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ABSTRACT: *What is the optimal size of a democratic society? While not taking an explicit stand on this issue, Hélène Landemore's model of democracy in* Democratic Reason *suggests that democracies ought to be small, certainly smaller than many existing states. If, as Landemore argues, we must rely on the random selection of representatives, then we should be concerned about both the size of the population and the way cognitive diversity is distributed within it. Given the realities of party politics and media framing, this means that smaller political societies will yield wiser decisions than very large ones.*

In *Democratic Reason: Politics, Collective Intelligence, and the Rule of the Many* (Princeton University Press, 2013), Hélène Landemore presents an exciting and insightful defense of democratic government that focuses on the importance of cognitive diversity for good collective decision making. According to Landemore, "democracy is a smart collective decision-making procedure that taps into the intelligence of the people as a group in ways that can even, under the right conditions, make it smarter than alternative regimes such as the rule of the one and the rule of the few" (1). Landemore's model of democracy thus emphasizes the need to cultivate and mobilize diverse cognitive models within democracies and deploy these within decision-making institutions.

In this symposium paper, I want to ask a question about size. How large—and, more importantly, how small—must democracies be to manifest collective intelligence? This is an old question, but one that has recently drifted from the forefront of theoretical debates.[1] One of the virtues of Landemore's book is that it allows many such questions to reemerge into philosophical debates about democracy. Her answer, I will argue, should be that democracies must be small, at least far smaller than modern mass democracies currently are. Before we can understand Landemore's contribution to answering this question, however, we must first analyze how she understands cognitive diversity, and then wrestle with the most radical proposal she sets forth in *Democratic Reason*: the random selection of political representatives.

Cognitive Diversity

Drawing on the work of Scott Page (2008), Landemore (89-90) understands cognitive diversity in terms of the variety of heuristics, interpretations, and predictive models people use to solve problems. Thus, a given group is made more cognitively diverse by adding members who make use of different tools to address problems or make predictions.

> Cognitive diversity . . . is roughly the fact that people make predictions based on different models of the way the world works or should be interpreted. Cognitive diversity ensures that votes (or predictions) are not independent but, on the contrary, negatively correlated. The good thing about negative correlation of this type is that it guarantees that where one voter makes a mistake, another is likely to get it right, and vice versa. In the aggregate, therefore, mistakes cancel each other out not randomly but systematically. (160)

Given the recent trend in democratic theory toward epistemic justifications of democracy,[2] Landemore's most important contribution to current debates in democratic theory consists in providing a framework for thinking about how cognitive diversity can bolster epistemic arguments for democracy. While it has long been granted that individual epistemic competence is a key variable in assessing the reliability of democratic decision making, the role of cognitive diversity has been largely overlooked.[3] Landemore claims that not only is cognitive diversity important for the epistemic reliability of democratic decision making, it is

in fact more important than individual epistemic ability. Thus, the Diversity Trumps Ability Theorem:

> The general point of the Diversity Trumps Ability Theorem is that it is often better to have a group of cognitively diverse people than a group of very smart people who think alike. This is because whereas very smart people sharing local optima will tend to get stuck quickly on their highest local common optimum, a more cognitively diverse group has the possibility of guiding each other beyond that local optimum toward the global optimum. (103)

Landemore makes productive use here of the 1957 film "Twelve Angry Men" to show how a diverse group can do better at reaching the truth than a group with higher average ability but less diversity. I have no quarrel with her conclusions in this area, but I do want to make a point about the methodology here: we are using insights from the decisions of small groups (cf. claims about mazes in Chapter One and Landemore's use of the 1997 horror film "Cube") to generalize about the nature of democratic institutions. This is true not only of Landemore's examples and intuition-pumps, but also seems to reflect the structure of the empirical results upon which she bases her argument. This evidence, as I understand it, builds complex computational models on the foundation of decision-making behavior observed in relatively small groups.

Given the difficulty involved in testing the accuracy of large-scale institutions and groups, this is unsurprising. It should be noted, however, that there are limits to how much we can learn about the decision making of large, complex societies by studying puzzle-solving activities of small groups. As a result, I think we ought to be somewhat more conservative than Landemore is in making extrapolations about large-scale, democratic decision making from data that concerns the behavior of juries, teams, or even large committees. I will not dwell on these concerns here, however. Instead, I want to focus on a significantly more ambitious claim that Landemore makes on the basis of the above insights, her Numbers Trump Ability Theorem:

> I hypothesize, very simply, that the advantage of involving large numbers is that it automatically ensures greater cognitive diversity. In that sense, more is smarter, at least up to the point of deliberative feasibility. (104)

Here, Landemore claims that cognitive diversity positively correlates with numbers. In absolute terms, this seems plausible. That is, as we expand the size of a group, we should eventually expect to scoop up more individuals with different cognitive models. My concern is that the absolute number of different cognitive models doesn't seem as important to Landemore's argument as the way cognitive diversity is distributed within a population. In order for her Numbers Trump Ability Theorem to be plausible, I will argue, we must assume that cognitive models are evenly distributed. As I will attempt to show later, there are empirical reasons for doubting this will be the case. Before I get to that argument, however, we need to see how the above insights about cognitive diversity structure Landemore's model of democracy.

Random Selection

One of the most striking things about Landemore's epistemic argument in favor of democracy is that it implies that elections ought to have no central place in democratic government. On Landemore's account, the benefits of cognitive diversity must be brought to bear on deliberation, and this is possible only if we reject the election of representatives in favor of random selection. She states:

> In practice, elections tend to bring to power socially and economically homogenous people, suggesting that the assembly is not likely to be as cognitively diverse as it should. Even in theory, though, it is not clear that the principle of election can be fully reconciled with the goal of cognitive diversity, as there might be a selection bias in the pool of people likely to run in the first place. (108)

The argument here laments the fact that the electoral process cannot be relied upon to reproduce the diversity of the larger group. Elections, in virtue of the self-selection of candidates and the effects of political competition, seem destined to produce representatives that are less cognitively diverse than the groups they are tasked to represent. For Landemore this is a major failing of elections because her model of democratic government relies upon fruitful deliberation among a cognitively diverse group to generate collectively wise decisions. If elections are systematically incapable of reproducing sufficient cognitive diversity, then some other method of selection is required. Landemore considers various means of "oversampling" diversity, but rejects these as

impractical and undesirable (110-11). Instead, she advocates the random selection of representatives.

Building on the model of ancient Athens,[4] Landemore argues that fruitful democratic deliberation requires the selection of representatives by lot. It should be noted, however, that the Athenian model of democracy operated on a much smaller scale than most modern states. Estimates vary, but it seems plausible to assume that for most of its existence, there were between 30,000 and 50,000 Athenian citizens (Ober 2008, 141). Even at that scale, generating inclusive and effective deliberation is no easy feat, but it should be remarked that the challenges and advantages posed by random selection in Athens were significantly different than they would be in a country like the United States. Most obviously, all or most Athenian citizens could reasonably expect to hold some important political office at some point in their lives. Given limits to the number of representatives that can produc-tively deliberate (this is what Landemore means by "deliberative feasibility" above), such expectations would be massively diminished in contemporary states.

As a result, we ought to recognize just how radical a proposal this is: Democracy on Landemore's account would require a profound reshaping of how citizens think about political participation and equality. Indeed, in order for her argument to be convincing, I think we would have to completely reconsider the appropriate scale of democratic societies.

My concern with Landemore's epistemic argument for democracy is that in the long run, random sampling will prove successful in selecting a cognitively diverse set of representatives only if cognitive models are evenly distributed within its population. Random selection from a group with a large number of individual cognitive models will not generate inclusive deliberation if that large number is swamped by a majority or plurality who share a single or a few models. Put another way, a large cognitively homogenous group with all of its diversity packed into a tiny cluster will not be amenable to random selection of representatives. Instead, what Landemore needs is a group that has a large number of cognitive models that are all fairly evenly distributed throughout the population.

Thus, enlarging the size of the group is not a reliable means of increasing the cognitive diversity of the assembly, unless we also assume that each cognitive model has a roughly equal probability of being selected. That is, for the Numbers Trump Ability Theorem to be plausible, we must assume that cognitive models are evenly distributed within the population. As a

merely conceptual matter, that needn't be the case. For example, we can imagine a very large group where every possible cognitive model is represented by at least one individual, but where 99.99 percent of the population shares the same cognitive model.[5] If we randomly select representatives from that group, we should (in the long run, at least) expect to generate a cognitively homogeneous assembly. This is in spite of the fact that this group is—in one sense—cognitively diverse (i.e., it possesses at least one token of every possible type of cognitive model). The problem here is that the probability of selecting a representative from the homogeneous group is so much larger than the probability of selecting any one of the diversity-generating models that random selection fails to provide a reliable means of generating a diverse assembly.

What matters, therefore, is not just the size of the group, but also the distribution of cognitive models. Once we see this, we must acknowledge that sometimes a smaller group with a more even distribution of cognitive models will prove a better source of representatives than some larger group (even if it has a higher absolute number of cognitive models). In the next section, I will argue that, given the realities of mass politics and party democracy, we should not expect cognitive diversity to be evenly distributed in very large societies.

The Limits of Large Numbers

In this section I provide empirical reasons for doubting that cognitive models will be evenly distributed in very large democratic societies. To make this empirical case, I draw on my own work on framing effects (Kelly 2012). Further, I suggest that this insight should lead Landemore to favor small democratic societies. Thus, on her account, democracy ought to be understood as the rule of a small many.

To recall, Landemore (104) claims that

> Under the right conditions and all things being equal otherwise, what matters most to the collective intelligence of a problem-solving group is not so much individual ability as the number of people in the group.

The nature of political framing and the existence of powerful groups influencing politics, I argue, reveal that the ceteris paribus clause quoted above cannot be satisfied in large democratic societies. That is because

such democracies do not (and likely cannot) sustain the sort of cognitive diversity required for random selection to generate wise assemblies. Perhaps in small democracies like Switzerland it is possible to mobilize cognitive diversity in the way Landemore requires, but huge societies like the United States seem incapable of distributing high levels of cognitive diversity in that way. To see this, consider the way political framing operates in modern mass democracies.

In general, I understand a frame to be a particular way of presenting a question or problem. Thus, political frames represent different interpretations of a given political issue. For example, decisions about enacting affirmative-action policies can be framed either in terms of preferential treatment or reverse discrimination.[6] Although these are just different ways of presenting the same policy question, they can lead to very different responses and decisions. In this way, we see that the framing of a political issue can have important political consequences: Since different frames tend to highlight different considerations or concerns, they often lead individuals to substantively different conclusions regarding which decision is appropriate.[7] Although the link between cognitive diversity and framing effects is somewhat complicated,[8] I assert that the diversity of frames is importantly connected to the sort of cognitive diversity that concerns Landemore, and that the diversity of frames in a population will have important consequences for her argument.

Indeed, it seems that diverse frames constitute part of what Landemore (233) refers to as the "the toolbox of democratic reason." That is, diversity of frames is an important precondition for the cognitive diversity upon which her argument relies. It should be noted, however, that there will be a finite number of viable frames for any given political issue, and that as a result, there is an upper bound to the amount of diversity that could be fostered in any given society. There are, for example, only so many ways that we can productively recast the affirmative-action debate. Surely there are more than just the frames outlined above,[9] but past a certain point frames for a given issue will become redundant, vacuous, or confused. Thus, while cultivating a diversity of frames for political issues appears to be a worthwhile goal of liberal societies, a determination to augment the number of individual frames beyond limit is surely a fool's errand. What we want is enough diversity to cast productive light on the important issues in question, but there will be diminishing returns to the further proliferation of frames.

These theoretical limits to the number of possible frames for political issues are compounded by practical limitations on the dissemination of frames. As it stands, there are a limited number of institutions in society that are effective in disseminating political frames. Most obviously, political parties and media entities are currently the primary groups responsible for disseminating frames for political issues.[10] Political parties devote significant resources to the development, testing, and dissemination of frames. Through polls, surveys, focus groups, and sophisticated advertising campaigns, political parties seek to develop frames for political issues that will sway voters toward their political positions and candidates. They do this in order to increase their political power, but also to ensure a certain uniformity of political positions across a large and varied field of candidates. Political parties exert a significant amount of control over political frames, and they have a vested interest in disseminating only those frames that serve their political interests.[11]

Media entities also develop frames for political issues and serve to disseminate them on a mass scale. Their interest in these tasks stems partly from a desire to present political issues to the public in a coherent and insightful way, but also from their interest in entertaining their audience and expanding their market share. As a result, media entities (whether print, broadcast, or Internet) should be expected to exert significant power over the dissemination of political frames in a given society. Media frames of course interact with frames derived from political parties, educational institutions, and other interest groups, but the power of media entities in determining the group of frames circulating in a population will be significant. Since media entities pick up on only a small subset of the total number of possible frames for political issues and reproduce these very widely, it stands to reason that they have an important impact on the amount of cognitive diversity found in any given society.

I think we can draw some important inferences about the diversity of cognitive models in democratic societies from the framing of political issues. In particular, I think we can see why smaller democracies will have more of the sort of diversity that Landemore requires. Within a small society, it should be possible to approach the theoretical limit on feasible frames by establishing liberal social and educational institutions. Beyond that, however, political parties and media entities should be expected to select out just a small number of frames and disseminate them widely. It thus seems predictable that mass democracies will have a small number of frames that are widely distributed, while the remaining

frames are relegated to the margins. Thus, the mechanics of mass politics would seem to skew the distribution of frames in a way that threatens the epistemic value of democracy. Once we reach a size capable of sustaining the full diversity of viable frames, further growth in the size of the electorate (at least in the presence of political parties and the media) seems to put downward pressure on the diversity of frames.

Just as mass democracies skew the distribution of political frames toward just a small subset of all those available, I think that large democracies will be similarly incapable of ensuring the even distribution of cognitive models that Landemore's argument requires. Indeed, Landemore recognizes a version of this problem when discussing the use of large-scale referenda in political societies:

> There is probably an upper limit to the number of cluster interpretations that can be used, which would seem to mean that the cognitive model does not, at least not straightforwardly, support the epistemic properties of majority rule past a certain threshold, since the impossibility of introducing new cluster interpretations may result in positive correlations between judgments that can harm the epistemic properties of judgment aggregation. (163)

In that case, she seems to agree that majority rule will be unable to work in large populations, and this is why she prefers to constrain its use to post-deliberative voting by representatives. Later she writes:

> In other words, although Hong and Page's results do seem to speak against too much confidence in the epistemic properties of mass scale elections and referenda, the question of the possibly diminishing epistemic return of greater inclusiveness in voting need not arise for standard representative assemblies. (164)

Despite recognizing the problem posed here by the finite number of interpretations possible in a given society, Landemore appears to think that this difficulty afflicts only systems of majority rule. Since, on her account, representative assemblies are to be selected randomly, she appears to think that while there must be an upper bound to the proper size of assemblies, no similar bound applies to the size of the demos itself. But this is not the case. As I hope I have shown, random selection is effective for her purposes only if cognitive diversity is distributed in the right way. In particular, random selection will be effective only if there are a large number of cognitive models that all have a roughly equal

chance of being selected. If only one or two models are widespread in a population, and the remaining models have a low probability of being selected, then random selection (at least in the long run) should be expected to produce a relatively homogeneous group of representatives. My worry is that once we scale up past a certain point, the homogenizing effect of political campaigning and media framing will begin to undermine the cognitive diversity found in smaller groups.

Decentralization as a Solution

If Landemore's argument is correct, then under the right conditions, cognitive diversity provides a compelling reason to prefer rule of the many to rule of the few. One question that remains unaddressed by Landemore, however, is which "many" should rule.[12] If my arguments above are correct, then Landemore's answer (as hinted at by her reliance on the example of Athenian democracy) must be that democracy ought to be the rule of a small many.

Before I conclude, however, I should anticipate a reply. Perhaps we cannot immediately conclude that assemblies will be insufficiently diverse for the purposes of Landemore's argument merely because the overall size of the demos is large. Instead, we can imagine a very large demos where authority is consistently delegated downward (e.g., to states, provinces, or cantons). If the overall demos is subdivided into smaller, self-governing groups, then maybe assemblies selected from these smaller groups may be able to mobilize the epistemically beneficial effects of cognitive diversity. Thus, my argument above regarding the proper size of democracies seems to simply assume a particular stance in the debate between federalism and state sovereignty.[13] However, in order to cultivate the right distribution of cognitive diversity, decentralization of power would have to reduce the effect of mass politics across the whole population. That is, we would still need to know how to constrain the homogenizing influence of mass politics across localities. If political parties and media entities continue to dominate political discussion across the whole demos, it is not clear why we should be more confident in the distribution of cognitive diversity within states, provinces, or cantons than across the entire population.

Thus, the lesson of Landemore's argument appears to be that we still need to think quite a bit harder about what sorts of institutions and practices are capable of meeting the epistemic demands of democracy.

NOTES

1. For a concise history of this debate, see chapter 1 of Dahl and Tufte 1973.
2. David Estlund's *Democratic Authority* (2009) represents an important milestone in this "epistemic turn," but a number of distinct trends in the literature have been moving in a similar direction. See for example Anderson 2006 and Talisse 2009.
3. Landemore's selective genealogy of epistemic considerations in democratic theory points out some important exceptions (ch. 3).
4. For thorough studies of Athenian democracy that seem to support Landemore's argument, see Woodruff 2005 and Ober 2008.
5. I assume here that there are a finite number of different cognitive models. Thus, there is a limit to how much cognitive diversity is possible. As I show in the next section, Landemore also seems to endorse this claim.
6. This example is taken from Bartels 2003.
7. The most famous example of this is the "Asian Disease" experiment (Tversky and Kahneman 1981).
8. It should be clear that cognitive diversity is a much broader notion, and I do not mean here to equate such diversity with the diversity of frames. I do expect, however, that there will be an important relationship between the two.
9. For a better way of framing this issue, see Anderson 2002.
10. Recently, in the Unites States, a third such entity has emerged: political-action committees. I am grateful to Joseph Fishkin for pointing this out. Although this is an important issue, I am not yet sure what sort of effect such groups will have, and will not treat them in what follows.
11. Whether political parties would see their influence lessened in Landemore's model is an interesting question. Surely, the abandonment of elections would change the character of party politics, but it is unclear whether parties would have their power significantly reduced. Since parties would still have an interest in disseminating frames and standardizing messages (in order to influence anyone who may eventually become a political representative), I assume that they would continue to play an important role in democratic societies.
12. To be clear, Landemore is deliberately agnostic on this question. For example, see her reference to "the demos (however the latter is defined)" (117).
13. On this issue, see the work of Heather Gerken (2010) and Ilya Somin (2013).

REFERENCES

Anderson, Elizabeth. 2002. "Integration, Affirmative Action, and Strict Scrutiny." *New York University Law Review* 77: 1195–1271.

Anderson, Elizabeth. 2006. "The Epistemology of Democracy." *Episteme* 3(1–2): 8–22.

Bartels, Larry M. 2003. "Democracy with Attitudes." In *Electoral Democracy*, ed. Michael B. MacKuen and George Rabinowitz. Ann Arbor: University of Michigan Press.

Dahl, Robert A., and Edward R. Tufte. 1973. *Size and Democracy*. Stanford: Stanford University Press.

Estlund, David M. 2009. *Democratic Authority: A Philosophical Framework*. Princeton: Princeton University Press.

Gerken, Heather K. 2010. "Federalism All the Way Down." *Harvard Law Review* 124: 4–74.

Kelly, Jamie T. 2012. *Framing Democracy: A Behavioral Approach to Democratic Theory*. Princeton: Princeton University Press.

Landemore, Hélène. 2013. *Democratic Reason: Politics, Collective Intelligence, and the Rule of the Many*. Princeton: Princeton University Press.

Ober, Josiah. 2008. *Democracy and Knowledge: Innovation and Learning in Classical Athens*. Princeton: Princeton University Press.

Page, Scott E. 2008. *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*. Princeton: Princeton University Press.

Somin, Ilya. 2013. *Democracy and Political Ignorance: Why Smaller Government Is Smarter*. Stanford: Stanford University Press.

Talisse, Robert B. 2009. *Democracy and Moral Conflict*. Cambridge: Cambridge University Press.

Tversky, Amos, and Daniel Kahneman. 1981. "The Framing of Decisions and the Psychology of Choice." *Science* 211(4481): 453–58.

Woodruff, Paul. 2005. *First Democracy: The Challenge of an Ancient Idea*. Oxford: Oxford University Press.