Twitter Thread by Graham Neary



Graham Neary
@GrahamNeary

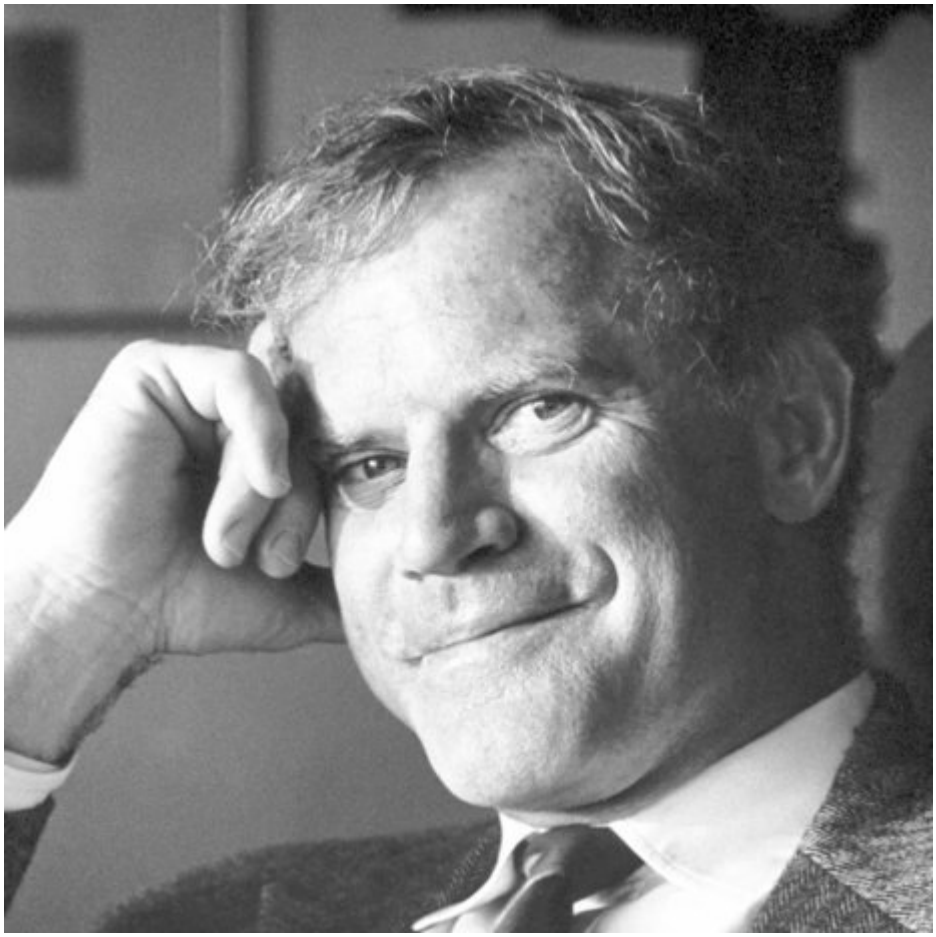
Kary Mullis won a Nobel Prize for Chemistry in 1993.

His most famous achievement was the invention of PCR, the method being used around the world to test for Covid-19.

I've been asking myself: what would he think of current events?

It's time for a thread. ■■

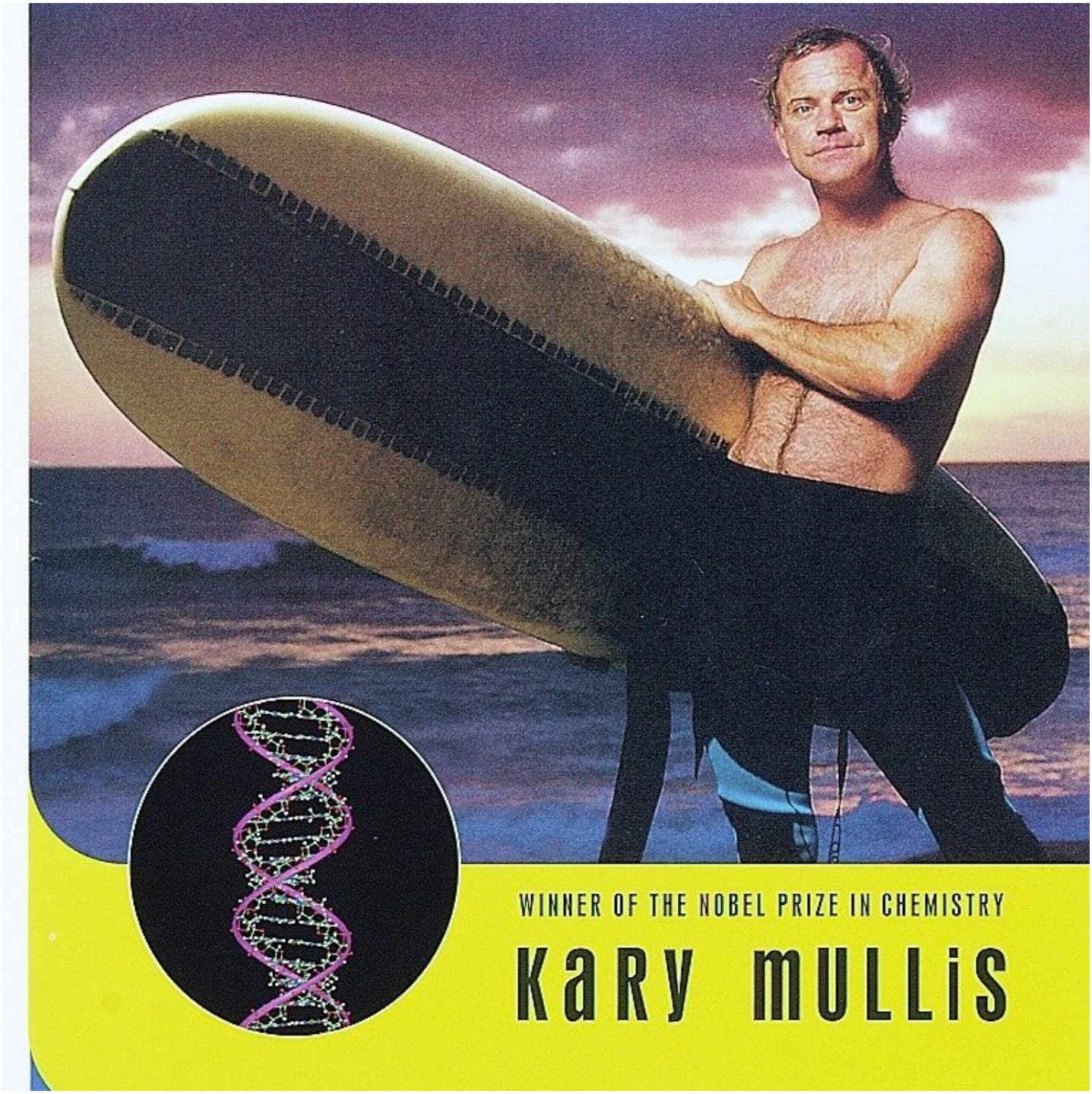
Please retweet.



In one of life's strange coincidences, Mullis died in August 2019 - just months before the first cases of Covid were allegedly discovered in China.

Since I can't ask him for his latest thoughts, I've read his book, "Dancing Naked in the Mind Field".

Here are the six best bits.

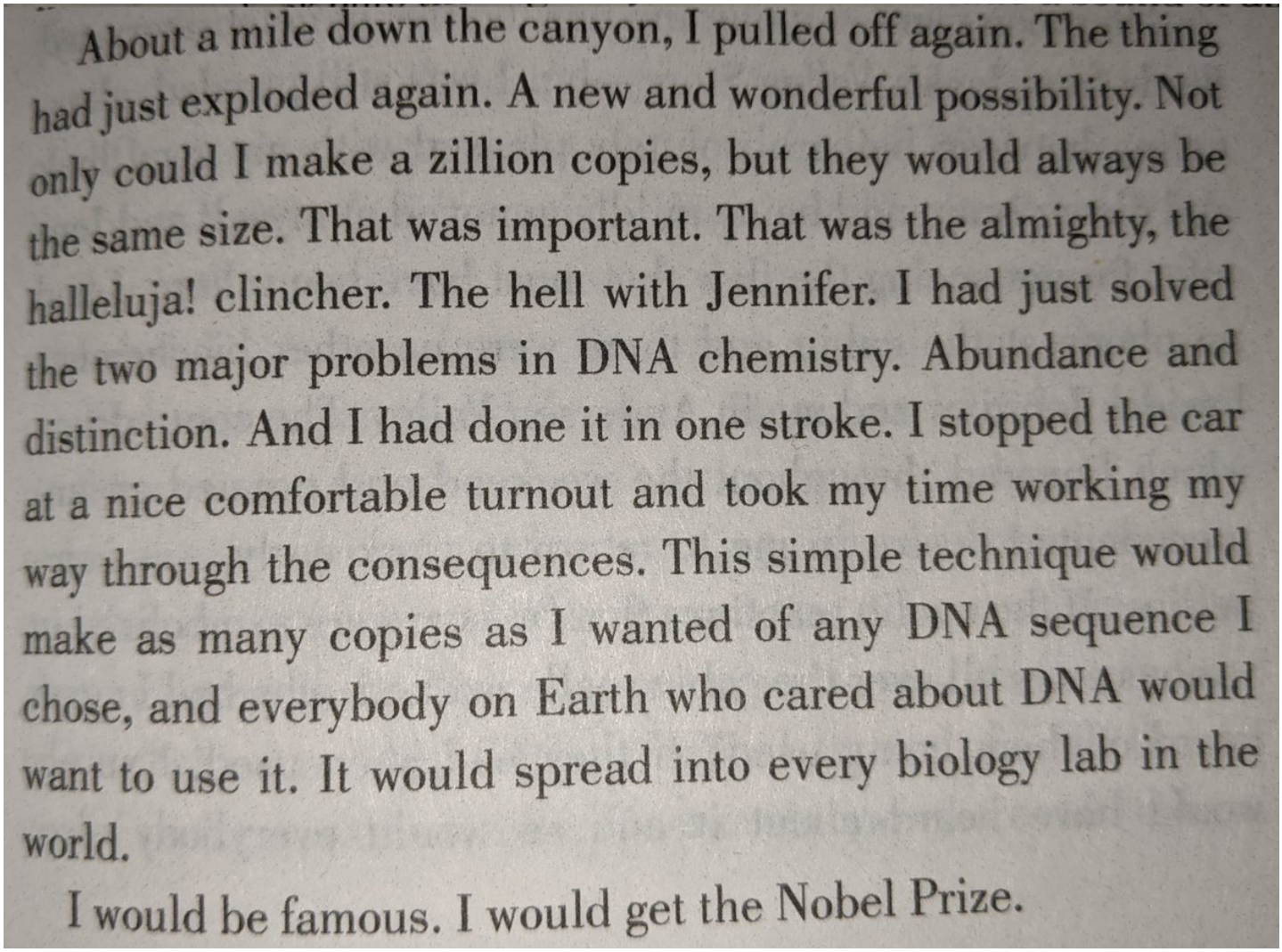


1. The invention of PCR.

The idea for "polymerase chain reaction" came to Mullis while driving at night through the Californian countryside.

With PCR, he could make "as many copies as I wanted of any DNA sequence I chose".

He predicted he would win the Nobel prize for this.

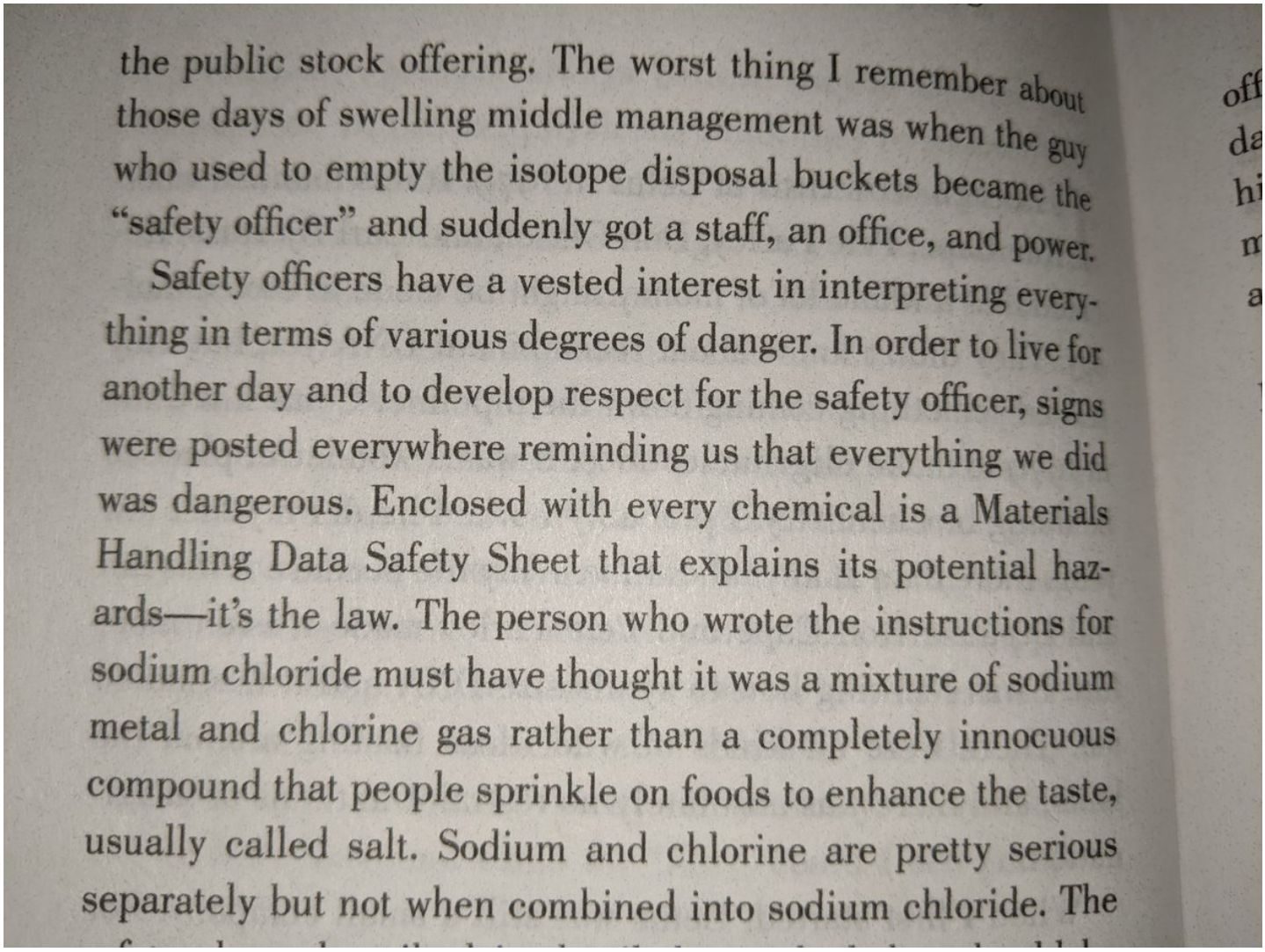

About a mile down the canyon, I pulled off again. The thing had just exploded again. A new and wonderful possibility. Not only could I make a zillion copies, but they would always be the same size. That was important. That was the almighty, the halleluja! clincher. The hell with Jennifer. I had just solved the two major problems in DNA chemistry. Abundance and distinction. And I had done it in one stroke. I stopped the car at a nice comfortable turnout and took my time working my way through the consequences. This simple technique would make as many copies as I wanted of any DNA sequence I chose, and everybody on Earth who cared about DNA would want to use it. It would spread into every biology lab in the world.

I would be famous. I would get the Nobel Prize.

2. Battling with the safety officer.

Mullis invented PCR while working at a biotechnology company called Cetus.

He enjoyed working there, but he hated its embrace of safety culture. He hated the "safety officer" who was given power over him.



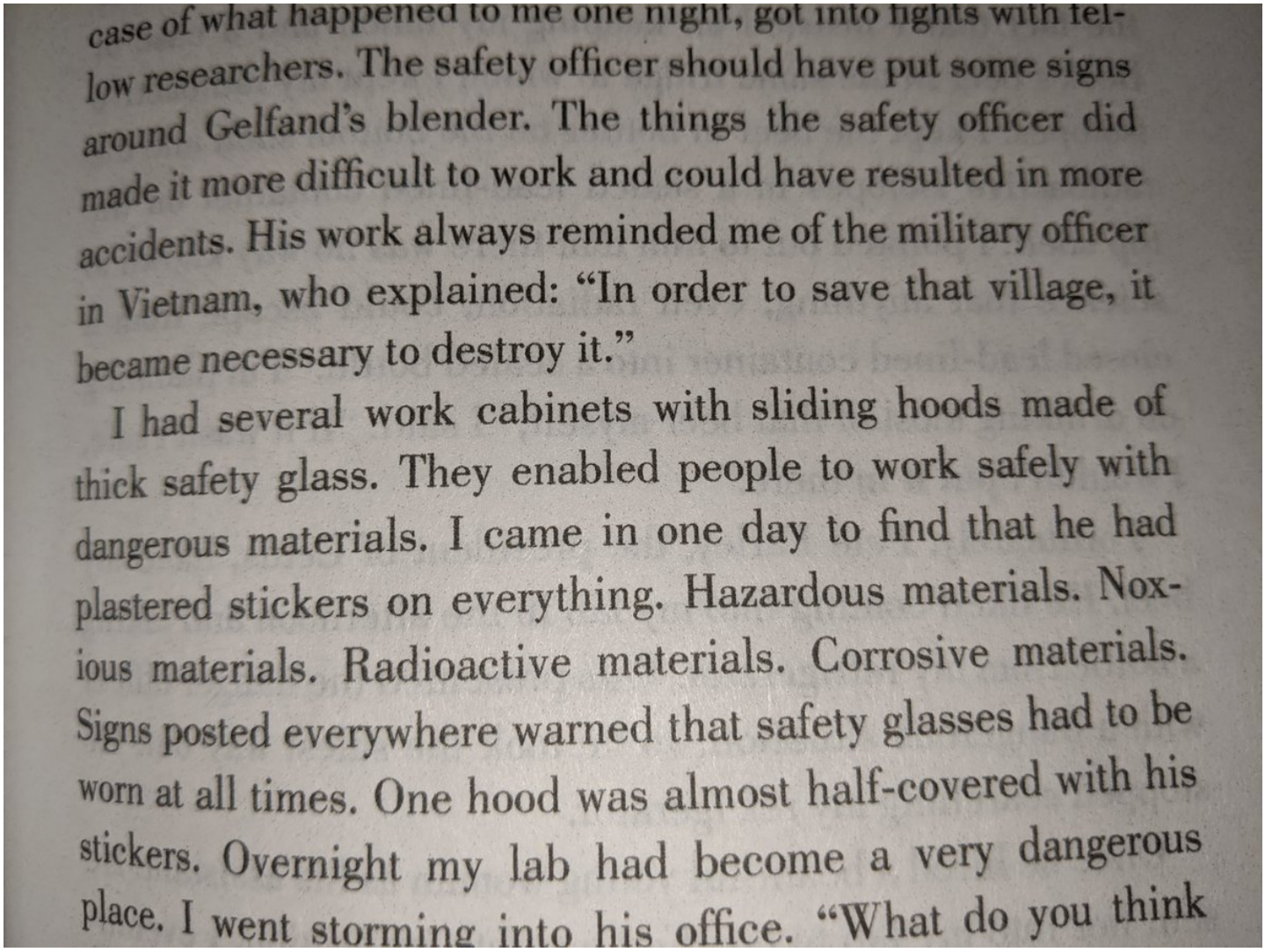
the public stock offering. The worst thing I remember about those days of swelling middle management was when the guy who used to empty the isotope disposal buckets became the "safety officer" and suddenly got a staff, an office, and power.

Safety officers have a vested interest in interpreting everything in terms of various degrees of danger. In order to live for another day and to develop respect for the safety officer, signs were posted everywhere reminding us that everything we did was dangerous. Enclosed with every chemical is a Materials Handling Data Safety Sheet that explains its potential hazards—it's the law. The person who wrote the instructions for sodium chloride must have thought it was a mixture of sodium metal and chlorine gas rather than a completely innocuous compound that people sprinkle on foods to enhance the taste, usually called salt. Sodium and chlorine are pretty serious separately but not when combined into sodium chloride. The

He called this man the "danger officer", because "all he ever did was put up DANGER signs".

This man covered up his glass cabinets with warning stickers, making it impossible to see the chemicals inside.

"Overnight, my lab had become a very dangerous place".



case of what happened to me one night, got into fights with fellow researchers. The safety officer should have put some signs around Gelfand's blender. The things the safety officer did made it more difficult to work and could have resulted in more accidents. His work always reminded me of the military officer in Vietnam, who explained: "In order to save that village, it became necessary to destroy it."

I had several work cabinets with sliding hoods made of thick safety glass. They enabled people to work safely with dangerous materials. I came in one day to find that he had plastered stickers on everything. Hazardous materials. Noxious materials. Radioactive materials. Corrosive materials. Signs posted everywhere warned that safety glasses had to be worn at all times. One hood was almost half-covered with his stickers. Overnight my lab had become a very dangerous place. I went storming into his office. "What do you think

The safety officer also objected to Mullis storing beer bottles in the same fridge as his radioactive isotopes.

Mullis argued that radiation couldn't escape from a lead-lined container. Mullis won this battle because the president of Cetus also liked taking beer from the fridge.

3. Defending OJ Simpson.

Mullis was asked to be an expert witness at the murder trial of OJ Simpson, though he did not ultimately testify.

He had testified for the defense at murder trials before - "my role was to make sure the PCR-DNA work had been done fairly and accurately".

Los Angeles Times

THE O.J. SIMPSON MURDER TRIAL : Defense's DNA Expert Is Called Brilliant, Offbeat : Profile: Colleagues say Nobel laureate who uses LSD and scandalizes scientific meetings loves theatrical behavior. D.A. may use his personal history and outrageous ways to attack his credibility.

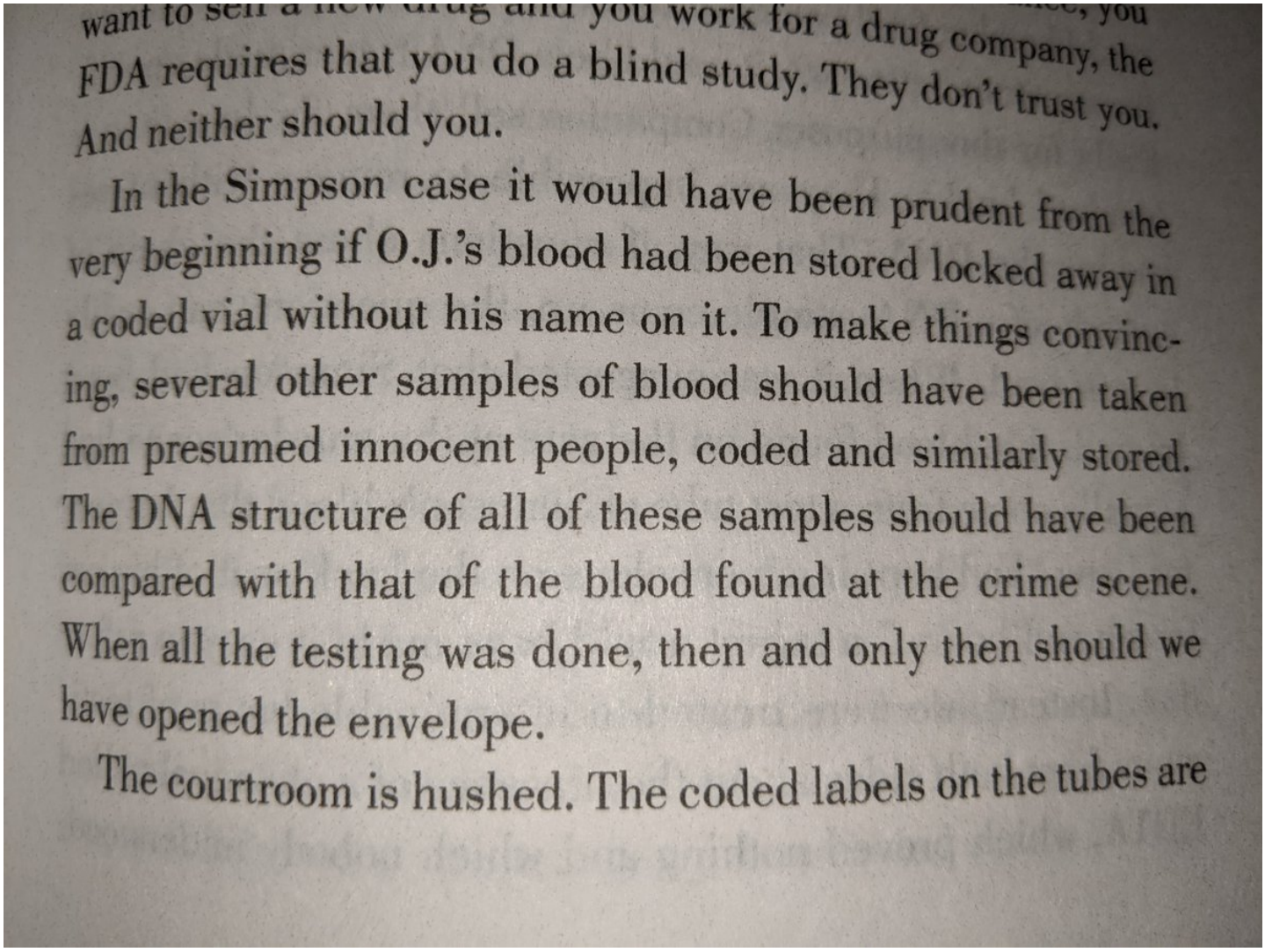
By TONY PERRY
MARCH 29, 1995 | 12 AM
TIMES STAFF WRITER

SAN DIEGO — Kary Mullis, the Nobel laureate and DNA expert who may testify for the defense in the O.J. Simpson case, is known in the scientific community for his brilliance, his iconoclasm and his sometimes outrageous ways.

Twelve years ago, he discovered a method of unlocking the secrets of DNA that led to such advances as genetic fingerprinting from tiny blood samples, the type of evidence that the prosecution hopes will convict Simpson. Defense lawyers, however, have indicated that Mullis will testify about the fallibility of DNA testing in criminal cases.

In OJ's case, Mullis thought "most of the DNA evidence should be thrown out on first principles."

Why? It was a "one-man line-up" - only OJ's DNA was tested. It was impossible to be sure that the test would not also put some other presumed innocent person at the crime scene.


want to sell a new drug and you work for a drug company, the FDA requires that you do a blind study. They don't trust you. And neither should you.

In the Simpson case it would have been prudent from the very beginning if O.J.'s blood had been stored locked away in a coded vial without his name on it. To make things convincing, several other samples of blood should have been taken from presumed innocent people, coded and similarly stored. The DNA structure of all of these samples should have been compared with that of the blood found at the crime scene. When all the testing was done, then and only then should we have opened the envelope.

The courtroom is hushed. The coded labels on the tubes are

Furthermore, the blood should have been stored without OJ's name on it, so that those carrying out the test wouldn't know whether the prosecution wanted a positive result.

Today, governments are mass testing for SARS-CoV-2 and nothing else. Another "one-man line-up". perhaps?

4. Nobody is taking care of us.

At 22, Mullis realised there was nobody taking care of humanity - no group of older, wiser people looking out for our best interests.

He realised this when his "description of the entire universe" was published by Nature.

https://t.co/HNDqg6yJxy

Published: 18 May 1968

Cosmological Significance of Time Reversal

KARY MULLIS

Nature **218**, 663–664(1968) | Cite this article

1629 Accesses | **2** Citations | **17** Altmetric | Metrics

Abstract

A RECENT attempt by Stannard[1] to explain the apparent overthrow of parity in the long-lived kaon experiments suggested the possibility of an unseen component of the universe in which matter was of opposite time sense to that in the observable universe.

Despite his "limited experience as a cosmologist", this piece of work was taken seriously by the foremost scientific journal in the world. The media picked up on it and he became internationally notorious for it.

But he knew that it was really just a "tentative hypothesis".

By contrast, the major scientific journals rejected him when he wanted to share the discovery of PCR - something which he knew would be extremely useful.

Nature and Science couldn't see it, and both turned him down.

He was eventually published by "Methods in Enzymology".

› Methods Enzymol. 1987;155:335-50. doi: 10.1016/0076-6879(87)55023-6.

Specific synthesis of DNA in vitro via a polymerase-catalyzed chain reaction

K B Mullis, F A Faloona

PMID: 3431465 DOI: 10.1016/0076-6879(87)55023-6

This experience taught him that not even scientific journals could be trusted, let alone the unscientific news media.

"The media are at the mercy of the scientists who have the ability to summon them, and the scientists who have such ability are not often minding the store."

5. Science is corrupt.

Mullis agreed with Nobel-winning economist James Buchanan: "there is no vested interest in seeing a fair evaluation of a public scientific issue".

Voters don't have time to study politics, so they are preyed on by politicians, bureaucrats and lobbyists.

The Calculus of Consent

Logical Foundations of Constitutional Democracy

James M. Buchanan and Gordon Tullock

A scientific study of the political and economic factors influencing democratic decision making

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Description

Series: Ann Arbor Paperbacks

The Calculus of Consent breaks with past theories of political science in its analysis of democratic decision-making processes. It approaches the basic problems of politics, using the technical tools developed in modern economics and game theory.

Buchanan and Tullock discuss political institutions in the same manner as the economist discusses the market. They begin with the individual as he participates in the processes through which group choices are organized. Government is treated as a co-operative endeavor on the part of a number of people of differing tastes to increase their abilities to reach their separate objectives. As in economics, the basic question becomes one of efficiency—which set of governmental institutions will best serve the individual ends of the citizens.

The authors show that many of the apparent inefficiencies of governmental process are predictable results of positive analysis. Their methodology, concepts, and analytics are based on an intellectual movement which goes back to the work of Arthur Bentley and Pareto. A striking feature of the book is a series of figures designed to support the authors' arguments on a mathematical level.

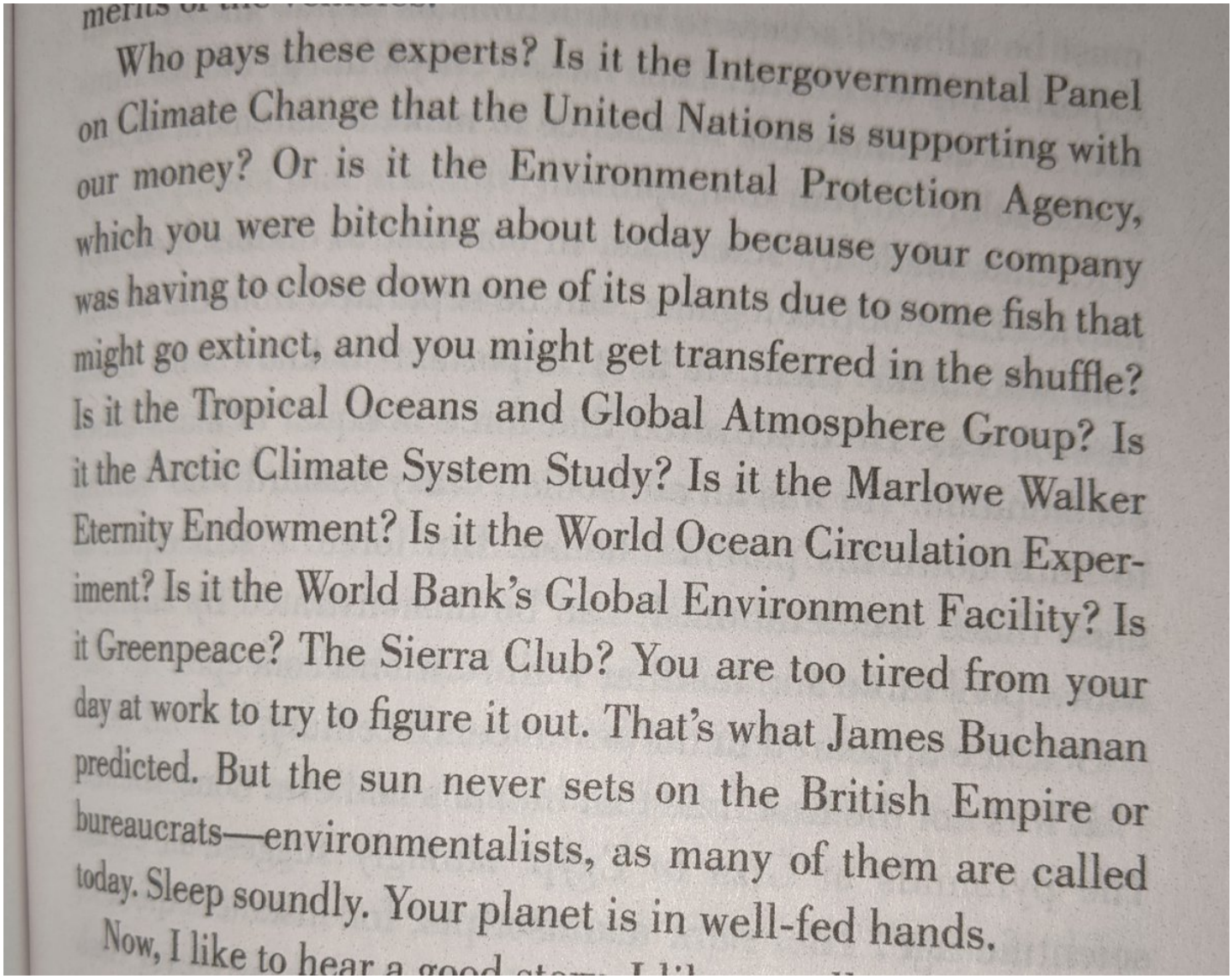
Of great originality and significance, *The Calculus of Consent* is an important theoretical document. It represents a major step towards formulating a scientific theory of democracy.

Scientific advisors to governments, according to Mullis, are "always having to come up with the imminent disasters that can be prevented by governmental projects, sponsored by informed and well-meaning politicians".

What they are really doing is manipulating the public.

Mullis singles out the UN's IPCC, the EPA and others for providing corrupted science to politicians.

"If you can't actually measure something, or make an accurate prediction from a theory, and present it to a group of your fellows, be good enough not to disturb us about it."


merits of the

Who pays these experts? Is it the Intergovernmental Panel on Climate Change that the United Nations is supporting with our money? Or is it the Environmental Protection Agency, which you were bitching about today because your company was having to close down one of its plants due to some fish that might go extinct, and you might get transferred in the shuffle? Is it the Tropical Oceans and Global Atmosphere Group? Is it the Arctic Climate System Study? Is it the Marlowe Walker Eternity Endowment? Is it the World Ocean Circulation Experiment? Is it the World Bank's Global Environment Facility? Is it Greenpeace? The Sierra Club? You are too tired from your day at work to try to figure it out. That's what James Buchanan predicted. But the sun never sets on the British Empire or bureaucrats—environmentalists, as many of them are called today. Sleep soundly. Your planet is in well-fed hands.

Now, I like to hear a good

As a result of the politically motivated funding of scientific research, Mullis says there is "very little experimental verification" when it comes to "important societal issues".

"Some of the big truths voters have accepted have little or no scientific basis."

Plus ça change..

6. AIDS: a symptom plus a positive test result.

Mullis was one of the most prominent scientists to question the connection between HIV and AIDS.

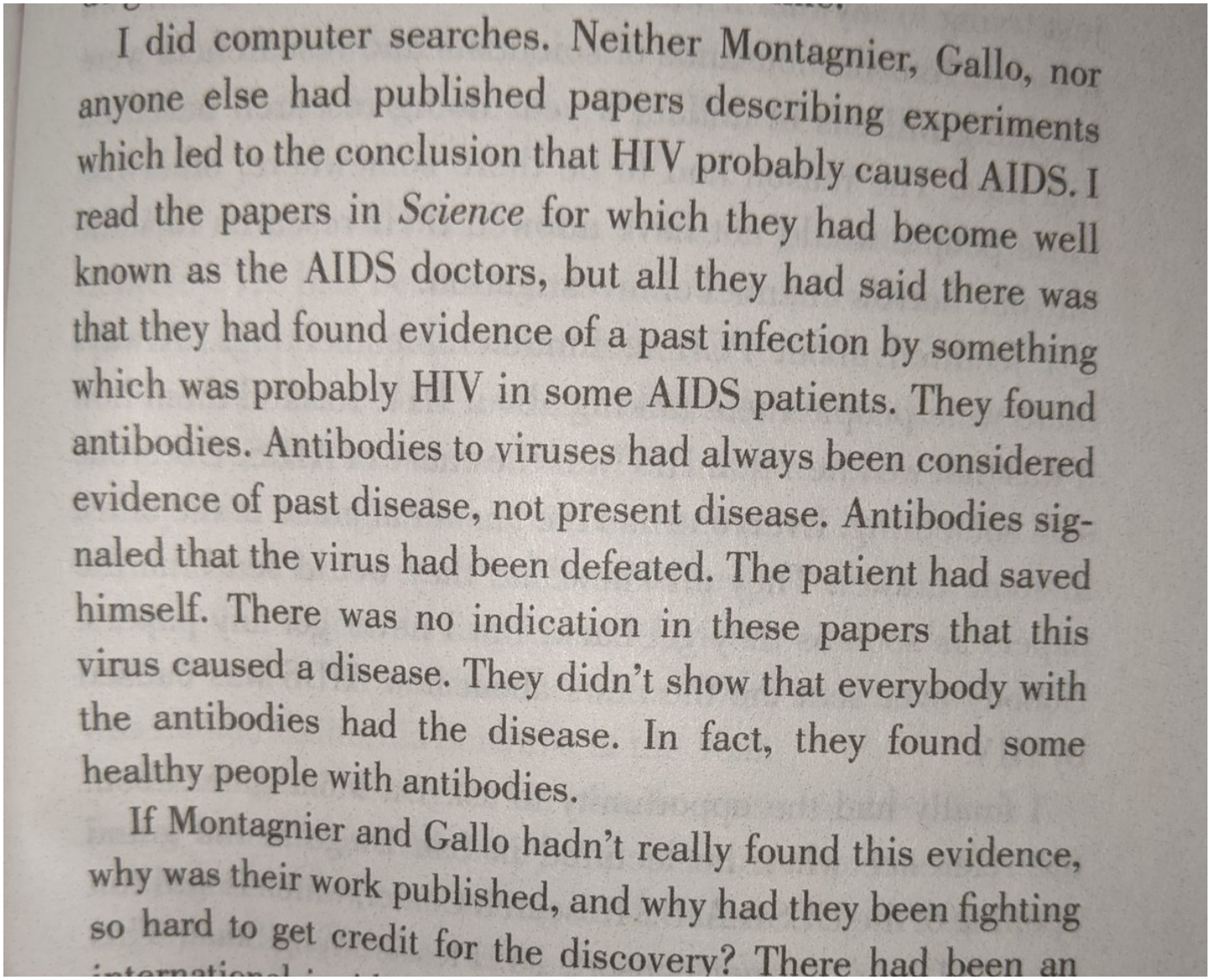
On reading this chapter of the book, I was shocked by the parallels between HIV/AIDS and SARS-Cov-2/Covid-19.

Buckle yourself in...

Mullis became interested in AIDS when he was involved in testing blood samples for retroviruses such as HIV.

When he looked for evidence that HIV caused AIDS, he could not find any experimental research to support this claim.

He kept asking for it, but nobody could provide it.



I did computer searches. Neither Montagnier, Gallo, nor anyone else had published papers describing experiments which led to the conclusion that HIV probably caused AIDS. I read the papers in *Science* for which they had become well known as the AIDS doctors, but all they had said there was that they had found evidence of a past infection by something which was probably HIV in some AIDS patients. They found antibodies. Antibodies to viruses had always been considered evidence of past disease, not present disease. Antibodies signaled that the virus had been defeated. The patient had saved himself. There was no indication in these papers that this virus caused a disease. They didn't show that everybody with the antibodies had the disease. In fact, they found some healthy people with antibodies.

If Montagnier and Gallo hadn't really found this evidence, why was their work published, and why had they been fighting so hard to get credit for the discovery? There had been an

He then came across Peter Duesberg, a virologist at Berkeley, who said that no such evidence existed.

In this 2015 lecture, Duesberg notes that all of his funding from the US government's NIH abruptly dried up, as soon as he became a HIV-AIDS dissenter.

https://t.co/QHgNKDvztl

By contrast, Duesberg's former colleague at the National Cancer Institute, Robert Gallo, had no problems getting funded.

President Reagan's AIDS-related funding jumped to the billions on the back of Gallo's advice.

Gallo admitted in 1991 that he hadn't really discovered HIV.

GALLO ADMITS FRENCH DISCOVERED AIDS VIRUS

By **John Crewdson, Chicago Tribune**
CHICAGO TRIBUNE

MAY 30, 1991 | WASHINGTON

A controversial piece of scientific history will be officially rewritten this week, with the publication of an acknowledgment by Dr. Robert C. Gallo that the AIDS virus he claimed to have discovered in 1984 was in reality a virus sent to him from France the year before.

Gallo`s acknowledgment, in a letter to the British scientific journal Nature, follows by two weeks the publication, in the American journal Science, of a report from the Pasteur Institute in Paris showing that a virus discovered there in 1983 is a virtual genetic twin of the Gallo virus.

The letter, which associates said was written at the urging of Gallo`s senior colleagues, appears to put an end to a six-year effort by Gallo and his employer, the National Institutes of Health, to claim the AIDS virus as an independent discovery.

So what are the similarities between SARS-CoV-2 and HIV? After listening to Mullis and Duesberg, I can think of many.

(1) Bad predictions.

The WHO was accused of making exaggerated, fear-inducing forecasts of AIDS deaths on the back of dodgy computer modelling.

Sound familiar?

AIDS Anal Afr. 1995 Dec;5(6):4-5.

WHO criticised for "inflating" AIDS figures

S W Derbyshire

PMID: 12319962

Abstract

PIP: The World Health Organization (WHO) has issued exaggerated projections about AIDS deaths that the press picked up to paint an apocalyptic future for Africa. Computer models used by WHO estimate that 2-3 million people in Africa are suffering or have died from AIDS since the early 1980s and another 10 million are carrying HIV. WHO surveys during 1987 indicated HIV seroprevalence rates from 5% to 30%. The Global Program on AIDS (GPA) utilized these data to predict 6.5 million new AIDS deaths annually by 1997, which would reduce population growth in urban areas by over 30%. This projection seems to be an exaggeration. The same 1987 figures were used to predict AIDS deaths for 1992. Using the highest seroprevalence rate of 30%, the WHO model predicted a high scenario of 6 million new AIDS deaths in 1992, when in fact the cumulative cases were only 331,376 in 1994. Even the low scenario of a 5% seroprevalence rate predicted 750,000 new AIDS cases for 1992, whereas the 1% rate suggested 500,000 new AIDS cases. Another projection made in 1994 estimated only 350,000 new AIDS cases for Africa in 1994. The discrepancies between projections and recorded figures are attributable to lack of statistical data and reliable reporting of mortality. National estimates are derived from censuses and surveys which are overextrapolated. Since 1985, AIDS has been defined in Africa on the basis of clinical observation (chronic diarrhea or prolonged fever and persistent cough or herpes) because of lack of HIV testing facilities. However, it is impossible to tell whether someone who develops malaria does so because of AIDS or because of normal impaired immunity. This definition has inflated the estimated AIDS figures. The danger of the AIDS epidemic is dwarfed by 3.5 million deaths from tuberculosis and 16.8 million deaths from malaria since the beginning of the AIDS epidemic. The frightening scenario looms that widespread, but curable, diseases are wrongly classified as AIDS-related complex, thereby foregoing appropriate treatment.

(2) A disease of many symptoms.

According to Mullis, the CDC definition of AIDS was "one of more than 30 diseases", plus a positive antibody test. The list was constantly expanding.

Without a positive test, you only had some boring disease, not a killer virus.

Sound familiar?

The most common symptoms of COVID-19 are

- Fever
- Dry cough
- Fatigue

Other symptoms that are less common and may affect some patients include:

- Loss of taste or smell,
- Nasal congestion,
- Conjunctivitis (also known as red eyes)
- Sore throat,
- Headache,
- Muscle or joint pain,
- Different types of skin rash,
- Nausea or vomiting,
- Diarrhea,
- Chills or dizziness.

Symptoms of severe COVID-19 disease include:

- Shortness of breath,
- Loss of appetite,
- Confusion,
- Persistent pain or pressure in the chest,
- High temperature (above 38 °C).

Other less common symptoms are:

- Irritability,
- Confusion,
- Reduced consciousness (sometimes associated with seizures),
- Anxiety,
- Depression,
- Sleep disorders,
- More severe and rare neurological complications such as strokes, brain inflammation, delirium and nerve damage.