

Letter

Analytical Democratic Theory: A Microfoundational Approach

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A prominent and publicly influential literature challenges the quality of democratic decision making, drawing on political science findings with specific claims about the ubiquity of cognitive bias to lament citizens' incompetence. A competing literature in democratic theory defends the wisdom of crowds, drawing on a cluster of models in support of the capacity of ordinary citizens to produce correct outcomes. In this Letter, we draw on recent findings in psychology to demonstrate that the former literature is based on outdated and erroneous claims and that the latter is overly sanguine about the circumstances that yield reliable collective decision making. By contrast, "interactionist" scholarship shows how individual-level biases are not devastating for group problem solving, given appropriate conditions. This provides possible microfoundations for a broader research agenda similar to that implemented by Elinor Ostrom and her colleagues on common-good provision, investigating how different group structures are associated with both success and failure in democratic decision making. This agenda would have implications for both democratic theory and democratic practice.

Over the last 15 years a prominent academic literature tied to libertarian thought has argued that democracy is generally inferior to other forms of collective problem solving such as markets and the rule of cognitive elites (Brennan 2016; Caplan 2008; Somin 2016). Following a long tradition of skepticism about democracy, these libertarians appeal to findings in cognitive and social psychology and political behavior to claim that decision making by ordinary citizens is unlikely to be rational or well grounded in evidence. Their arguments have been covered in magazines such as the *New Yorker* (Crain 2016) and popularized in proposals in the *National Review* for restrictions to dissuade "ignorant" people from voting (Mathis-Lilley 2021). Democratic theorists have mostly retorted with "epistemic" accounts, invoking mechanisms through which citizens can potentially reach good decisions—most significantly, deliberative mechanisms (Schwartzberg 2015).

This debate has been largely unproductive. Libertarian skeptics argue that democracy is generally inferior because of incorrigible flaws in citizens' individual

psychology, whereas democratic theorists lack a shared, compelling, and realistic micropsychological theory within which to ground their broader claims. Each side emphasizes empirical evidence that appears to support its own interpretation while discounting counterevidence.

This letter adopts a different approach. It demonstrates that democratic skeptics' pessimistic conclusion—that democracy is unfixable—rests on a misleading and outdated account of the relevant psychological literature. Similarly, epistemic democrats often overestimate deliberation's role in producing wise results or assume that aggregative models will operate at scale. We seek to avoid unwarranted skepticism and enthusiasm alike, instead providing microfoundations for a more empirically robust program investigating both the successes and mishaps of democracy, drawing on the experimental psychological literature on group problem solving (inter alia) to discover the conditions under which specific institutions perform well or fail in discovering solutions to collective problems.

Adapting a term from past debates, we contribute one foundational element of an approach that might be dubbed "analytical democracy." Like the "analytical Marxism" associated with scholars such as G. A. Cohen, Jon Elster, John Roemer, and Adam Przeworski (see Roemer 1986), we provide more demanding and specific microfoundations for an account we find broadly sympathetic. Our research program might also be analogized to Ostrom's work on the decentralized provision of common goods (Ostrom 1990). This emerged in response to Garrett Hardin's influential article on "the tragedy of the commons," which claimed that common-goods governance would inevitably collapse (Hardin 1968). Ostrom and her colleagues tested

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and falsified Hardin's claims. However, rather than simply defending the proposition that decentralized communities could provide common goods, they investigated *when* common-good provision was likely to succeed or fail. Similarly, a research program on democratic problem solving, investigating success *and* failure, might not only provide possible foundations for a truly realistic account of democracy but also generate practical advice on building and improving democratic institutions. This program would build on research on the consequences of group composition and structure to understand the conditions under which democratic problem solving will operate well or badly.

DEMOCRATIC SKEPTICISM, OPTIMISM AND SOCIAL SCIENCE

A recent pessimistic literature, dominated by libertarian scholars, diagnoses widespread democratic ignorance and incompetence. Bryan Caplan (2008, 19) asserts that voters are irrational and “rule by demagogues ... is the natural condition of democracy.” Jason Brennan believes that the democratic electorate is “systematically incompetent” so “some people ought not have the right to vote, or ought to have weaker voting rights than others” (2016, 201, viii). Ilya Somin claims that “widespread public ignorance is a type of pollution” so that “democracy might function better if its powers were more tightly limited” (2016, 6, 9).

Each argues that democracy is profoundly flawed because of irremediable problems in *individual* incentives and cognition. Each proposes circumscribing democracy in favor of some purportedly superior alternative principle of social organization. Caplan claims that markets impose an effective “user fee” for irrationality that is absent from democracy (2008, 133–4). Brennan proposes “epistocracy,” an aristocracy of those who know best. He defends restrictions on suffrage, identifying familiar possibilities such as restricting the franchise to those who pass a voter qualification exam and assigning plural votes to college graduates. Somin advocates what he calls “foot voting” (exit) over “ballot box voting” and emphasizes “the market and civil society as an alternative to government” (2016, 154), although he admits that the benefits “are likely to vary from issue to issue, from nation to nation, and perhaps also from group to group” (180).

These scholars ground their claims in social science findings. They invoke a literature leading back to Downs's (1957) argument that citizens are rationally ignorant about politics because they do not have sufficient incentive to gather good information or to make good decisions. They emphasize that ordinary citizens display severe cognitive bias. Caplan (2008) blames such biases for differences between voters' beliefs about economics and the beliefs of PhD economists, which he takes as a reasonable representation of empirical truth. Brennan (2016, 37ff) and Somin (2016, 94ff) cite work showing that biases lead people to search for information that supports their prior views and “not only reject new information casting doubt on their beliefs

but sometimes actually respond by believing in them even more fervently” (Somin 2016, 93–4; invoking the “backfire effects” described in Nyhan and Reifler 2010).

Brennan (2016, 40) unites rational ignorance and cognitive bias into a single stylized account in which most voters are either low information “hobbits” (ignorant) or politically fanatical “hooligans” (biased). He invokes Mercier and Sperber's explanation of how “[r]easoning was not designed to pursue the truth. Reasoning was designed by evolution to help us win arguments” (2016, 38). Furthermore, “human beings are wired not to seek truth and justice but to seek consensus... . They cower before uniform opinion” (Brennan 2012, 8; see also 2016, 47) as demonstrated by the famous Asch (1956) “conformity experiments,” where participants followed the obviously false opinions of confederates who were sitting next to them.

Achen and Bartels' (2016) “realist” account of democracy does not share the skeptics' normative priors but provides a similarly bleak judgment. They too draw on Asch and “similar studies” for social psychological microfoundations that stress the force of group identity and conformity (2016, 220).

There is little scope for democratic problem solving if individual consensus seeking invariably leads to group conformity and “echo chambers” (Sunstein 2002), affective polarization (Iyengar et al. 2018), the rejection of countervailing arguments from nongroup members, and backfire effects. Yet it is far from clear that the despairing picture is empirically accurate. Growing affective polarization may not increase ideological polarization and extremism (e.g., Desmet and Wacziarg 2021). People's economic beliefs are affected by economic reality (e.g. Duch and Stevenson 2008). Party leaders influence party members on some issues but on others adopt what they perceive to be the public's dominant opinion (Lenz 2013). Backfire effects are the exception, not the rule (Nyhan 2021; Wood and Porter 2019). People generally change their minds when presented with well-sourced facts and good arguments (see, e.g., Nyhan et al. 2020; Sides 2015).

In part, we do not see the expected universally negative consequences because citizens are not as ignorant as the skeptical consensus suggests. “Issue publics,” whose members acquire specialized information on a particular issue across a spectrum of opinion (Converse 1964), provide an important epistemic resource for democracy (Elliott 2020; Han 2009). Citizens do better on domain-specific knowledge, including information about candidates' positions on issues they care about (Henderson 2014; Krosnick 1990), than on the surveys of general factual information that skeptics rely on.

More fundamentally, individual-level biases are not devastating for collective democratic problem solving. The psychological literature on group effects and individual cognition is systematically misunderstood by skeptics and underexploited by political scientists. Contrary to Brennan's (2016) misinterpretation, scholars like Mercier and Sperber (2017) find that even if humans are subject to “myside bias,” they can filter out erroneous messages (including those from their

“side”) and change their minds when presented with good evidence from the other “side.” A realistic understanding of the capacities of democratic citizens need not be altogether bleak.

But it should not be overly sanguine. Democratic theorists (including those who are interested in practicalities) often rely on either conjecture or quasi-empirical claims. For instance, David Estlund argues that democratic procedures will tend to outperform non-democratic ones epistemically while acknowledging that the claim is conjectural rather than empirical (2008, 157, 160, 176). H el ene Landemore (2020, 8) asserts more forcefully that what she calls “open democracy” is empirically superior to other forms of social decision making: “in a complex and uncertain world, ... empowering all members of the demos equally ... is overall the best method we have to figure out solutions to common problems.”

We lack a research framework for establishing whether this strong assertion is more robust than competing claims from those who champion different forms of democratic decision making or who emphasize the possibility of democratic failure. Even if deliberation and other forms of reasoned exchange are morally valuable, they may not necessarily yield superior solutions to problems. Extrapolations such as Landemore’s (2013, 104) “Numbers Trump Ability” postulate that democracy can readily be scaled up so that “if twelve jurors are smarter than one, then so would forty-one or 123 jurors,” building on Hong and Page’s (2004) “Diversity Trumps Ability” theorem. Such claims are qualified by empirical findings from jury deliberations (Watanabe 2020) and Hong and Page’s later prediction that increasing group size does not necessarily improve problem-solving capability (Hong and Page 2021).

To move away from general claims for democracy’s superiority, epistemic democrats need to understand not just when democracy works but also when it doesn’t. Neblo et al. (2017, 915) establish an important possibility claim by showing how “scholars have assembled strong evidence that deliberative institutions positively influence citizens.” Still, it is hard to build from such demonstrations to a properly scientific account that can explain both democratic success and failure without some externally grounded theory of human decision making. Similarly, there is no very straightforward way of moving from a demonstration that Habermasian claims for deliberation can be grounded in plausible psychological mechanisms (Minozzi and Neblo 2015) to a broader account of when these mechanisms will or will not operate.

Surprisingly, possible microfoundations for such an account can be found in the literature on group psychology and cognition that skeptics have deployed against democracy. As Landemore (2013, 143) says, the “argumentative theory of reasoning” allows us to predict where deliberation will and will not work well. This is a pivotally important claim: we need to know *where* deliberation will function well to empirically assess theories of institutional design and practical justifications of democracy.

The argumentative account of reasoning is grounded in a recent “interactionist” literature in psychology, which explores how individual bias may or may not be corrected through social interaction. It investigates how mechanisms of “epistemic vigilance” allow people to employ cues to evaluate communicated information including the expertise and benevolence of the source, the plausibility of the message, and the quality of the arguments (for an overview, see Mercier 2020; Sperber et al. 2010). Chambers (2018) has also identified both the interactionist approach and the empirical literature on deliberation as reasons to doubt skeptical claims based on group psychology.

For example, contrary to skeptical claims that people conform to majority opinion, the experimental literature finds that people take account of relevant cues when evaluating the majority opinion including the absolute and relative size of the majority, the competence and benevolence of the majority’s members, the degree of dependency in the opinions of the majority, and the plausibility of the opinion (for review, see Mercier and Morin 2019). The much-bruited Asch (1956) experiments describe the consequences of external pressure rather than those of internalized bias. Practically no one was influenced when participants did not have to voice their opinion in front of the group, and contrary to the widespread academic folklore (Friend, Rafferty, and Bramel 1990), the experiments demonstrated independence as well as conformity. The literature finds that people are well able to evaluate arguments, that they are more influenced by strong than weak reasons (e.g., Hahn and Oaksford 2007), and that they partly change their minds when confronted with challenging but good arguments (e.g., Guess and Coppock 2020).

Interactionist scholarship suggests that reasoning processes are best evaluated in their normal environment of social interaction. It provides possible microfoundations for theories of variation. Instead of looking to the (supposedly invariant) cognitive limitations of ordinary citizens as skeptics do, an interactionist approach suggests that we should investigate the social context of decisions—how groups are structured—to understand when group identity and social pressure can distort or swamp problem solving. Both problem-solving capacity (which depends on whether groups harness individual biases and mechanisms of epistemic vigilance) and collective pressures to conformity will plausibly vary with group structure. Skeptical accounts, which depict group politics as simple condensates of individual bias writ large, are poorly fitted to capturing this variation. Equally, interactionism provides microfoundations for a framework that can investigate democratic theorists’ findings about when democracy works well while also investigating democratic failure.

This provides a more promising path forward than does the universal pessimism of democratic skeptics. It also provides more robust foundations for the claim that deliberation can occur under psychologically realistic circumstances and a starting point for investigating what those circumstances are. Democratic “realists” like Achen and Bartels (2016) need not be democratic

pessimists. A microfoundational approach, grounded in endemic individual cognitive bias, avoids the possible charge that the desired normative outcomes are baked into the initial empirical assumptions.

If outright democratic skeptics are sincerely committed to understanding the cognitive underpinnings of democratic processes, as their reliance on this literature ought to entail, they too should find it attractive. It allows the serious investigation of observed democratic failure as well as democratic success. Of course, these are not the only possible microfoundations, and like all empirically based accounts, they may be modified or even rejected as empirical evidence emerges.

Still, such microfoundations could support a broader analytical account that seeks to understand and address variation. If both the benefits and disadvantages of democracy arise at the group rather than individual level, then the challenge for advocates of democracy is to build democratic institutions that can better trigger the relevant cognitive mechanisms so as to capture the benefits of group problem solving instead of deferring to the social pressures that do sometimes lead to conformity. In other words, our goal is to better explain how democracy incorporates the capacities of groups to solve problems (under some circumstances) as well as their tendency to magnify conformity and factionalism (under others).

We do not provide a complete alternative account of democracy here. That would be a heroic undertaking, which would involve not just providing microfoundations but rebuilding existing institutional and organizational theories on their basis. Instead, we sketch the beginnings of a broader research program that we hope others will find attractive.

A RESEARCH PROGRAM ON DEMOCRATIC PROBLEM SOLVING

Ostrom (1990) began by demonstrating the systematic flaws in Hardin's skepticism of common goods but went on to articulate a coherent alternative research agenda on the conditions under which common goods provision succeeds or fails. Political science and related disciplines should commence a similar research program, uniting scientific research on group composition, network structure, and institutional form to investigate the conditions under which democratic problem solving is likely to succeed or fail.

As we have argued, this program could build on research in experimental cognitive psychology, which provides an alternative set of microfoundations to both rational choice and the social psychological arguments that have dominated political science debates. Specifically, this research identifies specific dimensions along which trade-offs in group problem solving plausibly occur:

- Between social comfort and comfort in expressing dissent (Baron 2005).
- Between shared common ground and some measure of preexisting disagreement. Stasser and Titus (1985)

point to the benefits of ground-level agreement for problem solving, whereas Schulz-Hardt et al. (2006) discuss how some level of background dissent allows for better problem solving.

- Between group size and the need to represent diversity. Fay, Garrod, and Carletta (2000) discuss how the quality of communication deteriorates as group size increases, whereas Hong and Page (2004; 2021) highlight the benefits of diversity and its complex interaction with group size and Mercier and Claidière (2022) examine whether deliberation is robust to increases in group size.
- Between pressures for conformity and concerns for epistemic reputation, Origgi (2017) describes how the cognitive mechanisms of reputation can generate both market bubbles and reliable collective information systems.

By understanding how different positions in this multi-dimensional space are associated with better or worse problem solving, we can arrive at useful hypotheses about how to fashion democratic systems. This research program should also incorporate scholarship on a broader level of social aggregation, which explores how network structure and social influence affect flows of information and opinion between individuals with different perspectives (Feng et al. 2019). It might incorporate practical findings about democratic decision making—for instance, the circumstances under which juries can form more accurate collective beliefs (Salerno and Diamond 2010) and how citizen constitutional assemblies (Farrell and Suiter 2019) and online town halls (Neblo, Esterling, and Lazer 2018) can support better communication between politicians and the public.

Crucially, the proposed research program would investigate democratic failures as well as successes, better explaining, for example, the circumstances under which epistemic breakdown and misinformation can become established in democracies. O'Connor and Weatherall (2018; Weatherall and O'Connor 2021) investigate how epistemic factionalization occurs among people who do not trust others with different beliefs. Nyhan (2021) emphasizes the importance of elite messaging and information decay in spreading misinformation, suggesting that punishing elites who spread falsehoods and focusing on intermediaries may have benefits.

Finally, such a research program would help address recent (Neblo et al. 2017) and current (Notes from the Editors 2020) demands for a “translational” approach to democracy that “challenges dominant disciplinary norms.” It would seek to reconcile scientific rigor with normative analysis, providing the groundwork for institutional improvement and reform.

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CONFLICT OF INTEREST

The authors declare no ethical issues or conflicts of interest in this research.

ETHICAL STANDARDS

The authors affirm this research did not involve human subjects.

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