

Bogged Down but Stuck Up:

How Sludge and Hubris Are Undermining Expertise

Corbin Barthold and Neil Chilson

TECH
FREEDOM

Stand
Together

Roadmap

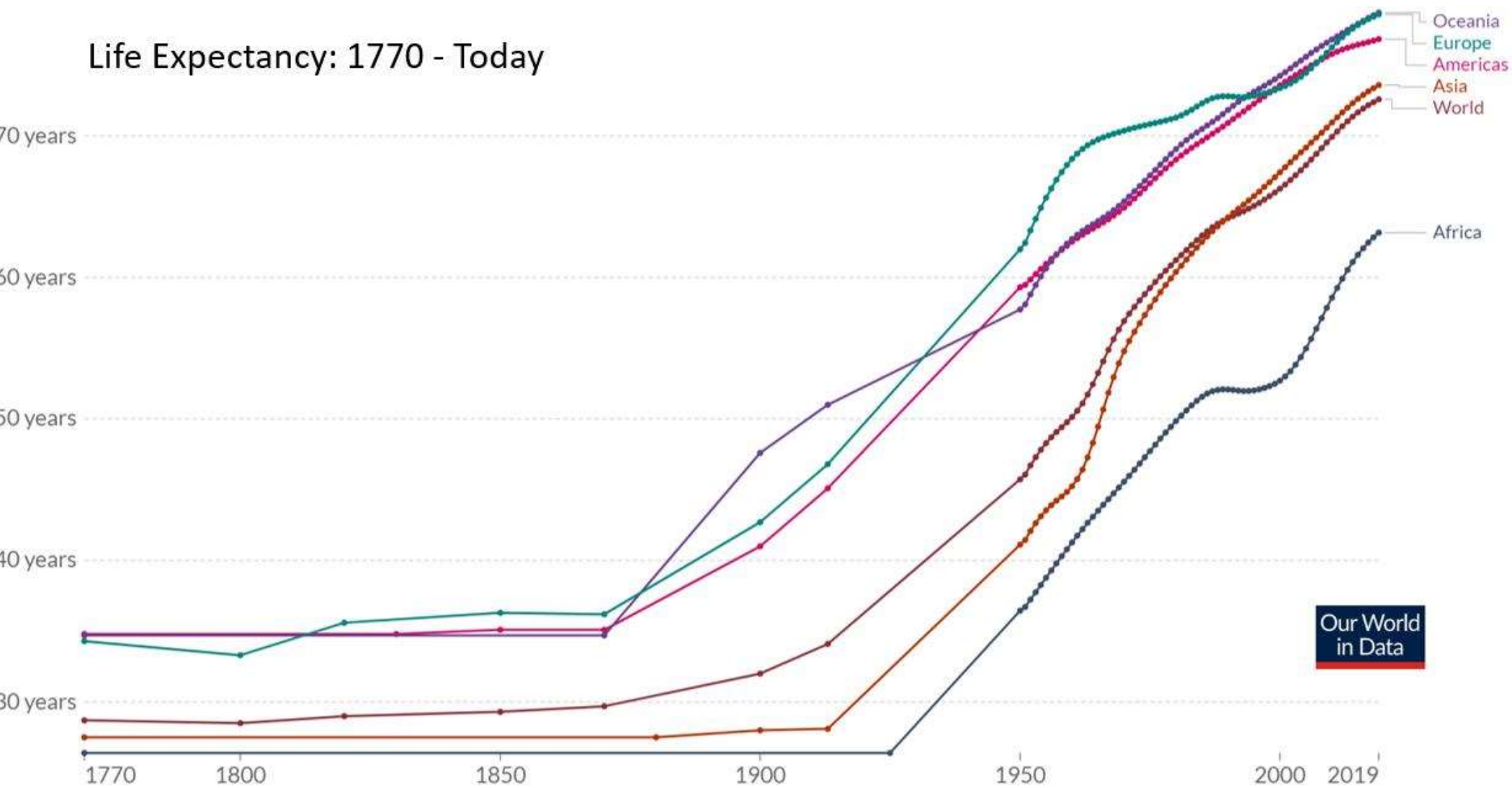
We Need Experts

The Decline of the Status of
Expertise

Why the Decline? Sludge and
Hubris

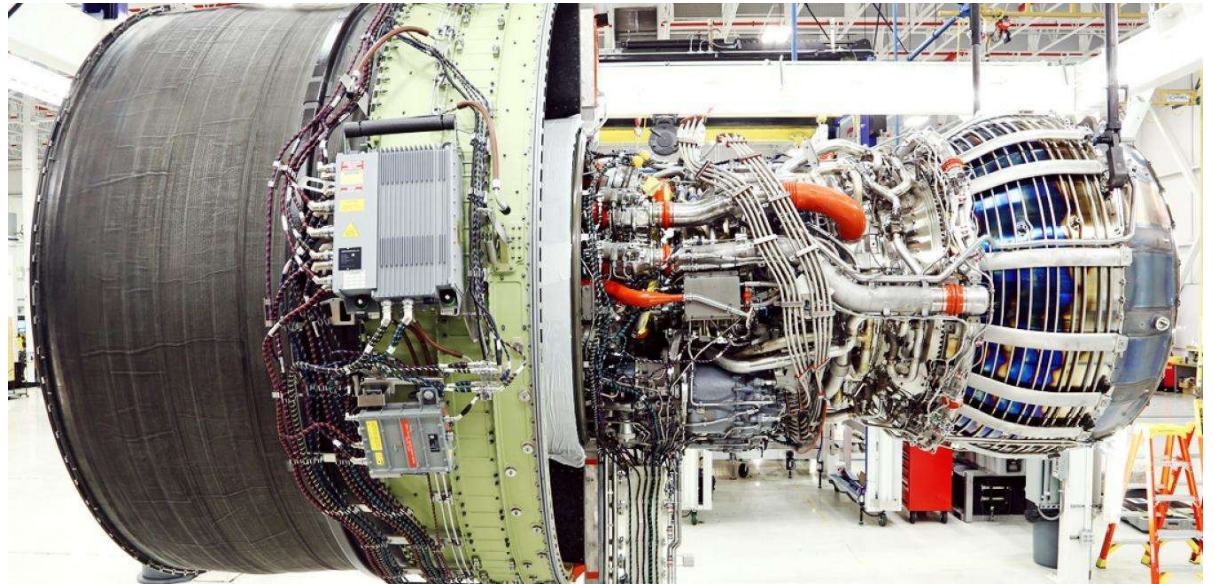
What Can be Done?

Life Expectancy: 1770 - Today



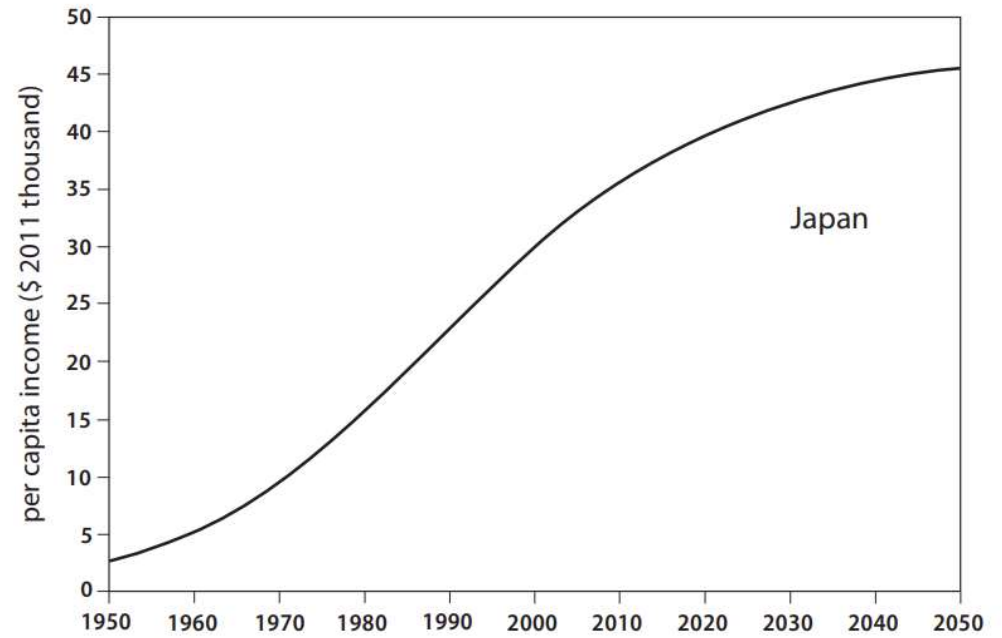
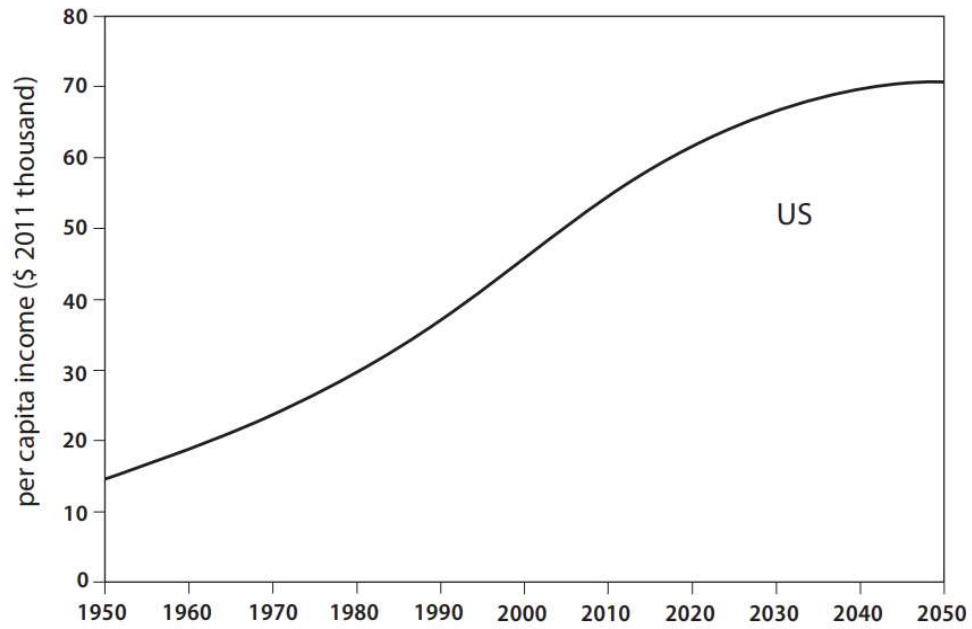
Source: Riley (2005), Clio Infra (2015), and UN Population Division (2019)
Note: Shown is period life expectancy at birth, the average number of years a newborn would live if the pattern of mortality in the given year were to stay the same throughout its life.
OurWorldInData.org/life-expectancy • CC BY

We Need Experts



- Source: General Electric

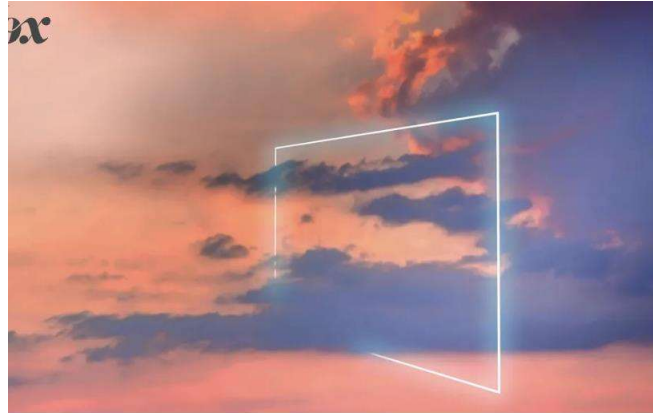
The Death of Progress?



Source: Vaclav Smil, *Growth: From Microorganisms to Megacities* (2019)

Choose your reality: Trust wanes, conspiracy theories rise

By DAVID KLEPPER July 9, 2022



Images

a new kind of religion forming on the internet?

Algorithms are surfacing content that combines Christian ideas like prosperity gospel with New Age and non-Western spirituality — along with some conspiracy theories.

Becca Jennings | @rebxxxxx | Dec 14, 2021, 7:30am EST

Open access, freely available

Essay

Why Most Published Research Findings Are False

John P. A. Ioannidis

Summary

There is increasing concern that most current published research findings are false. The probability that a research claim is true may depend on study power and bias, the number of other studies on the same question, and, importantly, the ratio of true to no relationships among the relationships probed in each scientific field. In this framework, a research finding is less likely to be true when the studies conducted in a field are smaller; when effect sizes are smaller; when there is a greater number and lesser preselection of tested relationships; where there is greater flexibility in designs, definitions, outcomes, and analytical modes; when there is greater financial and other interest and prejudice; and when more teams are involved in a scientific field in chase of statistical significance. Simulations show that for most study designs and settings, it is more likely for a research claim to be false than true. Moreover, for many current scientific fields, claimed research findings may often be simply accurate measures of the prevailing bias. In this essay, I discuss the implications of these problems for the conduct and interpretation of research.

factors that influence this problem and some corollaries thereof.

Modeling the Framework for False Positive Findings

Several methodologists have pointed out [9-11] that the high rate of nonreplication (lack of confirmation) of research discoveries is a consequence of the convenient, yet ill-founded strategy of claiming conclusive research findings solely on the basis of a single study assessed by formal statistical significance, typically for a p-value less than 0.05. Research is not most appropriately represented and summarized by p-values, but, unfortunately, there is a widespread notion that medical research articles

It can be proven that most claimed research findings are false.

should be interpreted based only on p-values. Research findings are defined here as any relationship reaching formal statistical significance, e.g., effective interventions, informative predictors, risk factors, or associations. "Negative" research is also very useful.

is characteristic of the field and vary a lot depending on what field targets highly likely relationships or searches for only one or a true relationship among thousands and millions of hypotheses that are postulated. Let us also consider computational simplicity, circumscribed fields where either only one true relationship exists or many that can be hypothesized. The power is similar to find a pre-study probability of a relationship being true is $R/(R + 1)$. The of a study finding a true relationship reflects the power $1 - \beta$ (one the Type II error rate). The of claiming a relationship which truly exists reflects the Type I rate, α . Assuming that relationships are being probed in the field expected values of the 2×2 table given in Table 1. After a research finding has been claimed has achieving formal statistical significance is the post-study probability that is the positive predictive value. The PPV is also the complement probability of what Wacholder have called the false positive: probability [10]. According to

The Death of Expertise?

	2021	2022	Change pct. pts.
	% Great deal/Quite a lot	% Great deal/Quite a lot	
Small business	70	68	-2
The military	69	64	-5
The police	51	45	-6
The medical system	44	38	-6
The church or organized religion	37	31	-6
The public schools	32	28	-4
Organized labor	28	28	0
Banks	33	27	-6
Large technology companies	29	26	-3
The U.S. Supreme Court	36	25	-11
The presidency	38	23	-15
Newspapers	21	16	-5
The criminal justice system	20	14	-6
Big business	18	14	-4
Television news	16	11	-5
Congress	12	7	-5

Institutions are ranked from highest to lowest confidence in 2022.

[Get the data](#)

GALLUP

EDUCATION

The Reason Behind Colleges' Ballooning Bureaucracies

Universities' executive, administrative, and managerial offices grew 15 percent during the recession, even as budgets were cut and tuition was increased.

By Jon Marcus



The Union Station train depot in Washington, DC. The US is the sixth-most expensive country in the world in which to build rapid-rail transit infrastructure. | Stefani Reynolds/Bloomberg via Getty Images

Why does it cost so much to build things in America?

This is why the US can't have nice things.

By Jerusalem Demsas | @JerusalemDemsas | Jun 28, 2021, 7:00am EDT

f t SHARE

As Congress argues over the size of the infrastructure bill and how to pay for it, very little attention is being devoted to one of the most perplexing problems: Why does it cost so much more to build transportation networks in the US than in the rest of the world?

HEALTHCARE & PHARMA
JANUARY 6, 2020 / 2:26 PM / UPDATED 3 YEARS AGO

More than a third of U.S. healthcare costs go to bureaucracy

By Linda Carroll

f t

(Reuters Health) - U.S. insurers and providers spent more than \$800 billion in 2017 on administration, or nearly \$2,500 per person - more than four times the per-capita administrative costs in Canada's single-payer system, a new study finds.



Economics

Excess Management Is Costing the U.S. \$3 Trillion Per Year

by Gary Hamel and Michele Zanini

September 05, 2016



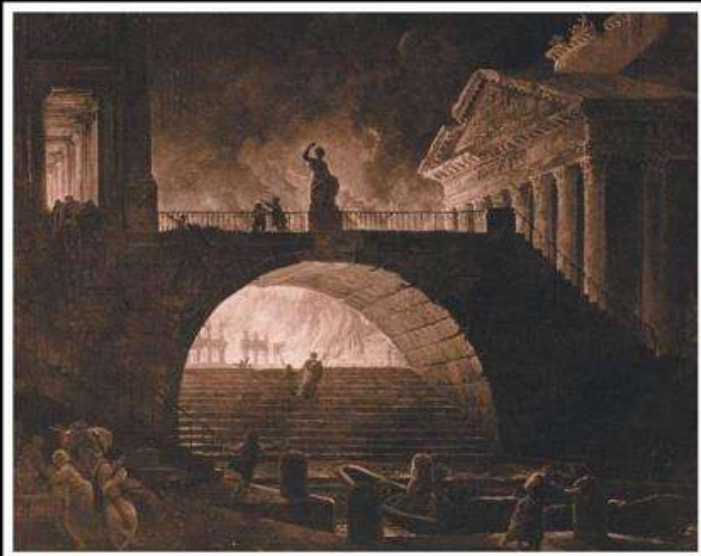
Juan Diaz-Faes for HBR

Sludge: Boggling Down Our Experts

New Studies in Archaeology

The Collapse of Complex Societies

JOSEPH A. TAINTER



The Collapse of Complex Societies (1988)

"Collapse is a recurrent feature of human societies."

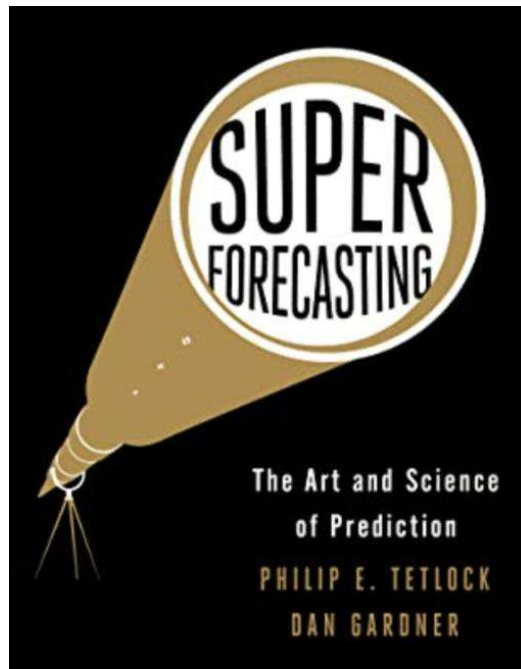
- Joseph A. Tainter



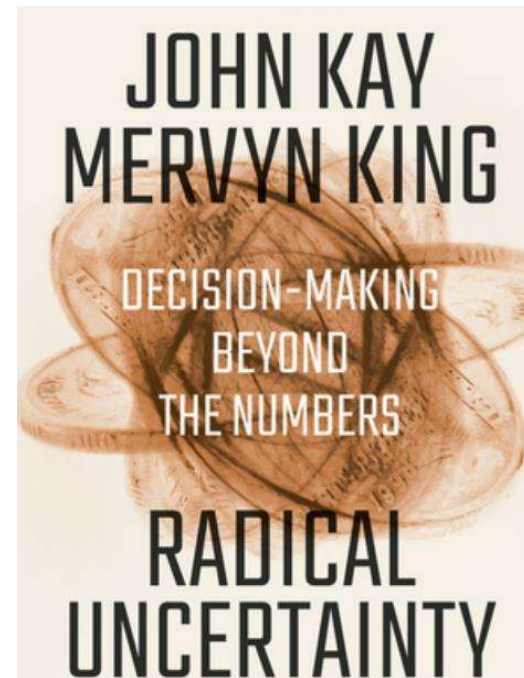
Tainter – the Collapse of Complex Societies, cont'd

- “A common trend among human organizations is to respond to problems by developing specialized administrators, and by increasing the proportion of the population engaged in administrative tasks. In many cases this increased, more costly complexity will yield *no* increased benefits, at other times the benefits will not be proportionated to the added costs.”
- “Organizational solutions tend to be cumulative. Once developed, complex societal features are rarely dropped. . . . Information processing needs tend to move in only one direction. Numbers of specialists ordinarily don't decline. Standing armies rarely get smaller. Welfare and legitimizing costs are not likely to drop. . . . Compensation of elites rarely goes down.”

Hubris: True Versus False Expertise



“The humility required for good judgment . . . is intellectual humility. It is a recognition that reality is profoundly complex, that seeing things clearly is a constant struggle, when it can be done at all, and that human judgment must therefore be riddled with mistakes.”



“Rational people answer most questions about the future—whether the question is ‘Which horse will win the Kentucky Derby?’, ‘What will be the level of the stock market at the end of 2025?’ or ‘How will artificial intelligence develop?’—by saying ‘I do not know’.”

“It was a complicated situation with little precedent.”

— Former Fed official

The image shows a screenshot of a WSJ article header. At the top left is a hamburger menu icon, and at the top right is the 'WSJ' logo. The main content area has a dark background. On the right side, there is a photograph of Jerome Powell, the Federal Reserve Chairman, wearing a dark suit and tie, standing in front of the American flag and the Federal Reserve seal. The article title is 'How the Fed and the Biden Administration Got Inflation Wrong' in a large, bold, white font. Above the title is the word 'ECONOMY' in a smaller, all-caps font. Below the title is a sub-headline in white: 'Officials applied an old playbook to a new crisis. 'We fought the last war.''. At the bottom of the article preview, there is a quote in italics: 'If you look back in hindsight then, yes, it probably would've been better to have raised rates earlier,' followed by 'Federal Reserve Chairman Jerome Powell said. OLIVIER DOULIERY/AFP/GETTY IMAGES'. At the very bottom, the byline reads 'By [Nick Timiraos](#) [Follow](#) and [Jon Hilsenrath](#) [Follow](#)' and the update time 'Updated June 13, 2022 4:15 pm ET'.

“Not even wrong”

“During the twentieth century, my best guess is that we faced around a one in a hundred risk of human extinction or the unrecoverable collapse of civilization. Given everything I know, I put the existential risk this century at around one in six.”

- Oxford philosophy professor

World To End; Experts Hardest Hit, *Forbes.com* (May 2020)

<https://www.forbes.com/sites/wlf/2020/05/28/world-to-end-experts-hardest-hit/?sh=71d4a4832015>

Hubris: Our Careless Experts

Menu **SLATE** Save 50%

A STAPLE OF CRUISE-SHIP ENTERTAINMENT

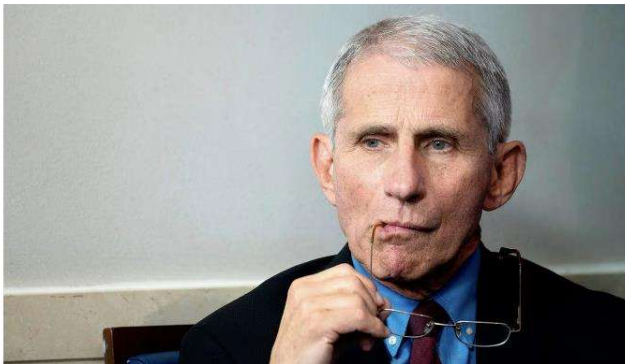
future tense

The Noble Lies of COVID-19

Do we want public health officials to report facts and uncertainties transparently? Or do we want them to shape information to influence the public to take specific actions?

BY KERRINGTON POWELL AND VINAY PRASAD

JULY 28, 2021 • 5:50 AM



MAGAZINE

CORONAVIRUS

Suddenly, Public Health Officials Say Social Justice Matters More Than Social Distance

For months, health experts told Americans to stay home. Now, many are encouraging the public to join mass protests.

Raymond Ahner/The Photo Access/Cover Images via AP

By DAN DIAMOND
06/04/2020 05:19 PM EDT

Jennifer Nuzzo, DrPH
@JenniferNuzzo

We should always evaluate the risks and benefits of efforts to control the virus. In this moment the public health risks of not protesting to demand an end to systemic racism greatly exceed the harms of the virus.

Jeremy Konyndyk @JeremyKonyndyk · Jun 2, 2020

For folks wondering why public health experts aren't calling out the protests as violations of social distancing, take it from the former head of the CDC: twitter.com/DrTomFrieden/s...

11:25 AM · Jun 2, 2020 · Twitter for iPhone

241 Retweets 1,205 Quote Tweets 458 Likes

A Vicious Cycle

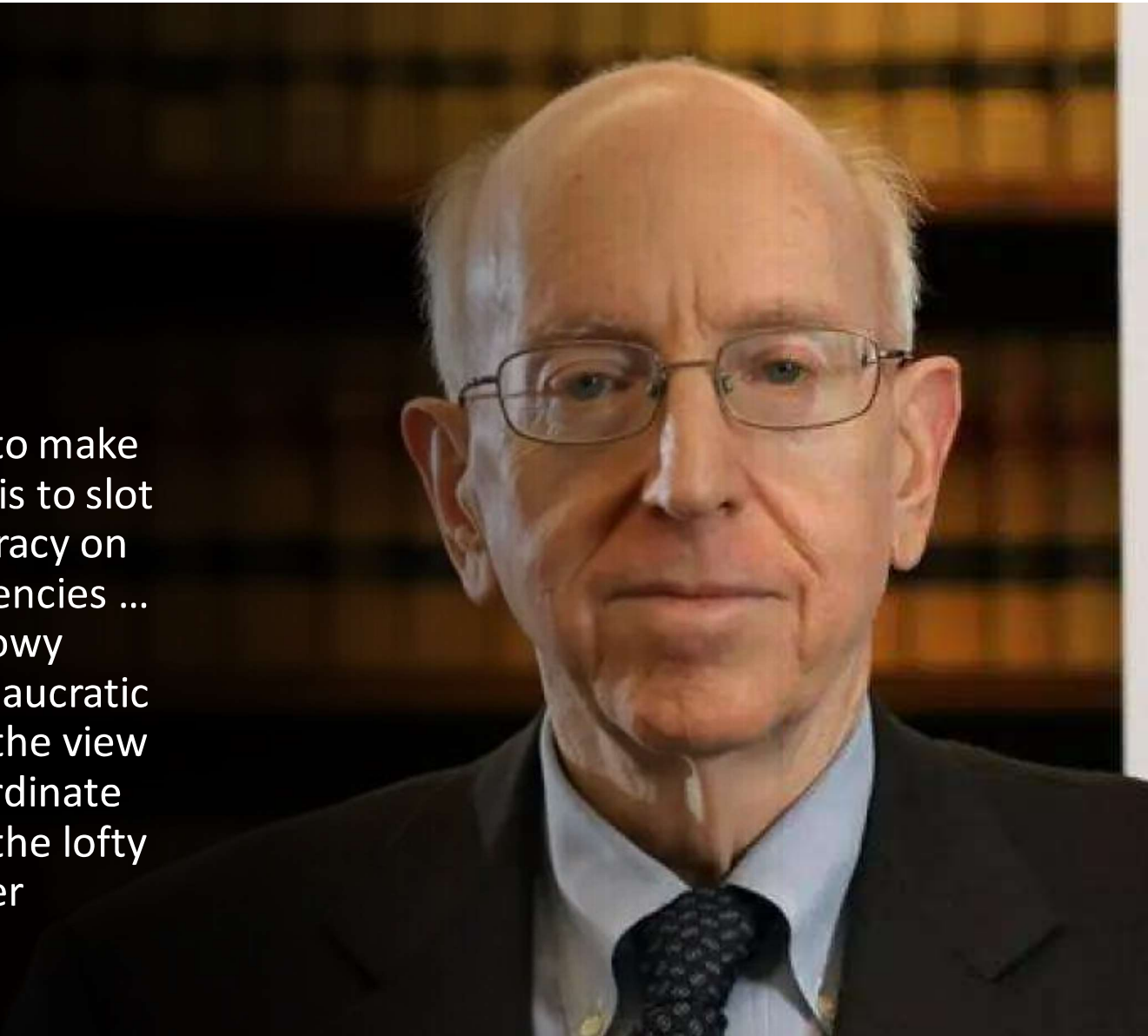


No Easy Answers

- “Virtuous cycles, whether individual or organizational, can only occur from the bottom up, as individuals develop and apply their abilities and as organizations do the same with their capabilities.” – Charles Koch & Brian Hooks, *Believe in People*
- “The alternative to corrupt elite institutions, then, is not anti-institutional populism but better elite institutions.” – Yuval Levin, *A Time to Build*
- “It is not your responsibility to finish the work of perfecting the world, but you are not free to desist from it either.” - Rabbi Tarfon, *Pirkei Avot 2:21*

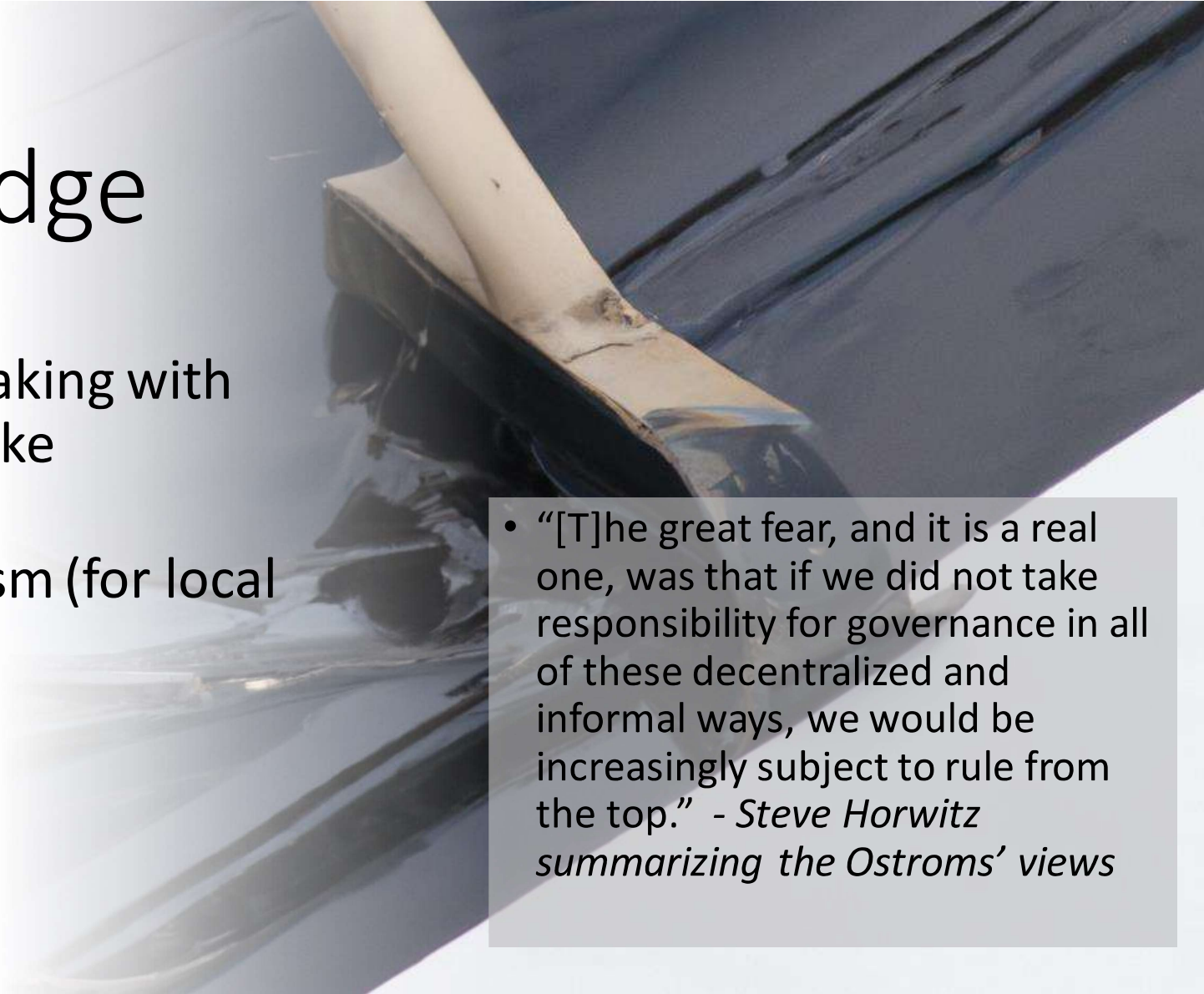
Stop Making it Worse

- “[T]he notion that the way to make government agencies work is to slot in another layer of bureaucracy on top of the existing set of agencies ... is governance by cheap, showy gestures. ... The added bureaucratic layer is a fog that obscures the view both from below (the subordinate agencies) and from above (the lofty superiors).” – Richard Posner



Purge Sludge

- Sludge audits
- Replace rulemaking with common law-like approaches
- Increase localism (for local problems)
- Etc.



- “[T]he great fear, and it is a real one, was that if we did not take responsibility for governance in all of these decentralized and informal ways, we would be increasingly subject to rule from the top.” - *Steve Horwitz summarizing the Ostroms’ views*



Exemplify Humility

“The effective leader is one who recognizes that his membership of the group is marked by his superior responsibility rather than his superior wisdom.” – Kay and King

“You are a part of a system of norms and informal rules that is much bigger than yourself. When you behave with virtue you are helping sustain that system.” – Russ Roberts





“Given my role here, how should I act?”

– Yuval Levin, *A Time To Build*

Serve Institutions, Don't Just Use Them

- Resist the urge to criticize your organizations from the outside
- Work to improve them from the inside
- But leaving is ok, too!

Conclusion

- The trend toward more sludge is inevitable, but can be fought
- Hubris isn't inevitable, but *must* be resisted
- Continued widespread prosperity requires effective institutions and trusted (and trustworthy) experts
- The best place to start is with yourself and your organizations