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DEMOCRACY AND THE EPISTEMIC LIMITS OF MARKETS

ABSTRACT: *A recent line of argument insists that replacing democracy with markets would improve social decision making due to markets' superior use of knowledge. These arguments are flawed by unrealistic assumptions, unfair comparisons, and a neglect of the epistemic limits of markets. In reality, the epistemic advantages of markets over democracy are circumscribed and often illusory. A recognition of markets' epistemic limits can, however, provide guidance for designing institutions in ways that capture the advantages of both.*

Keywords: *democracy; democratic competence; epistemic democracy; markets; rational ignorance; Samuel DeCanio; Mark Pennington; Ilya Somin.*

In recent years, a formidable set of arguments seeking to establish the superiority of markets over democracy as a means of coordinating society has emerged in the work of such scholars as Samuel DeCanio (2014), Mark Pennington (2011), and Ilya Somin (2013). This work combines arguments and evidence from political science, economics, and public choice to indict democratic decision making and celebrate that of markets. The conclusion of these authors is that markets make better decisions than democracy, in the sense of leading to better outcomes, because they better generate and take advantage of the knowledge needed to produce good outcomes.

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Though many of these arguments are familiar, two considerations make them especially powerful today. First, the rise of epistemic democratic theory has led many democratic theorists to recognize that at least some of democracy's attraction is conditional on its performance in producing good outcomes (Schwartzberg 2015). This framework enhances the theoretical significance of the pro-market arguments of DeCanio, Pennington, and Somin, as all of them compare markets to democracy on the epistemic dimension. Those who agree that outcomes matter are therefore pressured to say that markets should be favored if, on epistemic grounds, we have reason to think that markets can be expected to produce good outcomes more reliably than democracy can.

The second consideration enhancing the force of these pro-market arguments is that many of them engage deeply with empirical evidence to bolster their claims. This is significant because it offers the arguments a veneer of scientific validity that they might lack if put solely in terms of economic theory or rational choice. It also thereby helps inoculate the arguments from the claim that they are little more than elitist prejudice.

In this article, I show that the purported epistemic advantages of markets do not stand up to scrutiny and fall short of demonstrating the epistemic inferiority of democracy. We should therefore treat the conclusions of DeCanio, Pennington, and Somin with skepticism. In responding to these arguments, I introduce two underappreciated epistemic limits to markets that should further temper our reliance on them to improve social coordination and decision making, especially vis-à-vis democracy.

Markets in Political Theory

Political theorists have taken a renewed interest in markets in recent years. Since this is largely due to the rise of economic inequality and the flow of money into politics in recent decades, the focus of much of this work concerns the question of whether market transactions in some goods should not be allowed. Debra Satz (2010), for instance, argues that markets in such goods as human body parts and sexual and reproductive services are troubling because they can prevent parties from interacting with each other as equals, often by reinforcing social patterns of inequality. Others have argued that markets distort the proper valuing of certain goods. Michael Sandel (2012) argues that a great many goods, including

the ability to avoid queues and the names of buildings, should not be for sale because selling them in markets goes against principles of distribution that are inherent in the goods or are found in our shared social understandings of their nature. These authors do not reject markets in toto but rather claim that moral limits on markets should prevent the sale of certain goods.

The discussion here, however, will focus on the *epistemic* performance and limits of markets, not their morality. The question will be the overall quality of outcomes that markets generate for society rather than their fittingness or appropriateness given the value of persons or certain goods. This also means setting aside such intrinsic values as freedom and equality in this discussion, since both markets and democracy can promote them in different ways. In eschewing these possible lines of argument, I seek to meet the challenge put forward by the pro-market arguments on their own terms.

In addition, I am interested in markets in a more general sense than Satz or Sandel, since they focus on markets' appropriateness for certain specific goods whose character recommends special treatment. Instead, I consider markets as society-wide systems of coordination through the mutually entered-into transactions of individual buyers and sellers, which generate particular distributions of social resources (Lindblom 2001, 4; Satz 2010, 15-16). The question is whether markets in this sense do a better job than democracy, where *democracy* refers to a set of collective decision-making procedures in which inclusive mass publics or representatives elected by them choose policies that shape the distribution of social resources.

Part of my aim is to bring a perspective from political theory to this debate, rather than from economics or its affiliated fields. I therefore pass over without comment such market failures—established by economists—as information asymmetries, which could be construed as epistemic problems. Instead, I want to concentrate on two epistemic limits that have received less attention because they are most clearly seen when we compare markets with democracy, and when one approaches the task of comparison with the tools and perspective of political theory. One of the advantages of this perspective, we shall see, is to bring a more sophisticated account of democracy to the debate, one that better reflects actual democratic practice.

An important objection to epistemic theory, and thus to this entire debate, is that it fails to take disagreement seriously. I must briefly

address this objection. The claim is that since we do not agree about what would count as a "better" decision, a theory justifying democracy on that basis is useless. This matters because if we cannot tell what could count as a better decision, we have no basis for assessing the *comparative* performance of markets and democracy, whether on epistemic grounds or any others. However, even if we cannot agree about what a relatively good decision would be, one substantive thing that we can all agree to is that decisions should be unbiased. Thus, I argue below that markets systematically bias social decision making in ways that are epistemically problematic. I specifically argue that there are two epistemic limits to market decision making. The first of these is that markets bias social decision making against non-materialistic values; the second consists in the fact that markets bias social decision making in a manner that, if endorsed by a theorist, would commit her to begging the epistemic question.

The Epistemic Case for Markets over Democracy

What, then, is the case for markets having an epistemic advantage over democracy? Perhaps the most basic advantage, emphasized by Somin (2013), is that markets incentivize decision makers to become informed and to combat their cognitive biases in making buying decisions, while democratic citizens have no such incentive in making voting decisions. Because the outcome of an election is shared by all, and because no individual is likely to determine the outcome through his or her lone vote, voters lack a sufficient incentive to ensure that their voting decisions are made well, in light of all the relevant information. In addition, would-be voters have an incentive to free ride on the efforts of others to become informed and vote (Downs 1957). Market participants, on the other hand, have a strong incentive to ensure that their decisions are well founded, since they face all of the consequences of their decisions themselves and are singly responsible for making them. The hypothesis that citizens lack a similar incentive to gather relevant information is termed "rational ignorance."

In addition, Pennington and DeCanio, following Hayek (1945), argue that markets make more efficient use of information than democracy because they can tap and aggregate latent, non-linguistic knowledge in ways that democracy cannot (Pennington 2003; DeCanio 2014, 646). The main carriers of information in markets are prices, and prices emerge unintentionally from the aggregated buying and selling decisions

of people who may never otherwise communicate with one another (Pennington 2003, 731). In making these decisions, people draw on all the knowledge they possess—not just the knowledge they are consciously aware of or can put into words—and communicate it to others through the price mechanism. They are able to make maximal use of their knowledge and share it widely because they *act* on it in making buying or selling decisions, rather than *talking about* it (ibid.). This grants markets a decisive advantage over democracy, since deliberative forms of democracy, which dominate the literature, privilege information that can be put into linguistic form and offered discursively in public debate. The market's price-based mechanism of knowledge aggregation thereby undoes a linguistic bias in democratic deliberation that leads to loss and inefficiency in how democracy handles information. Markets are able to capture and make use of information that would be lost to a deliberative democracy. It does so, moreover, without the need for a central authority such as a democratic assembly to comprehend the whole or process the information aggregated in prices.

Another advantage of markets stems from the asymmetric difficulty of the political choice situation faced by voters as compared to the market choice situation faced by consumers. DeCanio (2014) argues that the political choice situation faced by voters is particularly difficult due to three features: the exclusivity of political choices, the bundling of policies within those choices, and the lack of a tenable metric for making tradeoffs.

The central case of democratic choice is among parties or candidates seeking political office. This choice gives the occupants of the offices exclusive control over decision making until their term expires. This exclusivity makes it impossible to compare the job that the winners do with the job that the losers could have done, had they won. Voters cannot compare the costs and effects of the rival baskets of policies that candidates would produce if elected (DeCanio 2014, 643; Somin 2013, 124). The same is not true for most market decisions, for which competition simultaneously presents products that can be readily compared. Such comparisons in politics require considering counterfactual scenarios that are difficult or impossible to forecast.

A different epistemic problem with the voting task is that the decision is singular and yet influences a vast bundle of policies. A fully rational decision would seem to require learning about all of these policies and understanding how the contending parties would act on each of

them, what the effects of each policy would be, and how the overall bundles and their consequences compare (DeCanio 2014). Yet there is no practical way to disaggregate the voting task so as to render consideration of each policy an epistemically distinct task. Market choices, by contrast, are generally distinct, so they can be approached piecemeal rather than all at once.

Exacerbating the problem of policy bundling is that political decisions lack a common metric for making tradeoffs between different policies. As DeCanio (2014, 642) observes, "it is difficult to compare a unit increase in medical insurance with a unit decrease in environmental protection, and even harder for voters to make these calculations across multiple issues" simultaneously. DeCanio quotes Gabriel Almond, who noted that there is "no simple policy currency in which the cost of alternative policies can be computed" (ibid., 643). However, none of this is true of markets, because money provides a ready metric of comparison for all manner of goods. This makes the task of comparison much easier for market decisions than for democratic ones.

Epistemic challenges to democracy do not end with citizens' voting decisions. They extend also to parties and representatives who (on some accounts) wish to supply policies that the voters will approve. The same features of exclusivity, policy bundling, and lack of a common policy metric beset their decision making. Exclusivity robs representatives of the opportunity to learn from competitors and reduces the pressure to innovate. Policy bundling makes it difficult for representatives to interpret their main source of information about citizen preferences—votes in an election—because the signal offered by such votes is too imprecise to guide policy choice and design (ibid., 644). They cannot know if citizens voted for them due to their stance on foreign policy, or against them for their environmental policies. All of this is made worse by the lack of a common policy metric, which hobbles parties and representatives in making the tradeoffs in their policy agenda needed to improve their performance in the next election. These difficulties do not beset market actors, for whom informational feedback is intensely specific and nonambiguous—the product sells or not—and for whom the ever-present pressure of competition requires adaptation and innovation. If we assume, as do those (such as DeCanio) who operate in a social-choice framework, that the task of representatives is to supply policies of which voters approve, the task is made exceedingly difficult by these endemic features of democratic choice.

These arguments can be summarized as follows:

1. rational ignorance
2. embodied or non-linguistic knowledge
3. exclusivity of the decision situation
4. policy bundling as a feature of the decision situation

The discussion thus far may seem to suggest that these arguments make for a single, coherent epistemic case for markets, but I do not intend this suggestion. The arguments have roots in several different theoretical traditions, including Austrian economics, social choice, neoclassical economics, and the new institutionalism. It is possible that there are tensions between them that prevent them from cohering. Yet we need not assume that they form a unified argument. We can instead think of them as alternative routes to the same broad conclusion: markets' epistemic superiority over democracy. Such eclecticism may strike some as philosophically untidy but it allows us to focus on the live political question at issue: will markets or democracy do a better job for society? This focus comes at a cost, however, in that in answering in the negative, I cannot deny that other routes derived from these or other theoretical roots may yet succeed.

Problems with Rational Ignorance

The first argument for the epistemic superiority of markets is that voters lack the incentive possessed by market participants to properly inform themselves, by dint of the fact that market decisions are made—and the consequences felt—individually. This argument against democracy combines the venerable thesis of rational ignorance with a favorable comparison to market decision making. However, there are problems with both parts of the argument.

First, rational ignorance is a prediction about how voters will behave derived from rational-choice analysis, yet these predictions are by and large inaccurate (Green and Shapiro 1994, ch. 4). The failure of rational-choice analysis can be seen in the case of voting. The logic predicting that citizens lack the incentive to inform themselves also predicts that they will lack the incentive to vote. Yet they do vote, by the hundreds of millions. It also fails to explain widespread regularities in voting patterns found in most electoral democracies. Take, for instance, the

observed regularity that first-order, national elections outpoll second-order, state or local elections. Rational choice would predict higher turnout in a smaller polity, such as a city or state, since one's chance of being decisive is much higher; yet we observe the opposite. Or consider the empirical regularity that turnout varies substantially across demographic groups, often in puzzling ways. When the more educated vote disproportionately often, for instance, it suggests that those who are best situated to understand the logic of collective action act the least in line with its predictions (Geys 2006). Moreover, on the rational-choice analysis, all members of a polity lack the incentive to vote equally, not differentially. Rational-choice theorists offer up many explanations for these failures of the predictions generated by the theory, yet as Donald P. Green and Ian Shapiro (1994) argue in their classic critique, these have the character of post-hoc rationalizations. The point here is not simply that the rational-choice theory of voting is wrong; it is that there are evidently other forces shaping the propensity of individuals to vote, forces strong enough to negate the predictions of the theory in most ordinary circumstances. This renders rational choice an unreliable source of predictions about human behavior—including the propensity of voters in large electorates to gather information (or not to).

Thus, we see a strikingly similar pattern of failures in the predictions of rational-ignorance theory. Like voting, the most glaring failure is that millions of people do in fact gather and retain large amounts of political information, despite the theory's prediction that people lack sufficient incentive to do so. Michael X. Delli Carpini and Scott Keeter, for instance, found that the top 30 percent of a nationally representative sample scored an average of 71 percent on their wide-ranging 51-item knowledge survey, implying that roughly a hundred million Americans do not behave as the theory predicts (Delli Carpini and Keeter 1996, 154). Rational-ignorance theory also fails to explain variations in political knowledge, such as why those with more education have more political knowledge even though they are in the best position to understand what a waste gathering such information is likely to be; or why knowledge about some issues varies according to race and gender (Delli Carpini and Keeter 1996, ch. 4). Moreover, there is evidence that knowledge levels vary considerably among democracies, tracking not the size of the electorate, as the theory would predict, but institutional features. For instance, higher political knowledge levels tend to be found in more complicated political environments, such as parliamentary and multiparty systems, suggesting

that knowledge levels are partly endogenous to the institutional environment (Fortunato, Stevenson, and Vonnahme 2016). Thus, rational-ignorance theory fails to help us understand the world we observe. Even if these patterns can be explained in ways that do not violate the theory, the theory does not itself illuminate them.

What I want to suggest is that instead of trying to patch up the theory with amendments, we should replace it with a fundamentally different theory that better accounts for the basic outlines of observable reality. What we need is a new starting point for analysis, and there is no shortage of alternatives in political science. We might, for instance, view voting and political learning socially, as something groups of people do, rather than as individual behavior. This would allow us to more clearly consider the ways that social meanings, expectations, and identities shape voting behavior. The significance of this step is that it makes both the "paradox of voting" and the rational-ignorance critique of democracy simply disappear as problems. Such a theory might, for example, explain why people vote by pointing out that other people like them tend to vote, instead of looking at payoffs to individuals. Likewise, a social approach might highlight the fact that those who are knowledgeable about politics substantially overlap with traditionally powerful groups, and also with those who participate in politics at higher rates. Political knowledge, on such an analysis, would mainly reflect the social distribution of power, not the incentives facing atomized individuals.

Such an understanding of political knowledge would transform the diagnosis of the problem of public ignorance. Rather than change our institutions to accommodate citizens' supposedly fixed and paltry stock of information, we should instead aim to spread power more equally, so that more groups acquire the habits of learning about politics that powerful groups display today. There is little reason, in this light, to favor Somin's preferred institutional arrangement—decentralized "foot voting in the private sector"— since democracy remains a viable option.

We know, moreover, that consumers are not especially well informed about their market choices (Scitovsky 1950; Akerlof 1970; Morgan 1978; DeCanio 2014, 638). Consumers seem to use cues and shortcuts such as recommendations from trusted sources in making their decisions, just as voters do (Claxton, Fry, and Portis 1974; Furse, Punj, and Stewart 1984; Lupia 1994). Far from markets having an advantage, it seems that voters and consumers use similar cognitive tools in both domains. This is, indeed, what we ought to expect, given that voters and consumers are one and the same.

One might think that the abundant empirical evidence showing that voters lack factual information about politics confirms that the informational incentives faced by voters are can be explained by rational ignorance (Bennett 1989; Delli Carpini and Keeter 1996; Somin 2013). Yet there are severe methodological problems with this evidence. First, it consists primarily of answers to pop-quiz questions that are asked of citizens out of the blue in short telephone, Internet, or in-person surveys. These questions are likely to underestimate what citizens know by assessing their knowledge in potentially distracting contexts in a format that discourages recall by stripping questions of cues that could aid memory (Graber 1994). Such measures of ignorance also underestimate citizen knowledge because they rely solely upon verbal or written recall, neglecting that much political information today is conveyed visually. Markus Prior (2014) has found that visual measurements of knowledge significantly boost detected levels of political information. Motivation is another serious problem with these measurements, since citizens have little incentive to expend the effort to answer such out-of-the-blue questions from an anonymous pollster on the phone. Knowledge surveys that pay respondents for correct answers substantially increase correctly answered questions, suggesting that traditional measurements of citizen knowledge systematically underestimate it (Prior and Lupia 2008; Bullock et al. 2015).

Issue-Specific Political Knowledge and the Single-Issue Standard

More fundamental than these methodological objections, however, is that it is far from obvious that the levels of political knowledge observed in the public are insufficient for the tasks of citizens in representative democracy. The information needed for citizens to perform well in the voting booth is relative to the complexity of the task. We thus need a standard of what level of information would be needed to complete a citizen's core tasks before we can assess whether observed knowledge levels are problematic.

Somin (2013, 39–53) recognizes this and compares (what he deduces are) the informational demands of four prominent democratic theories to the information citizens have, as revealed by knowledge surveys of the sort I have just criticized. Yet his pessimistic conclusion is not warranted, not just because the survey evidence is unreliable, but also

because he does not take seriously enough a standard that makes low information demands on citizens due to specialization.

By this standard, citizens need to know enough about a small number of issues, or even a single issue, to be able to identify bad policy ideas or performance on those issues. Call this the *single-issue standard*. Somin himself recognizes that "a given stock of information is, other things equal, more likely to be enough to handle a narrow range of issues than a broad one" (Somin 2013, 141); thus, he contends that if we were to reduce the number of issues on the public agenda, voters' decision making would improve. This argument redounds against Somin's worries about the problem of public ignorance, however, as it suggests that single-issue voting may solve the problem.

Is knowing about a single issue really enough to cast an informed vote? Such an idea cuts strongly against the longstanding view that an informed decision is one that (at least) encompasses all of the relevant information and considerations. Focusing on just one issue may seem to constrict the scope of the decision to an implausible degree, guaranteeing myopic outcomes.

This is where the second type of specialization comes in: specialization in the functions of citizens compared to other democratic offices, particularly elected representatives. Typically, citizens' role is limited to making electoral choices between just a few candidates or parties for office. They are not asked to draft or defend complex policy proposals, as are political elites. Theirs is a relatively simple task, and this simplicity reduces the amount of information needed to do it well (Lupia 2006). It also grants citizens latitude to make seemingly myopic voting decisions on the basis of only one or a few issues, since it is mainly elected representatives who make actual policy decisions. Representatives must take a wider view in order to complete the more demanding tasks associated with their role, including not just policy making but also managing the political agenda, balancing conflicting interests, and, especially, making tradeoffs. These difficult assignments are not shared by ordinary democratic citizens. However, by caring about one or a few issues and voting on the basis of those issues, citizens shape the electoral incentives of representatives such that the latter must be concerned about the quality of their performance, since there will be citizens watching and voting based on how well they do.[1] This incentive is a powerful mechanism for improving democratic decisions and outcomes.

Do citizens currently have the knowledge to meet such a standard? There has not been much empirical research on this question. One factor that has served to hamper such research has been the hegemony of the idea that political knowledge is general and hierarchical, such that some people simply know more about *all* aspects of politics than others. This assumption has profoundly shaped efforts to measure political knowledge. However, John Zaller, in an influential research paper for the American National Election Study (ANES), compared surveys that assessed general political knowledge to surveys that assessed issue-specific knowledge and found that the latter actually did a *better* job of capturing what people know about politics (Zaller 1986).[2] Using issue-specific surveys, Shanto Iyengar (1990) has found substantial domain-specificity in political knowledge. Amy Gershkoff (2006), too, found that people knew more about issues they thought were important. Others have found that citizens had more accurate information of candidates' positions on issues they cared about (Krosnick 1990; Kim 2009). In a case study of Social Security, Michael Henderson (2014) found clear evidence that senior citizens learned more about the issue than the rest of the public and retained that information over time. Even studies usually cited to indicate that information is distributed hierarchically find significant evidence of specialization. Delli Carpini and Keeter (1996, 147, 151) find evidence of domain-specific knowledge in several areas, despite the fact that their survey was poorly designed to discover it. While these studies comprise a significant body of empirical evidence, they remain suggestive and do not provide a sufficient evidentiary basis to draw strong inferences about citizens' ability to meet the single-issue standard. More research in this area is needed. Nonetheless, it suggests that Somin's conclusions about democracy's epistemic infirmities are too hasty, since there is a realistic standard of good decisions that exploits specialization and is at least plausible according to the available evidence. The single-issue standard aligns with the realistic assumption that citizens' knowledge of politics follows from their idiosyncratic interests in politics, such that they are likely to know a lot about the sliver of political issues that capture their interest but little about others. Such a specialized distribution of knowledge would almost certainly not register on a general knowledge survey, since issues an individual knew about would be excluded by chance due to the extremely large universe of possibly relevant political information, making the respondent appear more ignorant than he or she really is.

Information Bias and Scarcity Bias

The second argument for the epistemic advantage of markets, advanced by Pennington, is that they make more efficient use of information than democracy because they can draw upon implicit or non-linguistic information and do not need to centralize it. However, voting also allows voters to make use of implicit knowledge. Voting is an action in the same way Pennington claims that a decision to buy something is. Individuals are able to draw upon all the information they possess in deciding how to act, including non-linguistic and subconsciously held information, whether the action is buying or voting.

Pennington seems to think that voting is precluded by deliberative democracy, but even the most deliberative of democratic theorists reserve an important role for elections (Manin, Stein, and Mansbridge 1987, 359; Cohen 1997, 75; Habermas 1998, 28; Fishkin 2009, 85-88). For them, deliberation *precedes* elections, helping to make preferences more enlightened, informed, and worthy of representation (Elster 1986; Manin, Stein, and Mansbridge 1987, 349-51; Cohen 1997, 76-78; Miller 2003). Thus, deliberative democratic decisions do not discard non-linguistic and subconsciously held information, as Pennington claims. Voters can make use of as wide and inclusive an information set as consumers do, granting markets no general advantage through this mechanism—and potentially giving the epistemic advantage to democracy, because of the deliberative process that precedes voting.

Conversely, prices do not convey all the information necessary for making a fully rational choice about a buying decision. They primarily convey information relevant to the direct expenditures needed to bring a product to market, but they exclude a wealth of information that might be relevant to making a fully informed buying decision, such as the working conditions of those who produced the good, whether toxic or non-sustainable materials and techniques were used in its production, whether organized crime or barbaric regimes profit from its sale, and whether its production contributes to climate change or the degradation of ecological habitats. Important concerns such as these are actively obscured by the price mechanism.

It may be argued that a combination of regulations and prohibitions can effectively price such externalities into what consumers pay, restoring the epistemic merit of prices. Yet this response makes precisely the mistake

that Hayek (1945) thought social planners make: it assumes that central decision-making bodies can know enough to manage market activities well. It assumes that for every item for sale on the market, a central authority can know enough about its origins, ingredients, and externalities to convey that knowledge perfectly through prices that have been rationalized through regulation. The point here is not that regulation is pointless but rather that prices *omit* information that is relevant to making a fully rational buying decision when that information does not pertain to the basic costs of bringing a product to market.

Markets and prices are epistemically inefficient because they discard information that might be necessary for making good decisions, *all things considered*—including, in particular, non-market values. This suggests a general limitation to the epistemic ability of markets. We can call this limitation a *scarcity bias* because it focuses attention exclusively on the immediate and unavoidable costs of bringing a good or service to market. Markets systematically bias attention so as to make overcoming scarcity as efficiently as possible the *overriding* criterion of good social arrangements—even when this involves neglecting or sacrificing other important values. It is well known that market exchanges involve externalities, yet the very language of "externalities" makes such instances sound discrete rather than systemic. Less noticed is that this constitutes an *epistemic* limitation of markets, since it suggests that markets will be systematically blind to problems other than scarcity and will over-rely on solutions to the problems they do recognize when these solutions involve giving people more things. Overall, this will bias social decision making in a direction that neglects other concerns.

The reason for markets' scarcity bias is not obscure. For our purposes, the problem centers on the oversimplification that prices introduce into the market choice situation. Where prices exclude information relevant to making a fully rational decision—that is, almost everywhere—the brute fact of scarcity privileges those goods that require the least material expenditure to bring to market. This orients the incentives of all market participants in a distinctly narrow way, focusing their concern almost exclusively on minimizing (material) costs and maximizing (material) gains.

To point this out is anything but an indictment; this incentive structure has allowed market systems to eradicate extreme privation around the world. Yet for those whose basic material needs are now met, others of a non-material nature tend to arise (Inglehart 1977), and markets have failed to deliver these with the same relentless alacrity as they deliver

widgets. Prices discard precisely the kind of information that would be needed to provide the non-materialist goods, such as environmental preservation and the protection of human rights, which have become especially important to those relatively insulated from basic scarcity. With respect to this class of goods, markets introduce a bias against the rational allocation of social resources. This constitutes a general epistemic limitation to market decision making, and one to which democracy is not systematically subject.

Markets have proven themselves stunningly adept at resolving the problem of material scarcity. But this very facility suggests that where non-material concerns become paramount, markets are likely to misallocate social resources and bias outcomes against post- or non-materialist values. By contrast, because voters are able to draw upon all the information and concerns they may have—both material and non-material—in making a voting decision, they are not vulnerable to the same bias. Democracy is able to make decisions that may seem economically suboptimal, such as protecting a nation's forests from harvesting, yet are the best available choices when a wider set of concerns is weighed (which is what voters are able to do).

Indivisibility, Exclusivity, and Non-Substitutability

The third argument for the epistemic superiority of markets is that democratic choice situations are uniquely difficult when compared with market decisions. I see two problems with this argument. One problem, the non-substitutability of markets for democracy, constitutes a second general epistemic limitation of markets. The other problem is the standard against which this argument holds markets and democracy, discussed in the next section.

The first problem has to do with an inherent feature of collective decisions: their indivisibility (which DeCanio calls their exclusivity). DeCanio argues that this feature creates difficulties for democratic decision makers that have no parallel in market decisions. Yet in most cases, markets are incapable of substituting for democracy without begging essential policy questions; this constitutes a second fundamental limitation of markets.

To see why, consider that indivisibility applies not only to the provision of non-excludible public goods such as national defense, but also to laws that set down the constitutive rules of society. Abortion and

birth control can only be legally available or not; racial minorities and LGBTQ people can be legally protected from discrimination or not; workers may organize legally or not; intellectual property can be recognized and protected or not. Centralized decision making also determines what kinds of contracts are legally enforceable.

This is so far consistent with DeCanio's claim that the inherently indivisible structure of democratic choice situations leads to epistemic disadvantages. But the idea of having an advantage only makes sense where there are alternatives. If markets cannot, even in principle, be substituted for democracy with respect to certain decisions—*without begging the question the decision procedure is meant to answer*—then markets cannot have any advantage over democracy in these areas, epistemic or otherwise. To think so is to make a category error.[3]

Markets cannot "decide" whether abortion is legal or not; they can only allow women to make this decision for themselves. Markets cannot "decide" whether discrimination is to be allowed or not—they allow people to discriminate based on their own prejudices. In cases like these, markets presuppose an affirmative answer to the underlying policy question and are therefore begging the question they are deployed to answer. Indeed, some of these decisions, such as those regarding contracts and intellectual property, serve to constitute the conditions making markets possible in the first place (Vanberg 1988, 19; Carpenter 2009). There is no way to disaggregate such cases to allow market decision making about them without begging the policy questions at issue. Markets are thus fundamentally incapable of deciding these kinds of issues; they cannot substitute for democracy at all in cases like these. Because they presuppose an answer to the relevant policy questions, they cannot properly be said to decide the questions at all. The consequence is that a great many decisions currently made by democracy are simply not amenable to market-based decision making as an alternative, rendering any talk of comparative advantage or disadvantage literally meaningless.

This suggests a second general epistemic limitation of markets. Markets can serve as first-order institutions, deployed instrumentally to organize a particular area of social life, but they cannot serve as a second-order institution that decides which first-order institutions to use in a particular area. Yet this is not a problem for democracy. Democracy can serve as either a first-order or second-order institution. Indeed, Jack Knight and James Johnson (2011) argue that the advantages of democracy accrue to it

as a second-order institution, not a first-order one, and they admit that markets often make more sense than democracy on the first-order level. But because markets cannot, properly speaking, answer many important policy questions, they cannot constitute a true rival to democracy as a fundamental mechanism of social decision making, at least in cases such as these.

This constitutes an important general epistemic limitation of markets since it rules out market decision making across a large number of issues. Neglecting or violating this limitation (if this were possible) would systematically bias collective decision making and the allocation of social resources. If we forget this point, we may suggest that markets can substitute for regulation or anti-discrimination legislation in order to manage these kinds of issues, despite the fact that doing so is already to decide the question, and thus to bias the ensuing patterns of social behavior in predictable ways.

Standards and Corrigibility

The second problem with the choice-situation argument for markets is similarly fundamental and has to do with the standard to which democratic decisions are held, as opposed to market decisions.

DeCanio contends that democratic choices are more difficult than market choices because, in part, they bundle many policies together and lack a common metric for making tradeoffs among them. This is thought to present a daunting choice situation to voters, because voters need to know a lot about each policy and make choices among different policies if their electoral decisions are to meet a high epistemic standard. The problem here is twofold and has to do with the standard (or standards) used to conclude that democracy does worse than markets. First, democracy is held to the impossible standard of full rationality. Second, markets are often unfairly held to a different and less demanding standard (derived from Austrian economics), which democracy would easily meet.

For democracy to make good decisions, DeCanio argues, citizens must accurately predict the effects of rival candidates' policy proposals, determine whether the effects are produced efficiently, and trade off effects in one policy area against those in another (DeCanio 2014, 640–43). The standard invoked here is strikingly similar to that identified by Herbert Simon as the full rationality standard of economic decision theory, in which people must know about every alternative open to

them, know the consequences likely to follow from each alternative, and have a complete set of preferences which guides them to the uniquely best choice (Simon 1976, 80). Thus, DeCanio (2014, 647) claims that, because of the problems discussed above, democracy fails to "rationally allocate" social resources. This implies that democracy is being held to the full rationality standard: it is being judged on the basis of whether it optimizes its decisions given all the alternatives open to it with respect to a complete set of preferences which fully specifies how to make all possible tradeoffs.

The problem with this standard, as Simon, among others, has argued, is that it is an impossible one. Consequences are not just difficult but often impossible to predict and information is always limited. So, too, is our ability to value different outcomes, rendering our preferences incomplete (Simon 1976, 80–84).[4] Due to these limitations, and because searching for information is costly, no human decisions meet the demanding standard of full rationality, whether in the market or in politics. An impossible standard is an inappropriate basis for evaluative purposes, since it violates the principle of "ought implies can." It makes no sense to condemn people for failing to do something that they are incapable of doing. Since human beings cannot meet this standard, it is not an appropriate basis for evaluating their actions.

Setting aside this important concern, we might ask whether people can at least *approach* the standard of full rationality more closely in markets than in democratic choice. We might doubt it, in light of a sizable body of research suggesting that market actors deviate systematically from full rationality in a host of serious ways (e.g., Tversky and Kahneman 1974; Simon 1976; Ainslie and Haslam 1992; Kahneman 2011). This evidence renders makes it pointlessly speculative to attempt to answer the question of which of the two sorts of decision making more closely approximates full rationality. Perhaps in an effort to sidestep this difficulty, DeCanio unfairly holds markets to a different and less demanding standard. In Austrian economics, markets are "quasi-evolutionary" and deploy trial and error via entrepreneurial discovery (Boettke 2008) so as to gradually, and not without failure, produce solutions to social problems (DeCanio 2014, 639–40). This conception of markets excuses any particular failure or suboptimal outcome as an error, and an error that is all but certain to be fixed in the fullness of time.

Whether this is an accurate characterization of markets can be put aside for the moment. The first problem with using this conception in comparison with democracy is that it makes the comparison unfair. Both markets

and democracy might fail to solve a particular problem, yet markets would pass this conception's error-tolerant standard while democracy would have failed by the unforgiving standard of full rationality.

The Austrian conception of markets is, moreover, questionable. What justifies its confidence in the progressive character of markets? Suboptimal market equilibria are no less equilibria for the fact that they are suboptimal. Reaching equilibrium means that such situations are stable, and, absent an activist state, there is no actor with the power to unilaterally change it. If we also consider path dependence and simple inertia, we can understand how suboptimal market arrangements can become entrenched. In the meantime, conditions continue that I have been discussing in bloodless terms of failure and suboptima, but which amount to the unnecessary ruination of people's lives by ameliorable financial crises, dysfunctional markets, monopolistic price gouging, and the like.

Another problem with the Austrian standard is that if markets are to be praised for their ability to correct themselves when they fail, democracy should be praised as well. After all, openness to change and corrigibility is, especially in its reflexive form, held up as one of the key advantages of democracy by many theorists, particularly pragmatists (Popper 1966; Misak 2000; Talisse 2005; Knight and Johnson 2011). Whereas other regime types risk shaking the foundations of social order when the need for a drastic reversal of policy arises, democracies have the flexibility to throw out governing elites wedded to poorly performing policies without threatening the regime. To be sure, this point rests on comparing democracy to other forms of political rule, rather than to markets. But as we have seen, markets are often unable to substitute for democracy, so the comparison is appropriate for establishing that democracy shares the quality of self-correction with markets. If both democracy and markets meet this evolutionary, error-tolerant standard of epistemic performance, it cannot help us to gauge their *relative* epistemic merit.

The Effect of Uncertainty on Candidates and Parties

The final (purported) epistemic advantage of markets is rooted in the contention that candidates and parties are not able to detect which of their proposed policies voters approve of in an election due to policy bundling, and so cannot supply what the voters demand, as can producers in a market who face disaggregated feedback.

There are two problems with this argument. The first is that it is based on a naïve theory of democracy as pure responsiveness. No democratic theorist sees the job of representatives as simply providing voters what they want (Sabl 2015). This is largely because the responsiveness view assumes that voters' preferences are to be taken in their raw form, unfiltered by deliberation or representation. This renders democracy unable to respond flexibly to emerging problems, fixing its actions in ways that contravene the advantages of representation (Manin 1997; Rehfeld 2009).

Instead of responsiveness, many theorists today endorse constructivist accounts of representation in which representation is characterized as a perpetual, two-way current of communication between representatives and ordinary citizens (Urbinati 2006; Disch 2011). On this account, citizens' existing preferences and attitudes are communicated to representatives through a variety of means, including interest groups, mass media, direct communications (town halls, calls/letters from constituents, etc.), online petitioning and activism, protest, and traditional tools such as surveys and focus groups, all in addition to elections. The information from these sources comes to define a constrained action space within which representatives have discretion to exercise their judgment, and are punished if they stray beyond it (Key 1961, 264-66). Representatives, in turn, may seek to reshape that action space through persuasion and leadership, which may reconfigure popular opinion in ways that accommodate representatives' policy programs (Disch 2011). In constructivist accounts, representatives have many communication tools beyond the brute one of elections to discern which of their policies are popular. Representatives also have opportunities to convince voters that their policies cater to a need or desire the voters did not know they had, or to otherwise change what voters think, in much the same way that deliberation is thought to improve public opinion. This ability fundamentally alters the democratic choice situation in a way that short-circuits critiques premised upon representatives simply supplying what voters want.

The second reason this argument does not establish an epistemic advantage for markets is that the uncertainty experienced by representatives regarding the popularity of the specific policies in their bundle should actually encourage better outcomes and more representative decisions. This is because representatives cannot know in advance which of their actions in office are likely to capture public attention and become widely known (Key 1961, 265-56). Should they use their office and power in ways that do not serve the interests of their

constituents, and should these actions become known, they would expect electoral retribution. Because of their uncertainty regarding which actions will come to the public's attention, there is an intense pressure for representatives to behave as if *everything* they do will become widely known. Drawing from the rich variety of sources of information about their constituents' interests and concerns mentioned above, representatives should then be motivated to anticipate what will benefit their constituents when they make policy decisions.

* * *

The epistemic merits of markets are easily oversold. Markets do an excellent job of solving a narrow set of problems, and it is understandable to hope that this performance could be generalized. Yet such hopes are misguided. Markets are incapable of replacing democracy wherever one decision must apply to all. Nor are markets freestanding or self-supporting, since they rely on a whole series of universally applicable political decisions that constitute the preconditions of markets' existence. In the areas where markets can function, moreover, they introduce a scarcity bias into the social conditions they generate, denying a fair hearing to non- or post-materialist considerations.

The epistemic case for democracy is also undersold by the champions of markets. We have seen that although democracy may fail the most stringent standards of rational choice, so, in many cases, do markets. Moreover, democracy may be able to do better than survey research suggests due to specialization, although more research on issue-specific political knowledge is needed for firm conclusions about this.

The epistemic limits of markets can help us better understand where democracy and markets are best deployed in social decision making. Recall that the limit linked to the need for society-wide decisions suggests that markets cannot function as one of Knight and Johnson's second-order institutions. They are instead first-order institutions, to be deployed when they are found to be more useful than alternative arrangements by a second-order institutional process, such as democracy, but not to substitute for such a process. Scarcity bias, too, suggests that certain limitations of markets can be epistemically beneficial insofar as they allow non-materialistic concerns to come to the fore in the decision making of market actors. The limits discussed here therefore provide a fresh set of *epistemic*

reasons to support interventions in market processes, though these might take a different form than those justified by traditional arguments about externalities. I leave considerations of such questions to future research.

NOTES

1. This raises the question of whether there will be a group of citizens concerned about every issue, as well as of whether the boundaries of issues can be defined meaningfully (Somin 2013, 106). These are real problems that can be solved by means of deliberation. It would be fatuous to claim that there are citizens vigilantly attending to every conceivable issue. But free political discussion allows for new issues to become better known and for political entrepreneurs to make discursive connections between issues and interests, generating attention for issues from existing groups who come to understand why they should care about them. The boundaries of each issue are those that emerge from social and political discussion of it, reflecting contemporary social and political understandings. Such definitions are never complete or unanimous and must always be contestable but, at any given time, typically provide sufficient guidance for practical purposes.
2. Zaller's conclusion that the ANES should continue using general knowledge surveys was driven by considerations of methodology and cost, not exact truth. His task was to decide whether it was worth ANES investing in an issue-specific knowledge survey; he concluded that the returns would not be large enough to justify the added length and cost such items would entail—at least with 1986 technology. (Today the cost would be trivial; one could use a computerized branching survey that asked citizens which issues they habitually pay attention to or think are important, and then ask knowledge questions about them.) Surveys designed to assess general political knowledge have helped cement it as the only possible conceptualization of political knowledge.
3. DeCanio is coy in never explicitly putting markets forward as an alternative to democracy (except perhaps in his last sentence), yet he structures his entire argument around such a comparison (DeCanio 2014). This is apparent in his pairing of epistemically problematic features of political decisions with corresponding positive features of markets. Somin is not so careful and explicitly advocates leaving many more decisions to "foot voting in the private sector," as he calls market decision making (Somin 2013, 135). Pennington targets many of his comparisons at the "state" and only some against democracy (Pennington 2011). For more on Somin, see the symposium on his book in volume 27, nos. 3-4 of this journal and his response to the symposium (Somin 2015). For Pennington, see the symposium in volume 28, nos. 3-4, and Pennington's response (Pennington 2016).
4. Pennington advocates a "robust political economy" approach to designing political economic institutions which is premised upon accepting precisely these kinds of deviations from the ideal conditions of neoclassical economic theory (Pennington 2011). Such an approach would be less susceptible to the main critique in this section.

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