

Majorities Against Utility: Implications of the Failure of the Miracle of Aggregation

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Abstract:

A surprising conclusion of modern political economy is that democracies with highly ignorant voters can still deliver very good results as long as voters' errors balance each other out. This result is known as the Miracle of Aggregation. This paper begins by reviewing a large body of evidence against this Miracle. Empirically, voters' errors tend to be systematic; they compound rather than cancel. Furthermore, since most citizens vote for the policies they *believe* are best for society, systematic errors lead voters to support socially suboptimal policies. The paper then considers the case for "paternalistically" vetoing popular but misguided democratic decisions, presenting several arguments that overruling democratic decisions is much less objectionable than overruling individual decisions. In fact, since democracies routinely adopt paternalistic policies, the opponent of paternalism for individual decisions should embrace paternalism for democratic decisions. The paper concludes by considering several different mechanisms for improving upon majority rule.

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I. Introduction

Most societies throughout history have been dictatorships. These dictatorships have, unsurprisingly, emphasized the interests of the ruler at the expense of the ruled. The result is policies that are, according to almost all ethical standards, bad. From this starting point, the appeal of democracy is easy to see: If the problem is conflict of interest between rulers and ruled, the solution is to make rulers and ruled *the same people*.

What if voters do not *know* which politicians and policies are in their interest? Though this sounds like an awfully elitist question, the extensive empirical literature on political knowledge finds that the average citizen knows shockingly little about politics. Roughly half of Americans do not know that each state has two senators; three-quarters do not know that senators' terms are six years long. Only 70% can say which party controls the House, and 60% which party controls the Senate.¹ Over half cannot name their Congressman, and 40% cannot name either of their senators. Slightly *lower* percentages know their representatives' party affiliations.² Knowledge of specific policies verges on non-existent. These are *not* aberrations of modern American politics: Low knowledge levels have been stable since the dawn of polling in the 1930s, and international comparisons reveal Americans' overall political knowledge to be at worst moderately below average.³

Some scholars have tried to minimize the severity of these charges⁴, but a growing number of defenders of democracy have taken another route: Accept the negative depiction of the average voter, but argue that democracy works well anyway.⁵ How could rule of the extremely ignorant, by the extremely ignorant, for the extremely ignorant work well? The answer hinges on the fundamental statistical principle known

as the Law of Large Numbers: As long as individuals' errors are *random*, analogous to tossing a fair coin, the *average* belief of a large group will almost certainly be extremely accurate.

To take a simple example, suppose there is an election with two candidates, and 98% of citizens are so ignorant that they literally vote at random. The remaining 2% knows that candidate A is better than candidate B. As long as the electorate is reasonably large, each candidate gets approximately half of the ignorant votes. However, since A also gets 100% of the informed votes, he wins with a vote share of $49\%+2\%=51\%$. The election has exactly the same winner as it would have had if *all* of the voters – not just 2% — were well-informed.

This result seems so amazing that it has become known as the Miracle of Aggregation.⁶ Electorates "act as if" they were fully informed, even if the vast majority knows nothing at all. It may seem magical, but it follows logically from the assumption of "fair-coin error": Except in very small elections, ignorant voters will split about 50/50, leaving the well-informed in charge. Benjamin Page and Robert Shapiro sum matters up well:

Even if individuals' responses to opinion surveys are partly random, full of measurement error, and unstable, when aggregated into a collective response — for example, the percentage of people who say they favor a particular policy — the collective response may be quite meaningful and stable.⁷

If the Miracle of Aggregation works as advertised, the utilitarian case for democracy is extremely strong. Though many – even most — voters are deeply confused about their own interests, the democratic *system* works because politicians require the support of well-informed voters to win. No wonder the most sophisticated defenders of democracy have come to put so much weight on the Miracle of Aggregation.

Nevertheless, the Miracle of Aggregation is a double-edged sword. If voters' errors are random, then democracy works about as well as one could hope. But the logical inverse is also true: If voters' errors are *not* random, then democracy falls short of this ideal.⁸ The further voters stray from fair-coin error the worse the result.

To see this, return to the previous example where only 2% of the electorate knows that candidate A is better for everyone, and the other 98% do not. But now suppose that instead of splitting 50/50, the uninformed split 40/60, with the advantage going to candidate B. In effect, they toss an unfair coin that shows three tails for every two heads. Under this assumption, candidate A gets only 41.2% of the vote, and candidate B wins with 58.8%. The fact that most voters do not know their own interests leads the majority to elect the candidate who is worse for the majority.

The upshot: The critical political variable is not *whether* voters are *right*, but *how* they are *wrong*. If the fair-coin error assumption of the Miracle of Aggregation holds, then majority rule leads to optimal consequences for the majority. However, to the extent that the random error assumption of the Miracle of Aggregation fails, majority rule falls short of this optimum. At best, democracy becomes a disappointment; at worst, a tragic missed opportunity.

The next section briefly surveys the empirical evidence on the Miracle of Aggregation. Almost all of the evidence is strongly against the Miracle. Examples of fair-coin error in politics are few and far between, and large gaps between the public's average belief and reasonable proxies for the truth are quite common. The remainder of the paper explores the *implications* of the failure of the Miracle of Aggregation. Section three examines the

interaction between voter cognition and voter motivation. Given the failure of the Miracle of Aggregation, the large body of evidence voting is largely unselfish is actually reason for greater pessimism. Section four critiques autonomy-based defenses of socially harmful democratic decisions. While there are good reasons to tolerate self-destructive individual behavior, they do not easily extend to collective choice. Section five considers various ways to improve upon majority rule.

II. The Miracle of Aggregation: A Survey of the Evidence

To determine whether or not the Miracle of Aggregation holds, one needs a benchmark for truth. Only then can we figure out whether errors balance out – or, equivalently, whether the average belief is correct. Researchers who want to put popular beliefs to the test have taken three main approaches.

A. Comparing Public Opinion to Known Fact

The first, which works well for unambiguous questions, is to compare the beliefs of the public to authoritative reference sources.⁹ For example, suppose you survey the public about the share of the budget devoted to foreign aid. If the average response and actual number are both 1%, then the Miracle of Aggregation holds. If the average response is 20%, but the actual number is 1%, then the Miracle of Aggregation fails. In practice, of course, one would expect slight discrepancies due to sampling error, so the real question is whether the average response diverges from the actual number to a *statistically significant* extent.

Surveys that use this approach find strong evidence against the Miracle of Aggregation. For example, the National Survey of Public Knowledge of Welfare Reform and the Federal Budget found gross discrepancies between the federal budget as the public

perceives it and the federal budget as it really is.¹⁰ This survey asked Americans to identify the two largest areas of federal spending from a list of six spending categories – foreign aid, welfare, interest on the federal debt, defense, Social Security, and health. Foreign aid – which consumes about 1% of the budget, was named by 41% of respondents — the *most frequent* response. (Welfare was a close runner-up). In contrast, only 14% named Social Security, which, at 21.6% of the budget, was already its single largest component.

B. The Enlightened Preference Approach

The main drawback to simply comparing public opinion to authoritative reference sources is that many interesting policy-relevant questions cannot be answered by consulting a table in the *Statistical Abstract of the United States*.¹¹ Is free trade better for the economy than protection? Was the recent increase in the price of gas caused by supply-and-demand, or collusion? Answers to questions like these are still true or false, but they are not graven in stone.

Fortunately, there are two ways to deal with relatively ambiguous questions.

One is to compare the beliefs of the average citizen to the beliefs of the average *well-informed* citizen. This is known as the "Enlightened Preference" approach.¹² To avoid circularity, researchers begin by testing respondents' knowledge about *unambiguous* subjects – the length of a presidential term, the number of senators each state has, and so on. In effect, they administer a "Political IQ" test. The next step, though, is to see whether – controlling for various confounding variables — beliefs about ambiguous subjects change as Political IQ rises.

If the Miracle of Aggregation were correct, then people with high Political IQs should come to the same *average* conclusion as the overall population. They do not. As Scott Althaus explains in his comprehensive survey of the Enlightened Preference literature, the well-informed diverge from the rest of the population in three big ways:

- "[F]ully informed opinion on foreign policy issues is relatively more interventionist than surveyed opinion but slightly more dovish when it comes to the use and maintenance of military power."¹³
- The well-informed "hold more progressive attitudes on a wide variety of social policy topics, particularly on those framed as legal issues."¹⁴
- The well-informed are "more ideologically conservative on the scope and applications of government power. In particular, fully informed opinion tends to be fiscally conservative when it comes to expanding domestic programs, to prefer free market solutions over government intervention to solve policy problems, to be less supportive of additional government intervention to protect the environment, and to prefer a smaller and less powerful federal government."¹⁵

In other words, contrary to the Miracle of Aggregation, if everyone were well-informed, but the distribution of other characteristics stayed the same, the majority would favor major policy changes.¹⁶ These changes defy a simple left-right categorization; on balance, the main effect of greater voter knowledge is to push policy in a largely libertarian direction.

C. Comparing Public Opinion to Expert Opinion

The main alternative to the Enlightened Preference approach is to compare the beliefs of laymen to those of experts. If the Miracle of Aggregation holds, the average beliefs of laymen and experts should line up – at least after statistically adjusting for possible

confounding factors.¹⁷ When we examine the data, however, it is easy to find large disagreements between the average person and the average expert.

Take economics, arguably the most policy-relevant subject of all. There turn out to be large belief gaps between laymen and experts. Compared to Ph.D. economists, non-economists seriously underestimate the benefits of the market mechanism, especially for international and labor markets. Non-economists are also much more pessimistic about the (recent) past, present, and future of the economy than economists are. These results hold up across a wide variety of data sets, countries, and historical eras.¹⁸

While critics of the economics profession often attribute economists' contrarian views to their affluence, job security, and/or right-wing prejudices, these stories have been tested and shown to be wrong. Economists' financial position explains less than 20% of their large disagreement with the general public. Their political stance explains less than 0% of their disagreement with the general public; controlling for economists' party identification and ideology actually makes their disagreement with the public a little *larger*.

The Miracle of Aggregation fails the layman/expert comparison test in other subject matters as well. One well-known study compared the beliefs of the general public and professional toxicologists about toxicology.¹⁹ It found very large belief gaps on the fundamentals of the subject. For example, while toxicologists accept the truism that "the poison is in the dosage," a substantial fraction of the general public does not. Other researchers report similar discrepancies between experts and laymen about the causes of cancer.²⁰ In fact, contrary to the Miracle of Aggregation, it is hard to find subjects where laymen and experts *do* broadly agree.

In sum, the Miracle of Aggregation does not survive trial by data. All three of the main empirical approaches converge on the same conclusion: The public's errors do not harmlessly cancel out; citizens' average beliefs are often deeply in error. Without a doubt, aggregation *can be* a solution to the problem of voter error – but they have to be the right kind of errors. Unfortunately, many of the most important errors are *not* the right kind.

III. The Interaction Between Voter Cognition and Voter Motivation

If people vote selfishly, the failure of the Miracle of Aggregation does not necessarily lead to worse policies. It is conceivable that voter errors *mitigate* the bad effects of voter selfishness. For example, suppose a voter has a large personal stake in anti-social policy X. If he is selfish and correctly understands his own interests, he supports X. If he misunderstands his own interests, he might *accidentally* oppose X, and lend his support to the policy that is best for society overall.²¹

Admittedly, this is only a theoretical possibility. Errors might lead voters to support policies that are *worse* for everyone. Furthermore, as Donald Wittman, economist at UC Santa Cruz and the author of *The Myth of Democratic Failure*, explains²², democracies have many tools – such as logrolling — to transform policies that are efficient but unpopular into policies that are both efficient and popular.²³ Misperceptions make it harder for these tools to work.

In any case, there is a large empirical literature that tests the assumption of voter selfishness – or, as I term it, the SIVH – the Self-Interested Voter Hypothesis.²⁴ The results are quite uniform: Objective self-interest tells us very little about people's political

views.²⁵ Income predicts very little about party identification; higher income has only a slight tendency to make people more Republican. The same pattern emerges when we examine beliefs about specific issues. The elderly strongly support Social Security and Medicare – but if anything, the support of the young for these programs is even stronger.²⁶ Men are a little *more* pro-choice than women. Draft-age men support conscription at normal levels. The unemployed are at most a little more in favor of government-guaranteed jobs; the uninsured are at most a little more in favor of national health insurance.²⁷ For the most part, people support policies because they think they are best for society as a whole, not because they personally gain from them.

The upshot: Since voters are not selfish, the failure of the Miracle of Aggregation practically ensures suboptimal consequences. If voters' goal is to maximize social welfare, then competitive democracy plus the Miracle of Aggregation equals success. But without the Miracle, good intentions backfire. If the average voter falsely believes that counter-productive policies have good results, then well-meaning voters demand bad policies, and competitive democracy impels politicians to satisfy that demand.

For example, suppose, as almost all economists do, that free trade is socially optimal. If voters' goal is to maximize social welfare, and the average voter knows that free trade is socially optimal, the electorate asks for free trade. However, if the average voter falsely believes that high tariffs are socially optimal, then a well-meaning electorate *insists upon* high tariffs. If their intentions were less high-minded, free trade might still stand a chance.²⁸

Policy consequences depend on a complex interaction between voter cognition and voter motivation. By itself, the cognitive finding that the Miracle of Aggregation fails does

not *necessarily* put democracy in a worse light. *Combined* with the motivational finding that the SIVH is deeply false, however, the failure of the Miracle of Aggregation has clear implications. Voters who want to maximize social welfare will fail to do so – perhaps badly – if they err in predictable directions.

IV. Autonomy-Based Defenses of Socially Harmful Democratic Decisions

Suppose you know for sure that a democratically-chosen policy is substantially worse for most people (and for society overall) than an alternative policy. You have tried to persuade the majority to revise its beliefs, but failed. Would it be justifiable to overrule the majority for its own good?

In my experience, most people say "No." Why not? The main response, in essence, is that overruling the majority violates its *autonomy*.²⁹ Right or wrong, the majority is entitled to have final say over its own political decisions. When pressed, many reject the very idea of "grading" democratic performance; being preferred by a majority is the key ingredient that *makes* a decision right.³⁰

Note that there is a family resemblance between the defense of democracies' "right to be wrong" and opposition to paternalism at the individual level. In fact, there is a straightforward parallel: Suppose you know for sure that an individual's choice is substantially worse for him than an alternative choice. You have tried to persuade the individual to revise his beliefs, but failed. Would it be justifiable to overrule the individual for his own good?

Yet strangely, people who defend the autonomy of democracy rarely object to overruling individuals for their own good. (Aside from a few libertarians, who does?) Paternalism

is the standard rationale for policies like drug prohibition; if drugs were legal, more people would take them and ruin their lives. But even programs like Social Security are ultimately rooted in paternalism; that is why no one is allowed to opt out. For everything from heroin to saving for retirement, most societies refuse to give individuals a choice, because they might make bad choices and hurt themselves.

If one is willing to paternalistically overrule individual decisions, though, it is difficult to see how one could refuse to paternalistically overrule democratic decisions. If it is right to stop an individual from hurting himself, how could it be wrong to stop a group of individuals from hurting themselves? Precisely because group-level errors often affect the whole group, even small mistakes can have large negative effects.

One could reply that groups rarely make large errors, so there is little point in second-guessing group decisions. As we have seen, however, this claim does not hold up empirically; groups often stray far from the truth. In fact, there are strong reasons to believe that people are better judges of their self-interest than their collective interest.

Joseph Schumpeter famously listed some of the reasons:

The picture of the prettiest girl that ever lived will in the long run prove powerless to maintain the sales of a bad cigarette. There is no equally effective safeguard in the case of political decisions. Many decisions of fateful importance are of a nature which makes it impossible for the public to experiment with them at its leisure and at moderate cost. Even if that is possible, however, judgment is as a rule not so easy to arrive at as it is in the case of the cigarette, because effects are less easy to interpret.³¹

In *The Myth of the Rational Voter*, I emphasize a more fundamental reason why the same people are often rational consumers but irrational voters. Basic economics predicts that individuals will "buy" more irrationality as its price falls.³² As consumers, we bear the full cost of our irrationality. As voters, in contrast, society as a whole picks up

the tab for our failure to face facts. Together, these two premises tell us to *expect* people to be more rational in the private sphere than they are in the public sphere.³³

To put matters differently: Individuals have a strong incentive to think rationally about their personal affairs, so there is limited scope to veto their choices "for their own good." In contrast, individuals have virtually no incentive to think rationally about public affairs, so bona fide opportunities to veto their choices "for their own good" arise all the time. Respecting democratic autonomy, unlike individual autonomy, comes at a high cost in terms of consequences.

Thus, it is hard for the proponent of paternalism for individuals to reject paternalism for democratic groups. But the reverse is not true; democratic group decisions have several features that make paternalism much less objectionable than it is at the individual level.

Most obviously, when the majority votes for socially injurious policies, it is not "just hurting itself."³⁴ Unless the decision is unanimous, the errors of the majority spill over onto innocent dissenters. No matter what the majority decides, of course, its choice makes *some* people worse off; for every policy, there are losers. But when the majority chooses the policies with the best overall consequences, at least it can offer the defense that "It is regrettable that we made some people worse off, but the decision was for the greater good." When the majority errs, in contrast, it wrongs the minority *without a serious excuse*. From this perspective, "paternalistically" overruling the majority is better seen as defending the prima facie right of the minority to be left alone in the absence of a good reason to do otherwise.³⁵

Furthermore, even when a democratic decision *is* unanimous, no voter is "only hurting himself." Rather, each voter hurts everyone, himself included. In economic jargon, voting for bad policies has a built-in *negative externality* – a problem conceptually distinct from abuse of the minority by the majority.³⁶

Think about it this way: Suppose that everyone drives polluting cars, making the air unpleasant to breathe. This does not imply that each driver is "only hurting himself." In fact, this is almost the reverse of the truth. Each driver hurts *everyone*, himself included.³⁷

Analogously, suppose that everyone votes for bad policies, making society an unpleasant place to live. It does not follow that each voter is "only hurting himself." Rather, each voter is hurting everyone. From this perspective, overruling democratic decisions is no more paternalistic than regulating pollution. In both cases, preventing individuals from hurting themselves is a minor side effect of a quite different goal: Preventing individuals from hurting each other.

Finally, since democracies almost always adopt paternalistic policies, there is a deep tension between opposition to individual-level paternalism and opposition to group-level paternalism. Suppose, for example, that the majority bans marijuana for paternalistic reasons, and a self-styled "opponent of paternalism" has the power to overturn the ban. Should the opponent of paternalism uphold the ban, on the grounds that "Right or wrong, voters have the right to rule society as they think best?" Or should the opponent of paternalism overturn the ban, on the grounds that "Right or wrong, *individuals* have the right to rule themselves as they think best"? To recognize the right of the majority to determine whether a ban on marijuana is in the best interest of society, one must

sacrifice the right of the individual to determine whether it is in his own best interest to smoke marijuana. To recognize the right of the individual to determine whether it is in his own best interest to smoke marijuana, conversely, one must sacrifice the right of the majority to determine what is in the best interest of society.

In short, autonomy-based defenses of deference to democracy fall short because there are conflicting autonomies at stake. Group autonomy can, and usually does, violate individual autonomy. Furthermore, since arguments about group autonomy normally *build upon* intuitions about individual autonomy, it is difficult for group autonomy to prevail in this conflict. Either we come down on the side of individual autonomy, or abandon arguments from autonomy altogether.

V. Improving Upon Majority Rule

A major obstacle to critical examination of democracy is a famous quote from Winston Churchill: "Democracy is the worst form of government, except all those other forms that have been tried from time to time."³⁸ Despite its popularity, this quote rests on a false alternative. We do not have to choose between unrestricted majority rule and no democracy at all.³⁹

In fact, "democracies" *already* accept two kinds of restrictions on majority rule. First, they depoliticize some areas of life, exempting them from the democratic process. For example, the First Amendment to the U.S. Constitution takes speech and religion off the political table. Even if the majority wants to restrict speech or create a state religion, it may not.

Second, putative democracies make many procedural exceptions to the principle of majority rule. They require supermajorities for large changes, let independent central banks determine monetary policy, and deny minors and convicted felons the right to vote.

At minimum, then, the failure of the Miracle of Aggregation suggests that we should take another look at both kinds of restrictions on democracy. If democracies lean in an anti-market direction, for example, the failure of the Miracle argues for taking some kinds of economic policy off the political table. During the so-called "Lochner era" (1890-1937), U.S. courts did precisely this, striking down a wide array of regulations on constitutional grounds.⁴⁰ There are several constitutional provisions, such as the Commerce Clause, that would, given teeth, drastically depoliticize economic activity.⁴¹ If that does not go far enough, one could borrow a new amendment from the penultimate page of *Atlas Shrugged*: "Congress shall pass no law abridging the freedom of production and trade."⁴²

Procedural exceptions to majority rule also deserve more sympathetic consideration. If the public errs in the direction of protectionism, for example, there is an argument for a supermajority requirement for restrictions on international trade. In a similar vein, one kind of expert – judges — already has some power to overturn popular but misguided legislation. Perhaps other kinds of experts should have similar power. If we let the Supreme Court overturn legislation for being "unconstitutional," why not let the Council of Economic Advisors overturn legislation for being "uneconomical"?

Another variable to consider is the franchise itself. In light of the failure of the Miracle of Aggregation, it is striking that low voter turnout is supposed to be a *problem*.

Empirically, non-voters know less⁴³, so their absence on election day actually helps democracy work better. Once one accepts the benefits of lower turnout, though, one might go further. If you need to pass a competency test to drive, why not a competency test to vote?⁴⁴

Admittedly, most of these proposed reforms suffer from a catch-22: Since the majority is already in charge, change requires its consent. To limit the power of the majority, you have to convince the majority that it should have less power.⁴⁵ But if you are persuasive enough to do *that*, why not just directly argue people out of their confused policy preferences?

Is there any way to improve upon majority rule that avoids this catch-22? Yes. Those who notice the failings of majority rule often have a degree of slack that allows them to push the world in a better direction.⁴⁶

This is particularly obvious for educators. As an economics professor, I know from experience that I can, within broad limits, decide what to teach. Should my courses focus on mathematical curiosities, or challenge popular misconceptions? That decision is largely up to me, so I use my discretion to nudge the world in a better direction. Many economists do the same, but unfortunately, most do not. A low-cost way to improve upon majority rule is to convince more economists to use their power for good. The same holds for other educators – indeed, for anyone who knows more than average and communicates with a broader audience.⁴⁷

But educators are not the only people in the world with slack. Politicians and bureaucrats also have some room to maneuver – they do not instantly lose their jobs as

soon as they slightly stray from public opinion. Furthermore, the public does not always have a policy preference; especially for policy details, the man in the street is often indifferent. The upshot is that politicians and bureaucrats can partially undo the policy damage caused by the failure of the Miracle of Aggregation, if they are so inclined. Majority rule is a serious constraint, but some room to maneuver remains.

Conclusion

The Miracle of Aggregation is the most intellectually serious response to concerns about voter ignorance. The Miracle demonstrates that it is possible for deeply ignorant electorates to sustain high-quality policies. Unfortunately, the data strongly suggest that the Miracle of Aggregation is just wishful thinking. Fair-coin error, its fundamental assumption, badly fails an array of empirical tests.

These findings provide a jumping-off point for the real topic of this paper: What does the failure of the Miracle of Aggregation *imply*? Under the empirically reasonable assumption that people generally vote for the policies they believe to be best for society overall, the failure of the Miracle implies that socially harmful policies will be popular. The majority can and does eagerly support policies that make most people worse off.

For a utilitarian, this is a good reason *not* to give the majority what it wants. Faced with this implication, however, people often switch to an autonomy-based defense of democracy: Even if the majority misunderstands its own interests, it is entitled to pick whatever policies it likes. I argue, however, that the norm of group autonomy is markedly less compelling than the norm of individual autonomy. Furthermore, the two norms usually conflict.

If autonomy-based defenses of majority rule fail, and majority rule has some bad consequences, we should consider ways to improve upon it. The key point to remember is that we do not face a binary choice between unlimited democracy and dictatorship. There are many continuous political dimensions that might be adjusted to adapt to the failure of the Miracle of Aggregation. So-called democracies already limit majority rule by depoliticizing some areas of life, imposing supermajority requirements, delegating authority to experts, and so on. There is ample reason to consider taking these exceptions to majority rule and expanding them.

In the likely event that these institutional fixes are too unpopular to implement, there is still room to improve upon majority rule. Even in the most competitive democracy, some slack remains. Educators have some control over their lessons, politicians over the policies they support, bureaucrats over the way they implement the policies the politicians have selected. The failure of the Miracle of Aggregation gives actors who have some political slack a normative rationale for using it.

Notes

¹ Michael Delli Carpini, and Scott Keeter, *What Americans Know About Politics and Why It Matters* (New Haven, CT: Yale University Press, 1996), 117.

² Thomas Dye, and Harmon Zeigler, *The Irony of Democracy: An Uncommon Introduction to American Politics* (Monterey, CA: Brooks/Cole Publishing Company, 1992), 206.

³ Delli Carpini and Keeter, *What Americans Know About Politics and Why It Matters*, 116-22, 89-92.

⁴ See e.g. Arthur Lupia, and Matthew McCubbins, *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* (Cambridge: Cambridge University Press, 1998), and Samuel Popkin, *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. (Chicago: University of Chicago Press, 1991).

⁵ See e.g. James Surowiecki, *The Wisdom of Crowds* (NY: Doubleday, 2004); Allan Drazen, *Political Economy in Macroeconomics* (Princeton, NJ: Princeton University Press, 2000); Torsten Persson, and Guido Tabellini, *Political Economics: Explaining Economic Policy* (Cambridge: MIT Press, 2000); Dani Rodrik, "Understanding Economic Policy Reform." *Journal of Economic Literature* 34, no. 1 (1996): 9-41; Donald Wittman, *The Myth of Democratic Failure: Why Political Institutions Are Efficient* (Chicago: University of Chicago Press, 1995); Benjamin Page, and Robert Shapiro, *The Rational Public: Fifty Years of Trends in Americans' Policy Preferences* (Chicago: University of Chicago Press, 1992); and Gary Becker, "Toward a More General Theory of Regulation: Comment." *Journal of Law and Economics* 19, no. 2 (1976): 245-8.

⁶ Philip Converse, "Popular Representation and the Distribution of Information," in John Ferejohn, and James Kuklinski, eds., *Information and Democratic Processes* (Urbana and Chicago: University of Illinois Press, 1990), 383.

⁷ Benjamin Page, and Robert Shapiro, "The Rational Public and Democracy," in George Marcus, and Russell Hanson, eds., *Reconsidering the Democratic Public* (University Park: Pennsylvania State University Press, 1993), 41.

⁸ This is true for continuous choices. For discrete choices, a biased electorate can still make the right choice as long as the bias is not too severe. For example, suppose an electorate faces a discrete choice to declare war or not, and voters err in a slightly hawkish direction. If peace is clearly the better option, a slight bias will not be enough to distort policy.

⁹ For more details, see Bryan Caplan, *The Myth of the Rational Voter: Why Democracies Choose Bad Policies* (Princeton, NJ: Princeton University Press, 2007), 25; 79-80.

¹⁰ Kaiser Family Foundation and Harvard University Survey Project, "National Survey of Public Knowledge of Welfare Reform and the Federal Budget." (1995), Table 16. URL <http://www.kff.org/kaiserpolls/1001-welftbl.cfm>.

¹¹ U.S. Census Bureau, *Statistical Abstract of the United States: 2007*. (Washington, DC, 2006).

¹² For more details, see Caplan, *The Myth of the Rational Voter*, 25-28, and Scott Althaus, *Collective Preferences in Democratic Politics: Opinion Surveys and the Will of the People* (Cambridge: Cambridge University Press, 2003).

¹³ Ibid, 128-30.

¹⁴ Ibid, 130.

¹⁵ Ibid, 131.

¹⁶ These results indicate that democracies adopt policies that are bad *given* the existing distribution of values. The Enlightened Preference literature does not address whether existing policies are bad in some more objective sense.

¹⁷ The leading potential confounding variables are usually proxies for self-serving bias, such as income, income growth, job security, race, gender, and age, or proxies for ideological bias, such as party identification and self-identified position on the left-right spectrum. For more details, see Caplan, *The Myth of the Rational Voter*, 52-6.

¹⁸ See *ibid*, 50-93. This does not mean that economists are infallible, only that their views tend to be sensible relative to contemporary public opinion. During the New Deal, for example, many economists supported policies that modern economists see as deeply misguided. But given the mass appeal of these policies, it is still quite likely that the average economist during the New Deal was, by comparison, a critic.

¹⁹ Nancy Kraus, Nancy, Torbjörn Malmfors, and Paul Slovic, "Intuitive Toxicology: Expert and Lay Judgments of Chemical Risks," *Risk Analysis* 12, no. 2 (1992): 215-32.

²⁰ S. Robert Lichter, and Stanley Rothman, *Environmental Cancer — A Political Disease?* (New Haven, CT: Yale University Press, 1999).

²¹ See Bryan Caplan, "Sociotropes, Systematic Bias, and Political Failure: Reflections on the Survey of Americans and Economists on the Economy." *Social Science Quarterly* 83, no. 2 (2002): 416-435.

²² Wittman, *The Myth of Democratic Failure*.

²³ Suppose, for example, that rent control costs 10 landlords \$200 each, but benefits 100 tenants by \$10 each. If citizens vote their narrow self-interest, a democratic vote leads to rent control even though the policy's net effect is to destroy \$1000. With logrolling, however, this inefficiency is easy to avoid. For example, landlords could agree to give each tenant a \$15 bribe if they vote against rent control, leaving each group with an extra \$500.

²⁴ Bryan Caplan, "Libertarianism Against Economism: How Economists Misunderstand Voters and Why Libertarians Should Care." *Independent Review* 5, no. 4 (2001): 539-63.

²⁵ See David Sears, and Carolyn Funk, "Self-Interest in Americans' Political Opinions," in Jane Mansbridge, ed. *Beyond Self-Interest* (Chicago: University of Chicago Press, 1990), 147-70; and Jack Citrin, and Donald Green, "The Self-Interest Motive in American Public Opinion." *Research in Micropolitics* 3 (1990): 1-28.

²⁶ Furthermore, support by the young persists even though many young people think Social Security benefits will be sharply lower by the time they retire. See Geoffrey Brennan, and Loren Lomasky. *Democracy and Decision: The Pure Theory of Electoral Preference* (Cambridge: Cambridge University Press, 1993), 103.

²⁷ For more details, see Caplan, *The Myth of the Rational Voter*, 148-51.

²⁸ See Caplan, "Sociotropes, Systematic Bias, and Political Failure."

²⁹ See Ellen Frankel Paul, Fred Miller, and Jeffrey Paul, eds. *Autonomy* (Cambridge: Cambridge University Press, 2003).

³⁰ See e.g. Ian Shapiro, *Democracy's Place* (Ithaca, NY: Cornell University Press, 1996).

³¹ Joseph Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper and Brothers Publishers, 1950), 263.

³² Caplan, *The Myth of the Rational Voter*, 114-131.

³³ *Ibid*, 131-5.

³⁴ Similarly, if the parents in a family abuse their children, it would be misleading to say that "the family is just hurting itself."

³⁵ On prima facie obligation, see W.D. Ross, *The Right and the Good* (Oxford: Oxford University Press, 1930).

³⁶ As David Friedman explains: "It is easy to misinterpret problems of market failure as unfairness rather than inefficiency... The problem with public goods is not that one person pays for what someone else gets but that nobody pays and nobody gets, even though the good is worth more than it would cost to produce." (David Friedman, *Hidden Order: The Economics of Everyday Life* (New York: HarperCollins, 1996), 278).

³⁷ In fact, economists would roughly say that everyone *but* the individual driver is worse off. Unlike the other people who breathe his emissions, the driver enjoys the compensating benefit of convenient personal transportation.

³⁸ Lewis Eigen, and Jonathan Siegel, eds. *The Macmillan Dictionary of Political Quotations* (New York: Macmillan Publishing Co., 1993), 109.

³⁹ For further discussion, see Caplan, *The Myth of the Rational Voter*, 192-9.

⁴⁰ See e.g. Gillman, Howard, *The Constitution Besieged: The Rise and Demise of Lochner Era Police Powers Jurisprudence* (Durham, NC: Duke University Press, 1993).

⁴¹ See Richard Epstein, "The Proper Scope of the Commerce Power." *Virginia Law Review* 73, no. 8 (1987): 1387-1455.

⁴² Ayn Rand, *Atlas Shrugged* (New York: Signet, 1957), 1083.

⁴³ Caplan, *The Myth of the Rational Voter*, 154-8.

⁴⁴ The fact that tests have at some point been used for discriminatory ends is hardly a decisive counter-argument. Should we abolish drivers' licenses simply because Saudi Arabia refuses to issue them to women?

⁴⁵ Admittedly, this problem is not insuperable: voter-approved expansions of the franchise on the basis of property, race, gender, age, and more have occurred in the past.

⁴⁶ For further discussion, see *ibid*, 199-205.

⁴⁷ Of course, the "knows more than average" stipulation is crucial. Before they try to correct their students' "misconceptions," teachers ought to double-check the quality of their lessons.