

a tao of

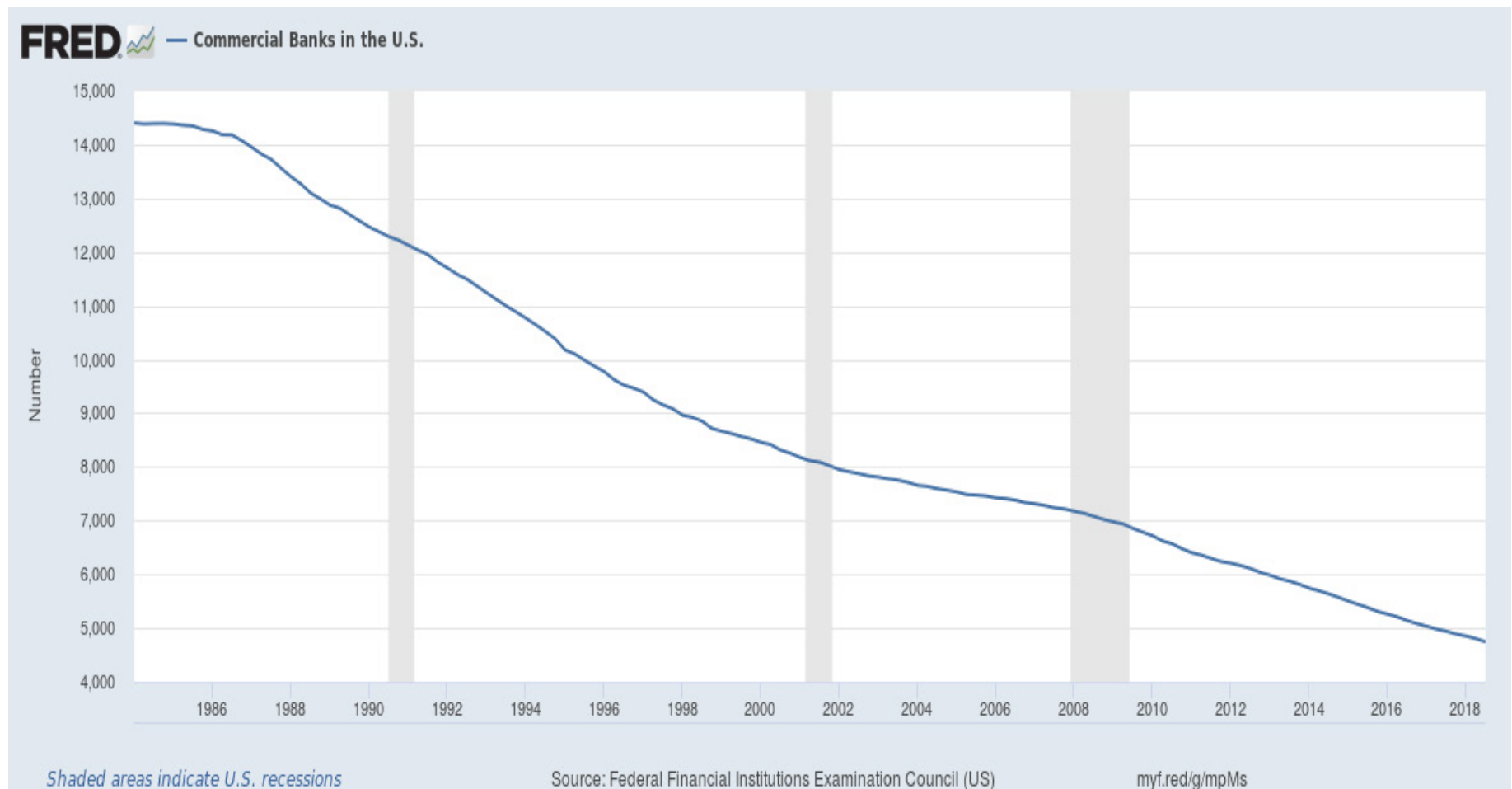
(de)centralization



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prologue: financial crisis nostalgia

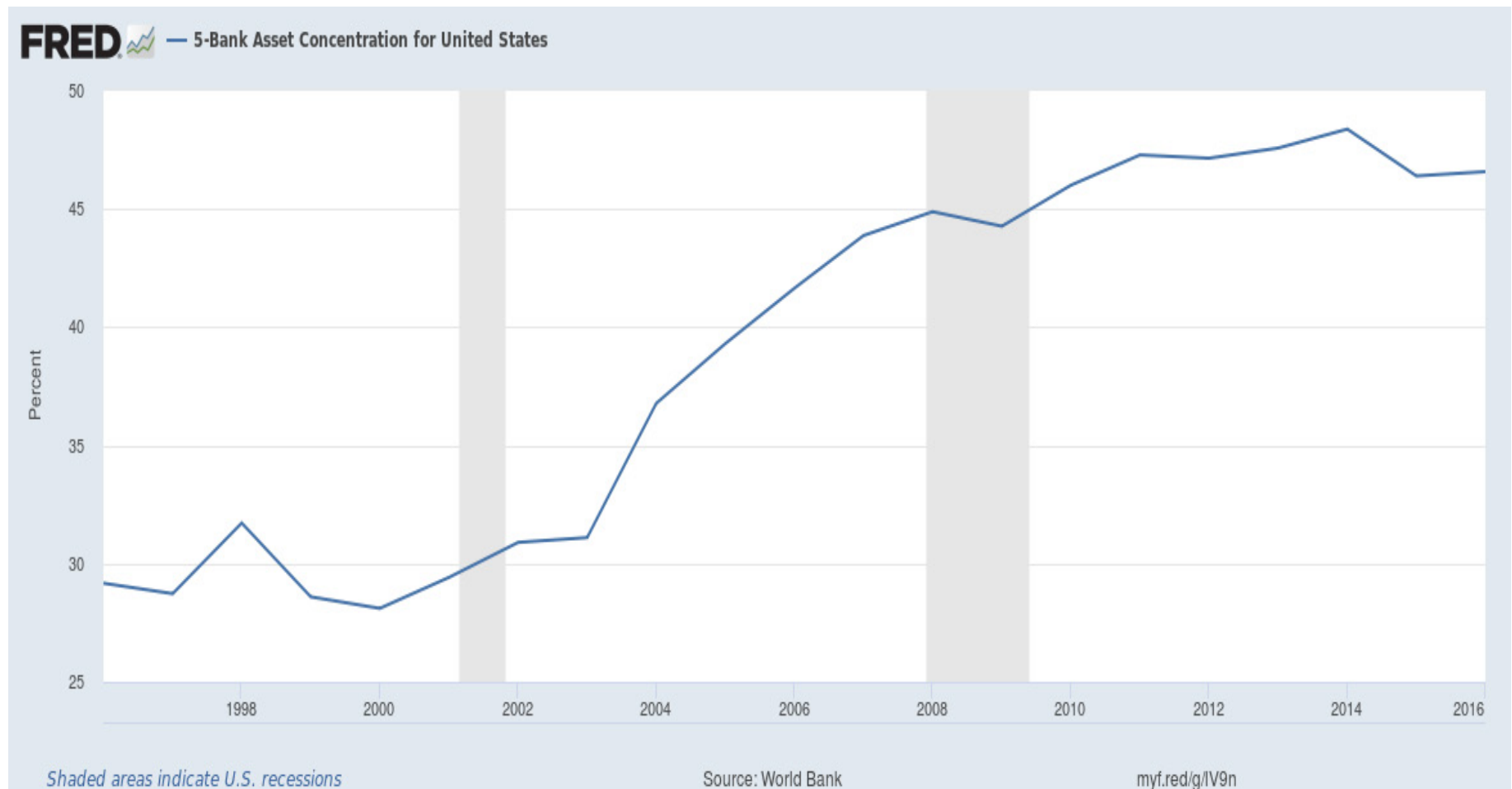
Number of US banks



...ever fewer banks (longstanding trend, accelerated a bit post-crisis)

prologue: financial crisis nostalgia

Asset share of the top 5 US banks



...ever more concentrated at the top (locked-in pre-crisis '00s development)

prologue: financial crisis counterfactual – the path not taken

What if we had...

- ✧ taken mark-to-market-insolvent banks into receivership
- ✧ written off equityholders, equitized uninsured creditors as necessary to achieve generous capitalization
- ✧ defenestrated prior management on ungenerous terms
 - ▣ *while aggressively investigating practices that were colorably fraud or misconduct to deter legal adventurism*
- ✧ instructed new management to gradually reorganize into “small” new entities, over a period of several years
- ✧ gradually released these small banks back into the market as a reconstituted private banking system

prologue: financial crisis counterfactual – the path not taken

**DECENTRALIZATION
NOW!**

prologue: financial crisis counterfactual – the path not taken

YAY!

prologue: financial crisis counterfactual – the path not taken

After the revolution, couldn't market competition regulate the system?

Couldn't we just impose size caps to prevent a recrudescence and be done?

Would we still need annoying, corruptible, arrogant, confused, captured bureaucrats?

prologue: financial crisis counterfactual – the path not taken

After the revolution, couldn't market competition regulate the system?

No.

Couldn't we just impose size caps to prevent a recrudescence and be done?

wouldn't work.

Would we still need annoying, corruptible, arrogant, confused, captured bureaucrats?

Yes, definitely.

prologue: financial crisis counterfactual – the path not taken

Decentralization is unstable.

- ✧ Banks large and small are copycats, they pile into trendy assets (*c.f. late 80s S&L crisis*)
 - ▣ *tacit centralization by virtue of coordinating on systemic signals*
- ✧ “Too ~~big~~ *special* to fail” spontaneously emerges, time & again
 - ▣ *derives from a network effect that creates real value for creditors, shareholders, and bank managers, at the expense of the state*
- ✧ Parity of deposits requires government guarantees (*de jure* or *de facto*) of the liabilities of individual banks
 - ▣ *the state is the ultimate creditor of every bank, and like any large creditor must be able to monitor and restrain controlling stakeholders, whose interests often diverge from its own*
 - ▣ *at an individual bank level, supervision and regulation serve a role wholly analogous to “covenants” imposed by private creditors*

prologue: financial crisis counterfactual – the path not taken

Decentralization is **desirable!**

prologue: financial crisis counterfactual – the path not taken

Decentralization is *achievable*! How?

- ✧ Regulators (*centralized bastards!*) must first and foremost be charged with **sustaining the decentralized market structure as a first-order mandate**, rather than as a discretionary instrument in the service of other goals.
- ✧ But... regulators themselves are a “coordinating systemic signal” (*centralizing bastards!*) whose mandates threaten substantive decentralization.
- ✧ As much as possible, **their instrument should be “tax and subsidy”** (imposition of regulatory costs at adjustable levels), enabling that aggregate goals to be achieved while permitting diverse trade-offs among the regulated.

prologue: financial crisis counterfactual – the path not taken

Decentralization is *achievable*! How?

- ✧ Regulators should “tax” size. But not just. They should tax “interconnectedness”, “centrality” with respect to derivative positions, ***every and any observable, evolving marker of indispensibility or source of network effects.***
- ✧ Market structure should be regulators’ core target, for which they are held to account.
- ✧ Regulators are responsible for aggregate outcomes, not just or primarily for the health of individual banks. In particular, regulators are responsible for ***ensuring adequate diversification of the aggregate banking system portfolio.***
- ✧ The “decentralized” regulated must adapt or die. ***Frequent failure and entry are marks of a healthy industry, not of regulatory failure.***

a tao of (de)centralization



a tao of (de)centralization



Core claims...

Core ~~claims~~ conjectures...

Core ~~claims conjectures~~ assertions...

Core assertions...

Core assertions...

- ✧ Decentralized social systems almost always fail, gracefully or sometimes suddenly, often silently, towards centralization.
 - ▣ *“Michels’ Iron Law of Oligarchy”*
- ✧ Centralized systems may not so ostentatiously fail — they may endure a long time — but when they do fail, they collapse abruptly, catastrophically. They are brittle.
- ✧ *Virtuous social systems marble together centralized and decentralized elements, paradoxically charging centralized components with the task and responsibility of sustaining the decentralization that otherwise would decay.*
- ✧ “Decentralization” is not an answer, not a solution to any problem in itself, but a challenging question of “how?”

Virtues attributed to decentralized systems

- ✧ Tolerate and enables “agency” of constituents
- ✧ Reconcile “freedom” (constituent) with “function” (aggregate)
- ✧ Resistent to corruption (while they remain decentralized)
- ✧ Outcomes are “natural”, “fair”, “legitimate” to constituents
- ✧ Regulable internally
 - *It is plausible to hold individual constituents to account*
- ✧ Stable: Independent entities shift slowly in aggregate
 - *Coordination “problems” are the solution to the problem of stability!*
 - *No “single point of failure”*
- ✧ Multiplicity of status hierarchies
 - *Enable more people to be positional “winners” in competitions they value*
- ✧ Inclusive, participatory
 - *Participants have comparable roles in driving behavior of the system*
- ✧ Hayekian information flows
 - *Incorporates and responds to fragmented, distributed, “organic” information*
 - *Recruits and makes use of highly distributed expertise regardless of credential*
 - *Tilt toward meeting internal goals (welfare of participants)*

***We like decentralized systems
for their virtues!***

***Systems “decentralized”
in some formal way or according to
putative measures may lack
many of these virtues.***

We shouldn't like those so much!

Virtues attributed to centralized systems

- ✧ Scalability
- ✧ Efficiency
- ✧ Predictability
- ✧ Rationality
 - ▣ *Can be organized to effectively pursue specific objectives*
- ✧ Adroitness
- ✧ Regulable externally
 - ▣ *Those who control the “center” can determine the system’s actions*
- ✧ Weberian information flows
 - ▣ *Recursively summarize widely dispersed information*
 - ▣ *Divide work/choice between routine (dispersed) and exception (towards center)*
 - ▣ *Recruit and makes use of formally credentialed expertise in impersonal roles*
 - ▣ *Tilt towards meeting external goals (build the bridges, win the war)*

We can read centralization's vices in many of the virtues of decentralization that it lacks.



And vice versa!

“Pure decentralized” social systems inevitably collapse towards ad hoc centralization.



“Pure centralized” social systems fail due to corruption (Lord Acton) and/or the “high modernist” conceit (James Scott)

So, we might consider centralized and decentralized elements to be complements rather than competitors

(How much each sort of element should predominate depends on which virtues we prioritize.)

***But if there are centralized elements, “someone” is in control of them.
Who???***

An obvious, if problematic, “least-worst”, answer is “democracy”.

Are democratic institutions...

✧ Centralized?

- ▣ *democratic decisions become imperative commands*
- ▣ *democratic institutions often control centralized bureaucracies*

✧ Decentralized?

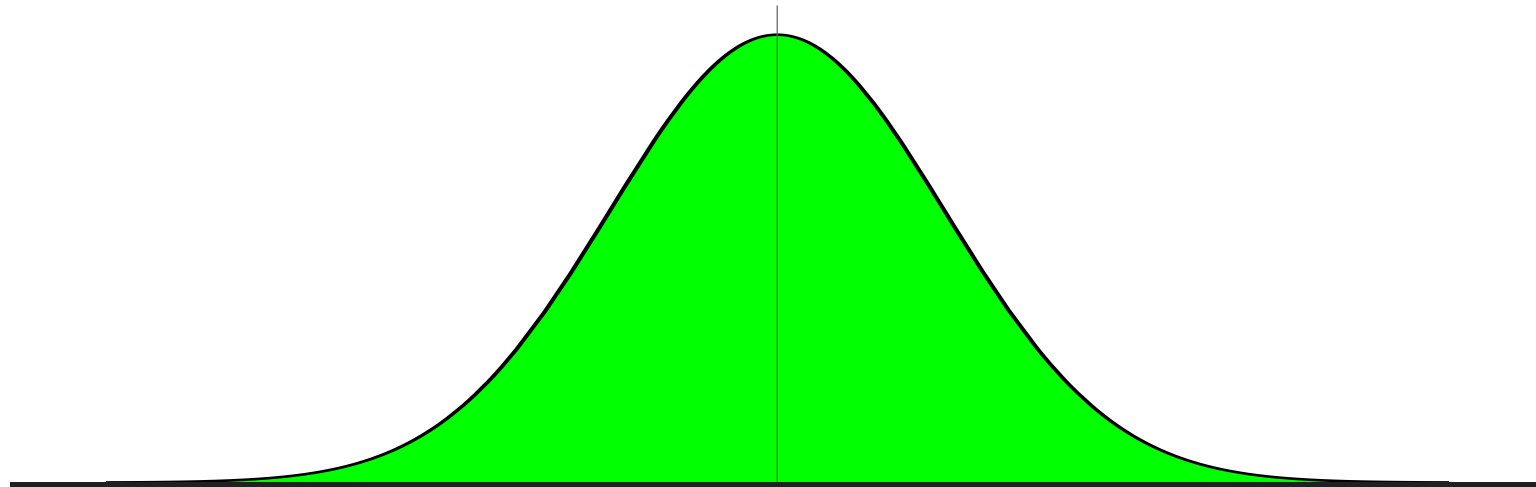
- ▣ *democratic decision-making can be inclusive and participatory*

✧ Who even cares how we classify them?

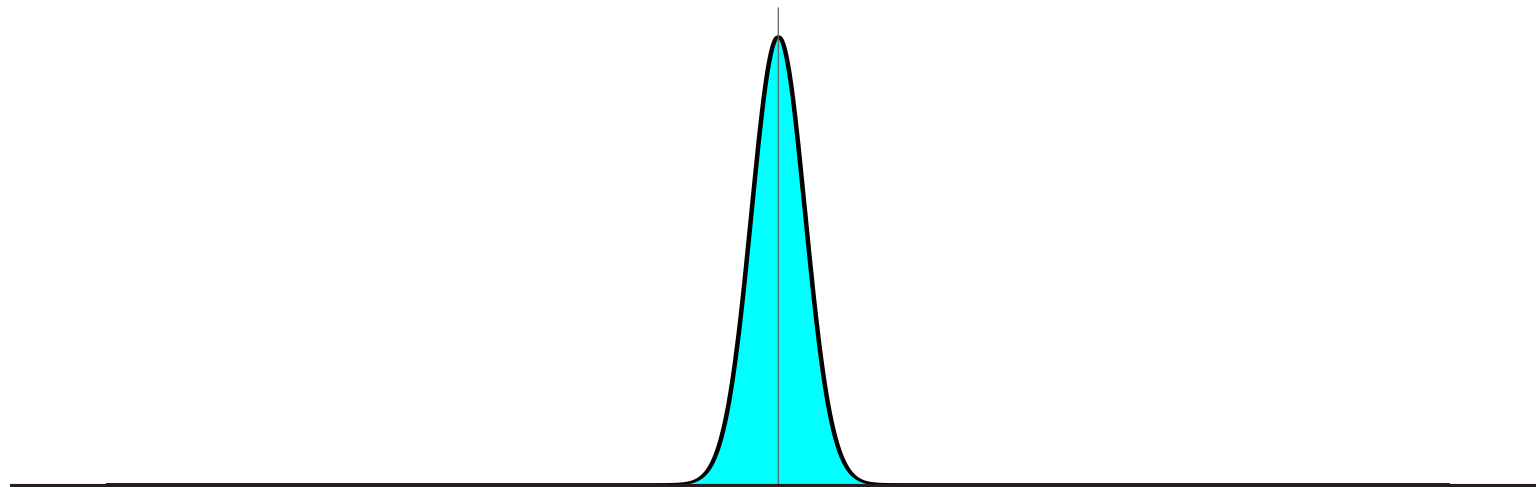
Democratic institutions: virtues & vices

- ✧ Does a right to vote amount to meaningful “agency”?
- ✧ Are they, or can they be made, resistant to corruption?
- ✧ Can they recruit and reflect fragmented, dispersed information beyond the small quantity and range that gets summarized in votes?
- ✧ How can decisions handed down from the *demos* be reconciled with freedom at an individual level?
- ✧ “Democratic” institutions are in practice always arbitrary games, subject to cynical manipulations, whose outcomes often turn on details unrelated to anyone’s conception of the “true” voice of the *demos*. Can they really be legitimate?

a (familiar!) proposal: “law of large numbers” democracy



Distribution of Individual Behavior



Distribution of Aggregate Outcomes

a (familiar!) proposal: “law of large numbers” democracy

“Democratic decisions” at the center about how to tax and subsidize the edges, in order to reconcile...

✧ Freedom

▣ *Individuals have real choices, make tradeoffs, within broad ranges*

✧ Function

▣ *The behavior of the polity is predictable, manageable in aggregate*

✧ Democratic control

▣ *But democratic institutions are corruptible, contestable, arbitrary, fragile, not always perceived as natural or legitimate. More soon!*

✧ Hayekian feedback



Adobe Stock Image

Decentralized



Adobe Stock Image

Centralized



Adobe Stock Image

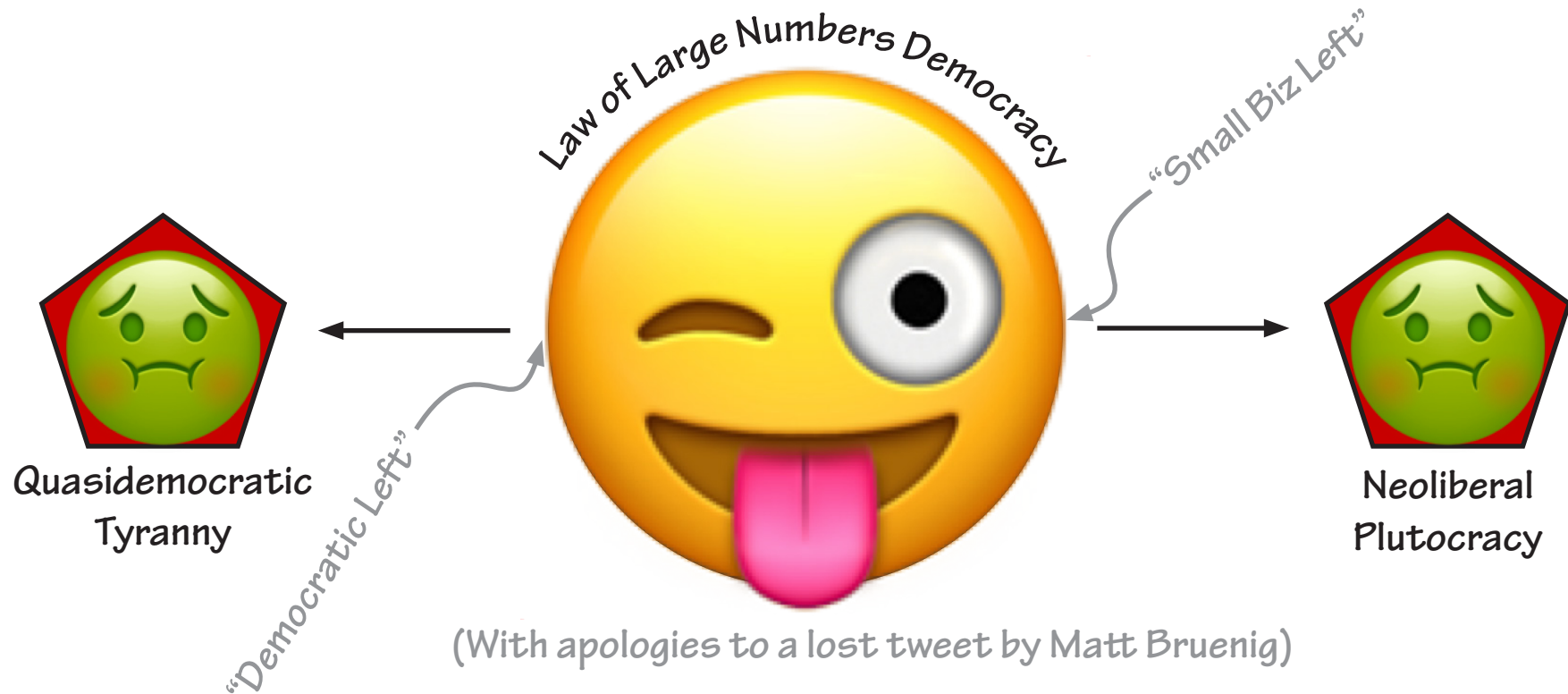
Mixed, with “Hayekian feedback”

A (familiar!) proposal: “Law of Large Numbers” Democracy

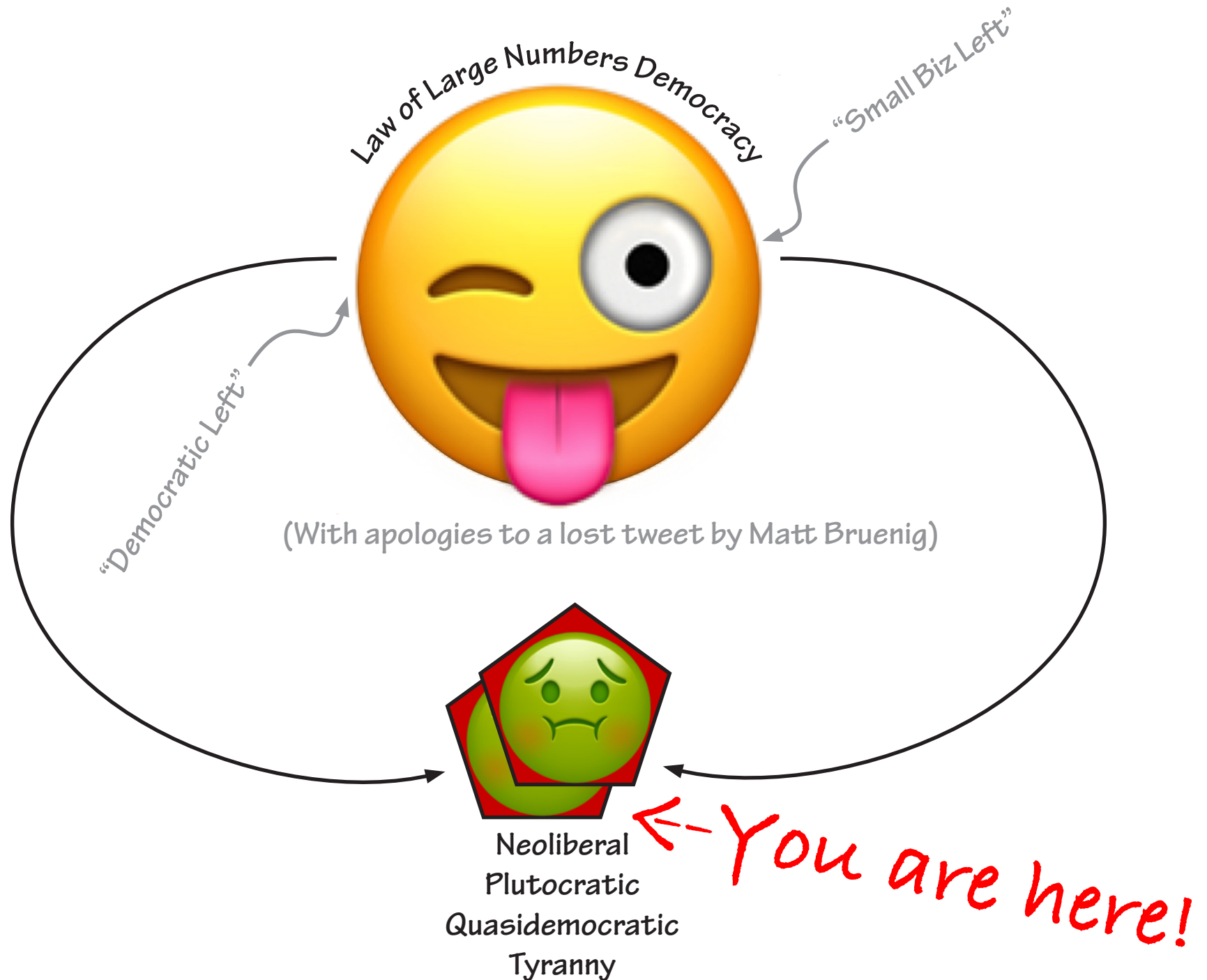
A lot like status quo neoliberalism, except...

- ✱ Decentralization is a *per se* mandate
 - ▣ *“Anti-trust” is not justified contingently by consumer welfare, but is a non-negotiable precondition of reconciling effective governance with the agency and freedom of constituents.*
 - ▣ *Applies to anti-concentration very generally!*
- ✱ Governance is explicitly “social engineering”
 - ▣ *Explicitly repudiates libertarian-ish superstition that there exists some virtuous “natural” outcome that would obtain if property rights were defined “correctly” and government “got out of the way” or ceased “distorting”*
 - ▣ *But retains Hayekian feedback to push back against decisions that seem sensible at the center but awful at the edges*
- ✱ Challenges federalism / subsidiarity
 - ▣ *Turns the logic of federalism on its head*
 - ▣ *The center incentivizes the edges, not an intermediating hierarchy*

tendentious diagram



tendentious diagram: a horseshoe theory



Nordic labor force participation

- ✧ Nordics famously offer generous welfare states and levy high GDP shares as taxes
- ✧ Nevertheless, “despite” this, they tend to have higher-levels of labor-force participation than the work-incentive-focused US
- ✧ High taxes fund benefits that are explicit complements to labor
 - ▣ *generous child care / elder care*
 - ▣ *paid parental leave*
 - ▣ *education*
 - ▣ *active labor market policy*
- ✧ Creates large incentive to capitalize on subsidized benefits for which citizens must pay regardless

“Buying” desegregation

- ✧ Offer a (potentially large) subsidy to *households directly* based on the “representativeness” of their neighbors
- ✧ Would such an incentive encourage neighborhoods, realtors, municipalities, to coordinate “at the edges” to extract the subsidy, and in doing so fulfill the social goal?
- ✧ *Is this approach ethical?*

Why households directly, not states or localities?

- ✧ Conflicting incentives within local governments
- ✧ Too many degrees of freedom of response
- ✧ Potential for coordinated resistance
- ✧ Compare to...
 - ▣ *ACA Medicaid expansion*
 - ▣ *Elizabeth Warren's*
"American Housing and Economic Mobility Act"

- ✧ Capital Account Protectionism
- ✧ Carbon-tax-financed dividend
 - ▣ But not straight carbon tax (why not?)

epilogue: “law of large numbers democracy”

INSTITUTIONAL PLURALISM IS A GOOD THING.

SHIPS STILL HAVE CAPTAINS.

(but we have some work to do before we are able to follow them again!)

stochasticism: random numbers to save democracy

These two things fit very poorly together.

- ✱ Majority rule
 - ▣ *“Winner take all”*

- ✱ Representative government
 - ▣ *“Everybody has a voice”*

stochasticism: random numbers to save democracy

Conventional “plurality voting” is horrible

- ✱ Tend towards a stable, unsatisfactory two-party equilibrium (“Duverger’s Law”)
- ✱ Despite formal equality, in practice voters do not have equal weight in determining outcomes
- ✱ Outcomes are extraordinarily fragile
- ✱ Outcomes are extraordinarily fragile in a manner that permits, and invites, corruption
- ✱ Brutal changes from tiny shifts in voting, “noise”
- ✱ For multimember legislative bodies, outcomes are very susceptible to intentional gerrymandering or unintentional quirks of grouping

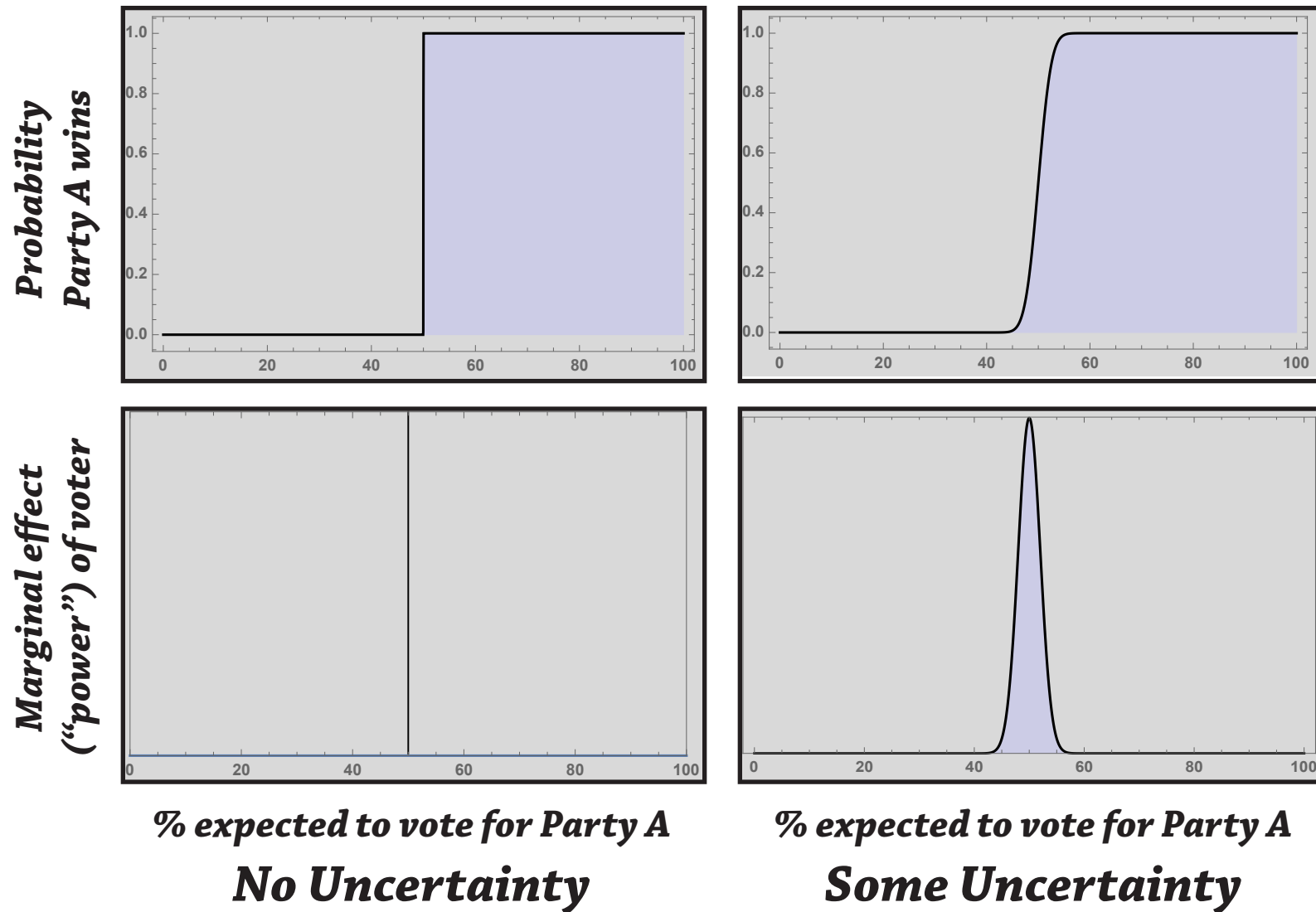
Conventional “plurality voting” is sneaky

(Even when you think you have a more robust and pluralistic system, the flaws of plurality voting sneak back in at the last minute)

- ▣ *Tiny parties with weird concerns often have outsize power as “king makers” even in multiparty parliamentary democracies*

stochasticism: random numbers to save democracy

Provocative fragility (two parties, A & B)



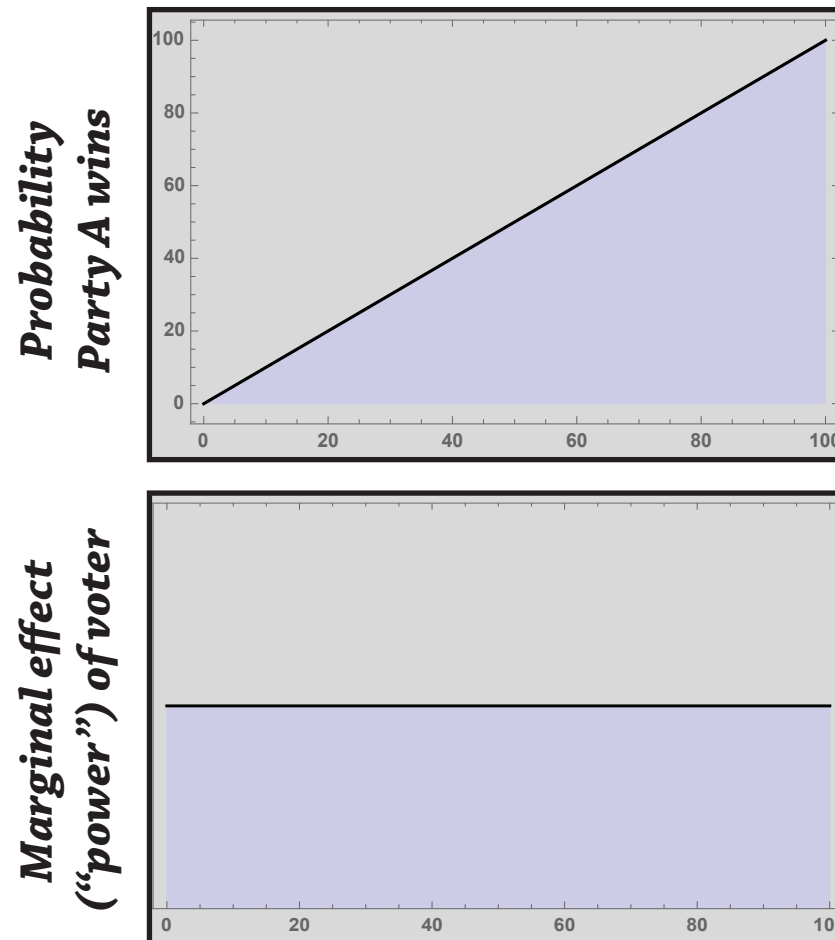
stochasticism: random numbers to save democracy

Endogenous corruption

- ✧ With two major parties or coalitions, near evenly matched votes are common
 - ▣ *Parties strategically modify their platforms, identity, and branding to not remain electoral losers*
- ✧ Outcomes turn on a very small number of marginal or “swing” voters with outsize power
- ✧ These most powerful voters are, paradoxically, the voters *most indifferent* to the core dimensions by which the parties distinguish themselves
- ✧ This invites influence campaigns, wacky overt policy bribes, and covert corrupt financial bribes.
 - ▣ *“Leverage” — small effects have huge consequences!*
 - ▣ *That corruption is competitive doesn't render it usefully deliberative!*

stochasticism: random numbers to save democracy

Fair, stable, difficult to corrupt...



***% expected to vote for Party A
Regardless of Uncertainty***

stochasticism: random numbers to save democracy

Fair, stable, difficult to corrupt...

- ✧ You could achieve this effect by just throwing all the ballots in a hat, then randomly drawing one winning ballot!
- ✧ You probably wouldn't want to elect a President this way
 - ▣ *10% chance of electing some weirdo only 10% of voters like*
 - ▣ *(but look what our current system just did!)*
 - ▣ *(might be OK with low-vote cutoffs & supermajority certainty)*
- ✧ You *would* want to elect a legislature this way!
 - ▣ *Any individual might be a bit "random"*
 - ▣ *But the body as a whole would be reliably representative!*
 - ▣ *Proportional representation, "Duverger's Law" doesn't apply*
 - ▣ *Resistent to party-list insiderism*
 - ▣ *Composition of legislature as stable as public preferences*

stochasticism: random numbers to save democracy

One weird trick to save the world...

- ✧ Read *Choosing Representatives by Lottery Voting*, by Akhil Reed Amar

- ▣ <https://pdfs.semanticscholar.org/6fd7/0eabac758800771f8baf880e7064cf361aa3.pdf>

- ✧ See also an excellent explainer by David MacIver

- ▣ <https://www.drmaciver.com/2013/09/towards-a-more-perfect-democracy/>

- ✧ An alternative, but I think inferior, stochastic approach is *sortition* (see e.g. Brianna Rennix & Nathan J. Robinson)

- ▣ <https://www.currentaffairs.org/2017/06/why-not-have-a-randomly-selected-congress>

*To what degree is political hyperpolarization
“**exogenous**”*

*(we’ve all just somehow come to have starkly
divided preferences & beliefs)*



how much is

*“**endogenous**”*

*to the fact that each political party is
desperate to define, construct,
and sustain 50% + 1 electoral coalitions or
else be shut out of power?*

stochasticism: random numbers to save democracy

Intralegislative ideas (speculative!)...

✧ Random alternatives

- ▣ *Subject to low-support cutoffs and certainty under supermajority, coalitions present same-domain legislative alternatives whose probability of enactment is fraction of support*
- ▣ *Reconsideration or “do-overs” forbidden for some period of time without the intercession of a supermajority*
- ▣ *Renders corruption expensive and defying the weirdos easy*
- ▣ *May be challenging to define and police!*

✧ Stochastic Gong Show

- ▣ *Periodically put legislators at risk for early recall (e.g. US senators with 6-year terms might face unexpected re-election challenge after 2- or 4-years.)*
- ▣ *Probability of recall determined by population-level favorability of the legislative body*



from <https://www.tvguide.com/news/chuck-barris-dead/> RIP Chuck

Radical™ Ideas™: What's the path from bullshit speculation to real application?

- ✧ There may not be an amendment to the US Constitution in favor of Lottery Voting—or Quadratic Voting—too soon
- ✧ ***Darn.***
- ✧ Conventional social science is not, on its own, a reliable or practical guide to institutional reform
 - ▣ *Theoretical methods are inherently unreliable:*
 - *You can convince yourself of anything, in theory, with the “right” math and assumptions!*
 - ▣ *Observational methods are inherently conservative:*
 - *You can only observe what you've seen! Hard to interpret!*
 - ▣ *Experimental methods are limited, practically & ethically:*
 - *The stakes have to be real!*

Blockchain “experiments” seem to have external validity!

- ✧ They’ve reproduced “real world” social dysfunction with remarkable fidelity!
- ✧ For example, with #TheDAO in 2016, *Ethereum* managed, over a remarkably short period, of time to spontaneously generate a Too Big To Fail institution, experience a crisis, and bail out its stakeholders in defiance of clear *ex ante* norms.
- ✧ In conventional contexts, this kind of thing takes years or even decades and puts trillions of dollars at risk. (At its peak, #TheDAO was worth \$245M USD.)

Blockchain “experiments” seem to have external validity!

- ✧ The storied Bitcoin/ICO bubble of 2017 reproduced many characteristics of a major equity bubble, but never put at risk more capital than the value of a single large public firm (despite outside press).
- ✧ ***To be clear, while these experiments were small relative to the overall economy, they were large relative to participant wealth, a lot of people were seriously harmed and others became rich without delivering value (some nefariously, others naively).***
- ✧ These “experiments” were too big, and very shoddy.

Blockchain “experiments” seem to have external validity!

- ✧ Nevertheless, they have demonstrated that **blockchain-ish technologies represent a space in which novel institutional forms can be rapidly sketched** (never say “engineered”) and deployed, engendering very real and so realistic incentives among participants.
- ✧ There has never been **a petrie dish for social/economic institutions** quite like this.

It's too early to be scalable

- ✧ Most blockchain experiments have been failures for most participants
- ✧ It's very early for mass-adoption “dApps”. We don't know what we are doing.
- ✧ It's a great time for “artisanal” experiments built with care in hopes of success but deployed tentatively, recognizing the likelihood of failure
 - ▣ *#TheDAO was a really creative and interesting experiment, designed around a very novel approach to managing the traditional corporate finance problem of “minority interest”*
 - ▣ *We should try more things like it — with creative approaches to voting, creative use of payout patterns and escrow to shape incentives etc.*
 - ▣ *But lower stakes, please.*

TINOPD

✧ ***There Is No Other Petrie Dish***

✧ It is extraordinarily difficult and costly — and inaccessible to most due to social stratification — to implement bespoke institutional experiments that shape the incentives of large numbers of participants via arbitrary flows of economic value using traditional legal, banking, and regulatory systems

- ▣ *Genuinely interesting experiments are novel and likely to fail. Traditional legal, banking, and regulatory systems are conservative. By design, they make it difficult to construct de novo, likely-to-fail, institutions. Even when it is possible, they make it very, very expensive.*



Model psychosis

- ✧ When LSD was discovered, its major first proposed use was as a *psychotomimetic*, a technologically inducible and reproducible means by which psychologists might study and gain empathy for the difficult experiences of troubled patients.
- ✧ Early researchers also experienced the ways in which LSD and similar drugs could be *psychedelic* — “mind expanding”. Some, most notably Timothy Leary, were excited to emphasize this more ambitious use to the broad public.

Model psychosis

- ✧ That probably did some good for some people. But it did clear, sometimes vivid harm to others. An exaggerated panic among journalists and other social gatekeepers caused these substances to be banished almost completely from legitimate use or study, provoking a 50 year winter from which we are only just, *just*, beginning to emerge.
- ✧ Psychotomimesis was a good start. It was a humble, cautious way to frame the possibilities of this new frontier of experimentation.

Model psychosis

- ✱ Blockchain technology has proven itself a remarkably capable, rapidly iterable, high fidelity psychotomimetic for social and economic phenomena.
- ✱ Framed this way, we might cautiously use them to explore how we might develop somewhat less psychotic social and economic institutions.
- ✱ That on its own is a big deal. Let's be careful about making claims very much grander than that.

