

Many-Minds Arguments in Legal Theory

Adrian Vermeule*

Many-minds arguments are flooding into legal theory.¹ Judicial precedents are said to aggregate the collective knowledge of many judges over time; customs and traditions incorporated into law are said to embody the collective wisdom of the broader society; the law of foreign states is said to provide aggregated information about optimal legal rules; prediction markets and virtual networks are said to generate accurate forecasts or to evolve efficient solutions to problems of law and policy; deliberation in legislatures and direct democracy embodies the “wisdom of the multitude.”² The theme that unites these arguments is a claim that in some way or another, many heads are better than one.

But the genus of many-minds argumentation is internally heterogeneous and contains many species, including arguments about how legal and political institutions aggregate information, evolutionary analyses of those institutions, claims about the benefits of tradition as a source of law, and analyses of the virtues and vices of deliberation. My aim here is twofold. First, I provide an intellectual zoology of many-minds arguments, distinguishing among the major species and explaining the conditions under which one or another is more or less successful. Second, I suggest that many-minds arguments are of low utility for legal theory and institutions. Many-minds arguments are typically stylized or pitched at a high level of abstraction, and there are serious problems with applying them to the concrete institutions of the legal system.

Part I distinguishes four major categories of many-minds arguments: the informational, evolutionary, traditional, and deliberative. The literature associates these, somewhat arbitrarily, with Condorcet for the informational argument, Hayek for the evolutionary argument, Burke for the argument from tradition, and Aristotle for the deliberative argument, respectively. I state the basic arguments briefly and then examine problems internal to each of these models, attempting to clarify their premises and to dispel some misconceptions. For example:

* Professor of Law, Harvard Law School. Thanks to Richard Fallon, Don Herzog, Daryl Levinson, Frank Michelman, Martha Minow, Mark Ramseyer, Mark Seidenfeld, Henry Smith, an anonymous referee, and participants in a faculty workshop at Notre Dame Law School for helpful comments, and to Elisabeth Theodore for helpful comments and research assistance.

¹ The phrase “many minds” comes from Cass R. Sunstein, *INFOTOPIA* (2006); see also Cass R. Sunstein, *A CONSTITUTION OF MANY MINDS* (forthcoming 2008). For my purposes, “legal theory” includes not only theorizing about the structure and behavior of courts, but also theorizing about the structure and behavior of legislatures and executive agencies, insofar as these are determined or constrained by law.

² So dubbed by Jeremy Waldron. See JEREMY WALDRON, *THE DIGNITY OF LEGISLATION* 93 (1999). The arguments referred to here are documented in the body of the paper.

- Condorcet’s Jury Theorem does not necessarily assume that exogenous “right” answers exist, and does not necessarily have anything at all to do with the aggregation of dispersed information.

- The Hayekian view of the common law as an evolutionarily successful system does not at all imply that any particular common law rule is efficient or otherwise desirable.

- Although Burkeans suggest that tradition is the collective analogue of individual wisdom, this idea rests on a fallacy of composition.

- Aristotle’s idea that the pooling of perspectives makes the multitude wiser than any individual has no intrinsic connection to deliberation.

Part II, the core of the essay, offers grounds for skepticism about the application of many-minds arguments to law. I lay out several quite general problems that cut across the different categories of many-minds arguments, and that arise when such arguments are applied to the legal system. Four problems are chronic:

(1) *Whose minds?*: The group or population whose minds are at issue is often equivocal or ill-defined. The multiplicand or denominator always matters for a many-minds argument about legal institutions; clarifying the denominator can make a plausible-seeming argument less impressive.

(2) *Many minds, worse minds*: The quality of minds is not independent of their number; rather, number endogenously influences quality, often for the worse. More minds can be systematically worse than fewer because of selection effects, incentives for epistemic free-riding, and emotional and social influences.

(3) *Epistemic bottlenecks*: The epistemic benefits of many minds are often diluted or eliminated because the structure of institutions funnels decisions through a small group of decisionmakers, who occupy an epistemic bottleneck or chokepoint. There is unavoidable epistemic slack between many minds and their few leaders; epistemic agenda-setters are also unavoidable. In general, there is an epistemic analogue to the iron law of oligarchy.

(4) *Many minds vs. many minds*: The insight that many heads can be better than one gets little purchase on the institutional comparisons that pervade legal theory, which are typically many-to-many comparisons rather than one-to-many.

The import of these problems will, I hope, become clearer as the discussion proceeds. The basic suggestion is not that many-minds arguments have zero utility for the legal system. Rather, we can see these problems as creating a succession of filters. Given an initial set of many-minds arguments, each filter will weed out some of those arguments, showing them to be either ill-specified or unpersuasive. Some subset of many-minds arguments will survive all four filters and thus prove both well-specified and plausible, and thus useful for law. My suggestion or prediction, however, is that the surviving subset will be rather small.

I. Many-Minds Arguments: A Taxonomy

Why might many heads be better than one? There are four main reasons: the aggregate judgment of many might employ dispersed information better than the judgment

of one; the judgments of many heads, over time, might weed out bad policies or institutions through an evolutionary process; closely related to the last, tradition might embody the contributions of many minds; finally, deliberation and argument among the many might contribute diverse perspectives, resulting in better policies or institutions than any one could devise. I will call these the arguments from information aggregation, evolution, tradition, and deliberation, respectively. I do not try to provide a full positive account of these many-minds arguments. Rather, I introduce them only insofar as necessary to explain some problems and limitations that are not well understood, and to set up the discussion in Part II, which suggests that these arguments are of limited utility for law.

A. Information Aggregation and Condorcet

The most widely-invoked model of information aggregation is the Condorcet Jury Theorem. In its simplest form, the Theorem states that where there are two alternatives, one of which is correct (somehow defined; we will see that correct need not mean “correct independent of people’s preferences”) and where in a choice between those alternatives the members of a group are even slightly more likely to be right than wrong (and are thus better than random), then as the number of members in the group increases, the probability that a majority³ vote of the group is correct tends towards certainty. Two implications are that the group’s “competence” or chance of being correct can exceed that of the group’s most competent members, and that a large enough number of fairly poor (but better than random) guessers can easily prove more competent than a small panel of highly competent experts. A corollary is that diversity -- here, the statistical independence of the guesses -- makes a big difference in group performance, holding competence constant.⁴ Hence recent suggestions that the Theorem models “the wisdom of crowds”⁵ or “smart mobs,”⁶ and that it supports an epistemic conception of democracy.⁷

Moreover, the Theorem can be extended in several directions without serious loss of generality. The simplest assumption is that all guessers have the same competence, but the Theorem can also hold if the group is heterogeneous, so long as the average competence is better than random. Where that is so, a majority of the group will, given the

³ The jury theorem can be extended to qualified majority (“supermajority”) rules, but only with restrictions. It has been shown that qualified majority rules maximize the probability of making a correct decision, but only if the status quo is stipulated to prevail in the event that no alternative garners the requisite supermajority. See Ben-Yashar & Nitzan, *The Optimal Decision Rule for Fixed-Size Committees in Dichotomous Choice Situations: The General Result*, 38 INT. ECON. REV. 175 (1997). This is of course a democratically suspect condition. If the status quo preference is abandoned, then a weaker result holds: “for sufficiently large electorates . . . if the average competence of the voters is greater than the fraction of the votes needed for passage, a group decision is more likely to be correct than the decision of a single randomly chosen individual.” Mark Fey, *A Note on the Condorcet Jury Theorem with Supermajority Voting Rules*, 20 SOCIAL CHOICE AND WELFARE 27 (2003). This condition is rather demanding; if the decisionmaking group uses a 2/3 majority rule, for example, then average competence must be at least .67. Nothing in my claims here turns on whether the group voting rule is a simple or qualified majority, so I will refer to “majority” voting for simplicity.

⁴ SCOTT PAGE, *THE DIFFERENCE* (2007).

⁵ JAMES SUROWIECKI, *THE WISDOM OF CROWDS* (2004).

⁶ HOWARD RHEINGOLD, *SMART MOBS* (2002).

⁷ See *infra* notes 8-14. Helene Landemore offers a sustained argument for democracy on epistemic grounds. See *Democratic Reason: Politics, Collective Intelligence, and the Rule of the Many* (Harvard University Ph.D. Dissertation 2008).

other conditions, prove more competent than the average individual and perhaps even more competent than the most competent individual. The Theorem has also been extended to more than two options, in which case the option that achieves plurality support is more likely to be correct than any other option, though not necessarily more likely than all the incorrect options combined.⁸

All this has provoked large claims about the Theorem's significance. I will briefly mention two serious and largely unresolved conceptual problems with the Theorem, and then comment on its interpretation. Conceptually, there are at least two respects in which the Theorem is still poorly understood. First, a crucial engine behind the Theorem is the independence of the group members' views or guesses. Even if particular voters make biased guesses, the group as a whole will be unbiased on average if guessers' biases are uncorrelated, which is the nub of independence. In one interpretation, this washing out of uncorrelated biases is what Rousseau was getting at when he claimed that the general will or common interest emerges when and because the differences between individual wills cancel out.⁹ The issue of correlation is just as important as the issue of accuracy;¹⁰ indeed, introducing voters who are worse than random can improve the group's overall performance if the new voters sufficiently reduce correlation across the group as a whole.¹¹

What is unclear is whether, and to what extent, independence is compromised by deliberation, discussion, or even common social background or professional training. Rousseau feared that it was, and therefore recommended voting without public deliberation; others deny that deliberation has such an effect.¹² To the extent that deliberation compromises independence, the epistemic power of groups will be reduced, although not eliminated; nonindependent guesses simply count as zero, so independence is a matter of degree, not an on-off switch. The independence required by the Jury Theorem is "statistical, not causal", meaning that so long as A's vote is the same as A's vote conditional on B's vote, statistical independence is preserved and the Jury Theorem goes through.¹³ This is a useful clarification but does not solve or even purport to solve the important problem, which is whether and when causal dependence – such as the guessers having a common social background, or common training, or deferring to a common opinion leader – undermines statistical independence. Absent any general account of this, the basic reach of the Jury Theorem is not well understood¹⁴ and no amount of possibility

⁸ Christian List & Robert E. Goodin, *Epistemic Democracy: Generalizing the Condorcet Jury Theorem*, 9 J. POL. PHIL. 277, 286 (2001).

⁹ See Bernard Grofman & Scott L. Feld, *Rousseau's General Will: A Condorcetian Perspective*, 82 AM. POL. SCI. REV. 567 (1988); for further discussion, see David M. Estlund, Jeremy Waldron, et al., *Democratic Theory and the Public Interest: Condorcet and Rousseau Revisited*, 83 AM. POL. SCI. REV. 1317 (1989).

¹⁰ This is the main point of Page, *supra* note 4.

¹¹ Krishna K. Ladha, *The Condorcet Jury Theorem, Free Speech, and Correlated Votes*, 36 AM. J. POL. SCI. 617, 628-29 (1992); Krishna K. Ladha & Gary Miller, *Political Discourse, Factions, and the General Will: Correlated Voting and Condorcet's Jury Theorem*, in COLLECTIVE DECISION-MAKING 393, 403-05 (Norman Schofield ed., 1996).

¹² See Estlund, Waldron, et al., *supra* note 9, at 1326-27 (Jeremy Waldron).

¹³ DAVID M. ESTLUND, *DEMOCRATIC AUTHORITY: A PHILOSOPHICAL FRAMEWORK* 225 (2007).

¹⁴ See *id.* at 226. For some comparative statics of the relationship between competence and deference to opinion leaders, see David Estlund, *Opinion Leaders, Independence, and Condorcet's Jury Theorem*, 36 THEORY & DECISION 131 (1994).

theorems or anecdotes about wise crowds will tell us whether the Theorem is an important tool of political and legal theory or a minor curiosity. Empirically, the social psychology literature is on the whole pessimistic about the wisdom of crowds, finding that “groups excel as judges only under limited conditions.”¹⁵

Furthermore, there is a conceptual puzzle about what it means to say, in jury-theoretic analyses, that the guessers are better than random. The problem is that the baseline against which randomness is measured is affected by how the options are partitioned.¹⁶ (There is a related problem of partition of states that afflicts the principle of insufficient reason in the theory of decisionmaking under uncertainty).¹⁷ If there might be 100, 200, or 300 beans in the jar, should we say that there are three choices, so that for a random guesser there is a 33% of each being right? On the other hand, we could say that the choices are “100 or anything else”; would this mean that for a random guesser there is a 50% chance that 100 is correct? And of course we could do the same for 200 or 300. This problem suggests that application of the Theorem, in multiple-option cases, might be sensitive to the order in which choices are presented, creating the same problems of agenda-setting and path dependence for judgment aggregation that are present, by virtue of Arrow’s Theorem, in preference aggregation. I touch upon some problems of epistemic agenda-setting in II.C.

From the intrinsic difficulties of the Jury Theorem, I now turn to its interpretation. The Theorem is in many respects much thinner than some incautious discussions recognize. It is a strictly mathematical artifact that does not necessarily say anything about information, or the aggregation of common judgments, or the wisdom of crowds, although in certain circumstances it can be interpreted to do so. The Jury Theorem is consistent with several very different probability models, and that these models yield interpretations of the Theorem that differ materially.¹⁸ I will highlight two common misconceptions.

First, it is not the case that the Jury Theorem presupposes the existence of an exogenous “right answer,” where by exogenous I will mean independent of the preferences held by the group’s members (or the members of some larger underlying group). One interpretation of the Jury Theorem is the “polling model”:¹⁹ as the sample drawn out of some larger population increases, and the other assumptions of the Theorem are met, it is increasingly likely that a majority vote of the sample group tracks what a majority of the

¹⁵ Daniel Gigone and Reid Hastie, *Proper Analysis of the Accuracy of Group Judgments*, PSYCHOLOGICAL BULLETIN 121 (1997) 149-67, at 149. Reviewing a large number of studies, the authors summarize the results as follows:

For the most part, group judgments tend to be more accurate than the judgments of typical [i.e. median] individuals, approximately equal in accuracy to the mean judgments of their members, and less accurate than the judgments of their most accurate member. . . . The judgment tasks in which groups can consistently outperform individual judges may therefore be extremely limited.

Id. at 153. The nature of the required judgment makes a difference; groups performing “eureka” tasks, whose solution is demonstrably correct once stated, tend to approach the performance of their best members, whereas groups performing other sorts of tasks “tend to perform at the level of their average members.” *Id.* at 149.

¹⁶ See Estlund, *supra* note 13, at 229-30.

¹⁷ See references in ADRIAN VERMEULE, JUDGING UNDER UNCERTAINTY 173-75 (2006).

¹⁸ Paul H. Edelman, *On Legal Interpretations of the Condorcet Jury Theorem*, 31 J. LEG. STUD. 327 (2002).

¹⁹ *Id.* at 332-33.

underlying population would choose. Here we can if we like say that the right answer is what the whole population would choose, and there is an attenuated sense in which the members of the polled subgroup have “dispersed information” about that, but that is not the sense of right answers or dispersed information that provokes interest in the Jury Theorem.

Second, and relatedly, the Jury Theorem does not necessarily aggregate information at all; it has no intrinsically epistemic properties. In one illuminating model there is no dispersed information being aggregated through a group attempt to answer a common question with a right answer independent of preferences, such as the number of beans in a jar. Rather the group members are each, severally, asking which collective choice will best promote the satisfaction of their own preferences.²⁰ In this model, as the number in the group increases, it becomes near-certain that the majority is correct about which collective choice will maximally satisfy the preferences of the majority. People sometimes talk as though there is a necessary connection between the Jury Theorem and the aggregation of collective judgments about a common preference-independent question, as opposed to the aggregation of individual preferences. There is no such necessary connection, as the polling model and the preference-aggregation model show.

The upshot is that it is wrong to say that the Theorem “requires” that voters be asking a common question, in any substantial sense. In the preference-aggregation model, there is a trivial distributive sense in which group members are asking the same question – each is asking “what collective choice will maximize the satisfaction of my preferences?” – but again this is not the sense of a common question that inspires interest in the Jury Theorem among epistemic democrats. What is true is that insofar as we are interested in the aggregation of judgments, as opposed to preferences, the group members must be asking the same question; if they are asking different questions, the jury theorem is not the right model of aggregation, although other models may be available (as in the Aristotelian models discussed shortly).²¹ However, nothing in the logic of the Jury Theorem is inherently tied to the aggregation of judgments, as opposed to preferences.

All the Jury Theorem does is to apply the Law of Large Numbers to a population of statistically independent guesses. These may be guesses informed by dispersed information, or they may be statements of preference, or what-have-you. The logic of the Jury Theorem is unaffected by the particular interpretation. It is true that in particular cases the Theorem can be applied to model the aggregation of information, but it need not have anything to do with that. At a minimum, the analyst must be careful to specify what exactly is being aggregated, and must be careful not to equivocate between different interpretations.²²

B. Evolution and Hayek

In legal theory, evolutionary many-minds arguments are likely to focus either on

²⁰ Nicholas R. Miller, *Information, Electorates, and Democracy: Some Extensions and Interpretations of the Condorcet Jury Theorem*, in INFORMATION POOLING AND GROUP DECISION MAKING 173 (Bernard Grofman & Guillermo Owen eds., 1983).

²¹ Adrian Vermeule, *Common-Law Constitutionalism and the Limits of Reason*, 107 COLUM. L. REV. 1482, 1494 (2007).

²² Edelman, *supra* note 18, at 339-48, provides several examples of arguments that equivocate between different interpretations of the Jury Theorem.

Hayek or Burke, whose ideas on this subject overlap to some degree. I will focus on Hayek here, bringing Burke into the picture in the next section. In legal theory Hayek is often associated with two ideas: the division of knowledge²³ (the epistemic analogue to Adam Smith's division of labor) and an evolutionary argument for the virtues of the common law.²⁴ The first emphasizes the dispersed and tacit character of knowledge in markets, an argument that Hayek famously used to win the debate over the feasibility of socialist calculation – whether a socialist planner could acquire and process sufficient information to make efficient centralized decisions. The second celebrates the common law by an extended analogy to markets, an analogy that is shaky at best, or so I will claim.

Hayek's central claim about explicit markets was true, important and largely original, which led him to draw ever-more-extended analogies between markets and other social institutions, such as custom, morality and the common law. The analogies are evocative, which accounts for his enduring appeal. But Hayek was an unsystematic thinker who had a strong tendency to think that all things he counted as good – spontaneous order, the division of knowledge, markets, morality, custom and the common law – somehow all go together. They do not; Hayek's analogies are flawed. Moreover, the version of his thought about the common law on which he seems to have finally settled -- that the common law is socially beneficial as a system in competition with other systems, rather than efficient taken rule-by-rule – strips his defense of the common law of any implications for action within an ongoing common law system.

We must start with some distinctions to come to grips with Hayek. One distinction is between intentional mechanisms and invisible-hand mechanisms. In the Jury Theorem model of information aggregation, participants are trying to get a particular answer (whether the preference-independent right answer or the answer that would, when collectively adopted, maximize the satisfaction of their own preferences). The epistemic value of their collective effort – the many-minds argument – is the intended result of their actions, although the group competence may of course differ from individual competence by virtue of the miracle of aggregation.

In evolutionary many-minds arguments, by contrast, the epistemic value of many minds arises as a byproduct of actions taken for other reasons. Evolutionary many-minds arguments are thus a species of invisible-hand arguments,²⁵ in which the epistemic competence of the group is “the result of human action, but not of human design.”²⁶ Hayek's core commitment is to spontaneous order, which means to invisible-hand mechanisms (although, as we will see, Hayek seems to have assumed that all invisible-hand mechanisms must be evolutionary, which is not the case). The Condorcetian mechanism is a model of aggregated intentions, not an invisible-hand mechanism, whereas Hayek thinks that the aggregation of information must occur through the action of the invisible hand. In this sense, there can be no Condorcetian interpretation of Hayek.²⁷

²³ See Friedrich A. Hayek, *The Use of Knowledge in Society*, in *INDIVIDUALISM AND ECONOMIC ORDER* 77-91 (1945).

²⁴ FRIEDRICH A. HAYEK, *LAW, LEGISLATION AND LIBERTY, VOL. I: RULES AND ORDER* (1973).

²⁵ Edna Ullmann-Margalit, *The Invisible Hand and the Cunning of Reason*, 64 *SOC. RES.* 181, 186 (1997).

²⁶ Paraphrasing ADAM FERGUSON, *AN ESSAY ON THE HISTORY OF CIVIL SOCIETY* 119 (Fania Oz-Salzberger ed., Cambridge Univ. Press 1996) (1767).

²⁷ Compare SUNSTEIN, *INFOTOPIA*, *supra* note 1, at 121.

Within the category of invisible-hand mechanisms, there is a further distinction between aggregative and evolutionary mechanisms.²⁸ Aggregative mechanisms are synchronic, explaining the emergence of an equilibrium at a given time; markets are an example. Evolutionary mechanisms are diachronic, explaining not the emergence but rather the maintenance and development of order over time. Thus, in biology, Darwin's mechanism of natural selection requires variation, heritability and differential reproductive fitness of the genotype (expressed in the phenotype), but natural selection is entirely agnostic about the origin of the genotype, which may arise through random mutation. The point is to explain the survival, or not, of the genotype over time.

Hayek seems to have systematically conflated these two types of invisible-hand mechanisms. Starting from an epistemic version of Adam Smith, inspired by aggregative markets, he slid over into an evolutionary account of morality, custom and the common law, without realizing that the subject had changed. Intrinsically, the price-system strand in Hayek's thinking has nothing to do with evolution. When Hayekians emphasize the dispersed character of information, and the ability of market-like mechanisms using explicit prices (such as so-called "prediction markets") to aggregate that information, their arguments are synchronic rather than diachronic, and thus not evolutionary at all.

Separately, Hayek and the Hayekians have a commitment to evolutionary accounts of morality, custom and law but this commitment need not follow from the commitment to aggregative spontaneous orders. Spontaneous orders arising at a given time and extended over space, such as a market, are analytically different than spontaneous orders evolving over time and there is no simple analogy between the two. To be sure, Hayek also means to offer an evolutionary account of markets as adjusting efficiently, over time, to exogenous shocks arising from technical, economic and social change, and such an account is fully in the spirit of Austrian economics. But an account of that sort needs separate justification and cannot be derived from the basic Hayekian insight that the price system aggregates dispersed information, which is a strictly synchronic insight taken by itself. In Part II, I will examine an institutional analogue of these problems: the distinction, crucial for many-minds arguments in legal theory, between simultaneous and sequential decisionmaking.

Finally, of course, spontaneous orders of either variety may either be desirable or not.²⁹ Hayekians acknowledge this in their cautious moments but seem to hold at least a presumption that spontaneous order is functionally beneficial. But there is no such presumption. In the case of aggregative invisible-hand mechanisms, the only requisite is that a patterned social structure arises as a result of human action but not through human design. Collectively suboptimal patterns fit this requirement just as well as collectively optimal ones. The Tragedy of the Commons is a spontaneous order, just a bad spontaneous order that produces a structured social pattern of depletion and waste.

What about evolutionary invisible-hand mechanisms? Here there is a strong temptation to invoke "the test of time" and to think that there is at least a presumption that evolved patterns must be functionally beneficial in some sense or another. However,

²⁸ The next few paragraphs draw heavily upon Ullmann-Margalit, *supra* note 25.

²⁹ Robert Sugden, *Spontaneous Order*, in THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 485, 494 (Peter Newman ed., 1998).

within the domain of evolutionary invisible-hand mechanisms, biological evolution is very different than social or economic or cultural evolution. Here too Hayek seems to have overlooked a crucial distinction. The rate of change in the biological (“natural”) environment is, plausibly, much slower than in the social or economic or cultural environment. The slow pace of environmental change in biology makes it plausible to think that natural selection produces organisms well-adapted to their ecological niches. If the rate of change in social, economic and technological environments is high, however, then social evolution faces a shifting target: even if social structures constantly evolve towards efficiency, they may at any particular point remain very far from it.³⁰ Once again the diachronic/synchronic distinction is crucial: the trend towards efficiency over time just does not support the very different assumption or presumption that observed institutions are beneficial at a given time.

Hayek and the common law. For legal theorists, the most obviously relevant of Hayek’s many analogies – morality is a spontaneous order like the market, custom is a spontaneous order like the market, and so on – is the Hayekian claim that the common law is a spontaneous order that incorporates dispersed information, and thus proves superior in some sense to the collectivist and intentional legislation that a Benthamite might favor.³¹ Here again, Hayek or at least the Hayekian tradition conflates several different things that must be disentangled. Moreover, the version of Hayek’s argument on which he finally settled is far narrower than usually assumed, and has few concrete implications.

The first step is to distinguish Hayek’s ideas from several near and not-so-near relatives. To begin with, we must distinguish (1) an intentionalist argument for the beneficial properties of the common law from (2) an invisible-hand argument for the beneficial properties of the common law. As the common law is a diachronic institution, extended over time, invisible-hand arguments in this domain are inevitably of the evolutionary variety. Moreover, we must distinguish (2a) evolutionary arguments at the level of particular common law rules from (2b) evolutionary arguments at the level of the whole society, including the legal system. It turns out that Hayek’s view is (2b), not (1) or (2a), and this blocks an easy application of Hayek’s views to the particular rules of the legal system.

Position (1) can be associated with Richard Posner,³² while (2a) later became a standard view in law-and-economics.³³ Position (1) is simply the argument that judges aim (or, in a normative variant, should aim) to maximize social wealth. That position is distinctly un-Hayekian, because it sees judges as a cadre of centralized, even Benthamite decisionmakers who rely for the most part upon their first-order reason to develop efficient rules, subject only to the weak constraints that higher-level legal rules must be respected and that precedents might convey useful information. Thus true-blue Hayekians reject the Posnerian vision of efficiency-seeking judges (and are especially suspicious of the Supreme Court, which they see as a centralized rulemaker). These Hayekians see custom as a genuine and highly beneficial spontaneous order, but deny that the common law system, at

³⁰ See JON ELSTER, *ULYSSES AND THE SIRENS* 6-7 (rev. ed. 1984).

³¹ See generally Hayek, *LAW, LEGISLATION AND LIBERTY* VOL. I: RULES AND ORDER, *supra* note 24.

³² RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 321-27 (1973).

³³ See Paul H. Rubin, *Why is the Common Law Efficient?*, 6 J. LEG. STUDIES 51 (1977); George L. Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 J. LEG. STUDIES 65 (1977).

least as it currently operates, actually incorporates custom.³⁴ I return to these issues in Part II.

Position (2a) is the argument that the common law will, at the level of individual rules, evolve towards efficiency. The basic mechanism is that inefficient rules will impose deadweight losses and will thus be more likely to be challenged by litigants. The losers from the rule will be willing to pay more to overturn the rules than the gainers will be willing to spend to defend them (this follows from the assumption that the rule creates a deadweight loss) and so, over time, inefficient rules will tend to be eliminated.

Among the many implicit conditions that make this hypothesis fragile and somewhat lacking in generality, I will confine myself to one observation.³⁵ Even if all the conditions required by this mechanism actually obtain, it only shows that the common law will evolve towards efficiency. By itself, it says nothing about the rate at which it will do so. The common law is path-dependent and hence sticky;³⁶ the very existence of a mistaken precedent reduces the ability or incentive of later actors to challenge it, in part by making it costly to switch to a different legal rule.

The crucial question then involves the relative rates of change in the common law and in the surrounding economic and political environment. If the environment changes slowly, then it is plausible that the common law will evolve to become quite efficient; perhaps the common law of the 17th or 18th centuries was like this. If, however, the nonlegal environment changes rapidly, then the common law will constantly be facing a moving target, and may be much less efficient at any given time than, say, statutes intentionally designed by Benthamite legislators, or even statutes designed by ignorant or self-interested legislators.³⁷ In a rapidly changing environment the common law may be constantly be evolving from 0% efficiency to 5% efficiency, over and over again, and then statutes need not be very efficient at all to be comparatively superior.

Hayek, however, does not offer evolutionary arguments at the level of individual rules in any event. Rather his arguments operate at the level of the whole society, including the legal system.³⁸ The suggestion is that the common law and related liberal institutions, such as the market, enable the social coordination of individual expectations, and that a society with a legal and economic system that coordinates expectations in this way will outperform competitors.³⁹

³⁴ John Hasnas, *Hayek, The Common Law, and Fluid Drive*, 1 N.Y.U. J. L. & LIBERTY 79, 92-98 (2005); Todd J. Zywicki, *The Rise and Fall of Efficiency in the Common Law: A Supply-Side Analysis*, 97 NW. U.L. REV. 1551, 1628-29 (2003). However, Hayekians of this stripe think that the common law was efficient in an earlier period, when it competed with other law-supplying institutions, such as equity and church law. See Zywicki, *supra*, at 1620.

³⁵ This paragraph and the next apply to law a point made by Elster, *supra* note 30. For a more extended treatment, see Vermeule, *supra* note 21.

³⁶ See Oona Hathaway, *Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System*, 86 IOWA L. REV. 601 (2001).

³⁷ Cf. DON HERZOG, POISONING THE MINDS OF THE LOWER ORDERS 22-23 (1998) (suggesting that an increasing rate of social change undermines Burkean arguments).

³⁸ See Gerald F. Gaus, *Hayek on the Evolution of Society and Mind*, in THE CAMBRIDGE COMPANION TO HAYEK 232, 238 (Edward Feser ed. 2006).

³⁹ See Todd J. Zywicki & Anthony B. Sanders, *Posner, Hayek, and the Economic Analysis of Law*, 93 IOWA L. REV. 559 (2008).

This argument is ill-defined. “Hayek is noticeably unspecific about the precise mechanism by which selection works. On different occasions, there are hints of different models of selection, based variously on imitation, inter-group migration, competition for resources, differential rates of reproduction, and wars of extermination; but none is developed in any detail.”⁴⁰ On the other hand, there is a burgeoning literature on “legal origins” suggesting that nations whose legal system descend from the common law outperform nations with other types of legal system, on various measures of economic and political well-being, perhaps due to the security of economic expectations that a common law system provides.⁴¹ The broad thrust of Hayek’s view might have been correct even if he did not understand or failed to spell out the mechanisms that make it so.

I will focus on a different problem with the systemic version of Hayek’s argument for the superiority of the common law. Even if well-specified, convincing, and empirically validated, the argument has few implications for action within an ongoing common law system, for the following reasons. The systemic version of the Hayekian approach is extremely narrow: it underwrites no conclusions whatsoever about the efficiency or desirability of any particular common law rule. That the common law as a system is superior to (say) a civil law system, as measured by some criterion of fitness, just means that one package of institutions and rules is superior to another package of institutions and rules. Any individual rule in the superior system might be inferior to the alternative rule found in the other system.

Moreover, the general theory of second best⁴² implies that the superior system might actually contain more rules that are inefficient or unfit than the inferior system. If a given system departs from the optimum in one respect, as it inevitably will, then the theory of second best implies that other departures from the optimum are necessary. The system whose rules most closely approach the optimum, evaluating the efficiency of rules one by one, might well be the inferior system. It is even possible that all rules in a given system are suboptimal and indeed inferior to those of the competing system, but that because of the particular structure of their interaction, the given system is superior overall. Because systems compete as packages, an evolutionary account of the superiority of the common law pitched at the system level tells us little about particular questions within an ongoing common law order.

C. Tradition and Burke

In American constitutional theory, self-described Burkeans and “common law constitutionalists” emphasize the role of tradition in giving content to ambiguous constitutional texts and norms.⁴³ This position can be given nonepistemic justifications,

⁴⁰ Sugden, *supra* note 29, at 494.

⁴¹ Rafael La Porta, Florencio Lopez-de-Silanes & Andrei Shleifer, *The Economic Consequences of Legal Origins*, J. ECON. LIT. (forthcoming 2008), available at http://www.economics.harvard.edu/faculty/shleifer/files/jel.nov_combine.pdf; Paul G. Mahoney, *The Common Law and Economic Growth: Hayek Might be Right*, 30 J. LEGAL STUD. 503 (2001).

⁴² R.G. Lipsey & Kelvin Lancaster, *The General Theory of Second Best*, 24 REV. ECON. STUD. 11 (1956).

⁴³ See, e.g., Thomas W. Merrill, *Bork v. Burke*, 19 HARV. J.L. & PUB. POL’Y 509, 511-12, 515-19 (1996); David A. Strauss, *Common Law Constitutional Interpretation* 63 U. CHI. L. REV. 877, 884-904 (1996); Ernest Young, *Rediscovering Conservatism: Burkean Political Theory and Constitutional Interpretation*, 72 N.C L. REV. 619, 697-712 (1994).

such as a preference for stability over change. Here I will limit myself to the epistemic justification for Burkeanism. On this account, the virtue of tradition is that it embodies collective wisdom.⁴⁴ And the virtue of using tradition as a source of law, in particular, is that it allows judges and other legal actors to increase their epistemic capacities by drawing upon the contributions of many minds in the past.⁴⁵

Generally speaking, traditionalism raises numerous puzzles.⁴⁶ In the best case for traditionalists, the relevant tradition has been continuous since some point in the remote past, so is currently the status quo, and the relevant tradition can uncontroversially be identified. But these conditions often fail to hold. First, traditions notoriously can be described at higher or lower levels of generality.⁴⁷ Second, Burkeans often face the problem of interrupted traditions. Where a tradition was followed during period 1, but was abrogated, violated or ignored during period 2, what is the good Burkean to do in period 3? Both the period 1 practice and the period 2 practice have their claims. Third, in the post-9/11 world, tradition seems an unlikely starting point for coping with emergencies, novel threats, and rapid legal and political innovation. Finally, as to Burkeanism in legal theory, “tradition” may be understood to include either general social and political customs and norms, on the one hand, or judicial precedents, on the other hand, or both. I examine this crucial ambiguity in II.A.

Here, I restrict myself to a central conceptual point that undermines the epistemic justification for Burkeanism. My basic suggestion is that Burkeans explicitly or implicitly suppose that tradition is the collective analogue of individual wisdom. For reasons given long ago by Bentham and Pascal, however, this idea is fallacious.

At the individual level, wisdom is an attribute that is notoriously hard to define.⁴⁸ A helpful starting point is to contrast wisdom with judgment. The latter is a form of impartiality; it consists in the ability to weigh disparate features of a situation without prejudice for or against any factors.⁴⁹ In this sense, a decisionmaker can exercise judgment in a highly technical domain; indeed, it has been shown that an algorithm may display judgment superior to that of any human decisionmaker, precisely because the algorithm does not overweight or underweight any particular elements of the decision.⁵⁰ Wisdom seems an altogether richer notion. Whatever it entails, it has some connection to human experience, which is why wisdom is typically associated with old age; neither an algorithm nor a baby can sensibly be described as wise.

For Burkeans, tradition is the collective analogue to individual wisdom. Just as the individual acquires wisdom (if one is lucky) over the course of a life, so too societies

⁴⁴ See Michael Moore, *The Dead Hand of Constitutional Tradition*, 19 HARV. J. L. & PUB. POL’Y 263, 266-68 (1996).

⁴⁵ See generally Cass R. Sunstein, *Burkean Minimalism*, 105 MICH. L. REV. 353 (2006).

⁴⁶ This paragraph is adapted from Adrian Vermeule, *Connecting Positive and Normative Legal Theory*, 10 U. PENN. J. CONST. L. 387, 392 (2008).

⁴⁷ The Burkean can propose simple rules to deal with this, such as the following: describe the tradition at the lowest relevant level of generality. See *Michael H. v. Gerald D.* 499 U.S. 110, 127 n.6 (1989) (Scalia, J., concurring). But the problem is why that simple rule rather than another should be chosen.

⁴⁸ Thanks to Nancy Rosenblum for helpful conversation on these points.

⁴⁹ See JON ELSTER, *SOUR GRAPES* 16 (1983).

⁵⁰ See, e.g., PHILIP TETLOCK, *EXPERT POLITICAL JUDGMENT* 76-77 (2005) (extrapolation algorithms and formal models outperformed all human experts at tasks involving political prediction).

acquire traditions over time, and these traditions embody the wisdom of the many minds who have made incremental contributions to them. As Bentham and Pascal in effect argued, however, this move rests on a fallacy of composition.⁵¹ Society is not like a big person who ages over time and (if lucky) acquires wisdom. Rather, one must consider an overlapping-generations model and ask whether following tradition makes the best possible use of all currently available information. As Bentham wrote, “[a]s between individual and individual living at the same time and in the same situation, he who is old possesses, as such, more experience than he who is young. But, as between generation and generation, the reverse of this is true.”⁵² The actors of today are wiser than the actors of yesterday in the sense that they have more experience and information; the current generation benefits by being able to see how the plans, projects and experiments of past generations actually turned out. At the social level, traditions developed long ago embody, not the wisdom of old age, but rather “the wisdom of the cradle.”⁵³

The fallacious idea that tradition is the collective analogue of individual wisdom is not the only way to understand the epistemic justification for Burkeanism. Other ways of cashing out that justification could involve claims that tradition aggregates information, or that tradition is shorthand for a complex of institutions that have evolved towards efficiency or some other desirable state. Those versions of epistemic Burkeanism largely overlap the Condorcetian and Hayekian views discussed in I.A. and I.B., so I will not belabor them here.⁵⁴ In Part II, however, I develop some further critiques of Burkeanism as applied to legal theory.

D. Deliberation and Aristotle

A different many-minds model altogether arises from Aristotle’s Doctrine of the Wisdom of the Multitude:⁵⁵

For the many, of whom each individual is not a good man, when they meet together may be better than the few good, if regarded not individually but collectively, just as a feast to which many contribute is better than a dinner provided out of a single purse. For each individual among the many has a share of excellence and practical wisdom, and when they meet together, just as they become in a manner one man, who has many feet, and hands, and senses, so too with regard to their character and thought. Hence the many are better judges than a single man of music and poetry; for some understand one part, and some another, and among them they understand the whole.⁵⁶

This is usually given a deliberative interpretation; the idea is that partial perspectives are shared by talking together. But deliberation is not inherent in and is not

⁵¹ JEREMY BENTHAM, THE HANDBOOK OF POLITICAL FALLACIES 43-53 (Harold Larrabee ed. 1952); Blaise Pascal, *Preface to the Treatise on Vacuum*, in THOUGHTS, LETTERS, AND MINOR WORKS 444, 449 (Charles W. Eliot ed., M.L. Booth et al. trans., 1910).

⁵² Bentham, *supra* note 51, at 44.

⁵³ Bentham, *supra* note 51, at 45.

⁵⁴ The Condorcetian interpretation of Burke is advanced in Sunstein, *supra* note 45; the evolutionary interpretation of Burke is standard. See Moore, *supra* note 44, at 266. In Vermeule, *supra* note 21, I critique these versions of epistemic Burkeanism as applied to legal theory.

⁵⁵ See Waldron, *supra* note 2.

⁵⁶ ARISTOTLE, POLITICS bk. 3, ch. 11, *reprinted in* THE POLITICS 66 (Stephen Everson ed., 1988).

necessary to Aristotle's idea.⁵⁷ I mean this as a conceptual point, not an exegetical one. (Exegetically, the passage above says nothing explicit about deliberation, as opposed to simply "meeting together," which is equally consistent with noncommunicative aggregation. Rather, the usual deliberative reading derives from the larger context of Aristotle's views.⁵⁸)

Just as the Jury Theorem is a statistical mechanism that can go through whether or not the participants talk to one another (although their talking to one another can cause the Theorem's conditions to hold or not to hold), so too the pooling of perspectives by itself need have nothing at all to do with deliberation or communication. In simple models of information aggregation without communication, the pooling of perspectives can be accomplished just by having each member of the group simultaneously state her partial perspective and using some aggregation rule to combine them into a whole picture.⁵⁹ Despite the absence of communication, this is still not a Condorcetian model; by hypothesis no one in the group can possibly be correct about the whole picture, so there is no analogue to the Condorcetian issue of individual competence. We need to distinguish among (1) Condorcetian models of information aggregation, (2) pooled-perspective models of information aggregation, and (3) deliberation. There are no necessary connections among any of these. Deliberative interpretations of Aristotle correctly point out the differences between (1) and (2) and between (1) and (3), but elide the difference between (2) and (3).

However, let us put this problem aside and focus on a deliberative interpretation of Aristotle, in which the pooling of perspectives is effected by communication. We are beginning to understand the conditions under which, and mechanisms by which, deliberation may produce either error⁶⁰ or extremism⁶¹ or both. Those two ways in which deliberation can go bad are not conceptually the same, although they may be empirically connected. If in many environments the extreme policy is also an erroneous policy, somehow defined, then extremism is causally connected to error. This is itself an Aristotelian theme – under uncertainty, we may often do well to adopt the Golden Mean.

Apart from extremism and error, however, there is a third important way in which group deliberation can go bad: deliberation may produce simple incoherence -- a mishmash of views or a misshapen policy or an interminable debate that never decides anything. In any of these cases, the results of deliberation might not even rise to the level of being wrong, let alone right, however error is defined. To be either extremist or erroneous, a policy must first be coherent; yet deliberation does not guarantee coherence and under certain conditions may undermine it.

⁵⁷ See Landemore, *supra* note 7, at 144-47, for a useful disentangling of Aristotle and Condorcet. On the particular point that Aristotle's account does not necessarily assume group deliberation, see *id.* at 146 n. 98 (attributing this point to Bernard Manin).

⁵⁸ Thanks to Adriaan Lanni for helpful tutoring on this question.

⁵⁹ PAGE, *supra* note 4, at 185-88.

⁶⁰ See generally Gigone and Hastie, *supra* note 15.

⁶¹ See, e.g., Edward L. Glaeser and Cass R. Sunstein, *Extremism and Social Learning* (forthcoming JOURNAL OF LEGAL ANALYSIS 2009); Cass R. Sunstein, *Deliberative Trouble? Why Groups Go To Extremes*, 110 YALE L.J. 71 (2000).

The simplest version of this worry is that many minds might spin their wheels indefinitely, reaching no single answer or composite perspective at all. Theorists who combine deliberation with an epistemic conception of democracy favor the metaphor of the blind men and the elephant.⁶² They are optimistic that the blind men can, by pooling their perspectives through communication, arrive at an overall picture of the elephant that is better than any one of them could supply individually. In one of the oldest versions of the story, however, a raja asks the blind men what sort of thing the elephant is, and the blind men “[come] to blows” over their rival descriptions. This delights the raja, who notes that “quarreling, each to his view they cling, such folk see only one side of a thing.”⁶³ In John Godfrey Saxe’s famous version the denouement is similar: “The disputants, I ween,/Rail on in utter ignorance/Of what each other mean,/And prate about an Elephant/not one of them has seen!”⁶⁴ Here the implicit mechanism is that deliberation further entrenches the beliefs held by differing camps, sharpening their disagreements.

Moreover, one may juxtapose to the story of the blind men and the elephant the maxim that a camel is an elephant built by committee.⁶⁵ If the blind men disagree about what the elephant is, they may compose their information to arrive at a superior overall view (the optimistic version of the story); they may argue interminably (in the older versions of the story); but they may also simply staple together their pictures into an incoherent whole through a process of “bargaining over beliefs.”⁶⁶ To avoid interminable wrangling, the group may decide to proceed with an incoherent collective view or program.⁶⁷ Such a course may well have pragmatic virtues, enabling the group to move on and get something done, but those virtues are not epistemic and it is hard to see that the pooling of perspectives from many minds has produced any positive good; rather it has created a problem that has to be pragmatically sidestepped.

The largest issue here, which applies both to deliberative interactions and to the simple aggregation of beliefs or judgments without communication, involves collective incoherence: the threat that beliefs or judgments will be incoherent at the group level even if all individuals hold coherent beliefs and identical preferences.⁶⁸ Even where all participants have identical preferences and talk together to decide how to promote their

⁶² See, e.g., ESTLUND, *supra* note 13, at 233-34.

⁶³ Udana 68-69: Parable of the Blind Men and the Elephant, *available at* <http://www.cs.princeton.edu/~rywang/berkeley/258/parable.html>.

⁶⁴ JOHN GODFREY SAXE, *The Blind Men and the Elephant*, in THE POEMS OF JOHN GODFREY SAXE 135, 136 (1882).

⁶⁵ In some versions, a camel is a horse built by committee.

⁶⁶ I have lifted this excellent phrase from Robert E. Goodin & Geoffrey Brennan, *Bargaining Over Beliefs*, 111 ETHICS 256 (2001). The use to which I put it, however, is perverse given the original context, because Goodin and Brennan want to stipulate that in cases of “bargaining over beliefs” the participants search for a “rationally grounded decision.” *Id.* at 260. I take this to be an additional stipulation (useful for Goodin and Brennan’s purposes), not one that is inherent in the notion of bargaining over beliefs.

⁶⁷ This assumes that the group’s members (or a sufficient fraction of them) want to proceed with some collective view or other. This will sometimes be true, sometimes not, depending upon the group and the situation. In other cases, members can agree to disagree on the rationale for their group action, proceeding with an “incompletely theorized agreement.” See Cass R. Sunstein, *Incompletely Theorized Agreements*, 108 HARV. L. REV. 1733 (1995).

⁶⁸ See Geoffrey Brennan, *Collective Coherence?*, 21 INT’L REV. LAW & ECON. 197 (2001); see also Lewis A. Kornhauser, *Aggregate Rationality in Adjudication and Legislation*, 7 POL., PHIL. & ECON. 5 (2008).

common good, the aggregation of beliefs and judgments⁶⁹ suffers from paradoxes and impossibility results that parallel the better-known paradoxes and impossibility results that arise in the aggregation of preferences. Problems of belief aggregation and judgment aggregation have only begun to be explored relatively recently, but in the best-understood result for judgment aggregation, shifting majorities within a group can produce a kind of group-level incoherence.

Consider cases in which all members of the group agree that C is correct or true only if both A and B are correct or true. The stock example is a breach of contract case in which, everyone agrees, the plaintiff wins if and only if it is true both that there was a contract and that the defendant breached. There are three judges. Under certain profiles of individual judgments, a majority of the group (say judges 1 and 2) will believe that there was a contract, while a different majority (judges 2 and 3) will believe that the contract was breached.⁷⁰ The consequence is that some majority believes that each of the necessary predicates for the plaintiff's victory are true, and yet a different majority (judges 1 and 3) believe that the defendant should win. It therefore matters whether the institutional rules aggregate beliefs by counting votes over issues or instead by counting votes over outcomes; the collective decision will be different depending upon which approach is chosen. The important point here is that the group judgment is indeterminate and in a sense incoherent, even though all individuals share the same goal (to get the case right) and even the same premises about the logical relationships at issue.

The example involves a legal case, and in legal theory this sort of problem is sometimes called the “doctrinal paradox,”⁷¹ but the problem generalizes straightforwardly to nonlegal domains. Impossibility results parallel to those for preference aggregation have been proven for judgment aggregation. Most notably, it has been shown that “if the domain of admissible individual sets of judgments is unrestricted ... there exists no procedure for aggregating individual sets of judgments in this domain into collective ones in accordance with a set of minimal conditions similar in spirit to those proposed by Arrow.”⁷²

Results such as this must be treated with caution, on both the normative and positive levels. Normatively, that it is impossible to guarantee coherent aggregation of either preferences or judgments may either be good or bad, under given conditions.⁷³ Incoherence is not the worst thing in the world; it may often be better than bad coherence.

⁶⁹ For purposes of the discussion here, and merely to simplify the issues, I will treat belief aggregation and judgment aggregation as posing similar problems.

⁷⁰ Here Judge 3 believes that there was no contract, but also believes that if there was one, it was breached. Although some may think that such a belief structure is puzzling, it is an ordinary case of conditional belief or belief “in the alternative.”

⁷¹ Lewis A. Kornhauser & Lawrence G. Sager, *The One and the Many: Adjudication in Collegial Courts*, 81 CALIF. L. REV. 1, 10-12 (1993).

⁷² Christian List, *Substantive and Meta-Agreement*, in DELIBERATION AND DECISION 119, 126 (Anne Van Aaken, Christian List & Christoph Luetge eds., 2004); for the basic result, see Christian List & Philip Pettit, *Aggregating Sets of Judgments: An Impossibility Result*, 18 ECON. & PHIL. 89 (2002).

⁷³ For the argument that preference cycling has beneficial effects in a democracy, see Nicholas R. Miller, *Pluralism and Social Choice*, 77 AM. POL. SCI. REV. 734 (1983); ANTHONY MCGANN, *THE LOGIC OF DEMOCRACY* (2006). Kornhauser, *supra* note 68, argues that it is too demanding to expect legislative and judicial institutions to produce aggregate rationality of judgments.

But incoherence cannot be defended on epistemic grounds, and where it obtains the Aristotelian account of the interaction of many minds seems starry-eyed.

As a positive matter, for preference aggregation, it is well-known that certain combinations of issues and preference profiles (single-dimensional issues and single-peaked preferences) preclude cycling, and some argue that deliberation can itself induce those conditions to hold.⁷⁴ It is ultimately an empirical question whether the conditions that produce preference cycling obtain in real-world institutions.⁷⁵ Likewise, it is possible that deliberation can induce profiles of belief that are analogous to single-peakedness for preferences, and that have a similar effect in ensuring the coherence of group-level judgments.⁷⁶ All this is an open question; it remains to be seen where, and under what conditions, the problems of collectively incoherent beliefs or judgments obtain (assuming these are problems), and how deliberation affects them. What the recent results about incoherent group judgments add, however, is another hurdle that optimistic Aristotelian accounts of the pooling of perspectives must surmount.

II. Many Minds and Law: General Problems

How useful are many-minds arguments for legal theory? It is too soon to tell. At one extreme, many-minds arguments might fare no better, so far as relevance for law is concerned, than arguments from evolutionary biology, which plausibly have no legal implications whatsoever.⁷⁷ Of somewhat more utility are social-choice arguments; although Arrow's Theorem and related results spawned a whole sub-domain of legal applications,⁷⁸ the impetus has dissipated with the recognition that Arrovian cycling requires restrictive assumptions, such as the exclusion of cardinal interpersonal comparisons of utility, and has not been shown to have ever occurred in the U.S. Congress.⁷⁹ It is unclear whether many-minds arguments will have a similarly disappointing career, or will instead become a standard tool in the repertoire of legal theory. Probably some will flourish while others will fall by the wayside; but which ones?

Although it would be premature to offer a view on the ultimate fate of the various types of many-minds arguments, I do think that such arguments, to be well-specified and plausible, must pass through a series of conceptual, methodological and institutional filters. Whether they can do so depends on the particulars of the case, but it is likely that most such arguments will fail at one stage or another. I will describe the filters seriatim. The general theme is that the thick and complex institutional structure of the legal system often defeats

⁷⁴ See David Miller, *Deliberative Democracy and Social Choice*, 40 POL. STUD. 54 (1992) (special issue); John S. Dryzek and Christian List, *Social Choice Theory and Deliberative Democracy: A Reconciliation*, 33 BRIT. J. POL. SCI. 1 (2003). For a critique, see MCGANN, *supra* note 73, at 130-33.

⁷⁵ A convincing study suggests that preference cycling is not a major problem in Congress. See GERRY MACKIE, *DEMOCRACY DEFENDED* (2003).

⁷⁶ See Christian List, *Group Deliberation and the Revision of Judgments: A Social-Choice-Theoretic Perspective* (July 23, 2007), available at <http://personal.lse.ac.uk/LIST/PDF-files/JudgmentRevision.pdf>; List, *Substantive and Meta-Agreement*, *supra* note 72.

⁷⁷ See Brian Leiter & Michael Weisberg, *Why Evolutionary Biology is (so Far) Irrelevant to Law* (Oct. 2007), available at <http://ssrn.com/abstract=892881>.

⁷⁸ See, e.g., Frank H. Easterbrook, *Ways of Criticizing the Court*, 95 HARV. L. REV. 802 (1982); Saul Levmore, *Bicameralism: When Are Two Decisions Better than One?*, 12 INT'L REV. L. & ECON. 145 (1992); Maxwell L. Stearns, *The Misguided Renaissance of Social Choice*, 103 YALE L.J. 1219 (1994).

⁷⁹ See generally MACKIE, *supra* note 75.

straightforward application of many-minds arguments, which are typically pitched at an excessively high level of abstraction.

A. *Whose Minds?* On Multiplicands and Denominators

A well-known conceptual problem with arguments for and against majority rule involves the following problem: over what group is the majority defined? A majority of what? A “majority” is a multiplier, and the attractiveness of majority rule in particular domains or cases will often vary with different accounts of the multiplicand. The abstract arguments for “majority rule” are not equally persuasive for a majority of all legislators, of all legislators who choose to vote, of all registered voters, of actual voters, of jurors, of judges, of oligarchs, and so on.

There are parallel problems with many-minds arguments in their various forms. *Whose* minds, exactly, are at issue? If “many minds who think X” is the numerator, what is the denominator, the set out of which the many minds are drawn? The appeal of the particular many-minds argument at issue varies as the denominator varies.⁸⁰ The parallel is clearest in legal applications of the Condorcet Jury Theorem, which can (but need not) be interpreted as a theorem about majority voting. Many applications of the Jury Theorem encounter problems with the multiplicand or denominator.

Consider the important claim that, on Jury Theorem grounds, American courts might be more likely to make good law, somehow defined, by taking into account the law of foreign jurisdictions.⁸¹ Here foreign lawmakers, especially courts, are understood as a virtual voting group or statistical group that will tend to converge on right answers, given the Theorem’s other conditions. Which foreign courts count, however?⁸² Should Zimbabwe and North Korea be excluded, because their courts are subject to political distortions, which tends to reduce their epistemic competence? Or should they be included precisely in order to reduce the correlation of biases within the virtual voting group, which might well improve overall epistemic competence?⁸³ A suitably specified decision rule would, in principle, trade off the benefits of increased competence against the costs of increased correlation, in order to maximize the epistemic power of the notional group whose majority view is to be taken into account.

A version of the denominator problem arises in other types of many-minds arguments, particularly the Hayekian and Burkean variants. Consider the argument, described in I.C., that tradition should be a source for rules of common law and constitutional common law, because tradition embodies the contribution of many minds. Which traditions exactly, emanating from whose minds? Is the idea that judges should look to judicial precedent, or rather to larger political and social customs and norms? Many discussions run these things together, treating precedent as a kind of judicial tradition or custom. But these ideas are very different.⁸⁴ Precedents come, proximately anyway,

⁸⁰ Ernest A. Young, *Foreign Law and the Denominator Problem*, 119 HARV. L. REV. 148 (2005).

⁸¹ The best treatment is Eric A. Posner & Cass R. Sunstein, *The Law of Other States*, 59 STAN. L. REV. 131 (2006).

⁸² See Posner & Sunstein, *supra* note 81, at 158-60; Young, *supra* note 80, at 161-63. For reasons not worth going into here, I do not agree with much of Young’s subsequent discussion, particularly the suggestion that “counting noses” lacks epistemic or persuasive value.

⁸³ See Ladha, *supra* note 11; Ladha & Miller, *supra* note 11.

⁸⁴ Hasnas, *supra* note 34, at 94.

from the minds of judges, whereas customs and norms come from the minds of nonjudicial officials or the citizenry at large. Depending upon the setting and the argument, these differences can be decisive.

Here is an example. The distinction between precedent, on the one hand, and social customs, on the other, will matter very much to Hayekians, who are generally suspicious of “social engineering” by centralized government institutions, emphatically including courts. Thus some Hayekians, who favor widespread social customs and traditions as the products of decentralized “spontaneous order,” see the United States Supreme Court as just another centralized decisionmaker, a body of social planners in robes.⁸⁵ We may add that the number of justices who have sat on the Supreme Court in its entire history is not high, only 110 in total; calling the body of precedent produced by this group “the work of many minds” exaggerates, at least if the comparison is to genuinely widespread social customs and traditions.

To be sure, the justices benefit from a supporting informational network of assistants, lawyers, *amici curiae* and so on, which expands the number of minds at issue. But only the justices themselves can ultimately decide, with their few minds, whether and when to accept the views of the many minds who counsel them. This unavoidable decision by few minds whether to accept the counsel of many minds forms a kind of epistemic bottleneck, a point to which I return in II.C. Moreover, if we expand the lens this way, we must also expand the lens in similar ways when comparing the epistemic competence of the justices with that of other institutional actors, say legislators, who enjoy elaborate informational support from staff, intralegislatory agencies such as the Congressional Research Service, and interest groups. Our institutional comparisons must be methodologically consistent, a point to which I return in II.D.

The important point here is just that specifying exactly whose minds are at issue matters a great deal. There are potentially critical distinctions between (1) the minds of many participants in social customs and traditions; (2) the somewhat fewer minds of ordinary common law judges developing ordinary precedents over time; and (3) the even fewer minds of Supreme Court justices developing constitutional precedents over time. Many-minds arguments in legal theory, particularly arguments for developing constitutional law through common law methods, gain rhetorical traction by running together (1), (2) and (3), with considerable loss of precision.

B. More Minds, Worse Minds

A basic problem for many-minds arguments is that, under identifiable conditions, more minds can be worse minds -- not by happenstance, but because an increase in the number of minds itself causes a reduction in the quality of each mind. An uninteresting version of this arises under the Jury Theorem when average individual competence is less than .5 (in the binary case); when this is so, adding more members to the group will drive group competence downwards towards zero. Likewise, there is a tradeoff between numerosity and average competence,⁸⁶ in the sense that large numbers of minds can more

⁸⁵ A.C. Pritchard & Todd J. Zywicki, *Finding the Constitution: An Economic Analysis of Tradition's Role in Constitutional Interpretation*, 77 N.C. L. REV. 409, 489-93 (1999).

⁸⁶ Bernard Grofman et al., *Thirteen Theorems in Search of the Truth*, 15 THEORY & DECISION 261, 270 (1983).

than compensate for lower individual competence, so long as that competence is on average better than random. But this is an uninteresting case because the average individual competence is still given exogenously. What gives the problem a sharp edge is the possibility that competence might be endogenous to numbers. Increasing the number of minds might have collateral causal effects that systematically make minds worse.

Where this endogenous effect obtains, the risk is that moving from few to many minds creates gains on one epistemic margin but losses on another. The losses may be greater than the gains or the overall effect may just be that the two margins cancel out, meaning that the institutional designer is at best running in place. I will touch on some mechanisms that can produce this sort of effect, and show that the problem is not at all confined to the Jury Theorem. Analogous problems arise for other types of many-minds arguments.

In general, there are three classes of mechanisms that might cause an endogenous reduction in competence as numbers increase: selection effects, incentives, and emotional and social influences. I will examine each in turn.

1. Selection Effects

The first mechanism involves constraints on selection. Madison observed that “the larger the number [of representatives], the greater will be the proportion of members of limited information and of weak capacities.”⁸⁷ Here Madison was echoing, and perhaps even following,⁸⁸ a famous observation of Condorcet, who believed that as the number of minds increases, average competence decreases, at least in elected legislatures:

A very numerous assembly cannot be composed of very enlightened men. It is even probable that those comprising this assembly will on many matters combine great ignorance with many prejudices. Thus there will be a great number of questions on which the probability of the truth of each voter will be below $\frac{1}{2}$. It follows that the more numerous the assembly, the more it will be exposed to the risk of making false decisions.⁸⁹

There is nothing in this passage about the incentives of each to take account of the information held by others, nor is there any suggestion that a more numerous assembly will be more prone to gusts of collective emotion or rhetorical manipulation of some by others. Rather the suggestion seems to be that epistemic competence is an extremely scarce resource. It just turns out to be hard to select a large legislature whose average competence will be greater than $\frac{1}{2}$ (in the binary case); beginning with the most competent, we must dip further and further into the barrel to fill up a large legislature, and by the time we are done average competence has fallen below the critical threshold.

⁸⁷ THE FEDERALIST NO. 58, at 360 (James Madison) (Clinton Rossiter ed. 1961).

⁸⁸ On historical connections, and perhaps influence, between Condorcet and Madison, see Nicholas Quinn Rosenkranz, *Condorcet and the Constitution: A Response to The Law of Other States*, 59 STAN. L. REV. 1281 (2007).

⁸⁹ Marquis de Condorcet, *An Essay on the Application of Mathematics to the Theory of Decision Making* (1785), reprinted in CONDORCET: SELECTED WRITINGS 33, 49 (K. Baker ed., Bobbs-Merrill 1976).

The same claim might be made about other institutions, such as courts.⁹⁰ Montesquieu remarked, of a Parisian court, that “decisions go by majority vote, but it is said that experience has shown that it would be better to follow the minority opinion. Which is natural enough, for there are very few good minds, and everyone agrees that there is an infinite number of bad ones.”⁹¹ There is a double irony here. Even if one might prefer the minority’s view because epistemic competence is sharply limited, it is paradoxical to infer that epistemic competence is sharply limited from the fact that everyone thinks so.

2. Incentives and Epistemic Free-Riding

The second way in which an increase in numbers can make epistemic outcomes worse is through incentives, rather than selection effects. Bentham noted that “[t]he greater the number of voters the less the weight and the value of each vote, the less its price in the eyes of the voter, and the less of an incentive he has in assuring that it conforms to the true end and even in casting it at all.”⁹² This is familiar from democratic theory as the problem of rational ignorance; it applies not only in the setting of mass elections, but in any setting where the Jury Theorem might otherwise apply.⁹³ A related phenomenon is the information cascade, in which individuals rationally allow the presumed information of others to swamp their private judgments.⁹⁴

The import of these problems is that increasing numbers of voters rationally free-ride on the informational competence of other voters, thus decreasing average competence and undermining the jury-theoretic hope that given better-than-random competence, sheer numbers will tell. On particular assumptions, of course, these problems are not insuperable,⁹⁵ as is always true where the Jury Theorem is at issue; on especially optimistic assumptions, rationally ignorant voters might simply abstain, in which case informed voters will dominate the turnout. But the epistemic free-riding problem is chronic and built into the very structure of the Theorem.

⁹⁰ As to selection effects in nongovernmental organizations, it has been claimed that internet-based networks of social production initially benefit from a small set of elite participants, but are then swamped by an influx of “trolls” when the network becomes well-known. See Lior Jacob Strahilevitz, *Wealth Without Markets?*, 116 YALE L.J. 1472, 1493-95 (2007) (reviewing YOCHAI BENKLER, *THE WEALTH OF NETWORKS* (2006)).

⁹¹ CHARLES DE SECONDAT MONTESQUIEU, *PERSIAN LETTERS* 167 (C.J. Betts trans., Penguin 1973) (1721).

⁹² Quoted in JON ELSTER, *EXPLAINING SOCIAL BEHAVIOR* 413 (2007).

⁹³ See Christian List & Philip Pettit, *An Epistemic Free-Riding Problem?*, in KARL POPPER: *CRITICAL APPRAISALS* 128 (Philip Catton & Graham Macdonald eds., 2004). In social psychology, the general problem of free-riding is called “social loafing,” and when applied to the epistemic performance of groups, has been called “cognitive loafing.” See Mark Seidenfeld, *Cognitive Loafing, Social Conformity, and Judicial Review of Agency Rulemaking*, 87 CORNELL L. REV. 486 (2002).

⁹⁴ For an overview of these phenomena, see Sushil Bikhchandani, et al., *Learning from the Behavior of Others: Conformity, Fads, and Informational Cascades*, 12 J. ECON PERSP. 151 (1998). For the effects of diversity in counteracting information cascades and social conformity, see generally Cass R. Sunstein, *WHY SOCIETIES NEED DISSENT* (2003).

⁹⁵ Minoru Kitahara & Yohei Sekiguchi, *Condorcet Jury Theorem or Rational Ignorance?* 4 (rev’d Jan. 31, 2006), available at <http://wakame.econ.hit-u.ac.jp/~riron/Workshop/2006/sekiguchi06.pdf> (showing conditions under which “[e]ven if the amount of information acquired by each voter is small, the amount of aggregated information can be large enough to [reach] the correct decision”).

In the context of many-minds arguments from evolution and tradition, there is a parallel to the problem of epistemic free-riding. The problem is best explained by reference to Burke's familiar epistemic argument for tradition:

We are afraid to put men to live and trade each on his own private stock of reason; because we suspect that this stock in each man is small, and that the individuals would do better to avail themselves of the general bank and capital of nations and of ages. Many of our men of speculation, instead of exploding general prejudices, employ their sagacity to discover the latent wisdom which prevails in them.⁹⁶

This passage, despite the praise that has been heaped upon it, seems to verge on the self-contradictory.⁹⁷ It is afflicted with a kind of Burkean paradox, one that Burke himself failed to recognize: if many participants in the development of the custom or tradition or line of precedent act as Burke recommended, then the informational value of the custom or tradition or line of precedent is lower to that very extent, because there are fewer independent minds contributing to the collective wisdom.⁹⁸ A strategy that is individually rational for judges at any given time -- following custom or tradition or precedent -- is harmful to all if followed by all, because it drains custom or tradition or precedent of any epistemic value. The best contributions to the stream of custom or tradition or precedent occur when individuals exercise their unaided reason. Those who rely on custom or tradition or precedent on the ground that it is the "bank and capital of nations and of ages" make withdrawals from the common pool of information, for their private benefit; those who exercise their unaided reason contribute to the common pool, for the good of future decisionmakers.⁹⁹

The Burkean paradox is not an all-or-nothing affair. Perhaps some judges in the stream of precedent or tradition have contributed independently, while some have not, in which case the informational value of that stream must still be discounted appropriately, but not to zero. Moreover, individual judges might adopt an intermediate approach, according to which they give some but not complete deference to the views of the past, and correlatively think for themselves to some degree or in some circumstances. This will alleviate the paradox, but only at the price of diluting the claimed benefits of following tradition in the first place. Burkeanism and the Burkean paradox, that is, have a sliding-scale relationship: the more strongly Burkean the judge's decision rule, the stronger the paradox, and reducing the force of the paradox requires a reduction of the commitment to Burkeanism itself.

⁹⁶ EDMUND BURKE, REFLECTIONS ON THE REVOLUTION IN FRANCE 74 (Frank Turner ed., Yale Univ. Press 2003) (1790).

⁹⁷ This paragraph is adapted from Vermeule, *supra* note 21, at 1498-99.

⁹⁸ See Michael Moore, *supra* note 44, at 269 (1996); cf. Posner & Sunstein, *The Law of Other States*, 59 STAN. L. REV. at 163-64 (making a similar point in the setting of international and comparative law).

⁹⁹ In principle, judges might prevent the Burkean paradox from arising by issuing opinions that record their independent judgments while basing their actual decisions on precedent. However, this is rarely observed in real-world institutions, and for good economic reason. Judges decide on the basis of precedent in part to conserve on the costs of decisionmaking. To incur the costs of forming an independent judgment that, by hypothesis, will not affect the current decision is to provide a benefit only to future judges and is thus a contribution to an informational public good; many judges will free-ride, and the informational public good will be underproduced.

Similar problems of collective action can arise in deliberative settings in which the focus is on Aristotelian pooling of perspectives. Here the problem is free-riding on the sincerity of others. Each deliberator may speak strategically, taking the sincerity of others as a parameter while hoping to nudge outcomes in the direction of his own interests. The others, however, may reason likewise. As against Aristotle’s metaphor, in which “a feast to which many contribute is better than a dinner provided out of a single purse,” diners who know they will split the check pro rata will often order more than they would if paying the full price, hoping to externalize part of the cost of their own meal onto others (and perhaps failing to realize that others will do the same).

3. Emotions and Social Influences

Finally, more minds may be worse minds because crowds tend to interact in pathological ways. On this view, increasing numbers create emotional and social influences that undermine epistemic competence or the preconditions for successful deliberation. Madison viewed the problem of legislative numbers – both in absolute terms, and as a ratio of representatives to eligible voters – as a kind of optimization problem, trading off declining epistemic benefits against increasing epistemic costs as numbers increase. Increasing the number and ratio of representatives in the House would, up to a certain point, improve deliberation, in part because representatives would hold more fine-grained information about local conditions. However, past the optimum, the epistemic cost of numbers starts to tell:

The truth is that in all cases a certain number [of representatives] at least seems to be necessary to secure the benefits of free consultation and discussion, and to guard against too easy a combination for improper purposes; as, on the other hand, the number ought at most to be kept within a certain limit, in order to avoid the confusion and intemperance of a multitude. In all very numerous assemblies, of whatever characters composed, passion never fails to wrest the scepter from reason. Had every Athenian citizen been a Socrates, every Athenian assembly would still have been a mob.¹⁰⁰

It is not clear that the effects of assembly size on emotion are as Madison posited. With size tends to come diversity – of information, emotional proclivities and social background – and diversity may counteract emotional and social influences, or break up informational or reputational cascades. On the other hand, everyone has experienced the intensity with which emotions are suddenly transmitted through large crowds, a phenomenon whose causes are as yet poorly understood. Madison’s speculation, although rejected outright by many sociologists,¹⁰¹ captures an enduring concern.

4. A Note on Simultaneous and Sequential Decisionmaking

An important institutional issue, one that is pervasive in the legal system, underlies several of the points made above. Simultaneous and sequential decisionmaking are very different; we cannot speak in any simple way of extending over time the Jury Theorem, or

¹⁰⁰ THE FEDERALIST NO. 55 (James Madison), at 342 (Clinton Rossiter ed. 1961) (emphasis added).

¹⁰¹ The classic treatment, supportive of Madison, is Gustave LeBon, *LA PSYCHOLOGIE DES FOULES* (1895). As against Madison and LeBon, see Carl J. Couch, *Collective Behavior: An Examination of Some Stereotypes*, 15 SOCIAL PROBLEMS 310 (1968) (arguing that crowds are not systematically more emotional or less rational than individuals).

the Hayekian division of knowledge, or Aristotelian deliberation, just as we might extend these things over space.¹⁰² Sequential decisionmaking in which decisions are revealed as they are made permits various forms of free-riding, informational and reputational cascades, strategic abstention, and bandwagon effects that may undermine the epistemic competence of many minds.

The problem is that sequential decisionmaking is the ordinary condition of the legal system. Bentham observed that the simultaneity of legislative voting dampened “undue influence,” because legislators vote in ignorance of how other legislators have actually voted.¹⁰³ For these reasons, Bentham recommended that legislatures use simultaneous decisionmaking. However, in modern legislatures and other decisionmaking committees, it is rare that everyone votes without knowledge of how others have voted, except where issues are so uncontroversial that voice voting or a show of hands is used. For controversial issues, practices such as formal or informal roll-call voting entail that voting occurs sequentially, with knowledge by later voters of how earlier voters have voted.¹⁰⁴ In the United States Supreme Court, the Justices vote sequentially in order of seniority. In mass elections, of course, voters invariably vote sequentially with knowledge of how others voted, and such elections are especially fertile ground for various forms of cascades, bandwagons, free-riding and strategic abstention.¹⁰⁵

Of special importance for legal theory is that a system of precedent is a system of sequential decisionmaking in which voters know the decisions of earlier voters. Even where there would be epistemic value in the aggregation of simultaneous legal judgments from many judges or other minds, one cannot straightforwardly infer that there would be equivalent epistemic value in precedent, seen as a system for aggregating the judgments of many minds over time. Far from representing a set of legal judgments that have stood “the test of time,” a body of precedent generated sequentially may embody reduced epistemic value. In place of the metaphor of the test of time, we might substitute another metaphor, seeing a line of precedent as a kind of judicial fad or fashion¹⁰⁶ that does not even presumptively embody the contributions of many minds. Precedential cascades are no mere possibility;¹⁰⁷ they have actually been observed under ordinary conditions.¹⁰⁸

None of this implies that sequential decisionmaking is always worse than simultaneous decisionmaking from an epistemic perspective. Quite the contrary, under some conditions it can be superior, especially if later decisionmakers acquire useful information from observing the actions of predecessors. But in the standard models of epistemic free-riding and information cascades that we have mentioned, sequential

¹⁰² Compare SUNSTEIN, *supra* note 1, at 122-26.

¹⁰³ JEREMY BENTHAM, *POLITICAL TACTICS* 106–09 (Michael James et al. eds., 1999).

¹⁰⁴ Marco Battaglini et al., *Efficiency, Equity, and Timing of Voting Mechanisms*, 101 *AM. POL. SCI. REV.* 409, 409-10 (2007). I was wrong to say, in an earlier paper, that “[i]n most legislatures on most issues, voting occurs relatively simultaneously.” Vermeule, *supra* note 21, at 1508.

¹⁰⁵ See Steven Callander, *Bandwagons and Momentum in Sequential Voting*, 74 *REV. ECON. STUD.* 653 (2007).

¹⁰⁶ Cf. Cass R. Sunstein, *On Academic Fads and Fashions*, 99 *MICH. L. REV.* 1251 (2001).

¹⁰⁷ For a skeptical account, see Eric Talley, *Precedential Cascades: An Appraisal*, 73 *SO. CALIF. L. REV.* 87 (1999).

¹⁰⁸ Andrew F. Daughety & Jennifer F. Reinganum, *Stampede to Judgment: Persuasive Influence and Herding Behavior by Courts*, 1 *AM. LAW. & ECON. REV.* 158 (1999).

decisionmaking is the crucial precondition for the problem. Some experimental evidence confirms the existence of the problem, although other evidence underscores the potential benefits of sequential decisionmaking.¹⁰⁹ So the fair conclusion, given the state of the evidence, is that while sequential decisionmaking is not necessarily worse, it is always an issue; many-minds arguments must be sensitive to the details of the decisionmaking structure.

C. Epistemic Bottlenecks and Related Problems

Madison also argued that “in all legislative assemblies, the greater the number composing them may be, the fewer will be the men who will in fact direct their proceedings. . . . The countenance of the government may become more democratic, but the soul that animates it will be more oligarchic.”¹¹⁰ As numbers increase, a nominal group of many minds will tend, in fact, to be dominated by few minds. Indeed, this is not only inevitable, but may actually be desirable for the many themselves, at least where direction by the few is necessary for the many to take any action or to form any coherent collective view. Still, the tendency for many minds to be directed by few undermines the epistemic superiority that many minds would otherwise display.

Suppose that we have a well-specified many-minds argument, stating clearly whose minds are at issue, and also that all members of the relevant population vote or judge or deliberate or act independently, so that there is no free-riding and no Burkean paradoxes or herd behavior. Still, the superior epistemic judgments of many minds may simply be unusable by the legal system. The problem is that those judgments will at some point have to be funneled or refracted through the judgments of a much smaller group, perhaps a single mind, and this will result in a kind of epistemic bottleneck or chokepoint. The judgments of many minds may be the input to a decisionmaking process, but if the structure of that process requires or allows few minds to accept or reject the many-minded judgment, or even just to interpret it, then the resulting decision may be little better than if the one mind had simply decided for itself, right from the start.

Bentham applied this idea to the incorporation of custom into common law decisionmaking. Suppose that customs or traditions – of the broader society, not of the judiciary -- are not self-defining or self-applying; alternatively, suppose that the content of the custom is quite clear in the given case, but that judges have discretion in whether or not to incorporate the custom. The few minds of the judges may distort the custom, misconceive it, or reject it in favor of their own, quite erroneous, judgments. If customs are refracted through judicial decisions, then they need have no better epistemic credentials than do the judges themselves.¹¹¹

In the limiting case -- the nightmare scenario for many-minds arguments -- a single judge, perhaps of lower than average competence, might be the chokepoint by virtue of the contingent politics of the judicial system. Suppose that on the high court of the jurisdiction a nine-member court is routinely split, four to four, and that one judge of low epistemic

¹⁰⁹ Battaglini et al., *supra* note 104.

¹¹⁰ THE FEDERALIST NO. 58, at 360-61 (James Madison) (Clinton Rossiter ed., 1961).

¹¹¹ Cf. Jeremy Waldron, *Custom Redeemed by Statute*, 51 CURRENT LEGAL PROBS. 93, 100 (1998)

(“Bentham argued that once they come into the hands of the judges, customs tend to be ill-used and subjected to arbitrary and unpredictable modifications.”).

competence is routinely the swing vote. In these circumstances a many-minds argument for the epistemic credentials of tradition, or custom, or a long line of judicial precedent, actually boils down to an argument for tradition or custom or precedent as refracted through the mind of the epistemically limited judge. That judge will in effect be the only one who interprets and applies the relevant tradition or custom or precedent; many minds will be funneled through one.

The same holds for the argument that epistemically limited judge should defer to the commands or policy choices embodied in statutes, because a large group of legislators, deliberating or aggregating their information, have reached an epistemically impressive judgment. The statute may plainly rule out some results but in hard cases, the ones that reach appellate courts, the swing judge will have a broad scope to make his own (low-competence) judgment about whether to accept the legislative judgment, and about what that judgment is best understood to mean. The resulting decision may or may not be good, but many-minds arguments will not establish whether it is; all will be reduced to the performance of a single mind or a small group.

I have used an example from the judicial setting for vividness, but of course the same problem may hold, with appropriate modifications, in other institutions. Even if legislators of high average competence could pool their many minds, the legislative leadership may form a kind of chokepoint that prevents them from doing so; perhaps the wisdom of the legislative multitude must be approved by, or at least refracted through, the mind of a Nancy Pelosi. Similar problems obtain in the executive branch. Although the executive is a they, not an it, still the hierarchical structure of the executive usually implies that at some point a decision supported by many experts or mid-level officials will be funneled upward to a chokepoint, coming to rest on the desk of a single mind who can approve, or disapprove, or modify, or interpret, before issuing a final decision. In this setting, as in the others, it is no good to say that we can just urge the one or few minds to accept the conclusions of many minds. The fact that one or few minds must unavoidably make the decision, with limited epistemic competence, whether and when to accept the counsel of many minds is precisely what constitutes the epistemic bottleneck.

Epistemic bottlenecks are only one of a class of related problems that have been insufficiently explored. Machiavelli argued that “a multitude without a head is useless”;¹¹² an undifferentiated mass of people cannot make their views known – even if they have common views – without speaking through a smaller subgroup or sole representative. Once that representative is appointed, a kind of epistemic slack arises: even if the leader shares the preferences of the group, she will inevitably filter the group’s common views or plans through her own, more limited understanding. Although this may distort the group’s views or plans, the tradeoff is that absent this distortion the group’s view may never be expressed at all and its plans may never result in action. Indeed, to coordinate on a group judgment or belief or view in the first place, many minds need an epistemic agenda-setter to help them sort between the possibilities. Just as with preference-based choices, so too with epistemic choices: decisions may be sensitive to the order in which they are presented,

¹¹² NICCOLO MACHIAVELLI, DISCOURSES ON LIVY, bk. 1, ch. 44 (Harvey C. Mansfield & Nathan Tarcov trans. 1996).

and where they are, the outputs of many minds will be structured by the views of the few agenda-setters.

Overall, there is an epistemic analogue to the iron law of oligarchy.¹¹³ The inevitability of epistemic chokepoints, epistemic slack, and epistemic agenda-setting makes some types of many-minds arguments seem utopian; “the wisdom of crowds” becomes “the wisdom of the chaperones.”¹¹⁴ Many minds inevitably require the leadership of few minds in order to form and express any views or to get things done. Where this is so, the epistemic superiority of the many is constrained by the imperatives of organization for collective action.

D. Many Minds vs. Many Minds: The Problem of Institutional Comparisons

A final problem for the application of many-minds arguments to law involves comparative epistemic competence across institutions. The problem arises because many-minds arguments typically compare the one or the few with the many. A main point of the Jury Theorem, for example, is that group competence can in principle exceed that of the group’s most competent single member. Hayekian or Burkean evolutionary arguments for the epistemic power of the common law compare the cumulative wisdom of many judges, over time, with the unaided reason of a single judge or small judicial panel. Aristotle’s metaphors compare the pooled perspectives of the many with the partial perspectives of the “few good.” I will call these one-many comparisons, and I will suggest that they are of little utility for legal theory and institutions. Even if one-many comparisons of this sort succeed, the legal system typically presents a very different type of issue: many-many comparisons, in which institutions staffed by many minds are on both sides of the comparison.

Recall “common law constitutionalism” – the idea that judge-made doctrine should fill in ambiguous, vague, or aspirational provisions of a written constitution (“equal protection of the laws”). When a statute is challenged as inconsistent with constitutional common law, we do not have a one-many comparison between the unaided reason of a single judge and the collective wisdom of the many judicial minds that participated in forming the line of precedent. Rather we have a comparison between many judicial minds and the many legislative minds who voted for the statute, implicitly or explicitly deeming it constitutionally valid (if the legislators acted in good faith, an issue I take up below). Common law constitutionalists must beware a fallacious slip from one comparison – between the aggregated wisdom of many judges over time, on the one hand, and a few judges exercising their unaided reason today, on the other – to a very different comparison between the wisdom of present judges and the wisdom of present legislators. The point is not to assert that the epistemic capacities of legislatures are superior to those of the judges; it is that no amount of comparing one judge to many judges can supply the answer to that very different institutional comparison.

¹¹³ See ROBERT MICHELS, *POLITICAL PARTIES* (5th ed. 2007).

¹¹⁴ See Chris Wilson, *The Wisdom of the Chaperones: Digg, Wikipedia, and the Myth of Web 2.0 Democracy*, SLATE (Feb. 22, 2008). For research showing that 1% of Wikipedia users are responsible for about half of the site’s edits, see <http://asc-parc.blogspot.com/2007/05/long-tail-and-power-law-graphs-of-user.html>.

Here a useful idea stems from the 19th-century legal theorist James Bradley Thayer, who argued that courts engaged in constitutional review should defer to legislatures unless the statute is clearly unconstitutional or irrational.¹¹⁵ Thayer's rather vague suggestion was that this regime would be beneficial because of legislators' superior "judgment." We can put analytic backbone into Thayer by reading him in epistemic terms, more particularly in Condorcetian terms.¹¹⁶ Under plausible conditions, legislative minds will be more likely than judicial minds either to identify preference-independent right answers, or to track what a fully accurate poll of public preferences would reveal. Structural features of modern legislatures give them powerful Condorcetian advantages, especially the sheer number of legislators; their powerful tools for acquiring information, which raises average competence; and the relative diversity of the legislators along dimensions of class, profession, and geography, which reduces the correlation of biases as compared to the more homogeneous judiciary.

It may be that legislators motivated by constituent pressures will ignore the issue of the statute's constitutional validity, rather than trying to get the constitutional question right. But this shows why the possibility of a polling-model interpretation of Condorcet matters. In that interpretation, the aim is precisely to track public preferences through an accurate poll, in which case legislators' relative political accountability and superior information about public preferences is a good, not a bad; it makes them a more accurate sample group than the judges. Thus Bentham implicitly invoked a polling-model version of the Jury Theorem when he wrote:

As to 'common reason,' or the reason of the majority of the people who use their reason about the matter, whose reason is it most to be apprehended should run counter to it? That of many hundred [members of Parliament] chosen the greater part of them by the people . . . or that of four [judges], appointed by the Crown.¹¹⁷

Moreover, even if the aim of the legal system is to obtain preference-independent right answers, judicial motivations might be just as ideological or partisan or political as legislative motivations.¹¹⁸ One should assume the same motivations on both sides of the comparison in order to compare like with like, and to isolate the question of epistemic capacities. And then it is hardly obvious that many legislative minds are epistemically inferior to many judicial ones.

To be sure, whether judges should ultimately adopt a regime of Thayerian deference to legislation will depend on the details of the institutional arrangements. Consider the issue, canvassed above, of sequential versus simultaneous voting, and the problem that the decision whether and when to defer to an epistemically impressive legislature may itself be channeled through an epistemic chokepoint created by a few low-competence judges. In some domains, moreover, there may also be a type of

¹¹⁵ See James Bradley Thayer, *The Origin and Scope of the American Doctrine of Constitutional Law*, 7 HARV. L. REV. 129 (1893).

¹¹⁶ The Condorcetian interpretation of Thayer is offered in Vermeule, *supra* note 21, at 1506-17. See also Cass R. Sunstein, *If People Would be Outraged by their Rulings, Should Judges Care?*, 60 STAN. L. REV. 155 (2007).

¹¹⁷ Jeremy Bentham, COMMENT ON THE COMMENTARIES 154 (Oxford University Press 1928).

¹¹⁸ For an overview of the evidence, see Thomas J. Miles & Cass R. Sunstein, *The New Legal Realism*, U. CHI. L. REV. (forthcoming), available at <http://ssrn.com/abstract=1070283>.

cumulative epistemic competence. On this view, even if legislatures have epistemic advantages relative to courts, one might nonetheless hold that adding courts to the mix improves the overall epistemic capacities of the system.

But this cumulative approach is problematic on several grounds. It cannot account for the most critical cases, in which courts engaged in constitutional review invalidate – not merely supplement or interstitially improve – legislative action. The testing ground for constitutional review generally, and common-law constitutionalism in particular, occurs where judges draw upon precedent, or tradition, or custom to overturn a legislative enactment, often a quite recent enactment. If legislators’ information is more recent than that of the judges who decided the precedents on which the invalidation is based, a version of Bentham’s point about “the wisdom of the cradle” arises: common-law constitutionalism pits the epistemic capacities of current legislators against that of past judges, who did not formulate their rules with knowledge of current conditions. In any event, to whatever extent past precedents do contain useful information, the legislators enacting statutes today can take the information into account; public precedents are as accessible to them as to the judges.

Indeed, even where legislative and judicial decisions are genuinely cumulative rather than alternative, adding judicial minds could make things worse, not better. Thayer famously worried that constitutional review would dilute legislators’ sense of responsibility.¹¹⁹ Interpreted epistemically, the concern is that legislators who anticipate constitutional review by judges may rationally invest less in gathering and processing information, producing a kind of epistemic free-riding or moral hazard: anticipating that the judges will catch their mistakes, legislators will for that very reason commit more mistakes. The epistemic free-riding might even be mutual, in a case of “after you Alphonse.” Legislators and judges might, on this picture, both reach fewer right answers than would either institution acting alone.

The ideas I have canvassed are speculative. I offer them not to prove their truth, but to illustrate my methodological point. In the theoretically crucial cases, there is little utility either in one-many comparisons between “the unaided reason of individuals” and “collective wisdom,” or in the possibility of cumulative epistemic competence. Rather, the key problems involve comparative epistemic competence across institutions, as in the questions of constitutional review discussed above. That the crowd or the multitude can be epistemically superior to a single individual or expert, under certain conditions, is a one-many comparison that gets little purchase on the many-many comparisons so central to legal theory.

Conclusion

I have expressed a qualified skepticism about the utility of many-minds arguments for the design and evaluation of legal institutions. Although many-minds argumentation is a heterogeneous category, comprising aggregative, evolutionary, traditionalist and deliberative ideas that bear only family resemblances to one another, still these different types of arguments are often treated together and there is good reason to do so. If there is a single feature common to all these arguments, it is that the one or the few cannot hope to

¹¹⁹ See JAMES BRADLEY THAYER, JOHN MARSHALL 107 (1901).

compare with the many in point of epistemic quality. Against this general view, I have made the following suggestions:

(1) “Many minds” is a slippery group, whose epistemic credentials depend on precisely who is included and excluded.

(2) As the number of minds increases, the quality of minds may decrease endogenously, due to selection effects, incentives for rational ignorance and free-riding, and emotional and social influences.

(3) There is an epistemic analogue to the iron law of oligarchy: many minds require the help of an epistemic agenda-setter and cannot speak or act except under the leadership of the few, which gives rise to epistemic chokepoints and epistemic slack.

(4) In the legal system, one-many comparisons are rare, while many-many comparisons are ubiquitous.

Of these suggestions, (1) and (4) bear upon the methodological utility of many-minds arguments, while (2) and (3) bear upon their persuasiveness – whether they show what they promise. We may understand these suggestions as filters through which many-minds arguments must pass in succession. I for one am skeptical that a large and interesting set of many-minds arguments will pass through all the filters and emerge as well-specified, plausible and useful for legal theory. But we shall see.