronavirus** death toll ... Since the outbreak of Novel **Coronavirus** which emerged in **China's Wuhan**, the ... it revealed that both **cell phone users** and **landline users dropped** dramatically.

The original data is published inside China in Chinese. Commentators offer a range of reasonable factors that may have caused registered cell phone users to voluntarily or involuntarily cancel their China based cell phone service. The expulsion of foreign workers from China due to the COVID-19 economic downturn is an example. Millions of Chinese nationals may have been retrenched in China during this time. These people cannot pay their monthly cell phone invoice. The consensus among those who analyze this data, in the COVID-19 context, is that these explanations account for no more than ten million registered users. In less subtle terms, they speculate that COVID-19 and/or 5G may have killed millions in China since after November 2019.

This image published by media giant *The Sun* is typical of thousands of pictures propagated by corporate media in recent months in Asia and the West. These outlets show stills of massive temporary hospitals that were supposedly constructed to treat COVID-19 casualties. These beds are always empty or mostly empty because the worst of the outbreak is always on the horizon.



The interior of the Hongshan Gymnasium in Wuhan that has been converted into a hospital Credit: Rex Features

On March 16, President Trump publicly labelled COVID-19 the “China Virus” for the first time.



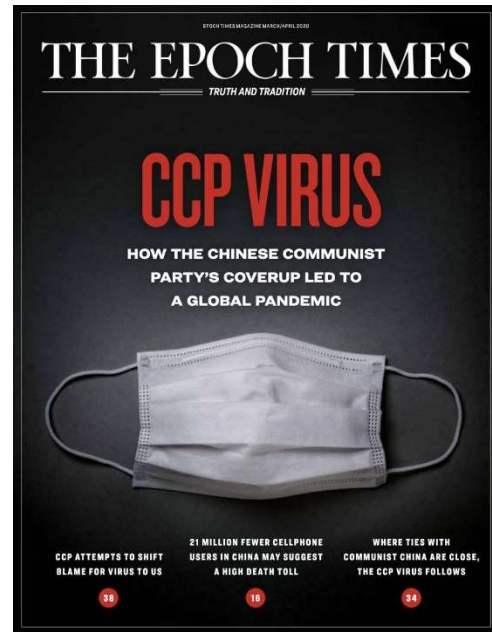
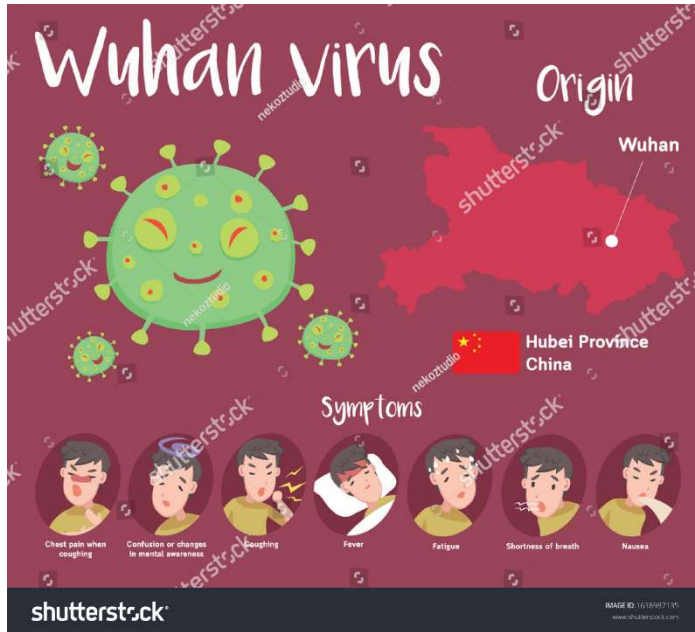
Donald J. Trump ✓
@realDonaldTrump

The United States will be powerfully supporting those industries, like Airlines and others, that are particularly affected by the Chinese Virus. We will be stronger than ever before!

6:51 PM · Mar 16, 2020 · [Twitter for iPhone](#)

✓ This gesture refers to his publicly stated conviction that COVID-19 ‘Patient Zero’ first occurred in China, probably in Wuhan.

Other independent commentators refer to Coronavirus COVID-19 by similar informal terms such as 'CCP Virus' (Chinese Communist Party) and 'Wuhan Virus'. These images are illustrations.



This image by corporate powerhouse Shutterstock is interesting. The pro-China stance of fake news and globalist corporate powerhouses seems to be waning over the past month. This article by BBC (2020) echoes that sentiment. Most mainstream corporate media outlets explicitly question whether the CCP murdered brave Chinese COVID-19 whistleblower Dr Wenliang.

www.bbc.com/news/world-asia-china-51403795 ▼

Li Wenliang: Coronavirus kills Chinese whistleblower doctor ...

7 February 2020 ... Li Wenliang contracted the virus while working at **Wuhan** Central Hospital. ... Analysis by Stephen McDonnell, BBC News, **Beijing** ... convince 1.4 billion people that Dr Li's death is not a clear **example** of the limits ... with Human Rights **Watch** saying China was "treating public health with a sledgehammer".

As at late April, it is unclear if mainstream media remain in opposition to their arch business partner, Beijing. As stated above, Google AI algorithms still favor globalist projects such as 5G.

At present, the short-term (*i.e.* immediate) trend in corporate mainstream media is anti-China. These articles are typical of hundreds published by mainstream news that offer premium online and print press space to collectives that intend to sue Beijing for billions of dollars in damages.

www.smh.com.au › World › Europe › Coronavirus pandemic

Coronavirus: China should be sued for trillions in damages ...

7 days ago - **China** should be **sued** for \$6.5 trillion for **coronavirus damages** says ... Minister Scott Morrison's unprecedented \$130 **billion** in **government** ... According to the report, **Coronavirus Compensation?** by conservative ... "It appears more than probable that the **Chinese Communist Party's** response to **COVID-19** ...



Class-action suit seeks to bill China for coronavirus fallout: 'We want the court to make them pay'

Get all the latest news on coronavirus and more delivered daily to your inbox. Sign up here. A class-action lawsuit filed in Florida this month ...

2 weeks ago



On 7 April 2020, China's state-owned monopoly propaganda news agency Xinhua claimed that there were no COVID-19 deaths reported on this day. Furthermore, in the statement shown below, it says that the last 32 reported infections inside China were "imported by foreigners".

www.xinhuanet.com › english ▼

Chinese mainland reports no increase in domestic COVID-19 ...

6 days ago - **Chinese** mainland reports **no** increase in domestic **COVID-19** cases ... BEIJING, April 7 (**Xinhua**) – **Chinese** health authority said Tuesday that **no new** domestically transmitted cases of the novel **coronavirus** disease (**COVID-19**) ... **No death** was reported Monday, and **12 new** suspected cases, all imported ...

This novel development was widely reported in Western media. It

was interpreted as fake news that aims to boost local and foreign investors' confidence. Xinhua stated in April that manufacturing output levels in China were close to pre COVID-19 peak rates.



Donald J. Trump 
@realDonaldTrump



The W.H.O. really blew it. For some reason, funded largely by the United States, yet very China centric. We will be giving that a good look. Fortunately I rejected their advice on keeping our borders open to China early on. Why did they give us such a faulty recommendation?

4:04 pm · 7 Apr 2020 · [Twitter for iPhone](#)

During early-mid April 2020, President Donald Trump repeatedly referred to the World Health Organization as a ‘China-centric’ agency in press interviews and via

Twitter. This development was widely reported by the English language press.

[thehill.com](#) › [homenews](#) › [administration](#) › [491707-who-pushes-back...](#) ▼

WHO pushes back on Trump comment that it's 'China centric ...

5 days ago - The World Health Organization (WHO) pushed back on recent criticism from **President Trump**, who described the body as “very **China centric**” ...

On 15 April 2020, President Donald Trump officially announced that he was temporarily freezing America’s funding to the World Health Organization. This is mostly driven by his concerns about the WHO offering bad advice during the earliest stages of the COVID-19 outbreak (see page 55). President Trump and dozens of other parliamentarians from several nations have expressed grave concerns that the WHO is a nefarious puppet of the Communist Chinese Government.

[www.whitehouse.gov](#) › [briefings-statements](#) › [president...](#) ▼

President Donald J. Trump Is Demanding Accountability From

6 days ago - President Donald J. Trump is holding the **World Health Organization** (WHO) accountable by putting a hold on United States **funding**.

Vatican

All vessels voyage to Venice. The diagram on page 10 is consistent with this author's body of works. This *corpus* argues that the Deep State crime cartel is based in Rome. The Roman Empire faked its demise. Like all cowards, it hid inside a square mile walled sovereign nation-state.

In a world of fake government statistics, fake NGOs (*e.g.* WHO), fake news and fake university research, this author can only speculate about the reasons why Italy reported the highest COVID-19 deaths and fatalities during the first six weeks of this 'pandemic'. Images below merely highlight thematic topics and observations that may arouse savvy readers' curiosities. Italy shares the closest business partner relationship with China among EU member states. Port infrastructure in Italy is due to become a part of China's monopoly One Belt hegemonic project.

[thediplomat.com](#) › 2019/04 › italy-signs-on-to-belt-and-road-initiativ... ▼

Italy Signs on to Belt and Road Initiative: EU-China Relations ...

Apr 3, 2019 - **Italy** Signs on to **Belt** and Road Initiative: EU-China Relations at Crossroads? ... **Belt** and Road Initiative (BRI) or One **Belt One Road** (OBOR), the brainchild of **Chinese** President Xi Jinping. ... The **Chinese** flagship project is the "Five **Ports**" initiative involving the **Italian** ports of **Venice**, Trieste, and Ravenna, ...

On March 21, it was widely reported that Italy announced one of the highest COVID-19 fatality rates in one day, of all nations. This figure of 793 is a daily record outside of China and America.

[www.businessinsider.com](#) › coronavirus-italy-again-sets-single-day-de... ▼

Italy surpasses its own record death toll for a single day, with ...

As of **March 21**, **Italy** has now recorded a total of nearly 5000 **deaths** related to the novel coronavirus, ... **Italy** surpasses its own record **death** toll for a **single day**, with **793** coronavirus **deaths** in 24 hours. Paige Leskin. Mar 21, 2020, 7:14 PM.

Italian fatalities mostly affect the elderly (age 70+) with pre-existing chronic medical conditions.

[www.bloomberg.com](#) › news › articles › 99-of-those-who-died-from-... ▼

99% of Those Who Died From Virus Had Other Illness, Italy Says

Mar 18, 2020 - More than 99% of **Italy's coronavirus fatalities** were people who suffered ... **Italians Rally in Coronavirus Lockdown** ... After **deaths** from the virus reached more than 2,500, with a 150% increase ... Threat to the **Elderly** ... All of **Italy's** victims under 40 have been males with serious **existing medical conditions**.

Tens of thousands of low paid Chinese foreign workers reside in Italy. There is a perception that these workers are sweatshop slaves who work in upmarket garment factories. They are not afforded EU labor market protection. The unemployment rate in Italy averaged *circa* 10% in 2019.

[www.washingtonexaminer.com](#) › policy › defense-national-security ▼

Top Italian official points to chance virus came from Germany ...

Mar 20, 2020 - Nevertheless, there are many **Chinese workers** in **Italy**, and the first ... on who you ask, tens of **thousands** of **Chinese migrant laborers** in **Italy**, ...

A small, visible public backlash against the Italian Government's business dealings with Beijing has been reported by social media and mainstream corporate media during April 2020.

[www.theguardian.com](#) › global-development › mar › as-if-we-were-t... ▼

coronavirus brings prejudice for Italy's Chinese workers - The ...

Mar 25, 2020 - At the beginning of February, Ilaria Santi, a councillor in the **Italian** city of ... and is attempting to counter **prejudice** by encouraging **Chinese** people to ... the diffusion of the virus **Covid-19**, alongside tourism and transportation".

[twitter.com/search?q=italy%20coronavirus%20chinese&src=typed_query](#)

Illegal's who invaded Lampedusa on Monday are roaming the streets while While Italians are in full lockdown due to the **Chinese coronavirus**.

110

1.2K

1.5K

Visiting Italy and engaging with her people in a variety of regions may be the best way to understand what is happening in this country. Media and social media have a knack for creating a distorted reality. They often extrapolate isolated incidents and frame them as national trends.

The Vatican is the world's smallest sovereign nation-state. On a *per capita* basis, the Vatican and its global frontline flock has been most affected by the Coronavirus COVID-19. At 12, April 2020, this nation reports eight Coronavirus infections (WHO, 2012, p. 3). The coded meaning, if one exists, that underpins these media stories may transpire after the Coronavirus scam dust settles.

www.nytimes.com › catholic-church-sex-abuse-pennsylvania

Catholic Priests Abused 1,000 Children in Pennsylvania ...

Aug 14, 2018 - The report, which covered six of the state's eight Catholic **dioceses** and ... than 15 years, ever since explosive allegations emerged out of **Boston** in 2002. ... the surname of a priest in the Erie **diocese** who was **arrested** in May.

www.bostonglobe.com › 2020/04/01 › metro › seven-catholic-priests-te...

Eight Catholic priests from Boston Archdiocese test positive for

Apr 1, 2020 - The confirmed cases of **clergy infected** with **coronavirus** included six ... said Wednesday that eight **priests** had tested positive for **COVID-19**.

The number of priests killed, as reported below, reflects the standing as at 25 March 2020 in Italy only. This writer conservatively estimates that the worldwide figure is no less than 200 priests.

www.msn.com › en-sg › news › world › 67-italian-priests-have-died-... ▼

67 Italian priests have died of virus: report - MSN.com

Mar 25, 2020 - 67 Italian **priests** have died of **virus**: report. ... the current emergency of the **coronavirus** disease (**COVID-19**) in Venice, Italy, March 25, 2020. ... A total of 67 Italian **priests infected** with the novel **coronavirus** have died since the ...



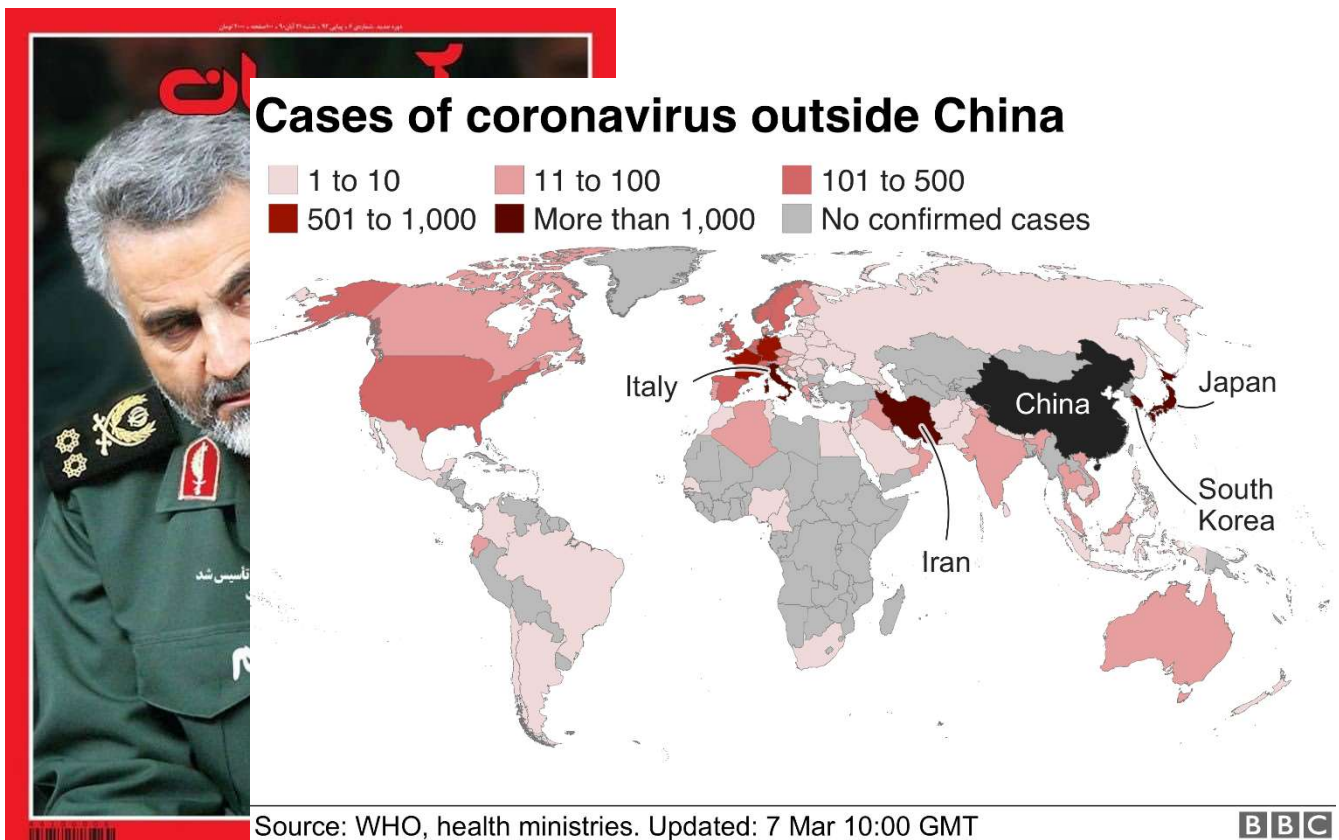
Iran

It is a remarkable coincidence that Rome’s Iranian (‘Aryan’) puppet province was a top three ranked Coronavirus COVID-19 infected nation during the first weeks of this crisis. Both countries are epicenters of the resistance to the removal of global criminal trafficking networks.

thefreeiranian.org › articles-and-reports › 2018-trafficking-in-persons... ▾

2018 Trafficking in Persons Report - - Iran

Jul 1, 2018 - Moreover, female victims of sexual abuse, including sex trafficking victims, faced ... trafficking—particularly child sex trafficking—was increasing in Iran. ... Meet the General Who Ran Soleimani's Spies, Guns and Assassins.



Let’s not overly finger Tehran. Its deep state mafia collaborators reside in most countries, such as China, Israel, the USA, England, Belgium, Germany, Netherlands, Switzerland – to name a few.

RSK

The Republic of South Korea is an economic powerhouse of Asia and the globe at-large. It is home to some of the most esteemed technological brands that exist on this planet. These include Hyundai, Samsung, LG and Kia. South Korea is noteworthy for its high number of total COVID-19 casualties and its high number of casualties *per capita*. At one stage during mid-March 2020, Korea was a top four national casualties rank alongside Italy, Iran and China.

www.washingtonpost.com › world › 2020/03/17 › south-koreas-corona...

South Korea's coronavirus success story underscores how the ...

Mar 16, 2020 - Apart from China, **South Korea** was one of the **worst**-hit countries in the early stages of the **coronavirus** outbreak. But an aggressive response ...

As at 22 April 2020, South Korea is not ranked in the top five national Coronavirus casualty list. It has since fallen out of the top 15 casualty rates (WHO, 2020b). South Korea is widely regarded as a model of best practice for COVID-19 health policy management.

A checkpoint at Incheon International Airport, South Korea, March 2020

Xinhua foreignaffairs.com/articles/united-states/2020-04-10/south-korea-offers-lesson-best-practices

When it comes to the novel coronavirus, South Korea has taken tracing to a new level. When passengers deplane at Incheon International Airport near Seoul, they pass through mandatory temperature checks and are required to download the health ministry's self-diagnosis app. Once at their destinations, they must use the app every day to self-report any symptoms of COVID-19, the disease caused by the new coronavirus. The movements of those who test positive are tracked, and other people in their vicinity receive social-distancing alerts on their phones.

The use of cellphone data to monitor human movements may be unlawful in some countries.

UK

Britain recorded the eighth highest national infection rate in total numbers as at April 12, 2020.

[who.int/docs/default-source/coronaviruse/situation-reports/20200412-sitrep-83-covid-19.pdf?sfvrsn=697ce98d_4](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200412-sitrep-83-covid-19.pdf?sfvrsn=697ce98d_4)

Reporting Country/ Territory/Area ¹	Total confirmed ¹ cases	Total confirmed new cases	Total deaths	Total new deaths	Transmission classification ¹	Days since last reported case
The United Kingdom	78995	8719	9875	917	Pending	0

The most noteworthy aspect of Britain's COVID-19 journey may be widespread reports of civilians destroying 5G towers in Britain. These incidents may offer an avenue of inquiry for those who are curious to independently research this topic reported in social media and corporate news.

www.bbc.com/news/uk-england-52164358

Mast fire probe amid 5G coronavirus claims - BBC News

Apr 4, 2020 - There have been **fires** at masts in Birmingham, Liverpool and Melling in Merseyside. ... Mast **fire** probe amid **5G coronavirus** claims ... Merseyside Police said an **investigation** is under way after the ... West Midlands **Fire** Service said the **fire** in Birmingham involved a 70ft **tower** on a telecommunications site.



We have broadened our guidance on unverified claims that incite people to engage in harmful activity, could lead to the destruction or damage of critical 5G infrastructure, or could lead to widespread panic, social unrest, or large-scale disorder.



Coronavirus: Staying safe and informed on Twitter
blog.twitter.com

8:35 PM · Apr 22, 2020 · Twitter for Advertisers

227 Retweets 348 Likes
Twitter/TwitterSafety



5G Towers Set On Fire Across UK Amid Coronavirus Fears

Ape Huncho · 65K views · 1 week ago

After the coronavirus outbreak people have linked the virus to 5G towers & people have taken it upon themselves to set fire to 5G ...



youtube.com/watch?v=JeYBSKIQ1U0

This video shown above reports that many British civilians believe that 5G waves diminish human immune systems. This depletion in health may make it more difficult for Britons to resist/fight legitimate COVID-19 infections.

Is Twitter's censorship policy fair, in your opinion?

Spain

Spain reports the highest number of COVID-19 casualties in Europe as at April 12, 2020. Total casualties of 161, 852 is second to America. The USA reports 492, 881 casualties at the same date.

Table 1. Countries, territories or areas with reported laboratory-confirmed COVID-19 cases and deaths. Data as of 12 April 2020*

Reporting Country/ Territory/Area [†]	Total confirmed † cases	Total confirmed new cases	Total deaths	Total new deaths	Transmission classification [‡]	Days since last reported case
who.int/docs/default-source/coronaviruse/situation-reports/20200412-sitrep-83-covid-19.pdf?sfvrsn=697ce98d_4						
European Region						
Spain	161852	4830	16353	510	Pending	0
Italy	152271	4694	19470	619	Pending	0

The reasons for the exceptionally high infection rate – in absolute numbers and *per capita* in Spain are not clear. The most interesting aspect of Spain’s arch misfortune may be popular news and social media stories that claim that the European Union bureaucracy has failed Spain and Europe. The EU could not or would not provide Spain and other countries with funding or healthcare resources. Commentators speculate that this failure may be a catalyst that devolves the EU. Such devolution may be comparable to the way that Britain voted to ‘Brexit’ the EU-Berlin One World Government fascist project. The representative articles below are penned in this vein.

[nymag.com › intelligencer › 2020/04 › will-the-coronavirus-tear-europe...](#)

[Will the Coronavirus Tear Europe Apart? - New York Magazine](#)

Apr 1, 2020 - At a human level, **Spain** and Italy have been hit hardest by the pandemic. ... countries like Greece, **Spain**, and Portugal for their own **problems**, saying ... they think the eurozone could **fall** apart or Italy could **leave** the **EU**.” The loss of a core eurozone country would inspire much more fear than **Brexit** ever did.

[www.bbc.com › news › world-europe-52135816](#) ▾ Apr 3, 2020 -

[Coronavirus outbreak eats into EU unity - BBC News](#)

Italy and **Spain** feel abandoned, as the crisis really brings into question what the **EU** is all about.

America



Donald J. Trump ✓
@realDonaldTrump



WE CANNOT LET THE CURE BE WORSE THAN THE PROBLEM ITSELF. AT THE END OF THE 15 DAY PERIOD, WE WILL MAKE A DECISION AS TO WHICH WAY WE WANT TO GO!

3:50 AM · Mar 23, 2020 · [Twitter for iPhone](#)



Jabin Botsford ✓
@jabinbotsford



Close up of President [@realDonaldTrump](#) notes is seen where he crossed out "Corona" and replaced it with "Chinese" Virus as he speaks with his coronavirus task force today at the White House. [#trump](#) [#trumpnotes](#)



♥ 27.1K 11:06 AM - Mar 19, 2020



Fake news trash such as Forbes repeatedly cite worst case COVID-19 casualty forecasts. This act propagates fear and panic about possible outcomes. These representative samples show how these propaganda outlets aim to tap into the fear of the unknown. Dr Fauci is the 1.7 base source.

www.nytimes.com › 2020/03/13 › coronavirus-deaths-esti...

Worst-Case Estimates for U.S. Coronavirus Deaths - The New ...

Mar 13, 2020 - **Projections** based on C.D.C. scenarios show a potentially vast toll. ... **How many** would be infected and need hospitalization? ... be infected over the course of the epidemic, according to a projection that encompasses the **range** of the four scenarios. ... As many as 200,000 to **1.7 million** people could die.

The use of the word 'psychological' is suggestive of the media's use of psychological warfare.

www.forbes.com › sites › hershshefrin › 2020/03/29 ▾

Risk High That Psychological Pitfalls Will Cause U.S. COVID ...

Mar 29, 2020 - ... and **1.7 million**, which to me suggests that the **CDC's forecasts** are ... that sensible policy will limit the deaths to about **1.7 million**; however, ...

cnn.com/world/live-news/coronavirus-pandemic-04-11-20/h_a72b3899f03070ecaad11f4375f1f995

What you need to know

- **The numbers:** The coronavirus pandemic has infected 1.7 million people and killed more than 107,000 around the world.
- **Grim milestone in US:** The country now has more than half a million cases. New

Old Deep State 17 code habits die hard for fake news trash like CNN. Image left: April 11, 2020.

WHO: 100, 000 – reported April 12, 2020.

who.int/docs/default-source/coronaviruse/situation-reports/20200412-sitrep-83-covid-19.pdf?sfvrsn=697ce98d_4

- The total global deaths from COVID-19 has surpassed 100 000.

According to corporate fake news, America has been the epicenter of the Coronavirus since late March 2020. This section merely lists official statistics as reported by the three leading agencies, as identified on page 29. These are the Center for Disease Control, European Center for Disease Control and the World Health Organization. It is impossible to verify *any* aspect of these numbers.

Table 1. Countries, territories or areas with reported laboratory-confirmed COVID-19 cases and deaths. Data as of 12 April 2020* [who.int/docs/default-source/coronaviruse/situation-reports/20200412-sitrep-83-covid-19.pdf?sfvrsn=697ce98d_4](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200412-sitrep-83-covid-19.pdf?sfvrsn=697ce98d_4)

Reporting Country/ Territory/Area [†]	Total confirmed ‡ cases	Total confirmed new cases	Total deaths	Total new deaths	Transmission classification [§]	Days since last reported case
Region of the Americas						
United States of America	492881	31606	18516	1920	Community Transmission	0

COVID-19: U.S. at a Glance*† [cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html](https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html)

- Total cases: 554,849
- Total deaths: 21,942

Updated April 13, 2020

ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases

America: 647 192 cases; the five countries reporting most cases are United States (557 571), Canada (24 365), Brazil (22 169)

Readers may access the latest statistics via the active links shown in this book's references section.

President Trump declared the Coronavirus COVID-19 a National Emergency on March 13, 2020.

[www.whitehouse.gov › presidential-actions › proclamation-declaring-...](https://www.whitehouse.gov/presidential-actions/proclamation-declaring-...) ▼

Proclamation on Declaring a National Emergency Concerning ...

Mar 13, 2020 - Proclamation on Declaring a **National Emergency** Concerning the Novel **Coronavirus** Disease (COVID-19) Outbreak ... On **March 11, 2020**, the World Health Organization announced **that** ... NOW, THEREFORE, I, **DONALD J. TRUMP, President of the United ...** Pursuant to this **declaration**, I direct **as follows**:

Since after mid-late March 2020, Republican President Donald Trump has repeatedly stated that he thinks that the Coronavirus 'issue' should not shut down America's national economy for any longer than another few weeks to a month after the date of his announcement. Such written and spoken statements are easy to find via online searches. These images below are examples.

www.nationalreview.com › [news](#) › [id-love-to-have-it-open-by-easter-t...](#) ▼

'I'd Love to Have It Open by Easter': Trump Hopeful Economy ...

Mar 24, 2020 - **I'd love to have it open by Easter,"** Trump said during a virtual town hall ... "social distancing" **and** staying home since the **coronavirus** outbreak.

www.cnbc.com › [2020/03/24](#) › [coronavirus-response-trump-wants-to...](#) ▼

Coronavirus response: Trump wants 'packed churches' ...

Mar 24, 2020 - I would **love to have it open by Easter,"** Trump said. "I would **love to have that**. It's such an important day **for** other reasons, but I'd **love to make it** ...

Donald Trump talks and tweets much about the 'Invisible Enemy' in contexts that seem to be about COVID-19. Curiously, he often does not cite this virus by its official or unofficial names.



Donald J. Trump ✓
@realDonaldTrump

10:52 AM · Apr 8, 2020 · [Twitter for iPhone](#) ▼

39.2K Retweets **216.2K** Likes

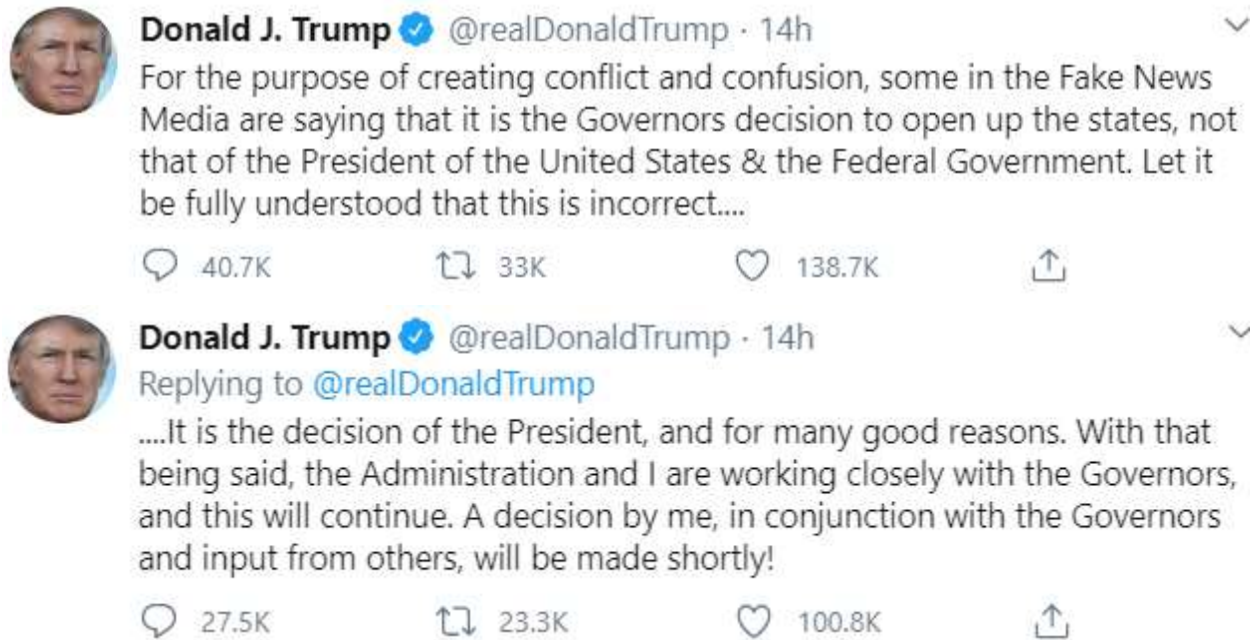
OOUOGCI

EOEB. 112?

Once we OPEN UP OUR GREAT COUNTRY, and it will be sooner rather than later, the horror of the Invisible Enemy, except for those that sadly lost a family member or friend, must be quickly forgotten. Our Economy will BOOM, perhaps like never before!!!

Of course, talk is cheaper than a Dollar Tree store. Deeds are more important. As far as this writer can gauge, Donald Trump has not closed Federal business. For example, USPS remains open.

The most recent intervention, which occurred ‘today’ (April 13), as this author is writing, is Donald Trump’s suggestion that he may deploy his Executive power to forcibly open state economies.



Thus far, economic shutdown responses to the COVID-19 crisis have mostly followed Red (Republican) and Blue (Democratic) party lines.

theintercept.com/2020/04/09/coronavirus-south-mayors-governors/

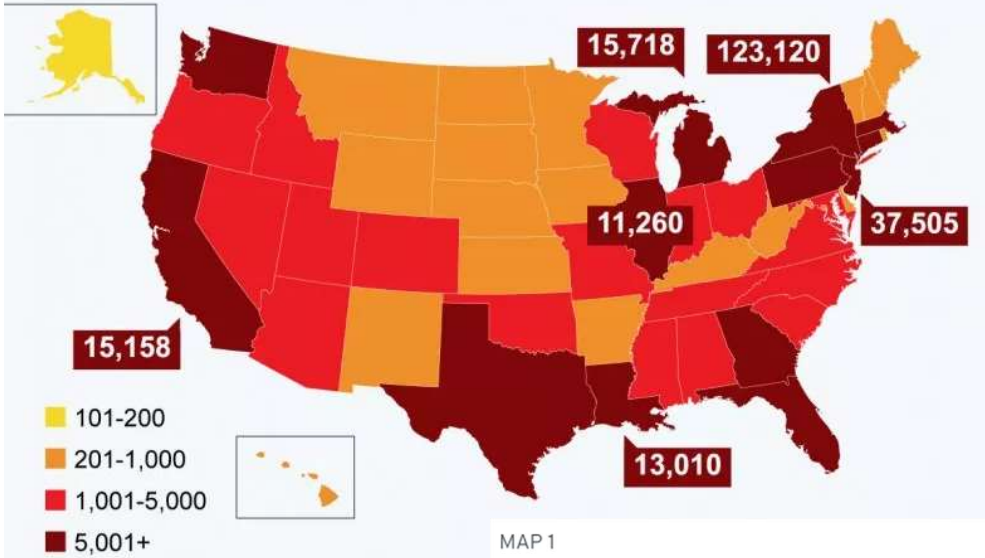
Throughout the South, Republican governors have followed President Donald Trump’s lead in resisting economic restrictions and orders to stay home. Meanwhile, mayors and local leaders, most of them Democrats, have heeded warnings from public health experts – and in Shelton’s case, his wife – to shut their cities down anyways. As case counts grew, governors tussled with mayors over the extent of local authority, sometimes reversing city orders and even reopening churches.

The biggest freezes in economic and social activity have been witnessed in California and New York State, especially in their largest cities – Los Angeles and New York City, respectively. Both states are Democratic strongholds.

Confirmed COVID-19 Cases in the U.S.

Number of confirmed COVID-19 cases, by U.S. state*

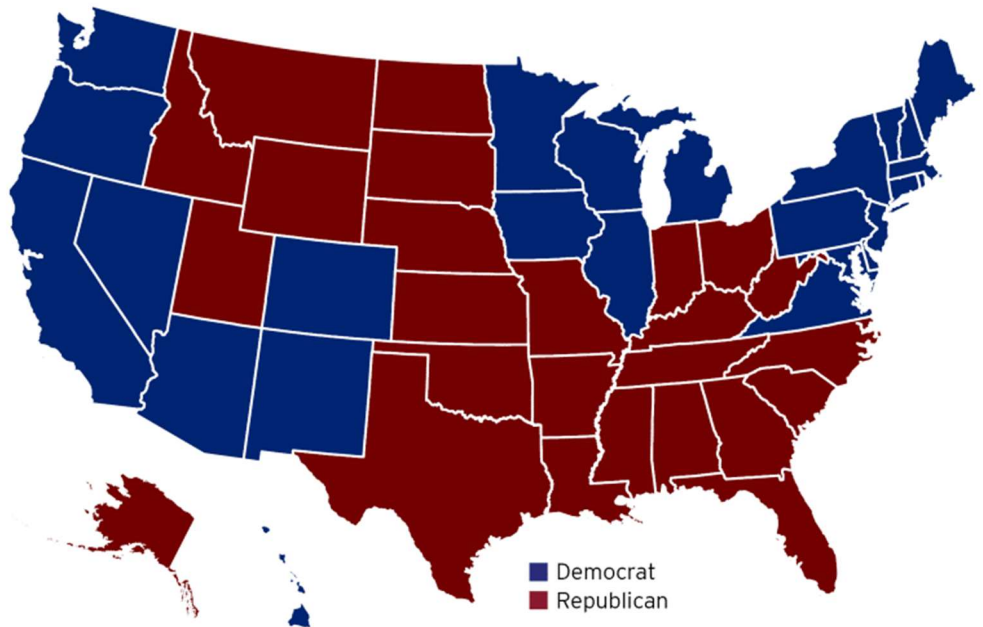
New York State: 123,120



* as of April 06, 2020 3 a.m. EST

Sources: Johns Hopkins University, CDC

States voting Democratic or Republican, 2018 House of Representative elections



Source: David Leip's Atlas of US Presidential Elections

B Metropolitan Policy Program
at BROOKINGS

What connections, if any, can you make from these diagrams shown above?

President Donald Trump has criticized the initial policy advice offered by the World Health Organization to America during the first wave of the Coronavirus COVID-19 outbreak.

[whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-22/](https://www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-22/)

Q Were you ever briefed on those memos? Did you ever discuss those memos with anybody on your —

THE PRESIDENT: I don't remember that. I've now seen the memo. I saw it. It was — Peter sends a lot of memos. I didn't see the memo. As you know, World Health was saying that was not correct because, at the time, they called it wrong.

But I didn't see the memo. But I acted as quickly as — people were shocked that I acted so quickly. And everybody thought I was wrong because I did act so quickly as you know, with respect to closing the borders — with respect not only to China, but with Europe I closed the borders. And I think that was very important.

But, no, I didn't see the memo at the time. But I have seen it since.



The Director General of the World Health Organization is not a Medical Doctor or a qualified frontline healthcare services delivery professional. He does not hold a MD, MBBS or equivalent. Dr Adhanon uses the title 'Dr' (Doctor) in public forums. He holds a PhD in Community Health from the University of Nottingham.



Donald Trump and his three highest ranking COVID-19 policy advisors don't wear masks at public press briefings. They don't 'socially distance'. Photograph date: April 12, 2020

Do you know of the work history (résumé) of Dr. Anthony Fauci and Dr. Deborah Birx?

Which institutions pay their salaries as at April 2020?

On 27 March 2020, President Trump issued the Executive Order shown below in extract. The "1,000,000" "Ready Reserve" section has attracted most commentary among political observers.

<https://www.whitehouse.gov/presidential-actions/eo-order-selected-reserve-certain-members-ir>

EO to Order the Selected Reserve and Certain Members of the Individual Ready Reserve of the Armed Forces to Active Duty

Defense, and the Secretary of Homeland Security with respect to the Coast Guard when it is not operating as a service in the Navy, are authorized to order to active duty not to exceed 24 consecutive months, such units, and individual members of the Ready Reserve under the jurisdiction of the Secretary concerned, not to exceed 1,000,000 members on active duty at any one time, as the Secretary of Defense and, with respect to the Coast Guard when it is not operating as a service in the Navy, the Secretary of Homeland Security consider

CDC

As the nation's health protection agency, **CDC** saves lives and protects people from health threats. To accomplish our **mission**, **CDC** conducts critical science and provides health information that protects our nation against expensive and dangerous health threats, and responds when these arise.



www.cdc.gov › [about](#) › [organization](#) › [mission](#)

[Mission, Role and Pledge](#)
[About | CDC](#)

The World Health Organization and America's Center for Disease Control command global respect among the masses partially because of their proper nouns. The same may not be said among all full-time independent researchers who are not beholden to interest groups such as corporate donors and tax-exempt fake Foundations owned by multi-billionaire crime families. This page invites savvy readers like you to freely investigate a range of views about the CDC.

thehill.com › [blogs](#) › [pundits-blog](#) › [healthcare](#) › [301432-the-cdc-is-b...](#) ▼

[The CDC is being influenced by corporate and political ...](#)

Oct 17, 2016 - A group calling itself **CDC Scientists Preserving Integrity, Diligence and ... our credibility and reputation** as a trusted leader in public health.”.

www.nytimes.com › [2020/03/13](#) › [health](#) › [robert-redfield-cdc-coronavi...](#)

[C.D.C.'s Dr. Robert Redfield Confronts Coronavirus, and ...](#)

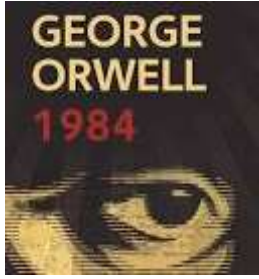
Mar 13, 2020 - Dr. Robert R. Redfield, the director of the **Centers for Disease Control** and ... state and local response and to protect the **reputation** of the **C.D.C.** ...

This author distinguishes between pre and post January 20, 2017 American Administrations. President Donald Trump has contradicted CDC data and guidelines in recent weeks.

www.cbsnews.com › [news](#) › [coronavirus-trump-fauci-interview-mem...](#) ▼

[Trump listens "even if we disagree on some things," Dr. Fauci ...](#)

Mar 23, 2020 - **President Trump** Joins Coronavirus Task Force Briefing At White House **Dr. Anthony Fauci**, director of the National Institute of Allergy and ...



Orwellian

Many public discourses about COVID-19 are explicitly framed in Orwellian '1984' themes. Please freely reflect on these narratives to draw your own conclusions.

Open-access links to Orwell's text '1984' are available in this book's references section (see Orwell, 1949). Short summaries of this classic fiction novel are available on YouTube.

1984 is a dystopian novel set in Britain. Its residents are victims of perpetual war, universal government surveillance and MK Ultra mind control. Free-thinking is a prosecutable 'thought-crime'. It is easy to find popular references that support and reject the thesis that America, the West at-large and the globe are trending towards a 1984 state. These are illustration examples.

[sifted.eu](#) › [articles](#) › [covid-1984](#) ▼

[Government More like Covid-1984 Marie Mawad in Paris - Sifted](#)

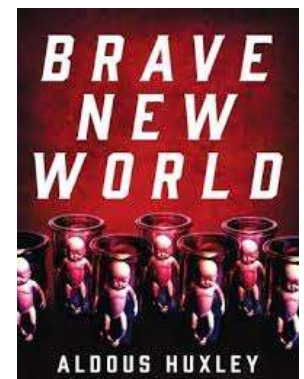
Apr 3, 2020 - **George Orwell, 1984** Book. Will **Covid-19** spell the end of Europe's long-cherished privacy ideals and give way to widespread ...

[www.alleytheatre.org](#) › [plays](#) › [production-detail](#) › [nineteen-eightyfour](#) ▼

[1984 - Alley Theatre Official Website](#)

Based on **George Orwell's** futuristic novel, **1984** brings us the story of Winston Smith and a ... the remainder of the 2019–20 season due to the **coronavirus** pandemic. ... Why '**1984**' is still **relevant** today – but not for the reason you may expect ...

Many COVID-19 commentators regard Aldous Huxley's *Brave New World* dystopian novel to be the Capitalist version of the socialist dystopia narrated in *1984*. Readers may access free links to a full copy of this classic book via the references section of this text (see Huxley, 1932).



Australia is the best example of a so-called free society that has transitioned into a state where its corrupt parliaments aspire to be overlords of a virtual house-arrest nation. Australia's fake corporate news media routinely name and shame people who walk their dog and go to the beach.

www.smh.com.au › National › Coronavirus pandemic

Police issue \$165000 in COVID-19 fines, but only two in ...

6 days ago - Police issue \$165,000 in **COVID-19 fines**, but only two in Sydney's ... For our free **coronavirus** pandemic coverage, learn more here. ... Two of the 151 **fines** relating to **COVID-19** issued so far by NSW ... at Bondi **Beach** drew criticism for failing to comply with **social distancing** ... The **Sydney Morning Herald**.

Australia's police state virtual lockdown laws are comparable to Communist China. This author questions whether these unprecedented Draconian lockdowns are covert wartime preparations. Australia has used the International English Language Testing System human trafficking racket to scam billions of dollars from international students from China. It has not repatriated these fraud victims. Does this explain why Chinese warships recently entered Sydney harbor 'unannounced'?

www.reuters.com › article › us-australia-china-navy › china-warships-... ▼

China warships leave Sydney after surprise visit 'raises ...

Jun 6, 2019 - The **Sydney Opera House** can be seen as the **Chinese naval ship** Kunlun Shan departs the Garden Island **Naval Base** in Sydney, Australia, ...

www.abc.net.au › radio › programs › worldtoday › chinese-warships-... ▼

Chinese warships arrive unannounced in Sydney Harbour ...

Jun 3, 2019 - Three **Chinese warships** have arrived in **Sydney Harbour** for a ... a week after Australian **Navy** aircraft were targeted in the South **China** Sea.

Australia must award all IELTS scam victims their due residency visa. To enslave masses of international students is an unforgivable crime against humanity. WWW.IELTS.AGENCY

Vaccines

We westerners are brainwashed from birth to respect Western medicine. Doctors orders! Law and Medicine are two of the most corrupt professions. They retain apex status in Western societies. Their *systems* are rotten. To the core. Most doctors and lawyers are champion beings.

This author's vaccine journey reflects his once unquestioning trust of Medicine. He has accepted free (they are always free, right) seasonal flu shots, Hepatitis A/B vaccines, tetanus/polio injections and the infamous MMR 'Mercury Murder Regime' microchip. MMR left his body swollen, bruised and bedbound for days. Why do new seasonal flus repeat annually? A convenient free vaccine is always ready. Governments pay billions for these vaccines – with our taxes. Which biowarfare fake university hospital fellers make these toxic rocks? Yes, that one.

Alarming discussions about COVID-19 and so-called vaccine cures are easy to find via searches.



VACCINATION IMPLEMENTATION DEPOPULATION PROGRAMME , YOU NEVER SAW THIS COMING!

Ijahstars THE MINDSET • 1.8K views • 4 weeks ago

Vaccination #covid19 #Ebola #africa #worldwide #ijahstarsthemindaet #journalist #radiopersonality No Copyright infringement

[youtube.com/watch?v=K448CEa31rs](https://www.youtube.com/watch?v=K448CEa31rs)

[Denmark Passes Mandatory Coronavirus Vaccine Law | Id2020 ...](#)

<https://www.youtube.com/watch?v=kMJ9XF2wUUA>

DENMARK PASSES MANDATORY CORONAVIRUS VACCINE LAW | ID2020 x VACCINE = MARK OF THE BEAST ... Depopulation trough vaccines and Chemtrails by Kent Hovind ... 03/21/2020 "COVID-19 and the Mark of the ...

Den plus Mark = Denmark. The Mark. Interesting. A Sly Fox coincidence?

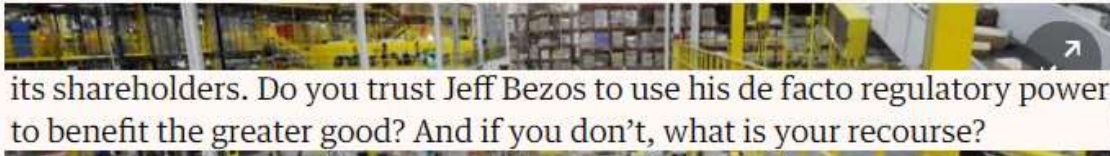
Discussion about vaccine depopulation murder scams repeat in the feature section of this book.

Internet

Approximately half of America's economy has shut down or scaled down operations in response to COVID-19. A visible number of critics of the COVID-19 pandemic theorize that the controllers behind this global panic aim to bankrupt most/all small to medium enterprises. According to this theory, governments and a handful of their corporate globalist puppets will manage national economies. Essentially, free-market capitalist nations such as America will transition into a Communist centrally planned economic model. Amazon has been widely criticized for its apparent heavy-handed treatment of unionized employees during the Coronavirus crisis.

theguardian.com/technology/commentisfree/2020/mar/24/the-us-of-amazon-how-the-coronavirus-has-created

If we let Amazon's strength dominate our entire economy, we may just find out how weak we are



its shareholders. Do you trust Jeff Bezos to use his de facto regulatory power to benefit the greater good? And if you don't, what is your recourse?

During April 2020, global powerhouse

Amazon is one of a handful of corporations that reports above-average growth compared to 2019. It is among a mere handful of large American corporations that is currently hiring masses of new staff. This trend is about the gradual death of brick and mortar family-owned stores.

[www.nasdaq.com > articles > amazon-to-recruit-100000-workers-as-d...](https://www.nasdaq.com/articles/amazon-to-recruit-100000-workers-as-demand-surges-due-to-coronavirus) ▼

Amazon To Recruit 100,000 Workers As Demand Surges Due ...

Mar 17, 2020 - (RTTNews) - **Amazon** is on a **hiring** spree in the U.S. amid the ... **Amazon To Recruit 100,000 Workers As Demand Surges Due To Coronavirus** ... travel are lost or furloughed as part of the crisis created by the **COVID-19** outbreak. ... **The 5 Largest Economies In The World And Their Growth In 2020** Jan 22, ...

Permanent and temporary store closures are a major factor that is increasing online purchases of food and general goods that are home delivered. Road closures are another factor.

Digital

A massive body of public material contextualizes discussions about the Coronavirus COVID-19 economic shutdown with the notion of an inevitable economic reset. This includes nation-specific and global discussions. America features prominently in these spoken word videos and printed sources. This is due to its massive national debt. This liability is presently *circa* USD 24 trillion. This body of evidence exists in mainstream sources such as popular corporate news. For example:

[www.forbes.com](#) › [sites](#) › [danielaraya](#) › [2020/03/31](#) › [the-revolution-...](#) ▼

The Revolution After The Crisis - Forbes

Mar 31, 2020 - **COVID-19 coronavirus** in USA, 100 dollar money bill with face mask. ... a massive **economic** contraction and a total **reset** of the global **economy**. ... severe than either the 2008 global **financial crisis** or the Great **Depression**.

It is also found in higher concentrations among alternative and independent news media.

[joshbersin.com](#) › [2020/03](#) › [the-big-reset-making-sense-of-the-corona...](#) ▼

The Big Reset: Making Sense Of The Coronavirus Crisis ...

Mar 22, 2020 - As I discussed last week (People First, **Economics** Second), the only way to ... The first big **Reset** is that we're going to make **digital**, remote work ... Upwards of 50 million **Americans** could possibly work at home. ... Pour **money** into your employee listening strategy. ...

Speculation about local and global Jubilee debt forgiveness is popular. This is because the global fiat financial system is awash with hundreds of trillions of dollars of unserviceable debts. This forgiveness may be universal or narrow. Student loan forgiveness is an example of the latter.

[www.wsj.com](#) › [articles](#) › [student-loan-debt-relief-offers-support-to-an-e...](#)

Student-Loan Debt Relief Offers Support to an Economy ...

Mar 20, 2020 - Student-Loan **Debt** Relief Offers Support to an **Economy** Battered by **Coronavirus** ... stimulate the **coronavirus**-buffeted **economy**: its \$1.5 trillion student-loan portfolio. ...



This forecasting journal special edition is an independent publication. It covers most of the key issues that surround the likely global downturn in America and other countries. These include topics such as the outlawing of cash and the switch to national and universal digital currencies. This may include a single universal digital currency that may or may not be backed by precious metals such as gold. Numerous trends support this observation. For example, cash accounts for about 3% of business transactions in America. This figure continues to slide slowly on an annual basis.

Corporate fake news mockingbird media are propagating the message that notes and coins can spread COVID-19 among customers and cashiers. This is supposedly one reason to outlaw cash.

This article published by *Technology Review* responds to these baseless claims about filthy cash.

www.technologyreview.com › 2020/03/12 › coronavirus-contaminate... ▼

No, coronavirus is not a good argument for quitting cash | MIT ...

Mar 12, 2020 - ... pushing to move away from **notes** and **coins** in the name of convenience and cost. ... For **Covid-19**, it appears that people become infected by inhaling particles ... But that message hasn't quelled fears of "**virus-tainted**" dollars, ... The **messy** network of labs rushing to increase testing capacity has some big ...

Author: Mike Orcutt.

It is near-certain that the so-called ‘truths’ about the Bitcoin fairy tale bear close to zero resemblance to the lies spread by trillionaire institutions such as the Rothschild Crime Family and its magazine, *Time*. This crime family part-own and manage the imploding Bank for International Settlements. This secretive Swiss bank monopolizes the dying global SWIFT fiat financial system.



During April 2014, the Rothschild Crime Family afforded Bitcoin hundreds of millions of dollars in free advertising by featuring this so-called digital ‘coin’ on the cover of its infamous magazine. The Rothschild Crime Family would not offer this amount of free advertising to a maverick currency if this coin truly posed a threat to their monopoly control over banking and finance.

A fair and logical guess is that the Rothschild Crime Family have a strong preference to

transition to a mandatory one world digital currency monopoly system. This model offers key advantages to authoritarian regimes who aim to form a one world government. Every transaction conducted by each citizen could be tracked by a one world government. Dissident citizens could be instantly locked out of this single financial system. Governments could also delete the digital balances of dissidents. Cash is problematic for totalitarian regimes. Citizens can bury cash in their garden. They may also conceal lawful activities such as the purchase of 2nd Amendment supplies.

Deep in your huge heart and logical brain, do you *truly* believe that one mystery man ‘Satoshi Nakamoto’ (A hook to satanism) is able to run a multi-trillion dollars digital currency empire that evades the detection skills of computer programmers employed by well-funded intelligence agencies such as the CIA, FBI, MI6, Mossad, Interpol and the KGB? Of course, no such mystery person exists. Bitcoin is a price rigged digital spy network. It was invented and is administered/ owned by a powerful cartel. The Rothschilds or the House of Windsor Crime Family, perhaps?



This free 46-pages book is a succinct introduction to the essentials of digital (crypto) currencies such as Bitcoin and Ethereum. It covers key topics such as proven price volatility and surveillance. References to the so-called ‘Mark of the Beast’ are a dominant theme in videos and print publications that forebode the dangers of a mandatory digital one currency system. Most Americans and Westerners as a collective subscribe to Abrahamic religions. This likely explains such references to the Book of Revelation.

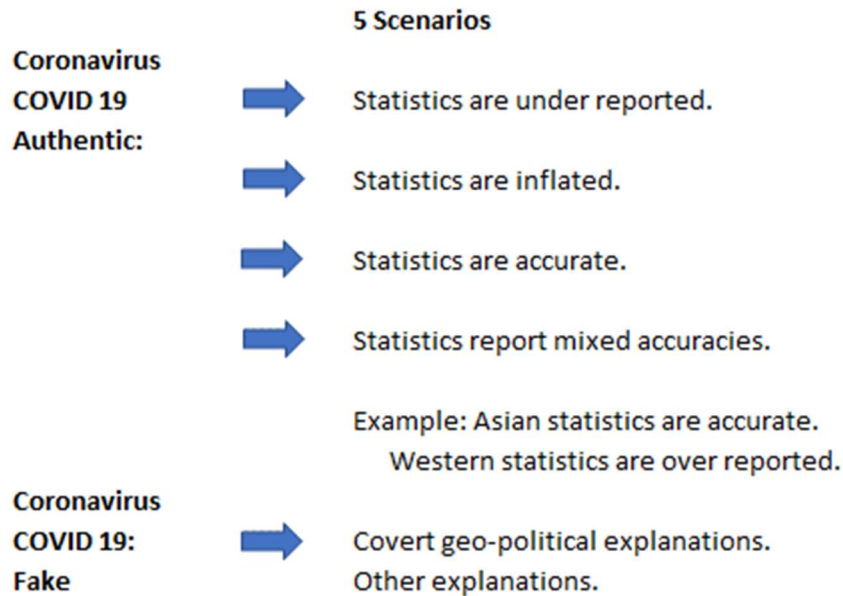
Concluding his letter, **Forbes** eventually urged **Zuckerberg** to consider changing **Libra's name** to the “**Mark**,” referencing the bad luck history of the “**Libra**” term. Specifically, he reminded that the “**Libra**” was used to refer to a measure of the weight from the destroyed Roman Empire. Jun 28, 2019 finance.yahoo.com › news › steve-forbes-tells-zuckerberg-1



Mark of the Beast?

Image: BBC

Reconciliation



Example

The CoronaVirus Cover Op 2020

1. Get Civilians and Children off the Streets, Schools and Public Events. Prevents Cabal doing mass killings for distraction, or to take revenge.
2. Quarantine : Cover for Mass Arrests. "Self-quarantine" is the World Leader and Hollywood Celeb version of the CEO "resignation".
3. Shut down Airports, and Borders = No Escape for Cabal. (Earthquakes in Glen Falls, NY = destroying remaining DUMB hide-outs and shuttles).
4. Capture/Execute Cabal figure heads and Celebs SWIFTLY, without having to RedPill the Public which can come later, after the dust has settled.
5. 0% Payroll Tax, extend 4/15 Tax Deadline = Restructure the IRS. Cut off Tax Revenue to corrupt IRS money funnel to Cabal.
6. Draining The Swamp Operation.... Disguised as a Public Health



Osto (2020)

The premise that underpins this book appears on its cover page. In a world of fake news, fake elite university research, fake NGOs and fake government data, it is near-impossible to know the who, what, when, where, why and how of the Coronavirus COVID-19. If such a virus exists. This author's body of works published in the 15 months prior to the Coronavirus outbreak predicted that a civilization and economic reset was inevitable and imminent. The hundreds of trillions of dollars in toxic, unpayable debt that floods our mafia global financial system is the obvious red flag. One doesn't need the prophetic skills of Nostradamus to foresee this unfolding fate.

Pre February 2020, it appeared that the globalist Deep State cartel aimed to use a Project Blue Beam–Antarctica disclosure distraction combo to create global fear and panic. I offer begrudged kudos to the Deep State for choosing COVID-19. From their wicked angle, COVID-19 ticks every box. This scam enables controllers behind the curtain to blame cash for transmission. Bye cash. Hello cryptocurrency trash. A microchip implant Mark of the Zuckerbeast surveillance state.

Biowarfare is the only event that triggers ever-lasting panic that is visually rich. Face masks galore. Social distancing laws prevent protests. The fear of an unknown invisible enemy suppresses human immune systems and civilian uprising. The mass bankrupting of small and medium family businesses unfolds in real time. Simultaneously, farms are failing. Hunger Games on the horizon?

The mass arrests of Australians who stroll their sandy beaches should be the avatar for the COVID-19 false flag scam. “We shall fight *them* on the beaches” may be an apt slogan to salvage.

NESARA

Download free at www.journalistethics.com

NESARA

The National Economic Stabilization and Recovery Act

108th CONGRESS

2nd Session

H. R. _____

(This bill has not yet been introduced into Congress)

To amend the Federal Reserve Act of 1913, as amended; and the Internal Revenue Code of 1939, as amended; in order to secure for the American people their unalienable right to Life, Liberty, and Property.

IN THE HOUSE OF REPRESENTATIVES

The Facts

For those who can handle the truth, the COVID-19 scam is most likely being exploited by all sides of the spectrum. Black (nefarious), white (freedom loving) and grey (fluid loyalties) may be apt analogies of sides.

The only questions that arouses this author is who started this COVID-19 scam, where and

when. Why is an easy question. Competing agents' motives are as transparent as pure crystal. This author suspects that the anti-Trump Administration Deep State crime cartel masterminded the 5G microwave attack – oops, I mean the COVID-19 outbreak. Donald Trump's essential financial reset was long planned to occur in America during his second term. This plan involved the devolution of the criminal, enslaving Federal Reserve. Pre 2020, the Federal Reserve was a European owned crime agency. It was never a Federal entity and did not hold America's reserves.

The 5G microwave attack/COVID-19/whatever false flag imposed, forced America's Administration to fast track the installation of an overdue financial reset that will ultimately free humanity from child trafficking Reptilian Overlords: Rome, Royals, Rothschilds and Rockefellers.



The vague conclusion outlined on page 68 is fiercely contested. All so-called 'knowledge' is contestable. The truth about COVID-19 may be an inversion of the planned false flag digital currency agenda.

According to thousands of popular and alternative media stories, COVID-19 originated in Hubei Province. Patient zero transmitted from a fruit bat to a human. The rest is history in the making.

Glorifying semi-achievements and concealing the state's failure is the norm in Beijing. An ever-growing number of governments, beyond Washington DC, blatantly finger Beijing as the arch culprit. This includes business partners such as corporate fake news. It also includes Canberra and Ottawa, whose *modus operandi* previously kow towed to Beijing in self-humiliating fashion.

Politicians are demanding answers from China about coronavirus. Some want to take things even further

[abc.net.au/news/2020-04-17/could-coronavirus-reset-the-way-the-world-interac](https://www.abc.net.au/news/2020-04-17/could-coronavirus-reset-the-way-the-world-interac)

Deputy Prime Minister Michael McCormack agrees China has some explaining to do, though maybe not right now. "Yes, certainly china does have some questions to answer over COVID-19 ... but at the moment ... we need to get through this crisis," he said.

The truth or falsity of the Wuhan/CCP/China Virus narratives imagine COVID-19 as real. It can be spread globally via passengers. Queen Corona size 5G towers cannot. 5G microwave emitting towers may cause Altitude Sicknesses like symptoms as reported by medical doctors in ICU units.

90°



He said Peking Duck Soup. She said Pirbright. Sore losers. Scorched Earth partners? 2020 is an election year. The global Swamp Draining Man is popular. The scale of the COVID-19 scam dwarf pandemics of the last century. Bar one. Why is this so? Perhaps this article aids your looking glass.

Annals of Internal Medicine

SPECIAL ARTICLE

mfprac.com/web2019/07literature/literature/Misc/GlobalID_Paules.pdf

What Recent History Has Taught Us About Responding to Emerging Infectious Disease Threats

Catharine I. Paules, MD; Robert W. Eisinger, PhD; Hilary D. Marston, MD, MPH; and Anthony S. Fauci, MD

Presidential administrations face any number of unexpected crises during their tenure, and global pandemics are among the most challenging. As of January 2017, one of the authors had served under 5 presidents as the director of the National Institute of Allergy and Infectious Diseases at the National Institutes of Health. During the Obama administration, the government faced unexpected challenges arising from the HIV/AIDS pandemic, which began during the Clinton administration, to the recent Zika outbreak, which started during the Obama administration. These experiences underscored the need to optimize



preparation for and response to these threats whenever and wherever they emerge. This article recounts selected outbreaks occurring during this period and highlights lessons that were learned that can be applied to the infectious disease threats that will inevitably be faced in the current presidential administration and beyond.

Ann Intern Med. 2017;167:805-811. doi:10.7326/M17-2496

Annals.org

For author affiliations, see end of text.

This article was published at Annals.org on 14 November 2017.

mauaji ya kimbari? *All vessels voyage to Venice.*

Gates



BUSINESS
INSIDER



Subscribe

The UK plans to issue coronavirus 'immunity passports' so people can leave the lockdown early

Adam Bienkov 19 hours ago



“First we’ve got population. The world today has 6.8 billion people. That’s headed up to about 9 billion. Now if we do a really good job on new vaccines, healthcare, reproductive health services, we can lower that by perhaps 10 or 15%”

Bill Gates (2010)

Please watch this Bill Gates presentation in context to derive your own meaning.

Does this presentation seem real, or it is Computer Generated Imagery, or something else?

www.youtube.com/watch?v=4vzFeiKH1jQ

In merely this author’s opinion, Bill Gates is among the most maligned public figures in alternative and social network media that question dominant narratives about Healthcare and so-called ‘Big Pharma’. His Instagram account is among the most ‘trolled’ (i.e. despised). For example, see: www.instagram.com/p/B6JfheogQWK/ This meme makes a point about Gates’s ‘qualifications’.



Compassion (2020)

Alphabet Order and Month	Aircraft Identification Mark	Points of Departure & Arrival	Miles Flown	Flight No.	Remarks, Passengers, Manifests, Endorsements	Number of Landings	Altitude Category...
1	B-727-318	PBI BQK	507	807	LV	1/1	1/1
2	G-1159A	DFW DFW			RECEIVED 10/16/2008 - 10/16/2008 10/16/2008 10:30 AM 10/16/2008	3/3	2/0
3	G-1159B	TEB PBI			LV	1/1	3/0
4	"	TEB ABR			LV	1/1	2/0
5	"	TEB AQB			LV	1/1	4/1
6	"	LOG TEB			LV	1/1	1/7
7	"	TEB PBI			LV	1/1	4/6
8	"	TEB PBI			LV	1/1	2/5

This writer encourages people to check authority primary sources and be fair in character evaluations. Bill Gates possibly flew on Epstein’s plane once only within continental America. Claims about ‘Documented Thief’ are not clear to this author.

dailymail.co.uk/news/article-7377133/Bill-Gates-REFUSES-reveal-flew-Lolita-Express-Jeffrey-Epstein-

Share or comment on this article: Bill Gates REFUSES to reveal why he flew on Lolita Express with Jeffrey Epstein after prison release

Why is Bill Gates often cited by media, NGOs and governments as an authority on immunology, epidemiology and vaccines? Gates does not hold an earned Diploma or Degree. It is fair to question whether Gates invested billions of dollars to purchase his fake public authority persona. Spy agency Microsoft was possibly created by a House of Windsor asset such as the pre 2017 CIA.



This page and the next invites free-willed intelligent readers like you to investigate popular themes and unsubstantiated claims made about the Bill and Melinda Gates Foundation. Melinda, show left is Bill's – wife.



India Holds Bill Gates Accountable For His Vaccine Crimes ...

 <https://vactruth.com/2014/10/05/bill-gates-vaccine-crimes/>

As **Bill Gates** faces a lawsuit for the illegal testing of tribal children in India, it appears that his crimes against humanity have finally caught up with him. A recent report published by Health Impact News has reported that the **Gates** Foundation has found itself facing a pending lawsuit, due to an investigation that is [...]

www.academia.edu › Eugenicis ▾ [academia.edu/10348943/Eugenicis](https://www.academia.edu/10348943/Eugenicis) Nakato Lewis

(PDF) Eugenicis | Nakato Lewis - Academia.edu

Bill Gates, who has stated in a TED **depopulation** experiments. The research is ongoing. presentation, that **vaccines** are a favored method of Undoubtedly, we ...

The Gates Foundation publicly stated that a vaccine is the likely solution to the COVID-19 crisis.

[gatesfoundation.org/TheOptimist/Articles/coronavirus-mark-suzman-therapeutics](https://www.gatesfoundation.org/TheOptimist/Articles/coronavirus-mark-suzman-therapeutics)

Ultimately, our goal with the COVID-19 Therapeutics Accelerator is to do for treatment what CEPI does for vaccines. That requires governments, private enterprise, and

This *Times* article is correct insofar as it states that there are a sea of independent commentators and researchers who know or suspect that Bill Gates was involved in the creation of COVID-19.

[www.nytimes.com > bill-gates-virus-conspiracy-theories](https://www.nytimes.com/bill-gates-virus-conspiracy-theories) nytimes.com/2020/04/17/technology

Bill Gates, at Odds With Trump on Virus, Becomes a Right ...

2 days ago - The **Microsoft** co-founder turned philanthropist has been attacked with falsehoods that he created the **coronavirus** and wants to profit from it.

The Bill & Melinda Gates Foundation donated \$5.5 million to the Pirbright Institute two weeks prior to the Coronavirus outbreak in Wuhan, China. Dr Erica Bickerton, who is a co-creator of the patented Coronavirus, is a co-recipient of this generous funding.

Researchers from The Pirbright Institute have been awarded US \$5.5 million by the [Bill & Melinda Gates Foundation](#) to establish a Livestock Antibody Hub aimed at improving animal and human health globally. The ambitious programme of work will see extensive collaboration between multiple UK research organisations in order to utilise research outcomes in livestock disease and immunology to support human health as part of the 'One Health' agenda. pirbright.ac.uk/news/2019/11/bill-melinda-gates-foundation-funds-development-pirbright-s-livestock-antibody-hub Six leading scientists from Pirbright will be involved in the project, including [Professor John Hammond](#), [Professor Venugopal Nair](#), [Dr Simon Graham](#), [Dr Elma Tchilian](#), [Professor Munir Iqbal](#) and [Dr Erica Bickerton](#).

Gates's Foundation co-hosted Event 201 in October 2019; the New York City pandemic forum.

[www.centerforhealthsecurity.org > event201](https://www.centerforhealthsecurity.org/event201)

Event 201, a pandemic exercise to illustrate preparedness ...

The Johns Hopkins Center for Health Security in partnership with the World Economic Forum and the Bill and **Melinda Gates** Foundation hosted **Event 201**, ...



Tedros Adhanom Ghebreyesus @DrTedros

WHO & #China have enjoyed a long & productive partnership. WHO is proud to have supported the overseas training of more than 2000 Chinese #HealthWorkers. Grateful for China's commitment to strengthening health systems in other countries through its Belt and Road Initiative.



2,940 11:30 AM - Jan 16, 2019

A growing number of reporters are connecting the dots to Bill and Melinda Gates's promotion of human trans projects and vampire-like cults that center around number 666. Bill Gates, the world's second richest man, is the second largest donor to the World Health Organization (2019). The mass discredited WHO recently displayed

Shiva, the Hindu Goddess of destruction, at a public meeting with Chinese officials. CERN adopted Shiva as its welcome mascot. CERN is the secretive research lab that has a 666 logo.

In April 2020, Microsoft cancelled its funding of a transhumanism art project that featured an artist who is widely regarded as the world's preminent creative who promotes



cannibalism, blood worship and human sacrifice. This

scandalous event was widely reported by established mainstream media such as *The Times* (UK).

www.thetimes.co.uk > article > microsoft-drops-marina-ab...

Microsoft drops Marina Abramovic ad after claims of satanism ...

3 days ago - **Marina Abramovic** had been deployed by **Microsoft** to promote "performance art

Gates was recently extracted from Microsoft's Board. This is his first absence in *circa* 30 years.

This author questions if Gates is Game Over. Has Gates been replaced with AI? A fitting finale.

www.businessinsider.com > bill-gates-steps-down-micro... Mar 13, 2020

Bill Gates steps down from Microsoft and Berkshire Hathaway ...

This subsection invites readers to freely investigate if connections exist between these words.

- Coronavirus COVID-19
- Bill Gates, Bill & Melinda Gates Foundation



**WuXi AppTec
(Wuhan)**

Small molecule drug discovery
and research services

wuxiapptec.com/about/location

666 Gaoxin Road East Lake
High-tech Development Zone
Wuhan 430075, China

projectcamelotportal.com > ... > ARTICLES ▾

BACKGROUND AND KEY INFO RE CORONAVIRUS AND ...

7 days ago - 1) George **Soros** owns **WuXi Pharma Biotech** Laboratory, located at **666 Gaoxin Rd.**, East Lake High Tech Development Zone, **Wuhan**, 430075 ...

There is much disinformation in the public domain. Independent research is recommended.

Gates has publicly argued for the need to reduce global CO₂ emissions to zero. This advice from a college dropout who is qualified in nothing is insanity. Plants and trees naturally release CO₂.

forbes.com/sites/randalllane/2016/02/23/bill-gates-just-released-formula-that-will-solve-climate-change/#6a0dda707c73

P = Population

S = Services used

E = Energy consumption

C = CO₂ created per Energy unit (E)

$P \times S \times E \times C = \text{CO}_2$ (carbon dioxide output).

According to Gates's formula, reducing the human population reduces CO₂ output. Bill Gates Senior was an Executive Board Member of Planned Parenthood – a population control entity.

magazine.washington.edu/feature/the-immense-impact-of-bill-gates-sr/

Washington bar associations. He worked on the boards of countless organizations including United Way and Planned Parenthood. In the '70s, Gates ran Seattle Public

The Gates brand was born in the 1980s. It is owned by the House of Windsor Crime Family. He is part of their Committee 300. The execution, imprisonment or natural death of a Committee 300 asset is usually announced decades later. It took decades and billions of dollars in resources to build globally influential brands like Zuckerberg, Soros and Gates. This author merely suspects that nowadays the Bill Gates depopulation vaccine brand was replaced by one or more of: computer generated imagery, Getty Images, holograms, clones and body doubles. Moving images of Gates look noticeably younger, smoother and digitized compared to a few years ago.

All images dated 2020.

Middle: CNN Interview

Left and center: Moving images.

JPEG file image.



I encourage readers to freely compare online moving and static images of Gates since *circa* 2015.

www.cnn.com › [style](#) › [article](#) › [doomsday-luxury-bun...](#) ▼

Luxury doomsday bunkers: How the mega-rich are preparing ...

Aug 7, 2019 - Billionaire **bunkers**: How the 1% are preparing for the apocalypse ... stars and tech executives (**Bill Gates** is rumored to have **bunkers** at all his ... Company, says 2016 sales for their

Re: The first image, above left, with the plain pink background and sterile cyborg eyes.

What is the circus trick concept known as 'Green Screen Video Making Technique'?

“In the event that I am reincarnated, I would like to return as a deadly virus, to contribute something to solving overpopulation (Folk lore mass replicated secondary citation, 1988).”

Queen’s Consort, House of Windsor Crime Family

www.qinetiq.com › news › 2020/04 › uks-industry-exp... ▼

UK industry experts join forces to create hotbed for ... - QinetiQ

Apr 15, 2020 - In response to our evolving telecoms security policies and lessons learned from the 5G Testbeds and Trials Programme, the UK5G Testbed ...

On death

theguardian.com/lifeandstyle/2009/jun/21/quotes-by-prince-philip

In the event that I am reincarnated, I would like to return as a deadly virus, to contribute something to solving overpopulation (1988)

Are some, most or all vaccines multi-trillion dollars revenue generating scams?

Are these clear liquids loaded with saline (psychological placebos) or mercury (depopulation)?

www.dictionary.com › browse › corona ▼

Corona | Definition of Corona at Dictionary.com

Corona entered English around 1555–65. It was borrowed directly from the Latin corōna, meaning “garland, wreath, crown.” Its plural form is corōnae. A verb ...

**U.S. Pat. No.
10, 130,701
CORONAVIRUS,
issued Nov. 20,
2018**

americans4innovation.blogspot.com/2020/01/coronavirus-traced-to-british-crown.html

CGI hairline?

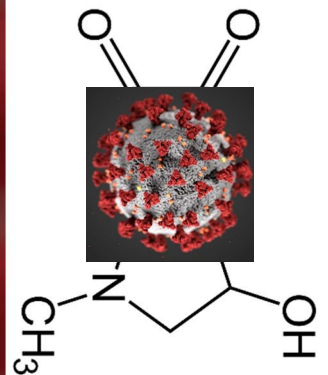
Trustees:

Sir Bertie Ross, KCVO, FRICS,
Prince Charles confidante
Dr. Venessa Mayatt OBE
More

Assignee:
The Pirbright Institute
UK Research & Innovation
Pirbright, Woking, Surrey
UK

Funders:

DARPA, Bill & Melinda
Gates Foundation,
BBSRC/SERCO,
Wellcome Trust, UKRI,
WHO, EU, Defra, UN



*All lanes lead
to London.*

Knowledge reset

Academic fraud is as rampant as fake news, fake government statistics and depopulation pharmaceuticals. These entities are mutually reinforcing. News media bestow wealth and power on fake camera-loving physicists like phony PhD Dr. Tyson. His friends publish fake research at fake Medical research universities that do not conduct coursework degrees, such as Rockefeller.

This author believed in the geological concept of 'Fault Lines' for 36 years. Mostly because this concept is repeated in millions of spaces such as fake news, school textbooks and documentaries.

This author fearlessly questions whether some, most or all fault lines reported by news and textbooks are fake. Are mass earthquakes in places like Los Angeles, Iran and Japan caused by underground nuclear tests? Perhaps tunnel creating underground bombs are the cause or part cause. Merely stating these ideas can cause many, maybe most people to become enraged. Because it challenges their belief system – that humanity can trust those who control narratives.



The noun 'peer reviewed' research means nothing. Most corrupt elite science researchers hand-select like-minded business partners as reviewers.

Winners who control society pen our

fake history books. The same for scientific theory. Does $E=MC_{33}$? Maybe at the Gates of Hell.

References

ABC (2020), *Politicians are demanding answers from China about coronavirus. Some want to take things even further*, www.abc.net.au/news/2020-04-17/could-coronavirus-reset-the-way-the-world-interacts-with-china/12158180

Ape Honcho (2020), *5G Towers Set On Fire Across UK Amid Coronavirus Fears*, www.youtube.com/watch?v=JeYBSKIQ1U0

BBC (2020a), *Coronavirus outbreak eats into EU unity*, www.bbc.com/news/world-europe-52135816

BBC (2020b), *Li Wenliang: Coronavirus kills Chinese whistleblower doctor*, www.bbc.com/news/world-asia-china-51403795

BBC (2020c), *Mast fire probe amid 5G coronavirus claims*, www.bbc.com/news/uk-england-52164358

Bill Gates (2020), *Bill Gates explains how vaccines work*, www.youtube.com/watch?v=hh6xTguRn9o&t=14s

Bloomberg (2020a), *Bill Gates is also WFH*, www.bloomberg.com/news/videos/2020-03-19/bill-gates-is-also-wfh-video

Bloomberg (Wadhams) (2020b), *China Concealed Extent of Virus Outbreak, U.S. Intelligence Says*, www.bloomberg.com/news/articles/2020-04-01/china-concealed-extent-of-virus-outbreak-u-s-intelligence-says

Bloomberg (Zhao, S.)(2020c), *China's Mobile Carriers Lose 21 Million Users as Virus Bites*, www.bloomberg.com/news/articles/2020-03-23/china-s-mobile-carriers-lose-15-million-users-as-virus-bites

Bloomberg (Ebhardt, T. et al.)(2020d), *99% of Those Who Died From Virus Had Other Illness, Italy Says*, www.bloomberg.com/news/articles/2020-03-18/99-of-those-who-died-from-virus-had-other-illness-italy-says

Boston Globe (Sweeney, E.) (2020), *Eight Catholic priests from Boston Archdiocese test positive for COVID-19*, www.bostonglobe.com/2020/04/01/metro/seven-catholic-priests-test-positive-covid-19-boston-archdiocese/

Business Insider (Leskin, P.) (2020), *Italy surpasses its own record death toll for a single day, with 793 coronavirus deaths in 24 hours*, www.businessinsider.com/coronavirus-italy-again-sets-single-day-death-toll-record-793-2020-3

Business Insider (Bienkov, A.) (2020), *The UK plans to issue coronavirus 'immunity passports' so people can leave the lockdown early*, www.businessinsider.com/uk-plans-coronavirus-immunity-passports-so-brits-can-leave-lockdown-2020-4

CBS News (O’Kaine, K.) (2020), *Trump listens “Even if we disagree on some things”*,
www.cbsnews.com/news/coronavirus-trump-fauci-interview-meme-listens-disagree-contradiction-white-house-task-force-press-briefings/

CDC (2020a), *Coronavirus Disease 2019 (COVID-19): Cases in U.S.*,
www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html

CDC (2020b), *COVID-19 Testing at Laboratories: Questions and Answers*,
www.cdc.gov/coronavirus/2019-ncov/lab/testing-laboratories.html

CDC (2020c), *Medicines for the Prevention of Malaria While Traveling Hydroxychloroquine (Plaquenil™)*, www.cdc.gov/malaria/resources/pdf/fsp/drugs/hydroxychloroquine.pdf

Celente, G. (2020), ‘Economic Epidemic: From Dirty Cash to Digital Trash’, *Trends Journal – Special Edition*, 24 March 2020, <https://trendsresearch.com>

Center for Health Security (2020), *Event 201*, www.centerforhealthsecurity.org/event201/

CERN (2020), *CERN Logo*, www.home.cern

CNBC (2016), *Facebook overestimated key video advertising metric: WSJ*,
www.cnbc.com/2016/09/22/facebook-overestimated-key-video-advertising-metric-wsj.html

CNN (Yeung, J. *et al.*) (2020a), *April 11 coronavirus news*,
www.cnn.com/world/live-news/coronavirus-pandemic-04-11-20/h_a72b3899f03070ecaad11f4375f1f995

CNN (2020b), *US could see millions of coronavirus cases and 100,000 or more deaths, Fauci say*,
www.cnn.com/2020/03/29/politics/coronavirus-deaths-cases-anthony-fauci-cnntv/index.html

Compassion (2020), *Bill Gates Meme*, www.namepros.com/threads/COVID-19-coronavirus-updates-and-news.1178134/page-112#post-7729309

Crooked Flags (2020), *Are DUMB Underground Bases in the Same Locations as Earthquakes*,
www.youtube.com/watch?v=h1zAhGKjblA

Daily Mail (2019), *Bill Gates REFUSES to reveal why he flew on Lolita Express with Jeffrey Epstein four years AFTER his release from prison while the billionaire was still chairman of Microsoft*,
www.dailymail.co.uk/news/article-7377133/Bill-Gates-REFUSES-reveal-flew-Lolita-Express-Jeffrey-Epstein-prison-release.html

Daily Mail (2020), *Coronavirus conspiracies debunked: 5G isn't responsible for the deadly infection and it didn't crash-land on Earth on a meteor*, www.dailymail.co.uk/news/article-8079177/Coronavirus-myths-5G-isnt-responsible-isnt-man-hand-dryers-wont-kill-it.html

Donald Trump (2020a), *Fake news Tweet Thread*,

<https://twitter.com/realdonaldtrump/status/1249712404260421633>

Donald Trump (2020b), *HYDROXYCHLOROQUINE & AZITHROMYCIN*, 10:13 AM · Mar 21, 2020,

<https://twitter.com/realDonaldTrump/status/1241367239900778501>

Donald Trump (2020c), *“Once we OPEN” Tweet dated 10:52 AM · Apr 8, 2020*,

<https://twitter.com/realDonaldTrump/status/1247900240155295745>

Donald Trump (2020d), *Tweet April 7, 2020 (WHO, China centric)*,

<https://twitter.com/realdonaldtrump/status/1247540701291638787>

Ellen DeGeneres (2020), *Smart people Tweet: March 23*,

https://twitter.com/TheEllenShow?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor

European Centre for Disease Prevention and Control (ECDC) (2020), *Situation update worldwide*,

as of 13 April 2020, www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases

European Patent Office (2015), *Original document: EP3172319 (B1) — 2019-11-20: Coronavirus*,

<https://worldwide.espacenet.com/publicationDetails/originalDocument?CC=EP&NR=3172319B>

[1&KC=B1&FT=D&ND=&date=20191120&DB=&locale=en_EP](https://worldwide.espacenet.com/publicationDetails/originalDocument?CC=EP&NR=3172319B1&KC=B1&FT=D&ND=&date=20191120&DB=&locale=en_EP)

Exosome RNA (2020), *Researchers expanding exosome detection technologies for point-of-care novel coronavirus tests*, www.exosome-rna.com/researchers-expanding-exosome-detection-technologies-for-point-of-care-novel-coronavirus-tests/

Financial Times (2020), *Transcript: Bill Gates speaks to the FT about the global fight against coronavirus*, www.ft.com/content/13ddacc4-0ae4-4be1-95c5-1a32ab15956a

Forbes (Lane, R. (2016), *Bill Gates Just Released The Math Formula That Will Solve Climate Change*, www.forbes.com/sites/randalllane/2016/02/23/bill-gates-just-released-the-math-formula-that-will-solve-climate-change/#6a0dda707c73

Forbes (Pertis, M.) (2017), *From Rockefeller To Gates...100 Years Of Wealth And Disruption*, www.forbes.com/sites/mikeperlis/2017/04/03/from-rockefeller-to-gates-100-years-of-wealth-and-disruption/#6a9fbf2513f6

Fox News (2020), *Tom Cotton says WHO leader has 'reputation for corruption': He is in China's pocket*, www.foxnews.com/media/sen-tom-cotton-world-health-organization-coronavirus-china

Fox News (Olson, T.) (2020), *Class-action suit seeks to bill China for coronavirus fallout: 'We want the court to make them pay'*, www.foxnews.com/politics/class-action-suit-seeks-to-make-china-pay

Gates Foundation (2020), *Announcing the COVID-19 Therapeutics Accelerator*, www.gatesfoundation.org/TheOptimist/Articles/coronavirus-mark-suzman-therapeutics

Harvard University (2020), *COVID-19 basics*,

<https://www.health.harvard.edu/diseases-and-conditions/covid-19-basics>

Huxley, A. (1932), *Brave New World*, England: Chatto & Windus,

https://archive.org/details/ost-english-brave_new_world_aldous_huxley/mode/2up

<https://epdf.pub/brave-new-world2e1e8b8b5bee020b6c3dce1f13ecef9482074.html>

ljahstars (2020), *VACCINATION IMPLEMENTATION DEPOPULATION PROGRAMME , YOU NEVER SAW THIS COMING!*, www.youtube.com/watch?v=K448CEa31rs

Johns Hopkins University (Pearce, K.)(2019), *Pandemic simulation exercise spotlights massive preparedness gap*, <https://hub.jhu.edu/2019/11/06/event-201-health-security/>

Johns Hopkins University (Sauer, L.)(2020), *What Is Coronavirus?*,

www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus

Justia (2015), *Patents Assigned to Pirbright Institute*,

<https://patents.justia.com/assignee/pirbright-institute>

Kostoff, R. (2020), *THE LARGEST UNETHICAL MEDICAL EXPERIMENT IN HUMAN HISTORY*,

https://smartech.gatech.edu/bitstream/handle/1853/62452/LARGEST_UNETHICAL_MEDICAL_EXPERIMENT_FINAL.pdf

Lewis, N. (2014), *Eugenics*, www.academia.edu/10348943/Eugenics

Media Matters (2020), *Fox News contributor: I'm seeing videos on Twitter of empty hospital parking lots*, www.mediamatters.org/coronavirus-covid-19/fox-news-contributor-i-am-seeing-videos-twitter-empty-hospital-parking-lots

Medi Line Plus (US Government (2020), *Viral infections*,
<https://medlineplus.gov/viralinfections.html>

Michigan.gov (2020), *Coronavirus: Michigan Data*,
www.michigan.gov/coronavirus/0,9753,7-406-98163_98173---,00.html

MPR (Bakst, B.)(2020), *COVID-19 death certificate change stirs controversy*,
www.mprnews.org/story/2020/04/07/COVID-19-death-certificate-change-stirs-controversy

MSN (2020), *67 Italian priests have died of virus: report*,
www.msn.com/en-sg/news/world/67-italian-priests-have-died-of-virus-report/ar-BB11lc7A

NASDAQ (2020), *Amazon To Recruit 100,000 Workers As Demand Surges Due To Coronavirus*,
www.nasdaq.com/articles/amazon-to-recruit-100000-workers-as-demand-surges-due-to-coronavirus-2020-03-17

National Library of Medicine (2006), *Severe acute respiratory syndrome coronavirus, Patent: S2006257852*, <https://pubchem.ncbi.nlm.nih.gov/patent/US2006257852#section=Primary-Patent-Identifier>

National Review (McCarthy, A.) (2020), *More Thoughts on Computing the COVID-19 Fatality Rate*,
www.nationalreview.com/2020/03/coronavirus-fatality-rate-computing-difficult/#slide-1

New York State Governor (2020), *Amid Ongoing COVID-19 Pandemic, Governor Cuomo Issues Executive Order Requiring All People in New York to Wear Masks or Face Coverings in Public*,
www.governor.ny.gov/news/amid-ongoing-covid-19-pandemic-governor-cuomo-issues-executive-order-requiring-all-people-new

New York Times (2018), *Catholic Priests Abused 1,000 Children in Pennsylvania*,
www.nytimes.com/2018/08/14/us/catholic-church-sex-abuse-pennsylvania.html

NPR (2020a), *Chinese Authorities Admit Improper Response To Coronavirus Whistleblower*,
www.npr.org/sections/coronavirus-live-updates/2020/03/19/818295972/chinese-authorities-admit-improper-response-to-coronavirus-whistleblower

NPR (Feng, E.) (2020b), *China Has Built Over 20 Mass Quarantine Centers For Coronavirus Patients In Wuhan*,
www.npr.org/2020/02/24/808995258/china-has-built-over-20-mass-quarantine-centers-for-coronavirus-patients-in-wuhan

NY Mag (Bevans, V.) (2020), *Will the Coronavirus Tear Europe Apart?*,
<https://nymag.com/intelligencer/2020/04/will-the-coronavirus-tear-europe-apart.html>

On Demand News (2020), *Shocking Xenophobic Attacks in Italy in Wake of Coronavirus Outbreak*,
www.youtube.com/watch?v=mDDwi4r82X0

Orwell, G. (1949), *1984*, London, England: Secker & Warburg,
www.globalgreyebooks.com/nineteen-eighty-four-ebook.html

OSTO (2020), *Adrenochrome is made out of our babies*, <https://osto.space/blog/2018/5/30/at-the-bottom-of-the-potus-swamp-global-adrenochrome-production>

Oxford University (2020), *Coronavirus Disease (COVID-19) – Statistics and Research*,
<https://ourworldindata.org/coronavirus>

Paules, C. *et al.* (2017), 'What Recent History Has Taught Us About Responding to Emerging Infectious Disease Threats', *Annals of Internal Medicine*, Vol. 167, No. 11, 5 December 2017, pp. 805–811, www.mfprac.com/web2019/07literature/literature/Misc/GlobalID_Paules.pdf

Pirbright Institute (2020), *Bill & Melinda Gates Foundation funds development of Pirbright's Livestock Antibody Hub supporting animal and human health*,
www.pirbright.ac.uk/news/2019/11/bill-melinda-gates-foundation-funds-development-pirbright%E2%80%99s-livestock-antibody-hub

QUniversity (2020), *Qniversity Episode 10 - It's ALL about The Children*,
www.youtube.com/watch?v=hO2yFcDbiso

Reuters (2020a), *Quarantine like jail joke brings fierce backlash for Ellen DeGeneres*,
www.reuters.com/article/us-health-coronavirus-ellen/quarantine-like-jail-joke-brings-fierce-backlash-for-ellen-degeneres-idUSKCN21Q342

Reuters (Wu, H.) (2020b), *Sealed in: Chinese trapped at home by coronavirus feel the strain*,
www.reuters.com/article/us-china-health-quarantine/sealed-in-chinese-trapped-at-home-by-coronavirus-feel-the-strain-idUSKCN20G0AY

Ruptly (2020), *USA: Chief US immunologist Fauci facepalms when Trump talks of "deep state"*,
www.youtube.com/watch?v=c8xVXrp8cRE

SABC (2020), *SA should brace itself for a new normal: Prof. Karim*,
www.youtube.com/watch?v=l7pjYi2Wzal

SIFTED (Mawad, M.)(2020), *More like COVID-1984*, <https://sifted.eu/articles/covid-1984/>

Statnews (Begley, S.) (2020), *What explains Covid-19's lethality for the elderly? Scientists look to 'twilight' of the immune system*, www.statnews.com/2020/03/30/what-explains-coronavirus-lethality-for-elderly/

Strayer, R. (2020), *Why Social Media Is Crucial for Frontline Physicians in the Fight against COVID-19*, <https://blogs.scientificamerican.com/observations/why-social-media-is-crucial-for-frontline-physicians-in-the-fight-against-covid-19/>

Sydney Morning Herald (Bourke, L.) (2020a), *China should be sued for \$6.5 trillion for coronavirus damages says top UK think tank*, www.smh.com.au/world/europe/china-should-be-sued-for-6-5-trillion-for-coronavirus-damages-says-top-uk-think-tank-20200405-p54h5b.html

Sydney Morning Herald (Singal, P. & Chung, L.) (2020b), *Police issue \$165,000 in COVID-19 fines, but only two in Sydney's worst-affected area*, www.smh.com.au/national/police-issue-165-000-in-covid-19-fines-but-only-two-in-sydney-s-worst-affected-area-20200409-p54ik3.html

Technology Review (Orcutt, Mike) (2020), *No, coronavirus is not a good reason for quitting cash*, www.technologyreview.com/2020/03/12/905341/coronavirus-contaminated-cash-quarantine/

Tedros Adhanom Ghebreyesus (2019) *Tweet: Who & China – January 16, 2019.*

https://twitter.com/DrTedros/status/1085559977597636609?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E1085559977597636609&ref_url=https%3A%2F%2Fwww.breakingisraelnews.com%2F148647%2Fphoto-surfaces-of-who-chief-meeting-chinese-officials-with-shiva-hindu-god-of-destruction%2F

Texas Monthly (Martin, B.) (2020), *Texas Anti-Vaxxers Fear Mandatory COVID-19 Vaccines More Than the Virus Itself*, www.texasmonthly.com/news/texas-anti-vaxxers-fear-mandatory-coronavirus-vaccines/

The Diplomat (Zeneli, B.) (2019), *Italy Signs on to Belt and Road Initiative: EU-China Relations at Crossroads?*, <https://thediplomat.com/2019/04/italy-signs-on-to-belt-and-road-initiative-eu-china-relations-at-crossroads/>

The Epoch Times (2020), *CCP Virus*, <https://www.theepochtimes.com/t-ccp-virus>

The Free Iranian (2018), *2018 Trafficking in Persons Report*,
<https://thefreeiranian.org/articles-and-reports/2018-trafficking-in-persons-report>

The Guardian (Weaver, M.) (2009), *Swine flu could affect third of world's population, says study*,
www.theguardian.com/world/2009/may/12/swine-flu-report-pandemic-predicted

The Guardian (2016), *Are Gates and Rockefeller using their influence to set agenda in poor states?*,
www.theguardian.com/global-development/2016/jan/15/bill-gates-rockefeller-influence-agenda-poor-nations-big-pharma-gm-hunger

The Guardian (Muzi, L.)(2020a), *'As if we were the disease': coronavirus brings prejudice for Italy's Chinese workers*, www.theguardian.com/global-development/2020/mar/25/as-if-we-were-the-disease-coronavirus-brings-prejudice-for-italys-chinese-workers

The Guardian (2020b), *Australia's coronavirus victims: Covid-19 related deaths across the country*,
www.theguardian.com/australia-news/2020/apr/13/australia-coronavirus-victims-deaths-covid-19-related-australian-death-toll

The Guardian (2020c), *China-US standoff escalates as Beijing expels major US media staff*,
www.theguardian.com/world/2020/mar/17/china-to-expel-more-us-journalists-in-latest-tit-for-tat-move

The Guardian (2020d), *The US of Amazon': how the coronavirus has created a governance vacuum the tech giant is quickly filling,*

www.theguardian.com/technology/commentisfree/2020/mar/24/the-us-of-amazon-how-the-coronavirus-has-created-a-governance-vacuum-the-tech-giant-is-quickly-filling

The Hill (Folley, A.) (2020), *WHO pushes back on Trump comment that it's 'China centric',*

<https://thehill.com/homenews/administration/491707-who-pushes-back-on-trump-comment-that-its-china-centric>

The Intercept (Sledge, M.) (2020), *SOUTHERN MAYORS PUSHED GOP GOVERNORS TO TAKE ACTION ON CORONAVIRUS. GOVERNORS PUSHED BACK,*

<https://theintercept.com/2020/04/09/coronavirus-south-mayors-governors/>

The Sun (2020), *DEADLY COVER-UP 'Overwhelmed' China is deliberately faking coronavirus death toll as government 'crumbles' under killer bug outbreak,*

www.thesun.co.uk/news/10886942/overwhelmed-china-deliberately-faking-coronavirus-death-toll-government-crumbles-killer-outbreak/

Time (2020), *The Elusive Digital Coin (Magazine Cover),* April 14, 1988.

Twitter (2020), *Search: Italy coronavirus Chinese,*

https://twitter.com/search?q=italy%20coronavirus%20chinese&src=typed_query

U.S. Surgeon General (2020), *Seriously people- STOP BUYING MASKS!*, Tweet at 7:08 AM · Feb 29, 2020, https://twitter.com/Surgeon_General/status/1233725785283932160

Vactruth (England, C.) (2014), *India Holds Bill Gates Accountable For His Vaccine Crimes*, <https://vactruth.com/2014/10/05/bill-gates-vaccine-crimes/>

Vanity Fair (Ecarma, C.) (2020), *Fox Hosts Now Convinced Coronavirus Death Tolls Are Being Inflated*, www.vanityfair.com/news/2020/04/fox-news-hosts-coronavirus-death-toll-inflated

Vatican News (2020), *Covid-19: First Catholic bishop dies of coronavirus*, www.vaticannews.va/en/church/news/2020-03/covid-19-first-catholic-bishop-dies-of-coronavirus.html

Vyehrah (2020), *DENMARK PASSES MANDATORY CORONAVIRUS VACCINE LAW | ID2020 x VACCINE = MARK OF THE BEAST*, www.youtube.com/watch?v=kMJ9XF2wUUA

Washington Examiner (Brest, M.) (2020), *CBS News blames 'editing mistake' after footage from Italian hospital appears in report on New York coronavirus crisis*, www.washingtonexaminer.com/news/cbs-news-blames-editing-mistake-after-footage-from-italian-hospital-appears-in-report-on-new-york-coronavirus-crisis

Washington Examiner (Gehrke, J.)(2020), *Top Italian official points to chance virus came from Germany as powerful Chinese minimize role in contagion*,

www.washingtonexaminer.com/policy/defense-national-security/top-italian-official-points-to-chance-virus-came-from-germany-as-powerful-chinese-minimize-role-in-contagion

Washington Magazine (2013), *The immense impact of Bill Gates Sr.*,

<https://magazine.washington.edu/feature/the-immense-impact-of-bill-gates-sr/>

Washington Post (Tharoor, I.) (2020), *South Korea's coronavirus success story underscores how the U.S. initially failed*, www.washingtonpost.com/

Washington Post (2020a), *All across the United States, the coronavirus is killing more men than women, data show*, www.washingtonpost.com/health/2020/04/04/coronavirus-men/

Washington Post (Thebault, R.) (2020b), *The coronavirus is infecting and killing black Americans at an alarmingly high rate*, www.washingtonpost.com/nation/2020/04/07/coronavirus-is-infecting-killing-black-americans-an-alarmingly-high-rate-post-analysis-shows/?arc404=true

Washington Times (2020), *Bill Gates and his coronavirus conflicts of interest*,

www.washingtontimes.com/news/2020/apr/2/bill-gates-and-his-coronavirus-conflicts-of-intere/

White House (2020a), *Remarks by President Trump, Vice President Pence, and Members of the Coronavirus Task Force in Press Conference: HEALTHCARE, Issued on: February 27, 2020*,

www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-conference/

White House (2020b), *Remarks by President Trump, Vice President Pence, and Members of the Coronavirus Task Force in Press Briefing, Healthcare, Issued on: April 8, 2020,*

www.whitehouse.gov/briefings-statements/remarks-president-trump-vice-president-pence-members-coronavirus-task-force-press-briefing-22/

White House (2020c), *Fact Sheets: President Donald J. Trump Is Demanding Accountability From the World Health Organization, HEALTHCARE, Issued on: April 15, 2020,*

www.whitehouse.gov/briefings-statements/president-donald-j-trump-demanding-accountability-world-health-organization/

World Health Organization (2011), *Summary of WHO Technical Consultation: H1N1pdm Mortality Estimates, 25-26 October 2011,*

www.who.int/influenza/publications/surveillance_monitoring/H1N1pdmMortalityEstimates_WHOconsultation.pdf?ua=1

World Health Organization (2019), *Contributors,*

<https://open.who.int/2018-19/contributors/contributor>

World Health Organization (2020a), *AC Status Report 2020,*

www.who.int/about/finances-accountability/funding/AC_Status_Report_2020.pdf?ua=1

World Health Organization (2020b), *Coronavirus disease 2019 (COVID-19): Situation Report – 76,*

www.who.int/docs/default-source/coronaviruse/situation-reports/20200405-sitrep-76-covid-19.pdf?sfvrsn=6ecf0977_2

World Health Organization (2020b), *Coronavirus disease 2019 (COVID-19): Situation Report – 93*, https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200422-sitrep-93-covid-19.pdf?sfvrsn=35cf80d7_4

World Health Organization (2020c), *Naming the coronavirus disease (COVID-19) and the virus that causes it*, [www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](http://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)

World Health Organization (2020d), *WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020*, www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

Xinhua (2019), *Central China province launches commercial 5G applications*, http://www.xinhuanet.com/english/2019-10/31/c_138517734.htm

Xinhua (2020a), *Chinese mainland reports no increase in domestic COVID-19 cases*, http://www.xinhuanet.com/english/2020-04/07/c_138953087.htm

Xinhua (2020b), *The Latest: China reports 571 confirmed cases of new coronavirus pneumonia*, http://www.xinhuanet.com/english/2020-01/23/c_138728309.htm

Yahoo News (Partz, H.) (2019), *Steve Forbes Tells Zuckerberg: Use Gold to Back Libra, Call It the 'Mark'*, <https://finance.yahoo.com/news/steve-forbes-tells-zuckerberg-gold-130300641.html>

Same thing?



Ignore the zero.

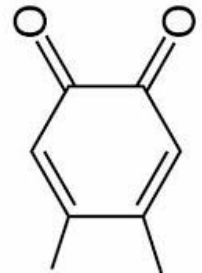




Annex 1

The
Great
Equalizer

???



Hey folks. Good News: One week after testing Positive, in self-isolation, the symptoms are much the same. No fever but the blahs. Folding the laundry and doing the dishes leads to a nap on the couch. Bad news: My wife has won 6 straight hands of Gin Rummy and leads by 201 points. But I have learned not to spread my Vegemite so thick. I travelled here with a typewriter, one I used to love. We are all in this together. Flatten the curve. Hanx



Bye bye
baby
Bye bye
It's your
turn to cry

Ciccione *et al.*,
1993 © Warner

Celebrity COVID-19 infections are *circa* 100 times more common, *per capita*, compared to infections among non-celebrities. The reasons for this may transpire over time. Celebrities includes famous singers, actors, royals, politicians and other figures such as elite sports players.

This tally shows the name of a selected list of celebrity infections as at late April, 2020. Names **highlighted yellow** denotes those who are probably most recognizable among the mainstream.

Adam Schlesinger (Dead), Musician

Alan Merrill (Dead), Songwriter

Allen Daviau (Dead), Hollywood

Andrew Jack (Dead), Actor

Andy Cohen, TV presenter

Boris Johnson, Prime Minister (UK), Disappeared from public view

Chris Cuomo & Wife, CNN fake news 'journalist'

Donovan Mitchell, NBA sportsman

Ellis Marsalis (Dead), Actor

Floyd Cardoz (Dead), Actor

Hal Wilner (Dead), Hollywood Producer

House of Saud, 150 family members

Idris Elba, Actor/Musician

Iranian Senior Government Officials (several), *e.g.* Ali Akbar Velayati

Irene Montero, Spanish Government Minister

www.nytimes.com › coronavirus-saudi-royal-infections
Coronavirus Invades Saudi Inner Sanctum - The New York ...
Apr 8, 2020 - As many as **150** royals in the kingdom are now believed to have contracted ... But while imploring residents to stay **home**, **Saudi** health officials warned ... The **infection** and treatment of the governor of Riyadh, Prince Faisal bin ...

Jay Benedict (Dead), Actor

Joe Diffie (Dead), Musician

John Prince (Dead), Musician

Julie Bennett (Dead), Actor

Justin Trudeau's wife, Canada's First Lady, Sophie Grégoire Trudeau

Ken Shimura (Dead), Comedian

King Charles Saxe-Coburg & Gotha, House of Windsor Crime Family

Kristofer Hivju, Actor

Lee Fierro (Dead), Actor

Lucia Bosè (Dead), Actor

Mark Blum (Dead), Actor

Mikel Arteta, Sports Manager, UK

Nadine Dorries, Asst. Health Minister (UK)

Olga Kurylenko, Actor/model



[dailymail.co.uk/news/article-8239233/Tom-Hanks-Rita-Wilson-j](https://www.dailymail.co.uk/news/article-8239233/Tom-Hanks-Rita-Wilson-j)

Peter Dutton, Home Affairs Minister (Australia)

Pink - Alecia Beth Moore & Husband (Singer)

Rand Paul, Senator (USA)

Rudy Gobert, NBA sportsman

Sara Bareilles, Musician

Terrence McNally (Dead), Playwright

Tom Hanks & Rita Wilson (Hollywood)




Wallace Roney (Dead), Musician

.atiR emoh eciN

APRIL 16,



Super-celebrities such as the ever-gorgeous Ellen exert much cultural power. We should listen carefully to their wise COVID-19 Tweet codes.

Ellen DeGeneres  **80.1M** Followers
@TheEllenShow

Ellen DeGeneres  @TheEllenShow · Mar 23
twitter.com/TheEllenShow?ref_src=twsrc%5Eego



“Stay safe, pay attention to what they are telling us to do, and uh, this will pass much faster if we all listen to what our smart people are telling us what to do. And I mean the smart people.”

Maybe it’s time that We the People paid fabulous Ellen the respect she deserves. She has 80.1 million followers – yet each Tweet averages just 3,000  . Are you kidding?  Bleat, bleat.

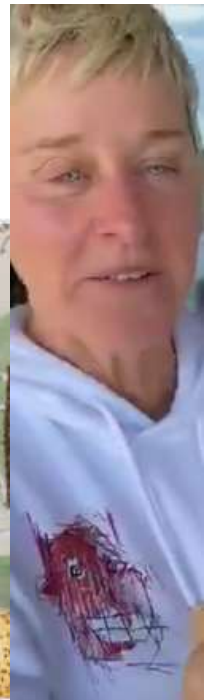
www.reuters.com › [article](#) › [us-health-coronavirus-ellen](#) ▾

Quarantine like jail joke brings fierce backlash for Ellen

Apr 8, 2020 - **Ellen DeGeneres**, one of America's most popular TV personalities,



Ellen DeGeneres  @TheEllenShow · Apr 12
Oh my goat, this is adorable. #HappyEaster 🐰



 445

 337

 8.9K



@TheEllenShow · Apr 7

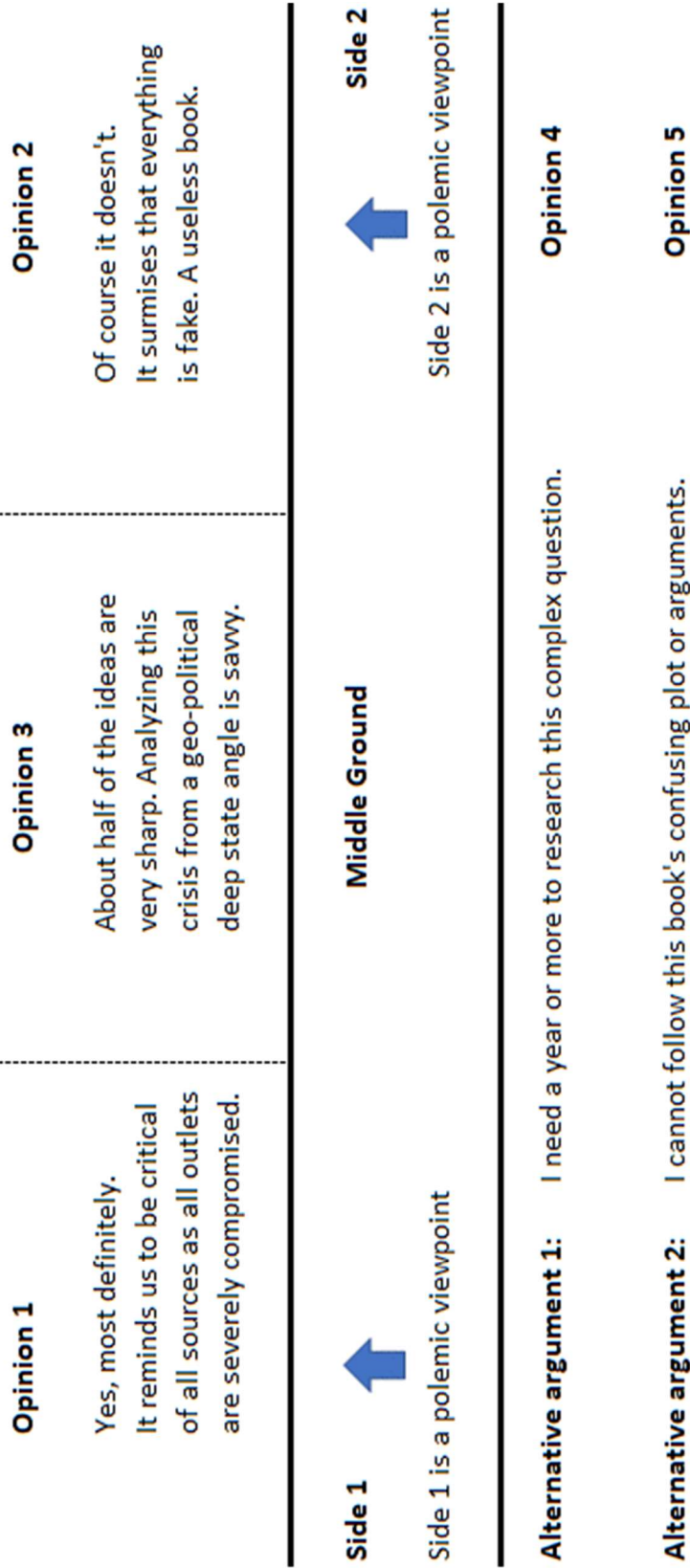
A frazzled house rest?

@TheEllenShow · Mar 17

End of book review. Please use this template to analyze one or more issues raised in this book.

Suggested question: Does this book enable you to form a clear view about COVID19 facts?

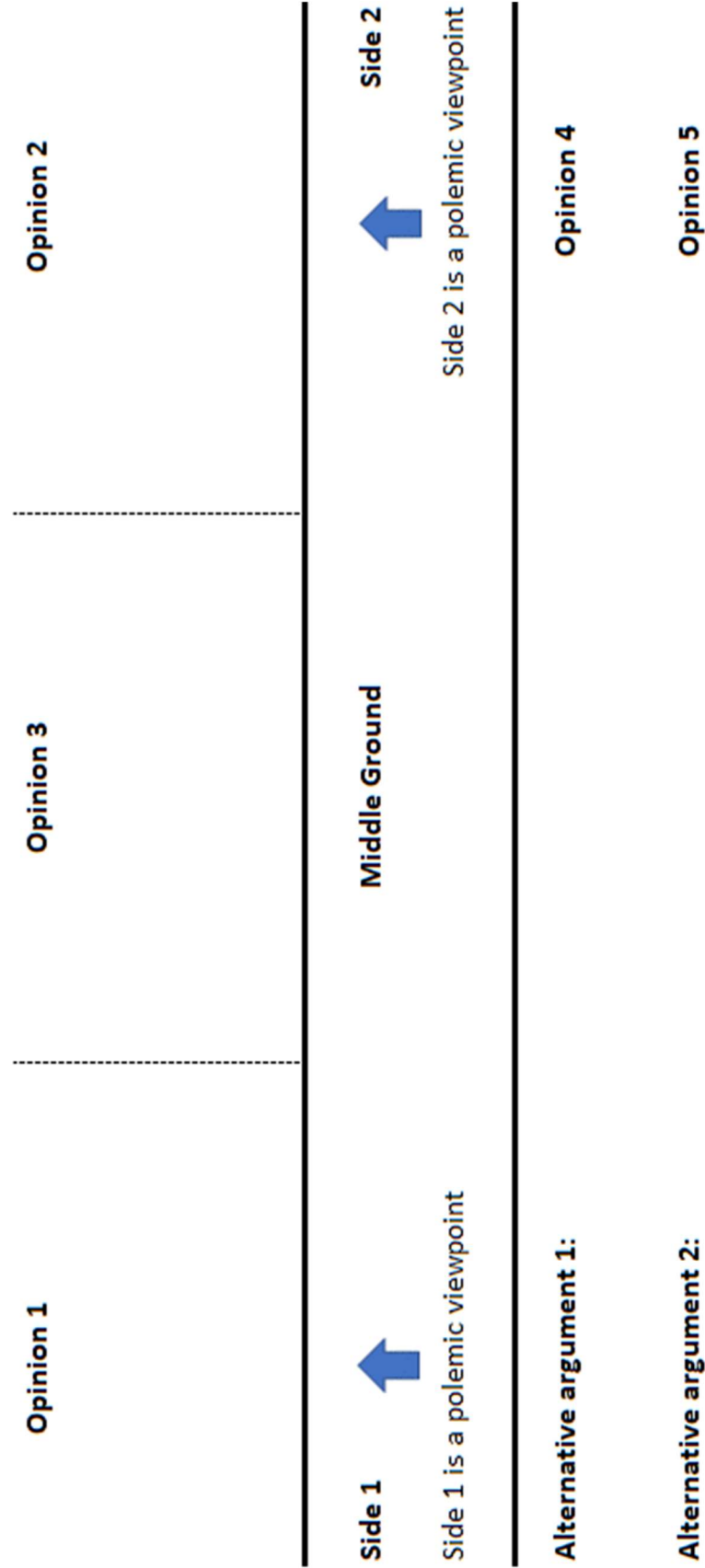
Non-dichotomy analysis model



End of book review. Please use this template to analyze one or more issues raised in this book.

Suggested question: Does this book enable you to form a clear view about COVID19 facts?

Non-dichotomy analysis model



Annex 2

Coronavirus, European Patent



(11)

EP 3 172 319 B1

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(54) **CORONAVIRUS**

CORONAVIRUS

CORONAVIRUS

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(56) References cited:
WO-A1-2011/004146 WO-A2-2004/092360
WO-A2-2005/049814

- **V. D. MENACHERY ET AL: "Attenuation and Restoration of Severe Acute Respiratory Syndrome Coronavirus Mutant Lacking 2'-O-Methyltransferase Activity", JOURNAL OF VIROLOGY, vol. 88, no. 8, 29 January 2014 (2014-01-29), pages 4251-4264, XP055215583, ISSN: 0022-538X, DOI: 10.1128/JVI.03571-13**
- **Anonymous: "EM_STD:KF377577", , 30 October 2013 (2013-10-30), XP55216202, Retrieved from the Internet:
URL:http://ibis/exam/dbfetch.jsp?id=EM_STD :K F377577 [retrieved on 2015-09-25]**
- **PAUL BRITTON ET AL: "Modification of the avian coronavirus infectious bronchitis virus for vaccine development", BIOENGINEERED, vol. 3, no. 2, 1 March 2012 (2012-03-01), pages 114-119, XP055215793, ISSN: 2165-5979, DOI: 10.4161/bbug.18983**
- **MARIA ARMESTO ET AL: "A Recombinant Avian Infectious Bronchitis Virus Expressing a Heterologous Spike Gene Belonging to the 4/91 Serotype", PLOS ONE, vol. 6, no. 8, 30 August 2011 (2011-08-30), page e24352, XP055215311, DOI: 10.1371/journal.pone.0024352**
- **MARIA ARMESTO ET AL: "The Replicase Gene of Avian Coronavirus Infectious Bronchitis Virus Is a Determinant of Pathogenicity", PLOS ONE, vol. 4, no. 10, 9 October 2009 (2009-10-09), page e7384, XP055215449, DOI: 10.1371/journal.pone.0007384 cited in the application**

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 3 172 319 B1

- CAVANAGH ET AL: "Manipulation of the infectious bronchitis coronavirus genome for vaccine development and analysis of the accessory proteins", VACCINE, ELSEVIER LTD, GB, vol. 25, no. 30, 10 July 2007 (2007-07-10), pages 5558-5562, XP022148593, ISSN: 0264-410X, DOI: 10.1016/J.VACCINE.2007.02.046
- R. CASAIS ET AL: "Reverse Genetics System for the Avian Coronavirus Infectious Bronchitis Virus", JOURNAL OF VIROLOGY, vol. 75, no. 24, 15 December 2001 (2001-12-15), pages 12359-12369, XP055215746, ISSN: 0022-538X, DOI: 10.1128/JVI.75.24.12359-12369.2001
- YAN-QUAN WEI ET AL: "Development and characterization of a recombinant infectious bronchitis virus expressing the ectodomain region of S1 gene of H120 strain", APPLIED MICROBIOLOGY AND BIOTECHNOLOGY, vol. 98, no. 4, 1 February 2014 (2014-02-01), pages 1727-1735, XP055132063, ISSN: 0175-7598, DOI: 10.1007/s00253-013-5352-5
- WANG ET AL: "Attenuation of porcine reproductive and respiratory syndrome virus strain MN184 using chimeric construction with vaccine sequence", VIROLOGY, ELSEVIER, AMSTERDAM, NL, vol. 371, no. 2, 31 October 2007 (2007-10-31), pages 418-429, XP022439793, ISSN: 0042-6822, DOI: 10.1016/J.VIROL.2007.09.032

Description

FIELD OF THE INVENTION

5 [0001] The present invention relates to an attenuated coronavirus comprising a variant replicase gene, which causes the virus to have reduced pathogenicity. The present invention also relates to the use of such a coronavirus in a vaccine to prevent and/or treat a disease.

BACKGROUND TO THE INVENTION

10 [0002] Avian infectious bronchitis virus (IBV), the aetiological agent of infectious bronchitis (IB), is a highly infectious and contagious pathogen of domestic fowl that replicates primarily in the respiratory tract but also in epithelial cells of the gut, kidney and oviduct. IBV is a member of the Order *Nidovirales*, Family *Coronaviridae*, Subfamily *Coronavirinae* and Genus *Gammacoronavirus*; genetically very similar coronaviruses cause disease in turkeys, guinea fowl and pheasants.

15 [0003] Clinical signs of IB include sneezing, tracheal rales, nasal discharge and wheezing. Meat-type birds have reduced weight gain, whilst egg-laying birds lay fewer eggs and produce poor quality eggs. The respiratory infection predisposes chickens to secondary bacterial infections which can be fatal in chicks. The virus can also cause permanent damage to the oviduct, especially in chicks, leading to reduced egg production and quality; and kidney, sometimes leading to kidney disease which can be fatal.

20 [0004] IBV has been reported to be responsible for more economic loss to the poultry industry than any other infectious disease. Although live attenuated vaccines and inactivated vaccines are universally used in the control of IBV, the protection gained by use of vaccination can be lost either due to vaccine breakdown or the introduction of a new IBV serotype that is not related to the vaccine used, posing a risk to the poultry industry.

25 [0005] Further, there is a need in the industry to develop vaccines which are suitable for use *in ovo*, in order to improve the efficiency and cost-effectiveness of vaccination programmes. A major challenge associated with *in ovo* vaccination is that the virus must be capable of replicating in the presence of maternally-derived antibodies against the virus, without being pathogenic to the embryo. Current IBV vaccines are derived following multiple passage in embryonated eggs, this results in viruses with reduced pathogenicity for chickens, so that they can be used as live attenuated vaccines. However such viruses almost always show an *increased* virulence to embryos and therefore cannot be used for *in ovo* vaccination as they cause reduced hatchability. A 70% reduction in hatchability is seen in some cases.

30 [0006] Attenuation following multiple passage in embryonated eggs also suffers from other disadvantages. It is an empirical method, as attenuation of the viruses is random and will differ every time the virus is passaged, so passage of the same virus through a different series of eggs for attenuation purposes will lead to a different set of mutations leading to attenuation. There are also efficacy problems associated with the process: some mutations will affect the replication of the virus and some of the mutations may make the virus too attenuated. Mutations can also occur in the S gene which may also affect immunogenicity so that the desired immune response is affected and the potential vaccine may not protect against the required serotype. In addition there are problems associated with reversion to virulence and stability of vaccines.

35 [0007] Menachery, V. D. et al. (2014) *J. Virol.*, vol. 88, no. 8, 4251 - 4264, WO 2005/049814 A2 and WO 2004/092360 already disclosed a coronavirus comprising a mutation in nsp-15 and nsp-16 as well as means and methods of how to arrive at a coronavirus comprising such mutated structural proteins.

40 [0008] It is important that new and safer vaccines are developed for the control of IBV. Thus there is a need for IBV vaccines which are not associated with these issues, in particular vaccines which may be used for *in ovo* vaccination.

45

SUMMARY OF ASPECTS OF THE INVENTION

[0009] The present inventors have used a reverse genetics approach in order to rationally attenuate IBV. This approach is much more controllable than random attenuation following multiple passages in embryonated eggs because the position of each mutation is known and its effect on the virus, i.e. the reason for attenuation, can be derived.

50 [0010] Using their reverse genetics approach, the present inventors have identified various mutations which cause the virus to have reduced levels of pathogenicity. The levels of pathogenicity may be reduced such that when the virus is administered to an embryonated egg, it is capable of replicating without being pathogenic to the embryo. Such viruses may be suitable for *in ovo* vaccination, which is a significant advantage and has improvement over attenuated IBV vaccines produced following multiple passage in embryonated eggs.

55 [0011] Thus in a first aspect, the present invention provides a live, attenuated coronavirus comprising a variant replicase gene encoding polyproteins comprising a mutation in nsp-14, wherein the variant replicase gene encodes a protein comprising an amino acid mutation of Val to Leu at the position corresponding to position 393 of SEQ ID NO:7.

[0012] The variant replicase gene may further encode a protein comprising one or more amino acid mutations selected from the list of:

- 5 Pro to Leu at position 85 of SEQ ID NO: 6;
- Leu to lie at position 183 of SEQ ID NO: 8;
- Val to lie at position 209 of SEQ ID NO: 9.

[0013] The replicase gene may further encode a protein comprising the amino acid mutation Pro to Leu at position 85 of SEQ ID NO: 6.

10 [0014] The replicase gene may encode a protein comprising the amino acid mutations Val to Leu at position 393 of SEQ ID NO: 7; Leu to lie at position 183 of SEQ ID NO: 8; and Val to lie at position 209 of SEQ ID NO: 9.

[0015] The replicase gene may encode a protein comprising the amino acid mutations Pro to Leu at position 85 of SEQ ID NO: 6; Val to Leu at position 393 of SEQ ID NO: 7; Leu to lie at position 183 of SEQ ID NO: 8; and Val to lie at position 209 of SEQ ID NO: 9.

15 [0016] The replicase gene may comprise one or more nucleotide substitutions selected from the list of:

- C to T at nucleotide position 12137;
- G to C at nucleotide position 18114;
- T to A at nucleotide position 19047; and
- 20 G to A at nucleotide position 20139;
- compared to the sequence shown as SEQ ID NO: 1.

[0017] The coronavirus may be an infectious bronchitis virus (IBV).

[0018] The coronavirus may be IBV M41.

25 [0019] The coronavirus may comprise an S protein at least part of which is from an IBV serotype other than M41.

[0020] For example, the S1 subunit or the entire S protein may be from an IBV serotype other than M41.

[0021] The coronavirus according to the first aspect has reduced pathogenicity compared to a coronavirus expressing a corresponding wild-type replicase, such that when the virus is administered to an embryonated egg, it is capable of replicating without being pathogenic to the embryo.

30 [0022] In a second aspect, a variant replicase gene as defined in the claims is provided.

[0023] In a third aspect, a protein encoded by a variant coronavirus replicase gene as defined in the claims is provided.

[0024] In a fourth aspect, a plasmid comprising a replicase gene as defined in the claims is provided.

[0025] In a fifth aspect, a method for making the coronavirus as defined in the claims is provided which comprises the following steps:

- 35 (i) transfecting a plasmid according to the fourth aspect of the invention into a host cell;
- (ii) infecting the host cell with a recombinating virus comprising the genome of a coronavirus strain with a replicase gene;
- (iii) allowing homologous recombination to occur between the replicase gene sequences in the plasmid and the corresponding sequences in the recombinating virus genome to produce a modified replicase gene; and
- 40 (iv) selecting for recombinating virus comprising the modified replicase gene.

[0026] The recombinating virus may be a vaccinia virus.

[0027] The method may also include the step:

- 45 (v) recovering recombinant coronavirus comprising the modified replicase gene from the DNA from the recombinating virus from step (iv).

[0028] A cell capable of producing a coronavirus according to the first aspect is provided.

[0029] In a another aspect, a vaccine comprising a coronavirus as defined in the claims and a pharmaceutically acceptable carrier is provided.

50 [0030] Also described herein is a method for treating and/or preventing a disease in a subject which comprises the step of administering a vaccine according to the invention to the subject.

[0031] Further aspects of the invention provide:

- the vaccine as defined in the claims for use in preventing a disease in a subject.

55 [0032] Also described herein is the use of a coronavirus according to the first aspect in the manufacture of a vaccine for treating and/or preventing a disease in a subject.

[0033] The disease may be infectious bronchitis (IB).

[0034] The method of administration of the vaccine may be selected from the group consisting of; eye drop adminis-

tration, intranasal administration, drinking water administration, post-hatch injection and *in ovo* injection.

[0035] Vaccination may be by *in ovo* vaccination.

[0036] The present invention also provides a method for producing a vaccine as defined in the claims which comprises the step of infecting a cell as defined in the claims with a coronavirus as defined in the claims.

5

DESCRIPTION OF THE FIGURES

[0037]

10

Figure 1 - Growth kinetics of M41-R-6 and M41-R-12 compared to M41-CK (M41 EP4) on CK cells

Figure 2 - Clinical signs, snicking and wheezing, associated with M41-R-6 and M41-R-12 compared to M41-CK (M41 EP4) and Beau-R (Bars show mock, Beau-R, M41-R 6, M41 - R 12, M41-CK EP4 from left to right of each timepoint).

15

Figure 3 - Ciliary activity of the viruses in tracheal rings isolated from tracheas taken from infected chicks. 100% ciliary activity indicates no effect by the virus; apathogenic, 0% activity indicates complete loss of ciliary activity, complete ciliostasis, indicating the virus is pathogenic (Bars show mock, Beau-R, M41-R 6, M41-R 12, M41-CK EP4 from left to right of each timepoint).

20

Figure 4 - Clinical signs, snicking, associated with M41R-nsp10rep and M41R-nsp14,15,16rep compared to M41-R-12 and M41-CK (M41 EP5) (Bars show mock, M41-R12; M41 R-nsp10rep; M41 R-nsp14,15,16rep and M41-CK EP5 from left to right of each timepoint).

25

Figure 5 - Ciliary activity of M41R-nsp10rep and M41R-nsp14,15,16rep compared to M41-R-12 and M41-CK in tracheal rings isolated from tracheas taken from infected chicks (Bars show mock; M41-R12; M41R-nsp10rep; M41R-nsp14,15,16rep and M41-CK EP5 from left to right of each timepoint).

30

Figure 6 - Clinical signs, snicking, associated with M41R-nsp10, 15rep, M41R-nsp10, 14, 15rep, M41R-nsp10, 14, 16rep, M41 R-nsp10, 15, 16rep and M41-K compared to M41-CK (Bars show mock, M41R-nsp10,15rep1; M41R-nsp10,14,16rep4; M41R-nsp10,15,16rep8; M41R-nsp10,14,15rep10; M41-K6 and M41-CK EP4 from left to right of each timepoint).

35

Figure 7 - Clinical signs, wheezing, associated with M41R-nsp10, 15rep, M41R-nsp10, 14, 15rep, M41R-nsp10, 14, 16rep, M41 R-nsp1 0, 15, 16rep and M41-K compared to M41-CK (Bars show mock, M41R-nsp10,15rep1; M41R-nsp10,14,16rep4; M41R-nsp10,15,16rep8; M41R-nsp10,14,15rep10; M41-K6 and M41-CK EP4 from left to right of each timepoint).

40

Figure 8 - Ciliary activity of M41R-nsp1 0, 15rep, M41 R-nsp1 0, 14, 15rep, M41R-nsp10, 14, 16rep, M41R-nsp10, 15, 16rep and M41-K compared to M41-CK in tracheal rings isolated from tracheas taken from infected chicks (Bars show mock, M41R-nsp10,15rep1; M41R-nsp10,14,16rep4; M41R-nsp10,15,16rep8; M41R-nsp10,14,15rep10; M41-K6 and M41-CK EP4 from left to right of each timepoint).

45

Figure 9 - Growth kinetics of rIBVs compared to M41-CK on CK cells. Fig 9A shows the results for M41-R and M41-K. Fig 9B shows the results for M41-nsp10 rep; M41 R-nsp14, 15, 16 rep; M41 R-nsp1 0, 15 rep; M41 R-nsp10, 15, 16 rep; M41R-nsp10, 14, 15 rep; and M41R-nsp10, 14, 16.

Figure 10 - Position of amino acid mutations in mutated nsp10, nsp14, nsp15 and nsp16 sequences.

50

Figure 11 - A) Snicking; B) Respiratory symptoms (wheezing and rales combined) and C) Ciliary activity of rIBV M41R-nsp10,14 rep and rIBV M41R-nsp10,16 rep compared to M41-CK (Bars show mock, M41R-nsp10,14rep; M41R-nsp10,16rep and M41-K from left to right of each timepoint).

DETAILED DESCRIPTION

55

[0038] The present invention provides a coronavirus comprising a variant replicase gene which, when expressed in the coronavirus, causes the virus to have reduced pathogenicity compared to a corresponding coronavirus which comprises the wild-type replicase gene.

CORONAVIRUS

[0039] *Gammacoronavirus* is a genus of animal virus belonging to the family *Coronaviridae*. Coronaviruses are enveloped viruses with a positive-sense single-stranded RNA genome and a helical symmetry.

5 **[0040]** The genomic size of coronaviruses ranges from approximately 27 to 32 kilobases, which is the longest size for any known RNA virus.

[0041] Coronaviruses primarily infect the upper respiratory or gastrointestinal tract of mammals and birds. Five to six different currently known strains of coronaviruses infect humans. The most publicized human coronavirus, SARS-CoV which causes severe acute respiratory syndrome (SARS), has a unique pathogenesis because it causes both upper
10 and lower respiratory tract infections and can also cause gastroenteritis. Middle East respiratory syndrome coronavirus (MERS-CoV) also causes a lower respiratory tract infection in humans. Coronaviruses are believed to cause a significant percentage of all common colds in human adults.

[0042] Coronaviruses also cause a range of diseases in livestock animals and domesticated pets, some of which can be serious and are a threat to the farming industry. Economically significant coronaviruses of livestock animals include
15 infectious bronchitis virus (IBV) which mainly causes respiratory disease in chickens and seriously affects the poultry industry worldwide; porcine coronavirus (transmissible gastroenteritis, TGE) and bovine coronavirus, which both result in diarrhoea in young animals. Feline coronavirus has two forms, feline enteric coronavirus is a pathogen of minor clinical significance, but spontaneous mutation of this virus can result in feline infectious peritonitis (FIP), a disease associated with high mortality.

[0043] There are also two types of canine coronavirus (CCoV), one that causes mild gastrointestinal disease and one that has been found to cause respiratory disease. Mouse hepatitis virus (MHV) is a coronavirus that causes an epidemic murine illness with high mortality, especially among colonies of laboratory mice.

[0044] Coronaviruses are divided into four groups, as shown below:

25 Alpha

- Canine coronavirus (CCoV)
- Feline coronavirus (FeCoV)
- Human coronavirus 229E (HCoV-229E)
- 30 • Porcine epidemic diarrhoea virus (PEDV)
- Transmissible gastroenteritis virus (TGEV)
- Human Coronavirus NL63 (NL or New Haven)

35 Beta

- Bovine coronavirus (BCoV)
- Canine respiratory coronavirus (CRCoV) - Common in SE Asia and Micronesia
- Human coronavirus OC43 (HCoV-OC43)
- Mouse hepatitis virus (MHV)
- 40 • Porcine haemagglutinating encephalomyelitis virus (HEV)
- Rat coronavirus (RCV). Rat Coronavirus is quite prevalent in Eastern Australia where, as of March/April 2008, it has been found among native and feral rodent colonies.
- (No common name as of yet) (HCoV-HKU1)
- Severe acute respiratory syndrome coronavirus (SARS-CoV)
- 45 • Middle East respiratory syndrome coronavirus (MERS-CoV)

Gamma

- Infectious bronchitis virus (IBV)
- 50 • Turkey coronavirus (Bluecomb disease virus)
- Pheasant coronavirus
- Guinea fowl coronavirus

55 Delta

- Bulbul coronavirus (BuCoV)
- Thrush coronavirus (ThCoV)
- Munia coronavirus (MuCoV)

Annex 3

CDC brochure: What is hydroxychloroquine?

Medicines for the Prevention of Malaria While Traveling

Hydroxychloroquine (Plaquenil™)

What is hydroxychloroquine?

Hydroxychloroquine (also known as hydroxychloroquine sulfate) is an arthritis medicine that also can be used to prevent malaria. It is available in the United States by prescription only. It is sold under the brand name Plaquenil and it is also sold as a generic medicine. It is available in tablets of 155mg base (200mg salt).

You should know that the 155mg base tablet is the same as the 200mg salt tablet. It is just two different ways of describing the same thing.

Hydroxychloroquine can be prescribed for either prevention or treatment of malaria.

This fact sheet provides information about its use for the prevention of malaria infection associated with travel.



Who can take hydroxychloroquine?

Hydroxychloroquine can be prescribed to adults and children of all ages. It can also be safely taken by pregnant women and nursing mothers.

Who should not take hydroxychloroquine?

People with psoriasis should not take hydroxychloroquine.

How should I take hydroxychloroquine?

Both adults and children should take one dose of hydroxychloroquine per week starting at least 1 week before traveling to the area where malaria transmission occurs. They should take one dose per week while there, and for 4 consecutive weeks after leaving.

The weekly dosage for adults is 310mg base (400mg salt).

Your doctor will have calculated the correct weekly dose for your child based on the child's weight. The child's dose should not exceed the adult dose of 310mg base (400mg salt) per week

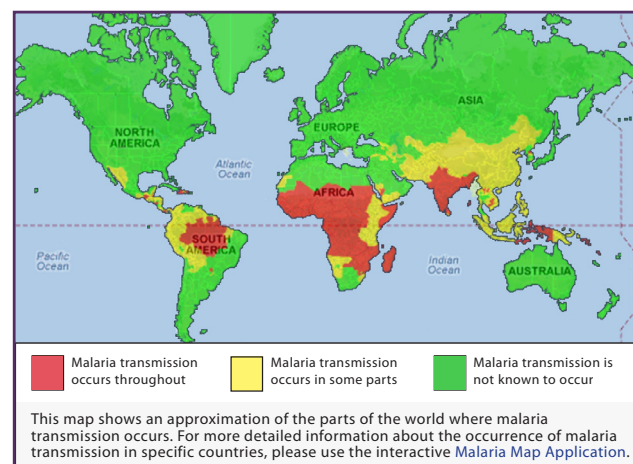
Where can I buy hydroxychloroquine?

Antimalarial drugs are available in the United States by prescription only. Medicines should be obtained at a pharmacy before travel rather than in the destination country. Buying medications abroad has its risks: the drugs could be of poor quality, contaminated, or counterfeit and not protect you against malaria.

In what parts of the world can hydroxychloroquine be used for prevention of malaria in travelers?

Hydroxychloroquine can only be used in places where chloroquine (a related medicine) is still effective. There are only a few places left in the world where hydroxychloroquine is still effective including parts of Central America and the Caribbean.

CDC keeps track of all the places in the world where malaria transmission occurs and which malaria drugs that are recommended for use in each place. This information can be found using the malaria map on the CDC website: <http://www.cdc.gov/malaria/map/index.html>.



Hydroxychloroquine (Plaquenil™)

Malaria is a serious disease that can cause death if not treated right away. It is caused by a parasite that can infect a certain type of mosquito which feeds on humans.

About 1,500 cases of malaria are diagnosed in the United States each year almost all in travelers to parts of the world where malaria occurs.

Will hydroxychloroquine interact with my other medications?

Some other drugs can interact with hydroxychloroquine and cause problems. Your doctor is responsible for evaluating the other medicines you are taking to ensure that there are no harmful interactions between them and hydroxychloroquine. In some instances, medicines can be adjusted to minimize the interaction. You can also ask your pharmacist to check for drug interactions.

What are the potential side effects of hydroxychloroquine?

Hydroxychloroquine is a relatively well tolerated medicine. The most common adverse reactions reported are stomach pain, nausea, vomiting, and headache. These side effects can often be lessened by taking hydroxychloroquine with food. Hydroxychloroquine may also cause itching in some people.

All medicines may have some side effects. Minor side effects such as nausea, occasional vomiting, or diarrhea usually do not require stopping the antimalarial drug. If you cannot tolerate your antimalarial drug, see your health care provider; other antimalarial drugs are available.

Other considerations

- A good choice for longer trips because you only have to take the medicine once per week.

- Overdose of antimalarial drugs, particularly hydroxychloroquine, can be fatal. Medication should be stored in childproof containers out of the reach of infants and children.
- Some people are already taking hydroxychloroquine regularly for other medical conditions such as arthritis. In those instances, they may not need to take an additional medicine to prevent malaria. Your doctor can advise you.

How long is it safe to use hydroxychloroquine?

CDC has no limits on the use of hydroxychloroquine for the prevention of malaria. When hydroxychloroquine is used at higher doses for many years, a rare eye condition called retinopathy has occurred. People who take hydroxychloroquine for more than five years should get regular eye exams.

For more information:

Check out the CDC malaria website at www.cdc.gov/malaria

Health-care providers needing assistance with diagnosis or management of suspected cases of malaria should call the CDC Malaria Hotline: 770-488-7788 or 855-856-4713 toll-free (M-F, 9am-5pm, eastern time).

Emergency consultation after hours, call: 770-488-7100 and request to speak with a CDC Malaria Branch clinician.

Prevent Malaria

- Take an antimalarial drug.
- Prevent mosquito bites.
- If you get sick, immediately seek professional medical care.

Annex 4

Fauci, A. et al. *Annals of Internal Medicine* (2017)

What Recent History Has Taught Us About Responding to Emerging Infectious Disease Threats

Catharine I. Paules, MD; Robert W. Eisinger, PhD; Hilary D. Marston, MD, MPH; and Anthony S. Fauci, MD

Presidential administrations face any number of unexpected crises during their tenure, and global pandemics are among the most challenging. As of January 2017, one of the authors had served under 5 presidents as the director of the National Institute of Allergy and Infectious Diseases at the National Institutes of Health. During each administration, the government faced unexpected pandemics, ranging from the HIV/AIDS pandemic, which began during the Reagan administration, to the recent Zika outbreak in the Americas, which started during the Obama administration. These experiences underscored the need to optimize

preparation for and response to these threats whenever and wherever they emerge. This article recounts selected outbreaks occurring during this period and highlights lessons that were learned that can be applied to the infectious disease threats that will inevitably be faced in the current presidential administration and beyond.

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In mid-January 2017, before the U.S. presidential inauguration, the outgoing Obama administration convened a meeting with most of the cabinet nominees of the incoming administration of President-elect Donald Trump to brief them on the types of unanticipated emergencies they might face (1). In addition to terror attacks, cyberattacks, and natural disasters, outbreaks of infectious diseases were presented as a likely threat. One of us (Anthony S. Fauci) attended that meeting along with other members of the Department of Health and Human Services to discuss emerging infectious diseases. The meeting prompted us to reflect on infectious disease challenges that have arisen during the 5 administrations under which Dr. Fauci has served as director of the National Institute of Allergy and Infectious Diseases (NIAID) at the National Institutes of Health (NIH) since his appointment in 1984. During this period, each administration was confronted with the need to manage ongoing or established infectious diseases as well as new and reemerging infectious disease threats. This review highlights selected infectious disease outbreaks occurring during this period that are especially memorable and have helped to shape and refine the role of the NIAID's research and public health response to such threats. Because current and as-yet unknown infectious diseases will continue to challenge us, these experiences may also serve as lessons that can be applied during the inevitable public health crises to come.

Infectious diseases, as both a discipline and a research field, were generally perceived as rapidly losing prominence among the key components of public health activity when Ronald Reagan assumed the Presidency of the United States in 1981. Many agreed with Nobel Prize winner and eminent virologist Sir F. Macfarlane Burnet and his colleague Dr. David O. White, who had written a decade earlier that "to write about infectious disease is almost to write of something that has passed into history... the most likely forecast about the future of infectious disease is that it will be very dull" (2). To make matters worse for the perception of the field, Dr. Robert G. Petersdorf, an iconic figure in

the field of infectious diseases and an important mentor to Dr. Fauci, famously wrote in 1978, in reference to the number of fellows scheduled to take the infectious diseases certifying examination given by the American Board of Internal Medicine, "Even with my great personal loyalties to infectious diseases, I cannot conceive a need for 309 more infectious-disease experts unless they spend their time culturing each other" (3). However, 3 years later, an event occurred that led to the stark realization of the real and potential emergence and reemergence of globally important infectious diseases, heralding a trend that would impact and influence each of the 5 administrations under which Dr. Fauci served.

Less than 6 months into the first year of the 2-term Reagan administration (1981-1989), a puzzling cluster of Kaposi sarcoma and *Pneumocystis pneumonia* among young, previously healthy men who had sex with men in New York City and California was reported by the U.S. Centers for Disease Control (CDC; now the Centers for Disease Control and Prevention) (4, 5). These unusual cases were first believed to be a curiosity limited to a small, marginalized segment of the U.S. population. However, in an *Annals of Internal Medicine* article written in 1981 and published in 1982 (6), Dr. Fauci opined that "because we do not know the cause of this syndrome, any assumption that the syndrome will remain restricted to a particular segment of our society is truly an assumption without scientific basis." This admonition, together with similar warnings from the CDC and other health authorities, presaged a pandemic of unfathomable magnitude. Currently, the Joint United Nations Programme on HIV/AIDS estimates that 37 million persons are living with HIV infection globally, and approximately 35 million have died of AIDS-related illnesses since the start of the epidemic (7).

The Reagan administration, particularly during its first term, was strongly criticized for failing to utilize its bully pulpit to galvanize efforts against this emerging threat (8). Although many infectious disease outbreaks begin dramatically and generate considerable public attention, the insidious emergence of HIV/AIDS and the

lack of due attention by policymakers illustrate how some outbreaks that start subtly can grow to global proportions if they are not aggressively addressed early on.

The NIH began building an HIV/AIDS research program from the ground up. Upon Dr. Fauci assuming the directorship of the NIAID in 1984, the institute immediately scaled up its research effort after the co-discovery of HIV as the cause of AIDS by Luc Montagnier, Françoise Barré-Sinoussi, and their team at the Institut Pasteur in Paris, France (9), and Robert Gallo and his team (10) in the NIH Intramural Research Program. Of note, a distinct AIDS program to fund extramural researchers was established to bring investigators into a field that desperately needed a rapid influx of scientists from different disciplines.

During its second term, the leadership of the Reagan administration took a more active public role in response to the AIDS outbreak with the 1986 issuance of the "Surgeon General's Report on Acquired Immune Deficiency Syndrome" (11) and the subsequent establishment of the first AIDS Commission, announced when Reagan visited the NIH on 23 July 1987. Despite this increased effort, these actions were regarded by activists as inadequate for the challenge at hand.

Simultaneously, in anticipation of his running for president in 1988, then-Vice President George H.W. Bush began taking an interest in the emerging HIV/AIDS pandemic. He visited the NIH Clinical Center on 8 April 1987 and met with HIV-infected patients and NIH researchers to learn firsthand about HIV/AIDS (12). Building on the interest he showed while vice president, upon becoming president in 1989, he took a much different approach from his predecessor in recognizing and responding to the growing HIV/AIDS epidemic. At that time, only a few years after HIV had been identified, patients generally presented to health care providers with advanced disease and a life expectancy ranging from a few months to 1 or 2 years (13, 14). Given the rapidly mounting death toll, federal funding for HIV/AIDS research was increased to more than \$1 billion by the end of the George H.W. Bush administration.

Over the coming years, this significant investment in science led to extraordinary advances in all aspects of HIV/AIDS research, from viral pathogenesis to immunopathogenesis, laying the groundwork for the development of targeted antiviral therapy. Such research ultimately resulted in the introduction of combinations of antiretroviral drugs that transformed HIV/AIDS from a nearly universally fatal disease to a manageable illness in areas of the world where such drugs are available. The accelerated U.S. government response to the HIV/AIDS epidemic, which had its beginnings in the George H.W. Bush administration, demonstrated the importance of investing resources in fundamental scientific research, including research infrastructure. It also put into sharp focus the critical need to promote direct communication with affected communities and to garner the support of political leaders and policymakers in responding to public health crises. The evolution of this

approach was slow at first, and the unrelenting pressure of HIV/AIDS activists played a critical role in accelerating the process (15). It soon became clear that there were distinct advantages of early participation of involved communities in the government response to the HIV/AIDS pandemic in the areas of public health and biomedical research.

The Clinton administration (1993-2001) was confronted with both the ongoing management of the HIV/AIDS pandemic and 2 new infectious disease challenges: the emergence of H5N1 avian influenza and the reemergence of West Nile virus in the Americas. With regard to the HIV/AIDS pandemic, the administration's sustained and accelerated investment in NIH research and strong collaboration with pharmaceutical companies continued to fuel scientific discoveries, particularly in the arena of treatment. This led to advances in combination antiretroviral therapy (ART) that have transformed the lives of HIV-infected persons. The 1- to 2-year median survival seen in the early years of the pandemic increased dramatically and set the stage for what we see today: an almost normal life expectancy for persons who are diagnosed early and maintain viral suppression through combination ART (16). To complement ongoing treatment research, attention turned to the importance of developing an HIV vaccine, and the NIH refocused its HIV vaccine efforts on basic immunology to accelerate the development of potential candidates. To address this key goal, and with strong encouragement from the NIH, in 1997, President Clinton announced the establishment of an NIH Vaccine Research Center (VRC). This facility, now part of the NIAID, has made pivotal contributions to HIV/AIDS research while also evolving into a critical component of the NIAID's response to other chronic and emerging infectious diseases.

In 1997, during its second term, the Clinton administration was faced with the emergence of H5N1 avian influenza in Hong Kong (17, 18). These infections were highly concerning given that international travel had increased dramatically by the turn of the millennium, underscoring the reality that we live in a global community. The NIAID followed this outbreak carefully and noted that mortality in persons infected directly through contact with birds was a striking 33% (18). Fortunately, the virus did not achieve the capacity to spread efficiently from person to person, and aggressive culling of poultry by the Hong Kong health authorities resulted in a temporary end to the outbreak. However, this event led to close surveillance for and attention to "prepandemic" viruses that threaten to evolve into pandemic influenza viruses. However, the H5N1 prepandemic influenza virus would capture our attention again.

In addition to the emergence of H5N1 avian influenza, the Clinton administration was faced with the reemergence of West Nile virus, a well-known global infectious disease that had never been observed in the Americas. West Nile virus is a classic example of an old infection that reemerges in a new geographic location. This flavivirus, previously endemic to Africa and the

Middle East, first appeared in the Americas in 1999, causing 59 cases of encephalitis and 7 deaths in New York (19). The virus spread rapidly and has since become endemic in the continental United States. In response to this outbreak, the NIAID VRC developed a vaccine against West Nile virus and completed a phase 1 clinical trial (20). Unfortunately, the vaccine was not developed further because of the lack of an industry partner. However, it showed the utility of a new vaccine platform (DNA) that would undergo advanced development in a subsequent flavivirus outbreak.

The George W. Bush administration (2001-2009) was faced almost immediately with 2 unprecedented domestic public health emergencies. The devastating terrorist attacks of 11 September 2001 were followed within days by detection of anthrax spores in letters to 2 U.S. senators and certain members of the press, likely the result of a deliberate release in the postal system. Twenty-two persons were known to have been infected with anthrax, 5 of whom died (21). With a substantial infusion of new funding, these attacks spurred the launch of a massive endeavor focused on public health preparedness for bioterrorist threats, particularly but not exclusively from infectious diseases. At the time of the anthrax attacks, the NIAID had a modest basic science research program on potential agents of bioterrorism (22). In response to the attacks, the institute issued a series of initiatives and used newly obligated resources to greatly expand its research portfolio. In 2002, the NIAID published its "Strategic Plan for Biodefense Research" (23) and the "NIAID Biodefense Research Agenda for CDC Category A Agents" (24). The reinvigorated research effort focused heavily on countermeasure development and led to several key achievements, including the development of vaccine candidates against smallpox and *Clostridium botulinum*, antivirals for smallpox, antitoxins for anthrax and botulinum, and the first clinical Ebola vaccine trials. At that time, Ebola was among a group of hemorrhagic fever viruses categorized as CDC category A agents and known to have been stockpiled by the former Soviet Union (25). The importance of the basic and translational research on Ebola conducted during the George W. Bush administration was not fully appreciated until later.

Although the anthrax attacks generated considerable public fear and even panic about the use of biological agents in acts of bioterrorism, NIAID leadership and many scientific and public health colleagues believed that the natural emergence of a virulent pathogen was an even greater threat (26). Nowhere was this more clearly illustrated than during the next few years of the George W. Bush administration, when severe acute respiratory syndrome emerged in 2002 and H5N1 influenza reemerged in 2003.

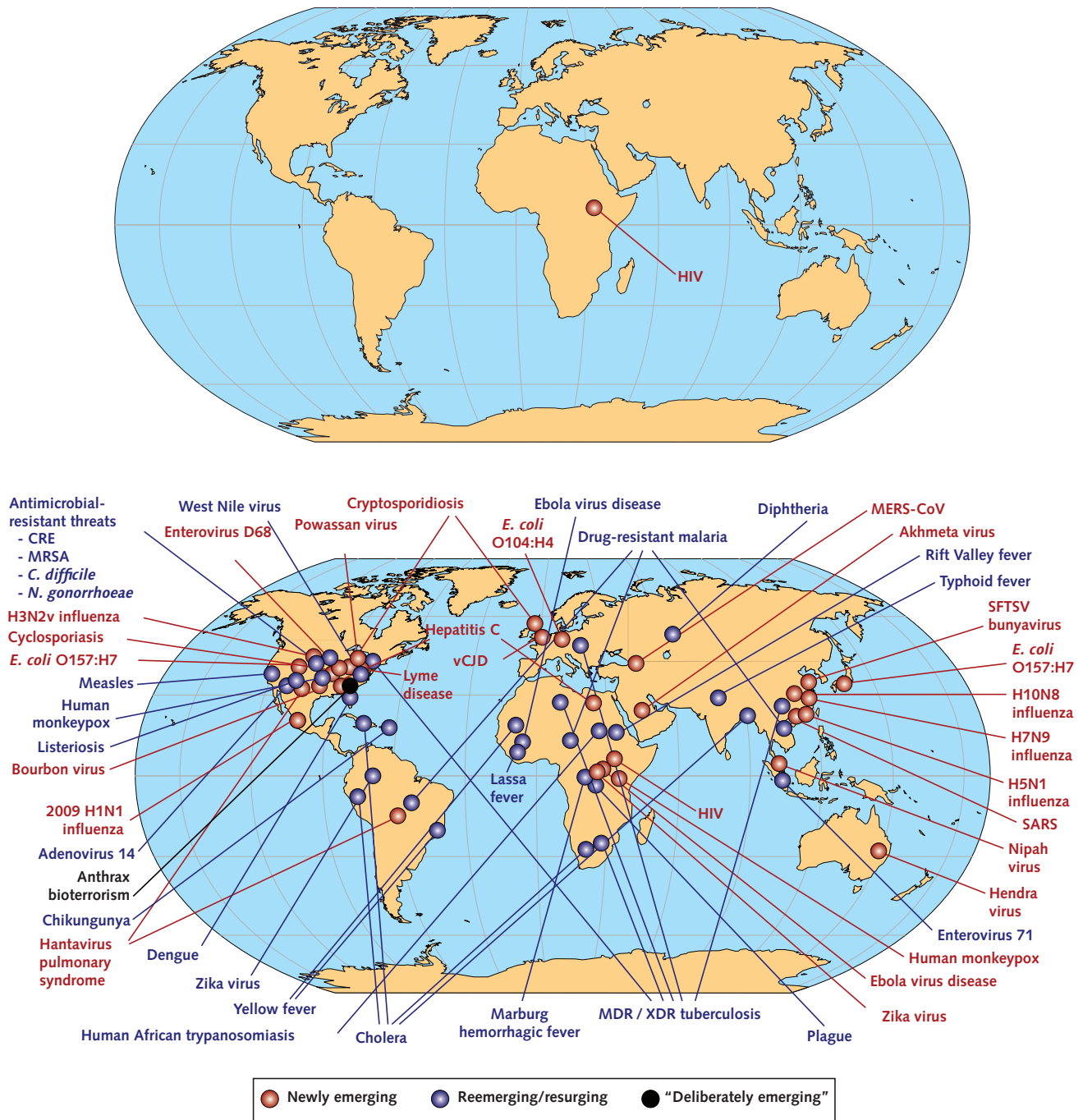
In late 2002, several cases of an unexplained severe atypical pneumonia were reported in the Guangdong province of China, and by February 2003, the number of cases totaled more than 300, with at least 5 deaths (27). Shortly thereafter, this disease, by then termed severe acute respiratory syndrome (SARS), re-

sulted in worldwide panic as it spread globally via air travel, with sporadic cases in some countries and more sustained clusters of transmission in others. The SARS pandemic, which was subsequently found to be caused by a novel coronavirus, resulted in 8096 cases and 774 deaths before the outbreak ended (28) and had a substantial negative effect on national and global economies. The outbreak was successfully controlled with classic public health measures, including early case identification, patient isolation, and use of personal protective equipment by health care workers, even before specific countermeasures were developed. The NIAID played a critical role in the research response to SARS, developing preclinical vaccine candidates in less than a year by using several novel technologies (29-31). Given the resolution of the SARS pandemic, the leading vaccine candidates were not commercially developed; however, they are serving as templates for vaccine approaches to other coronaviruses. Moreover, this rapid response set the pace for our research response to future infectious disease threats.

On the heels of the SARS outbreak, H5N1 influenza reemerged in East and Southeast Asia in 2003, causing infections in both birds and humans (18). Person-to-person transmission was suspected in several case clusters, and although it was inefficient, it caused global concern that the virus might mutate to adapt itself to humans and precipitate the next worldwide influenza pandemic (32). In response, an all-government approach to pandemic preparedness was developed, culminating in the publication of a "National Strategy for Pandemic Influenza" (33) and related implementation plans. Congress, responding to the Bush administration's request, provided billions of dollars in emergency spending to combat the threat of a global influenza pandemic. The NIAID, together with its grantees and contractors, played a key role in testing vaccine candidates against H5N1 influenza, some of which were later manufactured and placed in the Strategic National Stockpile.

Contemporaneous to these emerging infectious disease threats, the global HIV/AIDS epidemic continued to expand, fueled in large part by an explosive increase in infections in sub-Saharan Africa. In 2003, approximately one third of the population of several sub-Saharan African countries was infected with HIV, and more than 20 million persons had died of AIDS (34). Despite the availability of safe and effective therapies to treat HIV infection, only a fraction of infected persons were receiving treatment. In response to this crisis, President George W. Bush launched a \$15 billion, 5-year program, named the President's Emergency Plan for AIDS Relief (PEPFAR), in 2003. This program had ambitious goals, including preventing 7 million new HIV infections; treating 2 million HIV-infected persons; and providing care, such as basic medical services, education, and social support, for 10 million HIV-infected persons and AIDS orphans (35). PEPFAR, which has received continuous funding, is the largest global health initiative for a single infectious disease that has ever been implemented by any country.

Figure. Global examples of emerging and reemerging infectious diseases.



C. difficile = *Clostridium difficile*; CRE = carbapenem-resistant Enterobacteriaceae; *E. coli* = *Escherichia coli*; H3N2v = H3N2 variant; MDR = multidrug-resistant; MERS-CoV = Middle East respiratory syndrome coronavirus; MRSA = methicillin-resistant *Staphylococcus aureus*; *N. gonorrhoeae* = *Neisseria gonorrhoeae*; SARS = severe acute respiratory syndrome; SFTSV = severe fever with thrombocytopenia syndrome virus; vCJD = variant Creutzfeldt-Jakob disease; XDR = extensively drug-resistant. **Top.** Map of the world drawn in the early 1980s and indicating the predominant newly emerging infectious disease at that time (HIV). **Bottom.** Accumulation of some newly emerging and reemerging infectious diseases since the early 1980s and several that were encountered before then. Some infectious disease outbreaks have had major global health impact, whereas others have appeared as curiosities, with little public health impact. Adapted from reference 50.

As of March 2017, PEPFAR had treated 12.3 million HIV-infected men, women, and children with ART; funded 12.5 million voluntary medical male circumcisions in eastern and southern African nations to reduce

the risk for HIV transmission; and provided care for more than 6.2 million orphans and vulnerable children to decrease the physical, psychological, and financial impact of HIV on this high-risk group (36, 37).

Similar to the George W. Bush administration, the Obama administration (2009–2017) experienced the first of several unanticipated infectious disease threats in the early months of its first term. The H1N1 influenza pandemic, the first influenza pandemic of the 21st century, began in April 2009, just months after the inauguration. Because seasonal influenza vaccines offered little or no protection against this newly emerged virus, Congress acted quickly to give the Department of Health and Human Services significant additional resources in anticipation of a second phase of the outbreak in the fall and winter of 2009. Vaccine development was deemed to be the highest priority, and in early August 2009, as soon as an experimental vaccine was available, the NIAID began rapidly enrolling volunteers into a clinical trial conducted by its Vaccine and Treatment Evaluation Units network. However, despite intense efforts to rapidly develop and test the vaccine, trial results and vaccine supplies were not available until the late fall and early winter, after the outbreak had peaked (38).

This experience served as a striking reminder of the inadequacy of our pandemic preparedness capabilities and underscored the need, now being actively pursued, to develop platform technologies that can be applied rapidly to develop vaccines for evolving outbreaks. As in the example of influenza, history has shown that we will be continually threatened by prepandemic and pandemic viruses and that it is extremely difficult to “chase” an emerging virus. The need to develop a more broadly protective “universal” influenza vaccine that is effective against seasonal as well as novel influenza viruses has become clear, and the NIAID has made the marshaling of talent from multiple scientific disciplines to actively pursue the development of such a vaccine a top priority.

Infectious disease outbreaks continued to dominate the global health arena throughout the Obama administration. The 2009 H1N1 influenza pandemic was followed in quick succession by outbreaks of chikungunya in the Caribbean in 2013; Ebola in West Africa in 2014; and, finally, Zika in the southern regions of the Americas in 2015. Chikungunya virus, an alphavirus that had previously caused outbreaks in parts of Africa, Asia, Europe, and the Pacific islands, was first noted in the Caribbean in 2013 and subsequently spread rapidly throughout the Caribbean and Central and South America. It has since caused disease in approximately 2 million persons in the region, with outbreaks ongoing in many countries (39). The NIAID VRC responded quickly to this threat by developing a novel chikungunya virus-like particle vaccine (40) that is currently in a phase 2 study. This rapid response is a dramatic example of the power of utilizing preexisting platform technologies to expedite vaccine development during an outbreak.

The reemergence of chikungunya virus was followed by the devastating Ebola crisis in West Africa, which peaked in 2014. This outbreak was the result of a “perfect storm” in which a lethal disease spread rampantly in the crowded urban centers of countries that

Table. Optimal Response to Emerging Infectious Disease Outbreaks: Lessons Learned

Global surveillance to detect outbreaks early
Transparency and communication in response to outbreaks
Incorporation of infrastructure and capacity building domestically and internationally in outbreak responses
Conduct of basic and clinical research associated with outbreaks in a coordinated and collaborative manner
Involvement of the afflicted communities in policy decisions
Pursuit and perfection of adaptable platform technologies for vaccines, diagnostics, and therapeutics
Importance of flexible funding mechanisms

lacked public health infrastructure. By the end of the outbreak, Guinea, Liberia, and Sierra Leone reported more than 28 000 cases of Ebola, with 11 310 deaths (41). The American public reacted to Ebola with a level of fear and panic that was disproportionate to the actual risk to the U.S. population. Although several Ebola-infected persons were treated in the United States, all but 2 of the cases were acquired during health care provision in countries affected by the epidemic. In addition, most U.S. cases were treated in specialized isolation units by highly trained personnel and posed no danger to the general public. The NIH Clinical Center Special Clinical Studies Unit was one such facility, successfully treating 2 Ebola-infected persons.

In response to the Ebola crisis, the NIH, at the request of the Liberian Ministry of Health, launched a unique collaboration, the Partnership for Research on Ebola Virus in Liberia (PREVAIL), to better understand the natural history of Ebola and to build a clinical research infrastructure to evaluate candidate vaccines and therapeutics. PREVAIL-sponsored studies of several vaccine candidates (42) and the monoclonal antibody therapy ZMapp (Mapp Biopharmaceutical) (43) showed that even during an outbreak, rigorous clinical trials are both feasible and welcomed by affected populations. These trials offered important information to guide responses to future Ebola outbreaks. However, in the end, infrastructure development; close collaboration with the host countries; and the implementation of classic public health measures, such as safe burial practices and meticulous contact tracing, brought this historic epidemic to a halt.

The arrival of Zika virus in the Americas was the final major infectious disease threat confronted during the Obama administration. Zika virus, an obscure flavivirus believed to have limited clinical significance, was detected in Brazil in 2015 and was thrust into the public eye when it was linked to an upsurge in microcephaly in Brazil (44) and other countries. Zika virus has since spread throughout the southern regions of the Americas, causing widespread disease. Puerto Rico and other U.S. territories were hit especially hard by locally transmitted infections. In addition, thousands of travel-related cases were seen in the continental United States, together with more than 200 locally transmitted cases in Florida and a small cluster of infections in Texas (45). In addition to microcephaly, Zika virus has been linked to several other congenital abnormalities

(46), as well as serious clinical manifestations in adults, such as Guillain-Barré syndrome (47) and encephalitis (48). In response to this outbreak, the NIH rapidly launched a comprehensive research program to better understand the natural history and pathogenesis of Zika and develop effective countermeasures, such as vaccines. One NIH vaccine candidate, the VRC's investigational DNA vaccine, was created by utilizing a platform initially developed for West Nile virus. The time frame from obtaining the sequence of Zika virus to the initiation of a phase 1 clinical trial in humans was an extraordinarily short 3 to 4 months (49), and the vaccine candidate is currently in a phase 2/2b clinical trial, again demonstrating the importance of perfecting platform technologies to permit rapid vaccine development during an outbreak.

In 1984, when Dr. Fauci became director of the NIAID, he drew a map of the world for presentation at a congressional hearing that showed a single notable emerging infectious disease threat: HIV (Figure, top). Since then, he has continually updated the map, now showing the emergence of numerous infectious disease threats to illustrate the experiences of the past 33 years as well as highlighting certain infections that had emerged before HIV (Figure, bottom).

The current administration will undoubtedly be challenged by unanticipated infectious disease outbreaks. Leadership at the NIAID has learned many valuable lessons through experiences during the prior administrations with regard to optimal responses to such outbreaks (Table). It is critical to apply these lessons to the infectious disease threats that we will inevitably face in the current administration and beyond. Contrary to the predictions of infectious disease leaders of the mid-20th century, such as Sir F. Macfarlane Burnet (2) and Robert G. Petersdorf (3), we have not seen the end of the era of infectious diseases. We are certain that were these men alive today, both would agree emphatically and would encourage us to remain vigilant and prepared (50).

From Office of the Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland

Note: This article is based on a lecture given by Anthony S. Fauci, MD, on 30 March 2017 in San Diego, California, at the Internal Medicine Meeting 2017 of the American College of Physicians.

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References

1. Fabian J. White House holds disaster-response exercise with Trump officials. *The Hill*. 13 January 2017.
2. Burnet M, White DO. *Natural History of Infectious Disease*. 4th ed. Cambridge, UK: Cambridge Univ Pr; 1972.
3. Petersdorf RG. The doctors' dilemma. *N Engl J Med*. 1978;299:628-34. [PMID: 683236]
4. Centers for Disease Control (CDC). *Pneumocystis pneumonia*—Los Angeles. *MMWR Morb Mortal Wkly Rep*. 1981;30:250-2. [PMID: 6265753]
5. Centers for Disease Control (CDC). Kaposi's sarcoma and *Pneumocystis pneumonia* among homosexual men—New York City and California. *MMWR Morb Mortal Wkly Rep*. 1981;30:305-8. [PMID: 6789108]
6. Fauci AS. The syndrome of Kaposi's sarcoma and opportunistic infections: an epidemiologically restricted disorder of immunoregulation [Editorial]. *Ann Intern Med*. 1982;96:777-9. [PMID: 7091942] doi:10.7326/0003-4819-96-6-777
7. UNAIDS. Fact Sheet: Latest Global and Regional Statistics on the Status of the AIDS Epidemic. 20 July 2017. Accessed at www.unaids.org/en/resources/documents/2017/UNAIDS_FactSheet on 9 August 2017.
8. Scheer R. Early indifference to AIDS is blamed for its spread. *Los Angeles Times*. 29 November 1986.
9. Barré-Sinoussi F, Chermann JC, Rey F, Nugeyre MT, Chamaret S, Gruest J, et al. Isolation of a T-lymphotropic retrovirus from a patient at risk for acquired immune deficiency syndrome (AIDS). *Science*. 1983;220:868-71. [PMID: 6189183]
10. Gallo RC, Salahuddin SZ, Popovic M, Shearer GM, Kaplan M, Haynes BF, et al. Frequent detection and isolation of cytopathic retroviruses (HTLV-III) from patients with AIDS and at risk for AIDS. *Science*. 1984;224:500-3. [PMID: 6200936]
11. U.S. Public Health Service, Office of the Surgeon General. *Surgeon General's Report on Acquired Immune Deficiency Syndrome*. Washington, DC: U.S. Public Health Service; 1986.
12. Vice President Bush Visits Clinical Center, Gets AIDS Update from Experts. *NIH Record*. 1987;39:1-2. Accessed at <https://history.nih.gov/nihownwords/assets/media/pdf/publications/RecordApr21-87.pdf> on 13 September 2017.
13. Hellinger FJ. The lifetime cost of treating a person with HIV. *JAMA*. 1993;270:474-8. [PMID: 8320787]
14. Rothenberg R, Woelfel M, Stoneburner R, Milberg J, Parker R, Truman B. Survival with the acquired immunodeficiency syndrome. Experience with 5833 cases in New York City. *N Engl J Med*. 1987;317:1297-302. [PMID: 3500409]
15. Piot P, Russell S, Larson H. Good politics, bad politics: the experience of AIDS [Editorial]. *Am J Public Health*. 2007;97:1934-6. [PMID: 17901417]
16. Marcus JL, Chao CR, Leyden WA, Xu L, Quesenberry CP Jr, Klein DB, et al. Narrowing the gap in life expectancy between HIV-infected and HIV-uninfected individuals with access to care. *J Acquir Immune Defic Syndr*. 2016;73:39-46. [PMID: 27028501] doi:10.1097/QAI.0000000000001014
17. Subbarao K, Klimov A, Katz J, Regnery H, Lim W, Hall H, et al. Characterization of an avian influenza A (H5N1) virus isolated from a child with a fatal respiratory illness. *Science*. 1998;279:393-6. [PMID: 9430591]
18. World Health Organization. H5N1 highly pathogenic avian influenza: timeline of major events. 4 December 2014. Accessed at www.who.int/influenza/human_animal_interface/H5N1_avian_influenza_update20141204.pdf on 22 August 2017.
19. Nash D, Mostashari F, Fine A, Miller J, O'Leary D, Murray K, et al; 1999 West Nile Outbreak Response Working Group. The outbreak of West Nile virus infection in the New York City area in 1999. *N Engl J Med*. 2001;344:1807-14. [PMID: 11407341]

20. Ledgerwood JE, Pierson TC, Hubka SA, Desai N, Rucker S, Gordon IJ, et al; VRC 303 Study Team. A West Nile virus DNA vaccine utilizing a modified promoter induces neutralizing antibody in younger and older healthy adults in a phase I clinical trial. *J Infect Dis.* 2011;203:1396-404. [PMID: 21398392] doi:10.1093/infdis/jir054
21. Centers for Disease Control and Prevention. Anthrax. The Threat. Updated 1 August 2014. Accessed at www.cdc.gov/anthrax/bioterorism/threat.html on 9 August 2017.
22. Lane HC, Montagne JL, Fauci AS. Bioterrorism: a clear and present danger. *Nat Med.* 2001;7:1271-3. [PMID: 11726956]
23. U.S. Department of Health and Human Services; National Institutes of Health; National Institute of Allergy and Infectious Diseases. NIAID Strategic Plan for Biodefense Research. Washington, DC: U.S. Department of Health and Human Services; 2002.
24. U.S. Department of Health and Human Services; National Institutes of Health; National Institute of Allergy and Infectious Diseases. NIAID Biodefense Research Agenda for CDC Category A Agents. Washington, DC: U.S. Department of Health and Human Services; 2002.
25. Borio L, Inglesby T, Peters CJ, Schmaljohn AL, Hughes JM, Jahrling PB, et al; Working Group on Civilian Biodefense. Hemorrhagic fever viruses as biological weapons: medical and public health management. *JAMA.* 2002;287:2391-405. [PMID: 11988060]
26. Hirschberg R, La Montagne J, Fauci AS. Biomedical research—an integral component of national security. *N Engl J Med.* 2004;350:2119-21. [PMID: 15152055]
27. Peiris JS, Yuen KY, Osterhaus AD, Stöhr K. The severe acute respiratory syndrome. *N Engl J Med.* 2003;349:2431-41. [PMID: 14681510]
28. World Health Organization. Summary of probable SARS cases with onset of illness from 1 November 2002 to 31 July 2003. Updated 31 December 2003. Accessed at www.who.int/csr/sars/country/table2004_04_21/en on 9 August 2017.
29. Bisht H, Roberts A, Vogel L, Bukreyev A, Collins PL, Murphy BR, et al. Severe acute respiratory syndrome coronavirus spike protein expressed by attenuated vaccinia virus protectively immunizes mice. *Proc Natl Acad Sci U S A.* 2004;101:6641-6. [PMID: 15096611]
30. Yang ZY, Kong WP, Huang Y, Roberts A, Murphy BR, Subbarao K, et al. A DNA vaccine induces SARS coronavirus neutralization and protective immunity in mice. *Nature.* 2004;428:561-4. [PMID: 15024391]
31. Bukreyev A, Lamirande EW, Buchholz UJ, Vogel LN, Elkins WR, St Claire M, et al. Mucosal immunisation of African green monkeys (*Cercopithecus aethiops*) with an attenuated parainfluenza virus expressing the SARS coronavirus spike protein for the prevention of SARS. *Lancet.* 2004;363:2122-7. [PMID: 15220033]
32. Ungchusak K, Auewarakul P, Dowell SF, Kitphati R, Auwanit W, Puthavathana P, et al. Probable person-to-person transmission of avian influenza A (H5N1). *N Engl J Med.* 2005;352:333-40. [PMID: 15668219]
33. Homeland Security Council. National Strategy for Pandemic Influenza. Washington, DC: Homeland Security Council; 2005.
34. Office of the U.S. Global AIDS Coordinator. PEPFAR 3.0: Controlling the Epidemic: Delivering on the Promise of an AIDS-Free Generation. 2014. Accessed at www.pepfar.gov/documents/organization/234744.pdf on 9 August 2017.
35. Office of the Press Secretary. Fact Sheet: The President's Emergency Plan for AIDS Relief. 29 January 2003. Accessed at <https://georgewbush-whitehouse.archives.gov/news/releases/2003/01/20030129-1.html> on 9 August 2017.
36. U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Fact Sheet: PEPFAR Latest Global Results. 2016. Accessed at www.pepfar.gov/documents/organization/264882.pdf on 13 September 2017.
37. U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Statement by Ambassador Deborah L. Bix: U.S. Government/PEPFAR's global commitment to HIV/AIDS remains strong [press release]. 20 July 2017. Accessed at www.pepfar.gov/press/releases/2017/272760.htm on 9 August 2017.
38. Centers for Disease Control and Prevention. The 2009 H1N1 Pandemic: Summary Highlights, April 2009–April 2010. Updated 16 June 2010. Accessed at www.cdc.gov/h1n1flu/cdcresponse.htm on 24 August 2017.
39. Centers for Disease Control and Prevention. Chikungunya Virus. Updated 29 August 2017. Accessed at www.cdc.gov/chikungunya/index.html on 9 August 2017.
40. Chang LJ, Dowd KA, Mendoza FH, Saunders JG, Sitar S, Plummer SH, et al; VRC 311 Study Team. Safety and tolerability of chikungunya virus-like particle vaccine in healthy adults: a phase 1 dose-escalation trial. *Lancet.* 2014;384:2046-52. [PMID: 25132507] doi:10.1016/S0140-6736(14)61185-5
41. World Health Organization. Ebola virus disease. Updated June 2017. Accessed at www.who.int/mediacentre/factsheets/fs103/en on 9 August 2017.
42. National Institute of Allergy and Infectious Diseases. Experimental Ebola vaccines well tolerated, immunogenic in phase 2 study [press release]. 23 February 2016. Accessed at www.niaid.nih.gov/news-events/experimental-ebola-vaccines-well-tolerated-immunogenic-phase-2-study on 2 October 2017.
43. Davey RT Jr, Dodd L, Proschan MA, Neaton J, Neuhaus Nordwall J, Koopmeiners JS, et al; PREVAIL II Writing Group. A randomized, controlled trial of ZMapp for Ebola virus infection. *N Engl J Med.* 2016;375:1448-56. [PMID: 27732819]
44. Schuler-Faccini L, Ribeiro EM, Feitosa IM, Horovitz DD, Cavalcanti DP, Pessoa A, et al; Brazilian Medical Genetics Society-Zika Embryopathy Task Force. Possible association between Zika virus infection and microcephaly—Brazil, 2015. *MMWR Morb Mortal Wkly Rep.* 2016;65:59-62. [PMID: 26820244] doi:10.15585/mmwr.mm6503e2
45. Centers for Disease Control and Prevention. Zika Cases in the United States. Updated 16 August 2017. Accessed at www.cdc.gov/zika/reporting/case-counts.html on 22 August 2017.
46. Steele RW. Zika virus: an explosive pandemic and a new TORCH agent. *Clin Pediatr (Phila).* 2016;55:698-700. [PMID: 27000068] doi:10.1177/0009228166386660
47. Dos Santos T, Rodriguez A, Almiron M, Sanhueza A, Ramon P, de Oliveira WK, et al. Zika virus and the Guillain-Barré syndrome—case series from seven countries [Letter]. *N Engl J Med.* 2016;375:1598-1601. [PMID: 27579558]
48. da Silva IRF, Frontera JA, Bispo de Filippis AM, Nascimento OJMD; RIO-GBS-ZIKV Research Group. Neurologic complications associated with the Zika virus in Brazilian adults. *JAMA Neurol.* 2017. [PMID: 28806453] doi:10.1001/jamaneuro.2017.1703
49. National Institute of Allergy and Infectious Diseases. NIH begins testing investigational Zika vaccine in humans [press release]. 3 August 2016. Accessed at www.niaid.nih.gov/news-events/nih-begins-testing-investigational-zika-vaccine-humans on 2 October 2017.
50. Fauci AS. Infectious diseases: considerations for the 21st century. *Clin Infect Dis.* 2001;32:675-85. [PMID: 11229834]

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Annex 5

Patent No. US 10 , 130 , 701 B2



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Bickerton et al.

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(54) **CORONAVIRUS**

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(56) **References Cited**

U.S. PATENT DOCUMENTS

7,452,542 B2 * 11/2008 Denison C07K 14/005
424/221.1

FOREIGN PATENT DOCUMENTS

WO	WO-2004/092360 A2	10/2004
WO	WO-2005/049814 A2	6/2005
WO	WO-2007/078203 A1	7/2007
WO	WO-2011/004146 A1	1/2011

OTHER PUBLICATIONS

Sperry Journal of Virology, 2005, vol. 79, No. 6, pp. 3391-3400.*
Altschul et al., Basic local alignment search tool. *J. Mol. Biol.* 215:
403-10 (1990).

Ammayappan et al., Identification of sequence changes respon-
sible for the attenuation of avian infectious bronchitis virus strain
Arkansas DPI, *Arch. Virol.*, 154(3):495-9 (2009).

Anonymous: "EM_STD:KF377577", Oct. 30, 2013.

Armesto et al., A recombinant avian infectious bronchitis virus
expressing a heterologous spike gene belonging to the 4/91 serotype,
PLoS One, 6(8):e24352 (2011).

Armesto et al., The replicase gene of avian coronavirus infectious
bronchitis virus is a determinant of pathogenicity, *PLoS One*,
4(10):e7384 (2009).

Armesto et al., Transient dominant selection for the modification
and generation of recombinant infectious bronchitis coronaviruses,
Methods Mol. Biol., 454:255-73 (2008).

Ausubel et al., *Short Protocols in Molecular Biology*, 4th edition,
Chapter 18 (1999).

Britton et al., Generation of a recombinant avian coronavirus
infectious bronchitis virus using transient dominant selection, *J.*
Viol. Methods, 123(2):203-11 (2005).

Britton et al., Modification of the avian coronavirus infectious
bronchitis virus for vaccine development, *Bioeng. Bugs.*, 3(2):114-9
(2012).

Casais et al., Recombinant avian infectious bronchitis virus express-
ing a heterologous spike gene demonstrates that the spike protein is
a determinant of cell tropism, *J. Virol.*, 77(16):9084-9 (2003).

Casais et al., Reverse genetics system for the avian coronavirus
infectious bronchitis virus, *J. Virol.*, 75(24):12359-69 (2001).

Devereux et al., A comprehensive set of sequence analysis programms
for the VAX. *Nucl. Acids Res.* 12: 387-95 (1984).

Cavanagh et al., Manipulation of the infectious bronchitis coronavirus
genome for vaccine development and analysis of the accessory
proteins, *Vaccine*, 25(30):5558-62 (2007).

International Preliminary Report on Patentability, International Appli-
cation No. PCT/GB2015/052124, dated Jan. 24, 2017.

International Search Report and Written Opinion, International
Application No. PCT/GB2015/052124, dated Oct. 9, 2015.

Larkin et al., Clustal W and Clustal X version 2.0, *Bioinformatics*,
23(21):2947-8 (2007).

Menachery et al., Attenuation and restoration of severe acute
respiratory syndrome coronavirus mutant lacking 2'-o-
methyltransferase activity, *J. Virol.*, 88(8):4251-64 (2014).

Tatusova et al., BLAST 2 Sequences, a new tool for comparing
protein and nucleotide sequences, *FEMS Microbiol. Lett.*, 174(2):247-
50 (1999).

(Continued)

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(57) **ABSTRACT**

The present invention provides a live, attenuated coronavi-
rus comprising a variant replicase gene encoding polypro-
teins comprising a mutation in one or more of non-structural
protein(s) (nsp)-10, nsp-14, nsp-15 or nsp-16. The corona-
virus may be used as a vaccine for treating and/or preventing
a disease, such as infectious bronchitis, in a subject.

25 Claims, 15 Drawing Sheets

Specification includes a Sequence Listing.

Annex 6

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(54) Title (EN): CRYPTOCURRENCY SYSTEM USING BODY ACTIVITY DATA

(54) Title (FR): SYSTÈME DE CRYPTOMONNAIE UTILISANT DES DONNÉES D'ACTIVITÉ CORPORELLE

(57) Abstract:

(EN): Human body activity associated with a task provided to a user may be used in a mining process of a cryptocurrency system. A server may provide a task to a device of a user which is communicatively coupled to the server. A sensor communicatively coupled to or comprised in the device of the user may sense body activity of the user. Body activity data may be generated based on the sensed body activity of the user. The cryptocurrency system communicatively coupled to the device of the user may verify if the body activity data satisfies one or more conditions set by the cryptocurrency system, and award cryptocurrency to the user whose body activity data is verified.

(FR): L'activité du corps humain associée à une tâche fournie à un utilisateur peut être utilisée dans un processus de minage d'un système de cryptomonnaie. Un serveur peut fournir une tâche à un dispositif d'un utilisateur qui est couplé de manière à communiquer avec le serveur. Un capteur couplé de manière à communiquer avec un dispositif de l'utilisateur ou compris dans ce dernier peut détecter l'activité corporelle de l'utilisateur. Des données d'activité corporelle peuvent être générées sur la base de l'activité corporelle détectée de l'utilisateur. Le système de cryptomonnaie de la présente invention couplé de manière à communiquer avec le dispositif de l'utilisateur peut vérifier si les données d'activité corporelle satisfont une ou plusieurs conditions définies par le système de cryptomonnaie, et attribuer une cryptomonnaie à l'utilisateur dont les données d'activité corporelle sont vérifiées.

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Declaration made as applicant's entitlement, as at the international filing date, to claim the priority of the earlier application, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii))

1. WO2020060606 - CRYPTOCURRENCY SYSTEM USING BODY ACTIVITY DATA

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[FR] SYSTÈME DE CRYPTOMONNAIE UTILISANT DES DONNÉES D'ACTIVITÉ CORPORELLE

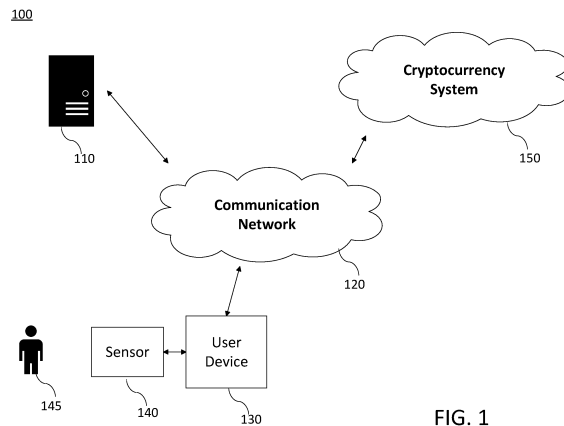


FIG. 1

Abstract

[EN]

Human body activity associated with a task provided to a user may be used in a mining process of a cryptocurrency system. A server may provide a task to a device of a user which is communicatively coupled to the server. A sensor communicatively coupled to or comprised in the device of the user may sense body activity of the user. Body activity data may be generated based on the sensed body activity of the user. The cryptocurrency system communicatively coupled to the device of the user may verify if the body activity data satisfies one or more conditions set by the cryptocurrency system, and award cryptocurrency to the user whose body activity data is verified.

[FR]

L'activité du corps humain associée à une tâche fournie à un utilisateur peut être utilisée dans un processus de minage d'un système de cryptomonnaie. Un serveur peut fournir une tâche à un dispositif d'un utilisateur qui est couplé de manière à communiquer avec le serveur. Un capteur couplé de manière à communiquer avec un dispositif de l'utilisateur ou compris dans ce dernier peut détecter l'activité corporelle de l'utilisateur. Des données d'activité corporelle peuvent être générées sur la base de l'activité corporelle détectée de l'utilisateur. Le système de cryptomonnaie de la présente invention couplé de manière à communiquer avec le dispositif de l'utilisateur peut vérifier si les données d'activité corporelle satisfont une ou plusieurs conditions définies par le système de cryptomonnaie, et attribuer une cryptomonnaie à l'utilisateur dont les données d'activité corporelle sont vérifiées.

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