### EPISTEMIC DEMOCRACY AND POLITICAL LEGITIMACY

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# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ii				
ABSTRA	CT	v		
Chapter 1	: Introduction	1		
1.	Democracy	1		
2.	The Epistemic Value of Democracy	3		
3.	Political Legitimacy	6		
4.	Theories of Democratic Legitimacy	10		
5.	Epistemic Democracy	12		
Chapter 2	: The Deliberative Model of Democracy	15		
1.	Estlund's Model Deliberation	16		
2.	Anderson's Experimentalist Model	29		
3.	Deliberation and The Diversity Trumps Ability Theorem	33		
4.	Conclusion	44		
Chapter 3	: The Aggregative Model of Democracy	46		
1.	The Main Ideas of Condorcet's Jury Theorem	46		
2.	The Challenges to Condorcet's Jury Theorem	50		
3.	Responses to the Challenge of Independence	54		
4.	Conclusion	61		
Chapter 4	: Defending the Post-Deliberation Jury Theorem	63		
1.	Two Senses of Competence	63		
2.	Defending the Competence Assumption	70		
3.	Dietrich's Objections	73		
4.	Anderson and Estlund's Objection	77		
5.	Conclusion	79		
Chapter 5	: Epistemic value and Democratic Legitimacy	81		
1.	Rejecting Epistemic Theories of Democratic Legitimacy	81		
2.	A Purely Proceduralist Argument for Democratic Legitimacy	88		
3.	Conclusion	100		
Chapter (	5: Estlund's Epistemic Proceduralism	102		
1	The Main Claims of Enistemic Proceduralism	102		

2.	Rejecting the Qualified Acceptability Requirement	106
3.	Estlund's Argument for EC2	111
4.	Conclusion	117
Chapter '	7: Conclusion	119
Bibliogra	phy	124
VITA		129

#### **ABSTRACT**

My dissertation aims to answer two questions: (1) Is democracy epistemically valuable? (2) Is the epistemic value of democracy, if it has any, necessary for justifying its legitimacy? I argue that democracy in certain form can be epistemically valuable. However, I also argue that the epistemic value of democracy is not necessary for justifying its legitimacy. To defend the epistemic value of democracy, I propose a post-deliberation version of Condorcet's jury theorem. I argue that this version of the jury theorem can avoid the common challenges against the classic version. To reject the necessity of epistemic value for democratic legitimacy, I argue that, given that the epistemic value of democracy is subject to disagreement, it cannot be used to justify legitimacy. In addition, I provide a purely proceduralist argument for democratic legitimacy, which appeals to the egalitarian principle that every citizens ought to be equally respected by the state. This argument, if succeeds, shows that the epistemic value of democracy is not necessary for justifying democratic legitimacy.

## **Chapter 1: Introduction**

This dissertation addresses the following two questions:

- 1. Is democracy epistemically valuable?
- 2. Is the epistemic value of democracy, if it has any, necessary for justifying its legitimacy?

The main purposes of this dissertation are to explain how democracy could be epistemically valuable (Chapters 2-4) and to show why the epistemic value of democracy is *not* necessary for its legitimacy (Chapters 5-6). This introductory chapter clarifies the core concepts and gives an overview of the major issues.

#### 1. Democracy

The two main questions of this dissertation are concerned with the epistemic value and legitimacy of democracy. I will therefore begin with a brief account of what I mean by democracy. In its general sense, democracy refers to a type of collective decision method characterized by its *inclusiveness* and *fairness*. Democracy is inclusive to the extent that it gives all parties whose interests will be influenced by the decisions opportunities to participate in the decision-making processes. Democracy is a fair decision method to the extent that it gives each participant an equal say in determining the results of political decision-making. Understood in this general sense,

i.e., as a type of decision method, democracy can be employed in various places and at different levels such as families, workplaces, states, international organizations, etc.<sup>1</sup> A family can be democratic, for instance, when the important decisions of the family are made collectively by all family members.

In the literature of democratic theories, however, theorists usually use democracy in a narrower sense. In their discussion, the term refers to democracy at the national level or to democratic *states*. This dissertation is also exclusively concerned with democratic states. Thus, democracy, throughout this dissertation, will refer to democratic state. A state, as I shall define it, is a structure of institutions for wielding supreme political power over all subjects within a territory, where to wield political power is to issue and coercively enforce commands (typically its laws, policies).<sup>2</sup>
Depending on the methods used in the essential components of political decision-making (e.g., legislation, elections of lawmakers or top public officials), a state can take different forms (e.g., monopoly, dictatorship, democracy). A state is democratic when it employs democratic decision-making method. More specifically, democracy is a form of state in which the citizens collectively authorize laws by directly voting for the laws or indirectly voting for the lawmakers and top public officials.<sup>3</sup>

Some theorists characterize democracy in terms of self-government. The distinctive feature of democracy, according to those theorists, is that in democracy people are self-governed, namely, the people and the government are "connected in

Philosophical Framework (Princeton, N.J.: Princeton University Press, 2008), 41.

<sup>1.</sup> See Mark E. Warren, "Democracy and the State," in *The Oxford Handbook of Political Theory*, ed. John S. Dryzek, Bonnie Honig, and Anne Phillips (Oxford; New York: Oxford University Press, 2006), 386.

<sup>2.</sup> This definition is adopted from Allen Buchanan's definition of state and legitimacy, Philpott's definition of sovereignty, and Estlund's definition of legitimacy. See Allen Buchanan, "Political Legitimacy and Democracy," *Ethics* 112, no. 4 (July 1, 2002): 689–719, doi:10.1086/340313; Dan Philpott, "Sovereignty," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Summer 2014, 2014, http://plato.stanford.edu/archives/sum2014/entries/sovereignty/; and David M. Estlund, *Democratic Authority: A* 

<sup>3.</sup> See Estlund, *Democratic Authority*, 38; Richard J. Arneson, "Defending the Purely Instrumental Account of Democratic Legitimacy," *Journal of Political Philosophy* 11, no. 1 (2003): 122.

terms of inputs and outputs." A state is democratic in terms of inputs if the people have freedom and ability to influence the actions of the government through electing government officials, contacting offices, and so on. A state is democratic in terms of outputs if the decisions (e.g., laws, rules, policies, etc.) made by the government indicate that the government is under the control of the people (e.g., the government does not make laws to disfranchise its subjects). Self-government distinguishes democracy from non-democratic states in which people are governed by others. For instance, in an oligarchic state people are governed by a small group of people. This is why some theorists define democracy simply as "collective self-rule."

Many currently existing states in our world claim to be democratic to some extent. However, this dissertation is not concerned with any of the actual democratic states. Instead, it is concerned with the *ideal* of democracy. In particular, it aims to justify the epistemic value and political legitimacy of democracy in some ideal form. The questions of whether any of the actual democratic states has epistemic value and is politically legitimate, despite their importance, will not be discussed in this dissertation.

#### 2. The Epistemic Value of Democracy

The first topic of this dissertation is the epistemic value of democracy. This section explicates the idea of epistemic value. I define the epistemic value of a decision-making procedure as its tendency to make correct decisions. Three points in this definition need to be explained. First, the correctness of a decision is used in a

<sup>4.</sup> Ellen Grigsby, *Analyzing Politics: An Introduction to Political Science*, 5th ed (Belmont, CA: Wadsworth Cengage Learning, 2012), 164.

<sup>5.</sup> Warren, "Democracy and the State," 382.

substantive sense rather than a procedural sense.<sup>6</sup> That is, if a decision is correct, it is because the decision itself meets certain standard independent of the decision-making procedure, and not because the decision is produced by a decision-making procedure that meets certain standard. For instance, the verdict made by a jury is correct in the substantive sense when the verdict corresponds with the fact (i.e., the verdict is "guilty" when the defendant is in fact committed to the crime, and the verdict is "not guilty" when the defendant is in fact innocent). The verdict may also be correct in the procedural sense, i.e., in the sense that the decision-making procedure (e.g., the trial and jury deliberation) used by the jury is fair or desirable. The epistemic value of decision-making procedures is concerned with their tendency to make correct decisions in the *substantive* sense rather than the procedural sense.

Second, the standard of correctness may vary depending on the nature of the decision problem. For example, in determining the correctness of a jury verdict, the standard is the fact of the world. When the defendant is in fact guilty, the correct decision is "guilty." In elections for governmental officials, the standard is the competence of the candidates. If candidate A is more competent than other candidates for the position, the correct decision is voting for A. In legislation, the standard of correctness is usually the principle of justice. The correct decision in legislation is thus to vote for the just law. As will be indicated in Chapter 5, there are substantial disagreements about what the right standards of correctness are (e.g., people disagree about what justice consists in). For the purpose of this dissertation, however, we do not need to adopt any particular standard of correctness. In justifying for the epistemic value of democracy, my arguments do no rely on the rightness of any particular

<sup>6.</sup> For more discussion about the correctness of decisions, see Estlund, *Democratic Authority*, 99; Fabienne Peter, "Pure Epistemic Proceduralism," *Episteme* 5, no. 1 (2008): 33; S. Ingham, "Disagreement and Epistemic Arguments for Democracy," *Politics, Philosophy & Economics* 12, no. 2 (May 1, 2013): 137, doi:10.1177/1470594X12460642; Franz Dietrich, "The Premises of Condorcet's Jury Theorem Are Not Simultaneously Justified," *Episteme* 5, no. 1 (2008): 58.

standard. Instead, my arguments only appeal to the formal features of democratic decision-making procedure (e.g., deliberation and majority rule) and thereby avoid the controversies concerning the standards of correctness.

Third, the tendency of making correct decisions is measured in terms of probability. The epistemic value of a decision-making procedure is thus the probability of its choosing the correct alternative option among all options. In most cases, of course, the exact number of the probability cannot be determined. However, in order to for a decision-making procedure to be epistemically valuable or has a tendency to make correct decisions, the procedure must satisfy a minimum requirement—having a higher than random probability of choosing the correct alternative option. Suppose in a decision-making case there are *n* options, among which m options are correct. A random probability is the probability of m/n, and a random decision-making procedure is defined as a procedure that has an m/nprobability of choosing a correct option. Accordingly, an epistemically valuable decision-making procedure must have a greater than m/n probability of choosing a correct option. For instance, in choosing between two candidates, a random procedure is a procedure that has a 0.5 probability of choosing the more competent candidate. An epistemically valuable procedure, as defined above, must have a greater than 0.5 (e.g., 0.7) probability of choosing the more competent candidate.

Applying the general definition of epistemic value to democracy, we can define the epistemic value of democracy as its tendency to make correct political decisions. Here by *political* decisions I mean the decisions made in legislation and elections (i.e., what laws are made and which candidates are elected to be legislators or governmental officials). The minimum requirement for democracy to be epistemically valuable is that it has a higher than random probability of choosing the correct

options. For simplicity, the discussions in this dissertation will mainly focus on two-option cases. Thus, in order to be epistemically valuable, democracy must have at least a greater than 0.5 probability of choosing the correct decision. For some theorists, democracy is epistemically valuable in the minimum sense, namely, in the sense that it is epistemically better than random.<sup>7</sup> For some other theorists, however, democracy is epistemically valuable in a stronger sense, since democracy is not only epistemically better than random but also better than non-democratic decision-making procedures such as aristocracy.<sup>8</sup>

### 3. Political Legitimacy

Normative democratic theories are concerned with the justification of democracy. There are several senses in which democracy can be justified. For some theorists, to justify democracy is to show that democracy is itself desirable or more desirable than alternative forms of state. For some other theorists, to justify democracy is to show that democracy is politically legitimate or authoritative. This dissertation concerns the justification of the *political legitimacy* of democracy. Throughout this dissertation, the justification of democracy refers specifically to the justification of democratic legitimacy.

<sup>7.</sup> See Estlund, Democratic Authority.

<sup>8.</sup> See Hélène Landemore, "The Mechanism of Collective Intelligence in Politics," in *Collective Wisdom: Principles and Mechanisms*, ed. Hélène Landemore and Jon Elster (Cambridge; New York: Cambridge University Press, 2012), 251–89; Hélène Landemore, "Deliberation, Cognitive Diversity, and Democratic Inclusiveness: An Epistemic Argument for the Random Selection of Representatives," *Synthese* 190, no. 7 (May 2013): 1209–31, doi:10.1007/s11229-012-0062-6.

<sup>9.</sup> Thomas Christiano, "Debate: Estlund on Democratic Authority," *Journal of Political Philosophy* 17, no. 2 (June 2009): 228–40, doi:10.1111/j.1467-9760.2009.00331.x; William Nelson, "The Epistemic Value of the Democratic Process," *Episteme* 5, no. 1 (2008): 19–32.

<sup>10.</sup> Estlund, Democratic Authority, 41.

Political legitimacy, as I shall define it, is the *moral permissibility* of a state's use of coercive power to issue and enforce commands.<sup>11</sup> As many theorists notice, a common feature of all forms of state, including democracy, is the coercive nature of political power. As John Rawls says, the wielding of political power is coercive because it is "backed by the government's use of sanctions."<sup>12</sup> A state, regardless of its form, punishes or threatens to punish its subjects for their non-compliance.<sup>13</sup> The coercive nature of political power raises the question of political legitimacy: Under what conditions, if any, is it morally permissible for a state to issue and coercively enforce its commands? One of the main purposes of this dissertation is to identify the conditions for political legitimacy and provide an account for why democracy can satisfy those conditions.

Alternative senses of political legitimacy

I define political legitimacy as the *moral permissibility* of a state's use of coercive power to issue and enforce commands. However, not all authors use the term in this way. To sharpen the meaning of political legitimacy that will be used in this dissertation, it is useful to consider some other senses of legitimacy used by other authors and to highlight their differences from moral permissibility. Below I shall present three alternative senses of political legitimacy.

In the first alternative sense, legitimacy refers to the *moral power* of a state to impose duties on the subjects which they would otherwise not have.<sup>14</sup> This sense of legitimacy usually implies that the subjects owe a duty of obedience to the state. I

<sup>11.</sup> This definition draws on Buchanan's and Estlund's definitions of legitimacy. See Buchanan, "Political Legitimacy and Democracy," 689–90; Estlund, *Democratic Authority*, 2.

<sup>12.</sup> John Rawls, Political Liberalism (Columbia University Press, 1996), 136.

<sup>13.</sup> See Estlund, *Democratic Authority*; Christopher W. Morris, "State Coercion and Force," *Social Philosophy and Policy* 29, no. 1 (2012): 28–49.

<sup>14.</sup> A. John Simmons, "Justification and Legitimacy," *Ethics* 109, no. 4 (1999): 739–71; Fabienne Peter, "The Procedural Epistemic Value of Deliberation," *Synthese* 190, no. 7 (May 2013): 1253–66, doi:10.1007/s11229-012-0119-6.

shall refer to this sense of legitimacy as *political authority*, and refer to the correlated duty of obedience as *political obligation*. Political authority is distinct from legitimacy as moral permissibility, since the latter does not guarantee political authority. It does not follow from the permissibility or acceptability of the state's actions that its actions create moral obligations for the subjects to obey the state. Even though a state is permitted to coercively force you to obey its laws, it does not necessarily mean that you are morally obligated to obey just because it is required by the state.

The distinction between political authority and political legitimacy can be seen more clearly in non-political contexts. Suppose I intend to assault an innocent person. It is morally permissible for you to prevent me from doing that, either by using nonphysical powers (e.g., persuasion) or by using physical powers (e.g., to hold my arms). But it does not follow that you have an authority over me. For your having an authority over me means your commands will change my moral status by creating moral obligations on my part. In other words, if you have an authority over me, then I have obligations to do as you command just because it is your command. In the case above, although it is relatively clear that you are permitted to stop me from attacking an innocent person (*legitimacy*), it is not clear that you have an *authority* over me in the relevant sense (i.e., to change my moral status). Thus, legitimacy is not sufficient for authority.

Whether legitimacy is a necessary condition for political authority is a controversial issue. Although I'm more sympathetic to the view that these concepts are independent, I do not intend to defend this view here, since no argument in the following chapters will depend on the independence of these concepts. Both the legitimacy and authority of states are important questions in political philosophy, but

this dissertation is only concerned with political *legitimacy* understood as the moral permissibility of a state's use of coercive power.

In the second alternative sense, legitimacy is concerned with whether the state's use of coercive power is morally permitted by *justice*. Here justice is understood to mean what we morally owe others. In this sense, a state is legitimate if its use of coercive power does no personal wrongs to the subjects or other people. Legitimacy in this sense is weaker than legitimacy as moral permissibility. This is because justice, understood as what we morally owe others, may be a subset of morality: Justice is only concerned with interpersonal moral requirements, while morality in general may be concerned with both interpersonal and impersonal moral requirements. This allows the possibility that a state is permitted by justice but not permitted by morality in general because there might be some impersonal requirements that forbid the state's actions. What I mean by legitimacy is the overall moral permissibility of a state, which takes into consideration both the requirements of justice and the moral requirements other than justice.

The third alternative sense of legitimacy refers to the state's right to non-interference. Legitimacy in this sense implies that the subjects of the state and/or other states are not permitted to forcibly interfere with the state's use of coercive power. This sense of legitimacy is weaker than legitimacy as moral permissibility and legitimacy as justice, for a morally impermissible or unjust state may still have a right to non-interference. One example might be a case where the interference might impose significant cost on the subjects of the target state. In such as case, even though the state is not just or legitimate, it might still have a right to non-interference due to the potential cost. Some theorists might contend that the moral permissibility of a

<sup>15.</sup> Peter Vallentyne, "Justice in General: An Introduction," in *Equality and Justice: Justice in General*, ed. Peter Vallentyne (Routledge, 2003), xii.

state is closely related to its right to non-interference. I do not intend to address the issue of the relation between moral permissibility and right to non-interference. The purpose of the discussion here is to show that there are differences between legitimacy as moral permissibility and legitimacy in other senses such as a right to non-interference.

Political legitimacy, in my terminology, is thus different from the state's political authority, its justice, and its right to non-interference. The question of political legitimacy is that of the conditions under which the state's use of coercive power is morally permissible. Democracy, like other forms of state, is also subject to the challenge of political illegitimacy because it involves the use of coercive power. One of the main themes in democratic theories is to establish the grounds for the legitimacy of democracy. The next section introduces the main ways of accounting for democratic legitimacy.

#### 4. Theories of Democratic Legitimacy

The various theories of democratic legitimacy can be usefully sorted into three broad families—pure proceduralism, instrumentalism, and the mixed view. Below I introduce the main claims of each type of theory.

Pure proceduralism attempts to establish the ground of democratic legitimacy merely on the *intrinsic* qualities of democratic decision procedure.<sup>16</sup> It holds that democracy is legitimate just because democratic decision procedure satisfies certain

<sup>16.</sup> Thomas Christiano, "Knowledge and Power in the Justification of Democracy," *Australasian Journal of Philosophy* 79, no. 2 (2001): 197–215; Thomas Christiano, *The Constitution of Equality: Democratic Authority and Its Limits* (Oxford; New York: Oxford University Press, 2008); Jeremy Waldron, *Law and Disagreement* (Oxford; New York: Oxford University Press, 1999); Jeremy Waldron, "The Core of the Case against Judicial Review," *The Yale Law Journal*, 2006, 1346–1406.

intrinsic (i.e., consequence-independent) requirements. Depending on which intrinsic quality it appeals to, pure proceduralism takes different forms. Fairness proceduralism, for example, refers to the procedural fairness of the democratic decision procedure in its account of democratic legitimacy. Some deliberative democratic theorists, however, focus on the impartiality of democratic deliberation among individuals' convictions and reasons.

Instrumentalism attempts to account for democratic legitimacy by only referring to the instrumental value of democracy.<sup>17</sup> It holds that democracy is legitimate just because it tends to produce better outcomes than non-democracy. Democratic legitimacy, according to instrumentalism, is grounded on the basis of the value of the outcomes democracy is expected to produce and not in any procedural values. There are various versions of instrumentalism, depending on which standards are used to evaluate the goodness of outcomes. For Mill, democracy is legitimate because it promotes the greatest welfare. But for Nelson and Riker, democracy is legitimate because it tends to produce just laws or protect liberty.<sup>18</sup> According Richard Arneson, democratic legitimacy relies on its capacity of protecting fundamental human rights.<sup>19</sup>

*Mixed views* of democratic legitimacy appeal to both procedural values and instrumental values of democracy. This type of theory claims that democracy is legitimate if and only if the democracy decision procedure meets both the intrinsic requirements and the instrumental requirements. Estlund advances a mixed view of democratic legitimacy. <sup>20</sup> According to Estlund's view, in order for a democracy to

<sup>17.</sup> Arneson, "Defending the Purely Instrumental Account of Democratic Legitimacy"; Richard J. Arneson, "The Supposed Right to a Democratic Say," in *Contemporary Debates in Political Philosophy* (Malden, MA: Wiley-Blackwell, 2009), 197–212; Steven Wall, "Democracy and Equality," *The Philosophical Quarterly* 57, no. 228 (2007): 416–38.

<sup>18.</sup> Thomas Christiano, "Freedom, Consensus, and Equality in Collective Decision Making," *Ethics* 101, no. 1 (1990): 151–81.

<sup>19.</sup> Arneson, "Defending the Purely Instrumental Account of Democratic Legitimacy."

<sup>20.</sup> David Estlund, "Beyond Fairness and Deliberation: The Epistemic Dimension of Democratic Authority," in *Deliberative Democracy: Essays on Reaons and Politics*, ed. James Bohman and William Rehg (Cambridge,

be legitimate, it must satisfy the intrinsic requirement of being procedurally fair and the instrumental requirement of being epistemically competent.

Recall the second main question that this dissertation aims to answer: Is the epistemic value of democracy, if it has any, necessary for justifying its legitimacy? Those three types of theories have different answers to this question. For the pure proceduralist, the epistemic value of democracy is not relevant to the justification of its legitimacy. According to instrumentalism and mixed views, however, the epistemic value of democracy is necessary for democratic legitimacy. In Chapter 5, I shall defend the pure proceduralist view of legitimacy and argue against instrumentalism and mixed views.

#### 5. Epistemic Democracy

Epistemic democracy is a broad approach to democracy concerned with the epistemic value of democracy and its relation to the moral justification of democracy (e.g., democratic authority or legitimacy). Some epistemic democrats focus on the assessment of the epistemic value of democracy and set aside the question of how epistemic value is related to the morality of democracy. They usually claim that democracy has certain epistemic value due to some mechanisms implemented in democratic decision-making, e.g., deliberation or majority rule.<sup>21</sup>

Some other epistemic democrats are not only concerned with the epistemic value of democracy, but also with the relation between the epistemic value of democracy and democratic legitimacy. They claim that democratic legitimacy depends, at least

Mass: MIT Press, 1997), 173–204. Also, see Buchanan, "Political Legitimacy and Democracy."

<sup>21.</sup> Christin List and Robert E. Goodin, "Epistemic Democracy: Generalizing the Condorcet Jury Theorem," *Journal of Political Philosophy* 9, no. 3 (2001): 277–306; Dietrich, "The Premises of Jury Theorem"; Landemore, "Collective Intelligence"; Landemore, "Deliberation, Cognitive Diversity, and Democratic Inclusiveness."

partly, on the epistemic value of democracy.<sup>22</sup> The stronger version of this view holds that democratic legitimacy *fully* depends on the epistemic value of democracy. The weaker version holds that democratic legitimacy *partly* depends on the epistemic value of democracy and partly on the intrinsic value of democracy. Epistemic democracy in this sense is either a form of instrumentalism or a mixed view of democratic legitimacy. The stronger version of epistemic democracy is a version of instrumentalism, because it attributes democratic legitimacy completely to the instrumental value of democracy. Epistemic value is an instrumental value because it is determined by the value of the outcomes produced by democratic procedure. The weaker version says that democratic legitimacy partly depends on the epistemic value of democracy and partly depends on the intrinsic value of democracy. This is a version of the mixed view, which holds that both intrinsic and instrumental values are relevant for legitimacy.

On the question of whether democracy has epistemic value, I agree with epistemic democracy that democracy is epistemically valuable due to the epistemic value of deliberation and majority-decision. However, I disagree with other theorists about how we account for the epistemic value of democracy. In Chapters 2-3 I shall criticize four models of epistemic democracy, and in Chapter 4 I shall propose a more promising model for justifying the epistemic value of democracy.

On the question of the relation between the epistemic value of democracy and democratic legitimacy, I disagree with epistemic democracy that democratic legitimacy either partly or fully depends on the epistemic value of democracy.

Instead, I think that democratic legitimacy can be justified without referring to the

<sup>22.</sup> Elizabeth Anderson, "The Epistemology of Democracy," *Episteme* 3, no. 1–2 (2006): 8–22; Estlund, *Democratic Authority*; Fabienne Peter, "Democratic Legitimacy and Proceduralist Social Epistemology," *Politics, Philosophy & Conomics* 6, no. 3 (October 1, 2007): 329–53, doi:10.1177/1470594X07081303; Peter, "Pure Epistemic Proceduralism."

epistemic value of democracy. I shall argue, in Chapter 5, that democratic legitimacy only depends on the intrinsic value of democracy. In Chapter 6, I shall criticize the most prominent epistemic theory of legitimacy—David's Estlund's epistemic proceduralism.

## **Chapter 2: The Deliberative Model of Democracy**

The epistemic value of democracy, as defined in the first chapter, is its tendency to make correct political decisions. In justifying the epistemic value of democracy, democratic theorists have developed two types of models—the *deliberative* models and the *aggregative* models. The deliberative models consider deliberation as the basis of the epistemic value of democracy, whereas the aggregative models attribute the epistemic value of democracy to the aggregative rules used in democracy (e.g., majority voting).

In this chapter, I examine three recently developed deliberative models of the epistemic value of democracy—David Estlund's model deliberation, Elizabeth Anderson's experimentalist model, and Hélène Landemore's model based on the Diversity Trumps Ability Theorem. An aggregative model will be examined in the next chapter. The purpose of this chapter and the next chapter is to indicate the problems with those models. A more promising model, which overcomes their problems, will be developed in Chapter 4.

In the first section, I examine Estlund's model deliberation and indicate three weaknesses of this model. In the second section, I examine Anderson's experimentalist model. I argue that Anderson's model shares the same problems with Estlund's model deliberation. The third section considers Landemore's model. I argue that, although Landemore's model overcomes the weaknesses of Estlund's and

<sup>1.</sup> Estlund, *Democratic Authority*; Anderson, "The Epistemology of Democracy"; Landemore, "Collective Intelligence."

Anderson's models, it has its own problems since it relies on two problematic assumptions.

#### 1. Estlund's Model Deliberation

Estlund argues that democracy is better than random decision procedures at making correct decisions.<sup>2</sup> What counts as a correct decision depends on the purpose of decision-making. For example, if the purpose is to make just laws, then the correct decisions are those that are just according to the right principles of justice. If the purpose is to make efficient policies, then the correct decisions are those that are most efficient. A random decision procedure can be understood as follows. When there are n alternative options, among which m options are correct, a random procedure will choose a correct option with a probability of m/n. To say that democracy is better than random is to say that democracy has a greater than m/n probability of choosing a correct option in such cases. For instance, when there are two candidates and one of them is competent for the position, a random procedure has a 0.5 probability of selecting the competent candidate. Democracy, if better than random, will choose the competent candidate with a greater than 0.5 probability. According to Estlund's view, democracy, when arranged properly, is better than random in the sense described above.

Estlund's argument for democracy's better-than-random epistemic value is divided into two main parts. The first part explains how an *ideal* form of democracy, called "model deliberation," can have better-than-random epistemic value. The second part explains how *actual* forms of democracy, by deviating from the ideal in

<sup>2.</sup> Estlund, Democratic Authority.

<sup>3.</sup> Ibid., 174.

certain ways, can be expected to perform better than random.<sup>4</sup> Here I want to focus on the first part of Estlund's argument. I argue that Estlund's argument fails to establish that model deliberation is epistemically better than random. Since the success of the second part of Estlund's argument depends on the success of the first part, my objections also imply that Estlund fails to justify the epistemic value of democracy in actual situations.

Before I examine Estlund's argument, two terminological points need to be clarified. First, since I am only concerned with the epistemic value of an ideal form of democracy in this section, "democracy" used in this section will refer to an ideal of democracy instead of any actual instance of the ideal. Second, since Estlund's conclusion is that democracy is epistemically better than random, the "epistemic value of democracy" discussed in this section refers to its better-than-random epistemic value. So, when I say that democracy is epistemically valuable in this section, what I mean is that democracy, in certain ideal form, is epistemically better than random.

Let me begin by briefly introducing Estlund's idea of model deliberation. Model deliberation specifies an ideal of democratic deliberation, in which the main sources of cognitive biases and errors can be excluded from deliberative process. Estlund provides a list of the main features of model deliberation. For example, in model deliberation, "all have equal time and power in the deliberation, all address the common good rather than merely some partial interests, all have certain capacities to recognize good arguments against their proposals and others, and so on." If democratic deliberation is organized in accordance with the restrictions listed above, Estlund argues, democracy can be expected to have a better-than-random tendency to

<sup>4.</sup> For the second part of Estlund's argument, see ibid., 184–205.

<sup>5.</sup> Ibid., 18.

make correct political decisions. In order to establish this claim, Estlund offers the following argument:

- P1. A randomly selected individual is likely to be better than a random procedure (at making correct political decisions).
- P2. A small group of individuals, after public deliberation, are likely to be better than a randomly selected individual.
- P3. A large group of individuals, after public deliberation, tends to be better than a small group of decision-makers.
- P4. In democracy, public deliberation involves a large group of individuals (i.e., all adult citizens).
- C. Thus, democracy tends to be better than a random procedure.<sup>6</sup>

Among the premises above, (P4) is self-evident and does not need further justification. (P1) – (P3), at first glance, appear to be empirical claims. So it might be thought that they can be verified by appealing to some empirical evidence about how individuals or groups actually perform in political decision-making. However, there are two reasons why these premises cannot be verified empirically. The first reason is that it is not clear that such evidence is yet available. Second, as mentioned above, Estlund is concerned with how individuals, groups, and democracy perform in *ideal* situations. Empirical evidence acquired from *actual* political decision-making situations, even if available, does not apply to ideal situations. Hence, the premises in Estlund's argument cannot be verified empirically. To justify those premises, Estlund

18

<sup>6.</sup> Ibid., 181.

offers some formal arguments, which appeal to the formal features of ideal deliberation. Below I examine Estlund's formal justification for (P1) - (P3).

Estlund does not provide explicit justification for (P1). I will try to provide a justification for (P1) on behalf of him. However, I will also indicate a potential problem with this justification. Let R stand for the randomly selected individual and G for the group from which R is selected. It is important to notice that the competence of R is not a fixed value. Rather, how likely R can make correct decision on a particular political issue may vary depending on whether there is public deliberation on that issue among the members of G. Call G a "deliberative group" when there is deliberation among the members of G, and call it a "non-deliberative group" when there is no deliberation among the members of G. Thus, whether an individual R randomly selected from G is likely to be better than random depends on whether G is a deliberative group or a non-deliberative group.

Now, suppose G is a non-deliberative group. If this is the case, it is not clear that R, a randomly selected individual from G, can be epistemically better than random. The reason is as follows. Political issues are complex and good decision-making requires an individual possessing a large amount of information. An individual, without discussing and communicating with other people, can only possess very limited amount of information, which is usually not enough for making good political decisions. Although it is possible that some members of G might be better than random even though there is no deliberation, the proportion of these better-than-random individuals to worse-than-random individuals is not clear. Without such information, we cannot determine how likely a randomly selected individual can be better than random.

Suppose, alternatively, that G is a deliberative group, from which R is randomly selected. On this supposition, Estlund may be able to provide the following justification for (P1). Since there is deliberation in G, individuals from G can obtain enough information by exchanging reasons with one another and correct their own mistakes by debating with others, and can thereby become better than random at making correct political decisions. Thus, Estlund may conclude that a randomly selected individual from such a deliberative group is likely to be better than random. However, there is a potential problem with this justification of (P1). The problem is that if R is selected from a deliberative group G, (P2) will be hard to justify. Let me now turn to (P2) and explain this problem in detail.

(P2) states that a small group of individuals, after public deliberation, are likely to be better than a randomly selected individual. In justifying this claim, Estlund appeals to two properties of deliberation. The first property is the information-pooling capacity of deliberation. In a large and diverse society, individuals have different interests and laws and policies have different effects on different groups of people. As mentioned above, a single individual only has limited, perhaps biased, knowledge about the interests of other people and the effects of the policies on other people. When deliberating together, however, a group of individuals are able to enlarge the pool of information by bring together the information each of them possesses. Thus, Estlund thinks that a group of individuals tend to make better decisions than a randomly selected individual because the former possess more information.

As Estlund notices, however, deliberation is not the only mechanism that can collect dispersed information. Markets and majority voting rules are some alternative mechanisms. So, it might be objected that the epistemic value of democracy can be explained by appealing to other mechanisms such as majority voting. To reply to this

objection, Estlund argues that deliberation has an additional advantage over markets and majority rules. In markets and majority rules, people are addressing the self-interested question, "What is the best decision for my interests?" In deliberation, by contrast, people are addressing the common question, "What is the best decision for the common good?" Estlund thinks that there would be more epistemic value if people are addressing the same question than if they are addressing different questions, so far as the epistemic goal is to make the correct decisions about what we ought to do.

By appealing to the information-pooling capacity of deliberation and the epistemic benefits of addressing common questions in deliberation, Estlund thinks that (P2) can be justified. However, this justification is not successful. Let R represent a randomly selected individual and G represent a small group of individuals. (P2) thus claims that if there is deliberation among the members of G (namely, G is a deliberative group), then G is likely to be more competent than G. To determine the truth of this claim, we need first determine how G is selected—Is G selected from G or from a non-deliberative group other than G?

Suppose R is randomly selected from a non-deliberative group other than G. In this case, (P2) might be justified. Given the epistemic benefits of deliberation, a deliberative group G is better than random, while a random individual selected from a non-deliberative group, as argued above, may be worse than random. However, Estlund cannot accept this assumption. As shown above, if R is selected from a non-deliberative group, (P1) is not justified.

In order for (P1) to be justified, Estlund has to assume that R is selected from a deliberative group G. However, (P2) cannot be justified given this assumption. Even if Estlund is right about the information-pooling capacity of deliberation and the

epistemic benefits of thinking about the same question, these features of deliberation cannot explain why a group G is more competent than an individual R randomly selected from G. The reason is that whatever epistemic benefits the group can achieve from deliberation, the individuals of the group can be benefited in the same way. For instance, the information-pooling capacity of deliberation helps the group to gather information from individuals and thereby enlarge the pool of information. The individuals of the group, however, also have access to the newly available information. In this sense, the group does not necessarily possess more information than the individuals of the group. Thus, it cannot be argued based on the epistemic benefits of deliberation that a deliberative group is likely to be better than an individual randomly selected from that group. Perhaps in some cases the group might perform better than a randomly selected individual. Yet it is not clear that on average the group is better than individuals. Also, even if a deliberative group is in fact better than a randomly selected individual from the group, Estlund fails to provide any justification for this claim. Now, we can see that the assumption under which (P1) can be justified—R is selected from a deliberative group—does not support (P2). This is why I said above that the justification for (P1) would render (P2) hard to justify.

As will be shown in the next chapter, in order to explain why a group is better than an individual member of the group, we have to appeal to the epistemic value of aggregative rules. In particular, I will argue that we need appeal to the Condorcet's Jury Theorem so as to explain why the majority of a group is more likely than an individual to make correct decisions. Deliberation itself, however, cannot provide

<sup>7.</sup> In practice, there are factors other than information that can influence group competence. For example, people may follow an opinion leader's views. However, since Estlund is concerned with idea deliberation, here I assume that the participants only make their judgments based on the reasons presented in the deliberation.

such an explanation. This indicates a serious limit of the deliberative model of democracy. That is, it can only explain the competence of individuals and cannot explain the competence of the group.

Let us consider (P3), the claim that a large group of individuals, after public deliberation, tend to be better than a small group of decision-makers. Estlund's justification for (P3) is as follows. The more participants a deliberation involves, the more information it will bring up. And the more information is available for a group, the better the decisions made by the group will be. This justification is problematic because it ignores the possibility that the average individual competence of the small group might be higher than that of the large group. Perhaps the epistemic benefits of higher average individual competence can outweigh the epistemic benefits of having more participants. In general, Estlund's justification only recognizes the importance of the amount of information in decision-making and ignores other factors such as an individual's capacity to use the information.

Estlund might respond that our justification for the epistemic value of democracy cannot be based on the comparisons between people's competences, because any such comparison would be "invidious" and therefore cannot be justified within public reason. However, this response is not satisfactory. Whether democracy has epistemic value is an empirical question. What is relevant here is whether the individuals are in fact competent. Whether their competence can be justified within public reason is not relevant. In order to establish that a large group is better than a small group, Estlund needs to show that the average individual competence of the large group is *in fact* not lower than that of the small group, whether or not the comparison can be justified within public reason.

<sup>8.</sup> Estlund, Democratic Authority, 33-36.

For the reasons presented above, Estlund's argument fails to establish that democracy is better than random. However, I think there is a better argument available for Estlund, which can be presented as follows:

- P1'. A large group of individuals, after public deliberation, is likely to be epistemically better than random.
- P2'. Democracy involves public deliberation among a large group of individuals.
- C. Therefore, democracy is likely to be epistemically better than random.

The difference between this revised argument and Estlund's original argument is as follows. In Estlund's original argument, the better-than-random competence of a large deliberative group is justified in an indirect way, namely, by showing that a large group is better than a small group, a small group is better than an individual, and an individual is better than random. This revised argument, by contrast, tries to show the better-than-random competence of a large deliberative group directly. Since the revised argument does not rely on those problematic premises, it can avoid the objections I raised against Estlund's original argument.

To justify (P1'), Estlund could argue as follows. A deliberative group is epistemically valuable mainly because of the information-pooling capacity of deliberation. Especially when the group involves a large number of individuals, the group can gather sufficient amount of information for making correct decisions. Moreover, in deliberation the individuals address the same question, which also improves the epistemic value of the group.

This revised argument, although better than Estlund's original one, is insufficient for justifying the epistemic value of democracy. Below I indicate three weaknesses of

this argument. First, Estlund does not provide any theoretical basis for his account of the epistemic value of deliberation. In particular, he does not explain why increasing the number of participants helps enlarging the pool of information in deliberation. More minds bring more relevant reasons into play only if those minds are cognitively diverse. If the participants are homogeneous, the pool of information will be the same regardless of the number of the participants. Thus, it is the greater diversity that accounts for the larger pool of information, although there being more people often implies greater diversity. Estlund's account fails to recognize, at least not explicitly, the role of diversity in explaining the epistemic value of deliberation.

Moreover, in order to explain why deliberation has epistemic value, we should not only appeal to its capacity to gather information, but also to its capacity to use the gathered information for making correct decisions. Estlund's account appeals to deliberation's capacity to enlarge the pool of information. Yet it says nothing about how the participants make use of the collected information and how they can arrive at the correct decisions based on the information. Gerald Gaus raises a similar objection against Estlund's account, which helps to illustrate my comments above:

Estlund acknowledges that he advances no 'detailed account of when reasoning together will improve group competence' (234)... [H]e commits to no systematic account of how it [the amplification of group competency] occurs even in the ideal deliberative model. This makes the evaluation of... [Estlund's claims] exceedingly difficult. My worry is that, without committing to any account, we do not know the range of claims for which amplification might occur, and so we do not even know when the ideal epistemic model plausibly produces amplification.<sup>9</sup>

<sup>9.</sup> Gerald Gaus, "On Seeking the Truth (Whatever That Is) through Democracy: Estlund's Case for the Qualified Epistemic Claim," *Ethics* 121, no. 2 (January 2011): 297, doi:10.1086/658141.

Gaus provides a more systematic account of how deliberation improves group competency, called *The Ideal of Convergence*:

As an ideal deliberator, Alf holds that if he believes *p* and Betty believes not-*p*, at least one of them is in error. As an ideal deliberator, Alf supposes that deliberation among ideal deliberators should tend toward convergence of belief; his and Betty's disagreement is a reason to reevaluate their *p*-related beliefs. Because, according to claim 8 [Everyone recognizes (or tends to recognize) a good reason when they see it], they recognize good reasons, the result of this reevaluation is that they tend to converge on more accurate/better *p* beliefs. <sup>10</sup>

Gaus's ideal of convergence is an improvement compared to Estlund's original account, because it includes more details about how deliberation improves group competency of making correct decisions. However, Gaus's account is not the best available. I will argue, in the third section, that Landemore's accounts based on the Diversity Trumps Ability Theorem is superior to Esltund's and Gaus's accounts. This is because Landemore provides a theoretical principle for why maximally inclusive deliberation improves group competency and a systematic account of how it does so.

The second weakness of Estlund's argument is that it relies exclusively on the epistemic benefits of deliberation and ignores another important source of the epistemic value of democracy—majority voting. Estlund sometimes seems to think that majority voting is a part of the mechanism by which democratic decision procedure has epistemic value. As he says, "This [reliably producing a just decision] is best accomplished through a democratic arrangement in which, after public discussion, individual votes are aggregated, and the decision is made by some form of majority rule." However, in some other places Estlund suggests that majority rule

<sup>10.</sup> Ibid.

<sup>11.</sup> Estlund, Democratic Authority, 179.

does not have epistemic benefits. For example, he says that universal voting rights might not be necessary if "the epistemic benefits of wide discussion are obtained."

The exclusion of voting from the account of the epistemic value of democracy has two potential problems. First, it forces Estlund to be committed to an awkward position. As he notices, according to his theory, "in principle, it would be possible to let all discuss and have only a small randomly selected set of voters." After all, "once the epistemic benefits of wide discussion are obtained, why also have everyone vote?" There might be some non-epistemic reasons for universal voting rights, but as far as the epistemic value of democracy are concerned, Estlund's account only recommends universal discussion rights, but not universal voting rights. Although Estlund argues that he does not "see in this arrangement anything that is particularly offensive or contrary to the moral spirit of democracy if it turned out to have pragmatic advantages," it indicates a weakness of Estlund's account.

Perhaps Estlund can reply that voting is a complement of deliberation. When deliberation fails to arrive at consensus, voting is used as a method to achieve the goal of consensus that would otherwise being achieved in deliberation. When there is consensus about which option is correct in a particular decision-making situation, there is no need to take votes from everyone and voting is superficial. This response is not satisfying. First, usually not all voters advocate the decisions made through majority voting. So, voting cannot achieve the goal of consensus building in most cases. If everyone would vote for the same option, then deliberation would have arrived at consensus in the first place. Second, as many deliberative theorists admit, consensus is unlikely to be achieved in deliberation. In most cases, disagreement will

<sup>12.</sup> Ibid., 182.

<sup>13.</sup> Ibid.

<sup>14.</sup> Ibid

remain after deliberation, which means voting is a necessary method of making collective decisions. For this reason, Estlund should consider voting as a necessary complement of deliberation. When deliberation fails to arrive at consensus, voting is used to achieve the goal of consensus.

Moreover, for many people, voting is a fundamental institution of democracy. People have a right to be officially involved in the final stage of political decision-making in democracy. Even though Estlund is correct that deliberation can lead to consensus and that voting is not necessary when there is consensus, there is still an independent reason to give them a right to vote. It is a disadvantage of a theory if it cannot explain why democracy requires universal voting rights for epistemic reasons.

A more serious problem with the exclusion of majority voting is that it renders an account of the epistemic value of democracy incomplete. As mentioned above, consensus cannot always be arrived at either in ideal deliberation or in actual deliberation. When there is no consensus, which is usually the case, voting is a necessary method for political decision-making. If majority voting can enhance the ability of collective decision-making, then without taking the epistemic benefits of majority voting into consideration, an epistemic theory of democracy would underestimate the epistemic value of democracy. The reason why Estlund does not consider majority voting as a mechanism of improving group competency might be that he rejects the Condorcet's Jury Theorem, which is often used to defend the epistemic value of majority voting. In the next chapter, I shall return to this topic and try to defend majority voting on the basis of the jury theorem.

The third weakness of Estlund's argument for the epistemic value of democracy is that it has the following limitation. Estlund's argument, even if succeeds, can only

establish that democracy is better than random. It says nothing about how democracy performs compared to other types of states such as aristocracy or authoritarianism. Perhaps for Estlund's purpose, he only needs to justify the modest claim that democracy is better than random. However, it is also the case that his account cannot provide a justification for a stronger claim. As mentioned above, in arguing for why a large group is better than a small group, Estlund appeals to the fact that more individuals can bring more reasons into play. Yet he ignores another factor that could affect the quality of collective decision-making, namely, the competence of individuals. Estlund does not consider the possibility that the benefits of greater average individual competence might outweigh the benefits of bringing more relevant reasons into play. For this reason, Estlund's account cannot be used to show that democracy is epistemically better than non-democratic procedures where the decision-makers are more competent than decision-makers in democracy.

In sum, Estlund's account of the epistemic value of democracy is not adequate due to (1) the lack of a systematic account of how deliberation improves group competency; (2) the exclusion of majority voting as a mechanism of improving group competency; and (3) the limitation of not recognizing the importance of individual competence for collective decision-making.

#### 2. Anderson's Experimentalist Model

Anderson applies Dewey's experimentalist model of democracy to account for the epistemic value of democracy.<sup>16</sup> Dewey's model divides democratic decision making into three stages. The first stage is deliberation. In deliberation, the participants

<sup>15.</sup> See ibid., 168.

<sup>16.</sup> Anderson, "The Epistemology of Democracy."

propose different solutions to the problems on hand, assess the potential benefits and costs of each proposed solution, and make collective decisions. Usually the decisions made in deliberation will become laws or policies. On the second stage, the laws and policies will be tested in practice. That is, they will be evaluated based on the consequences of enforcing the relevant laws or policies. If the laws or policies fail to solve the problems or impose too much cost, it shows that the decisions made in the first stage (i.e., deliberation) are mistaken and need to be revised. The third stage is the revision of the decisions. On this stage, we revise the flawed laws and policies so they can do a better job of solving the problems in the future.<sup>17</sup>

Based on the experimentalist model, Anderson identifies three main features of democracy—universal inclusion, deliberation, and dynamism. She thinks that these features can explain the epistemic value of democracy. Let me begin with Anderson's account for the epistemic benefits of universal inclusion and deliberation.

Universal inclusion refers to the democratic institution that all adult citizens have an equal opportunity to participate in political decision-making processes. By including all adult citizens, democracy maximizes the diversity of decision makers and therefore makes "maximal use of ... [citizens'] situated knowledge." Anderson takes this to be the epistemic benefit of universal inclusion. As for deliberation, Anderson suggests that deliberation is epistemically valuable due to its capacity to pool the "asymmetrically distributed" information necessary to make correct decisions. By saying that knowledge is situated in citizens and information is asymmetrically distributed among citizens, Anderson means that different people possess different information about the effects of laws and policies. Information is

<sup>17.</sup> See ibid., 13.

<sup>18.</sup> Ibid., 14.

<sup>19.</sup> Ibid., 11.

asymmetrically distributed for two reasons. First, laws and policies have different effects on different people due to their different "geographic location, social class, occupation, education, gender, age, race, and so forth." Second, people are usually only familiar with the effects of laws or policies on themselves or people close to them. Since making correct political decisions requires the decision makers knowing the effects of their decisions on all parties, it is necessary to include all citizens in decision-making process. If some people are excluded from decision-making process, the knowledge or information possessed by those people will be excluded as well, which will in turn undermine the quality of democratic decision-making.<sup>21</sup>

Dynamism refers to democracy's capacity to review its own decisions and correct mistakes by revising flawed decisions. Institutions that establish the dynamism of democracy include "periodic elections, a free press skeptical of state power, petitions to government, public opinion polling, protests, and public comment on proposed regulations of administrative agencies." These institutions have epistemic benefits because they press decision makers (e.g., legislators, government officials) to take people's complaints seriously and to revise flawed laws and policies based on people's views.

By appealing to the features of universal inclusion, deliberation, and dynamism, Anderson provides an account of the epistemic value of democracy. Anderson's account has an advantage over Estlund's (discussed in Section 1) to the extent that Anderson explicitly indicates the importance of diversity for enlarging pool of information. According to Estlund, democratic deliberation has epistemic value

<sup>20.</sup> Ibid

<sup>21.</sup> According to Anderson, universal inclusion has another epistemic benefit—It is necessary for ensuring that a problem is genuinely of public interest. However, since I'm only concerned with the epistemic value of democracy in an instrumental sense, I shall not discuss this feature of universal inclusion here. See ibid., 14. 22. Ibid.

because "more minds will tend to bring more relevant reasons into play." However, Estlund does not further indicate the deeper mechanism that accounts for why more people can bring more information. Unlike Estlund, Anderson shows that number matters because more participants usually imply greater diversity, and greater diversity means the involvement of more asymmetrically distributed information or situated knowledge.

Despite this advantage, Anderson's account shares two weaknesses with Estlund's model deliberation. The first weakness is that it does not provide a systematic account of how pooling distributed information will improve group competency or a theoretical principle for why this is the case. In particular, it only explains how deliberation can gather dispersed information from citizens, but does not explain how deliberation makes use of the information to improve the reliability of collective decision-making. As I shall argue in the next part of this section,

Landemore's account is better on this aspect in that it provides a systematic account and a theoretical principle for how deliberation uses information gathered from citizens.

The second weakness of Anderson's accounts is that it does not take the epistemic value of majority voting rule into account. In Dewey's experimental model, voting belongs to the institutions of dynamism. As presented above, the epistemic benefits of dynamism derive from the fact that decision makers are under pressure to make changes and improve the quality of their laws and policies—otherwise, they will likely to be voted out of office during the next election. It does not ground the epistemic benefits in the epistemic properties of democratic institutions. As I have argued in the previous section, voting is a necessary part of democratic

<sup>23.</sup> Estlund, Democratic Authority, 181.

decision-making. Without an account of the epistemic benefits of majority voting rule, a theory of the epistemic value of democracy is not adequate.

## 3. Deliberation and The Diversity Trumps Ability Theorem

Based on Lu Hong and Scott Page's Diversity Trumps Ability Theorem (*DTA*), Landemore develops an account for the epistemic value of democracy. According to *DTA*, under certain conditions, a group of randomly selected individuals is epistemically better than a group of individuals with the highest individual competences. This is because cognitive diversity is more important than individual competence for improving collective decision-making. This theorem is used in Landemore's account to explain why democracy is epistemically better than non-democracies (or why deliberation of many is better than deliberation of few). In what follows, I first introduce the core idea of *DTA* and show how it can be used to defend the epistemic value of democracy. After that, I indicate the advantages of Landemore's account over Estlund's and Anderson's accounts. I end this section by indicating some problems with Landemore's account.

#### 3.1 The Core Ideas of the Diversity Trumps Ability Theorem

Cognitive diversity, according to Hong and Page, is the differences between people concerning the ways they understand a particular problem (and the solutions to the problem) and the methods they deploy for solving the problem. The way one represents problems and solutions in his "internal language" is called a *perspective*,

<sup>24.</sup> Scott E. Page, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies* (Princeton University Press, 2008), 30.

and the "algorithm" one uses to solve the problem is called a *heuristic*.<sup>25</sup> Cognitive diversity could mean either differences in perspectives, or differences in heuristics, or both.

Cognitive diversity, as Hong and Page point out, is distinctive from identity diversity. The latter refers to the differences in demographic location, culture, ethnicity, expertise, etc. It is commonly accepted that identity diversity has epistemic value in improving group competence. As many theorists notice, this is because identity diversity often implies cognitive diversity.<sup>26</sup> In other words, identity diversity improves group competence only because it increases cognitive diversity, which is the deeper reason for why group competence can be improved.

Hong and Page point out that the advocacy of diversity often relies on the assumption that the diverse group and the homogeneous group have similar individual competences. That is, the advocates of diversity have only shown that when two groups are similar with respect to individual competences, the more diverse group is epistemically better. However, they have not considered cases where the more diverse group has lower individual competences. Hong and Page aim to defend a stronger claim that a cognitively diverse group will outperform a same-sized but less diverse group, even though the latter has higher individual competences. They argue that this is the case under four conditions: (1) the problem is difficult (i.e., no individual can always find out the best solution); (2) the individuals are smart; (3) the individuals are diverse; and (4) the individuals are selected from a large group. Their argument is as follows. Within a large group of individuals, the most competent individuals are likely to be similar in terms of perspectives and heuristics. A randomly selected group

<sup>25.</sup> Lu Hong and Scott E. Page, "Groups of Diverse Problem Solvers Can Outperform Groups of High-Ability Problem Solvers," *Proceedings of the National Academy of Sciences of the United States of America* 101, no. 46 (2004): 16385.

<sup>26.</sup> Hong and Page, "Groups of Divers Problem Solvers."

of individuals, by contrast, are likely to have greater cognitive diversity. Although the individual competences of the randomly selected group are lower than those of the group of the most competent individuals, the benefits of greater individual competence will be overridden by the benefits of greater diversity. Thus a randomly selected group of individuals (which has greater diversity and lower ability) can perform better than a group of the most competent individuals (which has less diversity and higher ability).

The essential claim in Hong and Page's argument is that the epistemic benefits of greater cognitive diversity are greater than the epistemic benefits of higher individual competence. The basic idea of their argument for this claim is as follows. Suppose problem solving is a matter of identifying the best solution within a set of potential solutions. An individual starts with a particular solution, and applies her heuristics to search for the best solution. A solution is a *local optimum* if "when that agent encodes the problem and applies her heuristic, none of the other solutions she considers has a higher value."<sup>27</sup> The local optimum depends on the starting point of the individual. The set of all local optima, combining with the probability of her arriving at each local optimum, determines the individual's expected performance or her competence. On the other hand, a solution is a *global optimum* if it has higher value than all other potential solutions. The purpose of collective problem solving is to locate the global optimum. Hong and Page argue that the most competent individuals, due to the similarity of their sets of local optimum, "will tend to be stuck quickly on their highest local common optimum," while a group of randomly selected people, due to the differences of their sets of local optimum, "have the possibility of guiding each

<sup>27.</sup> Ibid., 16386.

other beyond that local optimum toward the global optimum."<sup>28</sup> For these reasons, a

randomly selected group is more likely to arrive at the best solution than a group of

the most competent individuals.

3.2 An Illustrative Case

Let us consider an artificial case provided by Hong and Page.<sup>29</sup> This helps to

illustrate the basic ideas of the Diversity Trumps Ability Theorem and show why

deliberation is epistemically better than no deliberation. Suppose the city council

members are considering three projects  $p_1$ ,  $p_2$ , and  $p_3$ . They need to decide which

projects to fund, and their goal is to locate the solutions with the highest value (the

global optimum). The eight potential solutions and the value of each solution are

listed as follows:

Fund none: 0

Fund  $p_1$  only: 40

Fund  $p_2$  only: 20

Fund  $p_1$  and  $p_2$ : 60

Fund  $p_3$  only: 30

Fund  $p_1$  and  $p_3$ : 50

Fund  $p_2$  and  $p_3$ : 70

Fund all three projects: 10

28. Landemore, "Collective Intelligence," 260-61.

29. See Lu Hong and Scott E. Page, "Problem Solving by Heterogeneous Agents," Journal of Economic

Theory 97, no. 1 (March 2001): 123-63, doi:10.1006/jeth.2000.2709.

It is not hard to see that the global optimum in this case is to fund  $p_2$  and  $p_3$ . The value of this solution is 70, which is higher than the value of any other solution.

Let us first consider how an individual council member makes decisions, and then we will consider how two members can work together to improve their decision-making. As stated above, cognitive diversity involves differences of perspectives and heuristics. The perspectives of an individual are the ways she represents the problems, and the heuristics are the algorithms she uses to solve the problems. Suppose council member M1 represents the solutions of the problem above in the following way:

Fund none: 000

Fund  $p_1$  only: 001

Fund  $p_2$  only: 010

Fund  $p_1$  and  $p_2$ : 011

Fund  $p_3$  only: 100

Fund  $p_1$  and  $p_3$ : 101

Fund  $p_2$  and  $p_3$ : 110

Fund all three projects: 111

This is M1's perspective regarding the problem above. Notice that the numbers she uses to represent the solutions are not the value of the projects. Here "1" represents "to fund the project", and "0" represents "not to fund the project". The number on the right side indicates whether project  $p_1$  is to be funded; the number in the middle position indicates project  $p_2$  is to be funded; and the number on the left indicates whether project  $p_3$  is to be funded.

37

Now we consider M1's heuristics. Suppose M1 has the heuristic  $H_1 = \{\{1\}, \{2\}, \{3\}\}\}$ . This set specifies the method that M1 uses to search for the best solution. In particular,  $\{1\}$  represents "changing the decision on  $p_1$ ". For example, applying  $\{1\}$  to 110 means changing the value of the number on the right side, because that number represents our decision on project  $p_1$ . So by applying  $\{1\}$  to 110, we change "0" to "1", and what we have as a result is 111. In other words, by applying  $\{1\}$ , M1 moves from solution 110 to solution 111. Since the purpose of applying these methods is to find out the solution with the highest value, M1 will keep applying  $\{1\}$ ,  $\{2\}$ ,  $\{3\}$ ,  $\{1\}$ ,  $\{2\}$ , and so on, until she achieves an equilibrium, where further application changes nothing.

Now let us consider how M1 can apply her heuristics to search for the best solution for the problem described above. Suppose M1 starts, randomly, with solution 000. The first step is to apply {1} to this solution, which results in the change of the value of the number on the right side from 0 to 1. By doing so, M1 moves from 000 to 001. M1 needs to compare the value of 001 with that of 000, in order to decide whether she needs to change her status quo solution. In our case, the value of 000 is 0 and the value of 001 is 40. This means 001 is a better solution than 000. Thus, M1 updates her status quo solution to the better solution 001.

The second step, then, is to apply  $\{2\}$  to 001. Since  $\{2\}$  requires the change of our decision about  $p_2$  only, applying  $\{2\}$  to the status quo solution, 001, results in solution 011. By comparing the value of 011 with that of 001, M1 updates the status quo solution to 011, since 011 has higher value than 001. M1 applies the rules  $\{1\}$ ,  $\{2\}$ , and  $\{3\}$  sequentially until she cannot find a solution with higher value than the solution she currently locates on.

In our case, M1 will end her search at 011, because she cannot find a better

solution by applying any of the methods. Solution 011 is thus a local optimum relative

to the starting point 000. Starting with other solutions, M1 might have different local

optima. For example, if M1 starts with 111, she will end her search at 110, the global

optimum. Based on M1's perspective and heuristics, it is easy to identify the set of all

local optima, which is  $\{011, 101, 110\}$  or  $\{\text{fund } p_1 \text{ and } p_2, \text{ fund } p_1 \text{ and } p_3, \text{ fund } p_2 \text{ and } p_3, \text{ fund } p_2 \text{ and } p_3, \text{ fund } p_3, \text{ fund } p_4 \text{ and } p_4$ 

 $p_3$ . Here "fund  $p_2$  and  $p_3$ " is the global optimum because it has higher value than any

other solutions. As defined above, an individual's competence is the expected value of

the local optima, assuming that the individual starts with all potential solutions with

equal probability. It is not hard to see that M1's competence is

 $E(M1) = P(001) \times 60 + P(101) \times 50 + P(110) \times 70$ 

 $= 0.5 \times 60 + 0.25 \times 50 + 0.25 \times 70$ 

= 60.

Let us consider another council member M2 who has different perspectives and

heuristics from M1. The perspectives of M2 are as follows:

Fund none: 111

Fund  $p_1$  only: 110

Fund  $p_2$  only: 101

Fund  $p_1$  and  $p_2$ : 100

Fund  $p_3$  only: 011

Fund  $p_1$  and  $p_3$ : 010

Fund  $p_2$  and  $p_3$ : 001

39

Fund all three projects: 000

Suppose M2 has heuristics  $H_2 = \{\{1,2\}, \{1,3\}\}\}$ . Applying  $\{1,2\}$  means changing the decisions on  $p_1$  and  $p_2$ , and applying  $\{1,3\}$  will change the decisions on  $p_1$  and  $p_3$ . It is easy to establish that the set of local optima for Member 2 is  $\{001, 10\}$  or  $\{\text{fund } p_1 \text{ only, fund } p_2 \text{ and } p_3\}$ .

If M1 and M2 work separately, they may both end up with local optima that are not the global optima. As shown above, M1 did not locate the global optimum when she started with the solution "fund none". However, if M1 and M2 work together, they will always end up with the global optimum. To see why this is the case, we will assume that they work sequentially. Suppose M1 ends up with 011 in her first round of search. M2 then starts from where M1 stopped, i.e., solution 011. M2 will end up with the global optimum 110. The same applies to other local optima for M1. This example illustrates the idea that deliberation between two cognitively diverse people is epistemically better than decision-makings where individuals work separately.

#### 3.3 The Epistemic Benefits of Democratic Deliberation

Hong and Page generalize the previous case to deliberation of more than two people.<sup>30</sup> They argue that, under certain conditions, a group with greater cognitive diversity but less competence is more likely than a group with greater competence but less cognitive diversity to locate the global optimum. As mentioned above, the conditions of this theorem include: (1) the problem is difficult; (2) the individuals are smart; (3) the individuals are diverse; and (4) the problem-solvers are selected from a large group. The conclusion of the Diversity Trumps Ability Theorem can be used to

<sup>30.</sup> Ibid.; Hong and Page, "Groups of Divers Problem Solvers."

defend the superiority of democratic deliberation to non-democratic deliberation, if we can show that democratically selected group of problem solvers have greater diversity than non-democratically selected group of problem solvers (e.g., a group of oligarchs).

Direct democracy seems to have the greatest diversity, since it includes everyone in deliberation. Thus, according to *DTA*, direct democracy has better epistemic value than other forms of deliberation. Unfortunately, direct democracy is infeasible in large society due to the limitation of time. As some theorists point out, if we allow each member to speak for ten minutes during the deliberation on an issue, at most three hundred and sixty members could get chance to talk within a ten-hour period. For a society with millions of people, deliberation that allows everyone to talk would be too long.

Hence, it is more interesting to consider whether indirect democracy can be epistemically better than non-democracy. The answer depends on whether indirect democracy tends to have more diverse group of deliberation than non-democracy. Landemore indicates two reasons for why representative democracy has greater cognitive diversity than non-democracy such as oligarchy. First, due to the lack of periodic elections, the members of the oligarchs are renewed very slowly, so the diversity of the decision makers will stay on a certain level. The members of democratic deliberation, on the other hand, are renewed regularly thanks to periodic elections of representatives. This difference suggests that representative democracy, at least in the long run, will have greater diversity than non-democracy such as an oligarchy. It might be objected that representatives elected are very similar in many respects. For example, many legislators were lawyers. In responding to this kind of

<sup>31.</sup> See Robert E. Goodin, *Innovating Democracy: Democratic Theory and Practice after the Deliberative Turn* (Oxford; New York: Oxford University Press, 2008), 149.

objection, Landemore suggests that we adopt random selection of representatives rather than election.<sup>32</sup> If representatives are randomly selected, their similarities will be further decreased.

Second, the oligarchs are not motivated to take into account people's views. The representatives in democracy, however, have to consider the interests and opinions of people for whom they are accountable. The diversity of citizens' views will increase the diversity of the representatives. This shows that representative democracy will be more cognitively diverse than non-democracy such as an oligarchy. Thus, according to *DTA*, representative democracy has higher epistemic value than non-democracy due to its greater cognitive diversity. This is the case even if the deliberators in non-democracy have higher individual competence.

#### 3.4 Assessing Landemore's account

Landemore's account based on the Diversity Trumps Ability Theorem (*DTA*) overcomes the main weaknesses of Estlund's model deliberation and Anderson's experimentalist model. First, *DTA* provides a theoretical basis for why diversity is important for improving collective decision-making. Hong and Page make a distinction between identity diversity and cognitive diversity. They point out that it is cognitive diversity of individuals—the differences of individuals' perspectives and heuristics—that explains why a group of diverse individuals who work together can perform better than an individual or a group of homogenous individuals. The explains why universal inclusion helps enhancing the quality of collective decision-making—By increasing the number of participants, we can increase the

<sup>32.</sup> Landemore, "Deliberation, Cognitive Diversity, and Democratic Inclusiveness."

identity diversity of individuals, which in turn increases the cognitive diversity of the group.

Second, *DTA* provides a systematic account for how a group can use the information collected in deliberation to improve their decision-making. According to *DTA*, the differences of individuals' perspectives and heuristics increase the chance of their finding the best solution among a set of potential solutions. In Estlund's and Anderson's accounts, by contrast, only focus on deliberation's capacity to gather information and ignore another important part of the epistemic function of deliberation, namely, how the gathered information can be utilized in deliberation.

Third, *DTA* can be applied to examine the epistemic value of democracy relative to non-democratic forms of state such as aristocracy and authoritarianism. Estlund's model deliberation only establishes that democracy is better than random, but it cannot be used to establish the stronger claim that democracy is better than non-democracy. Anderson's experimentalist model provides an intrinsic justification for universal inclusion—it is necessary to define political issues of genuine public interest. However, it does not provide sufficient *epistemic* reason for favoring democracy over non-democracy. Landemore's account is better than Estlund's and Anderson's accounts in this respect. According to *DTA*, a more diverse group can be epistemically better than a less diverse group, even though the latter group has higher individual competences. The implication of this conclusion is that democracy can be epistemically better than non-democracy such as aristocracy, even if the participants of non-democracy are more competent. This is because democracy has greater diversity than non-democracy.

Although Landemore's account based on *DTA* solves the main deficiencies of Estlund's and Anderson's account, it has some problems on its own. The first problem

is that it relies on the assumption that all individuals must be smart,<sup>33</sup> which is often not satisfied in democratic decision-making. *DTA* is initially constructed as a model of problem solving within firms. Within firms, this assumption may be relatively easily satisfied, because the individuals of the group are familiar with the problems that are to be solved and have the required experiences and expertise. In democratic decision-making, however, many individuals often do not possess sufficient information or expertise necessary to arrive at good solutions to complex political problems. The requirement that *all* individuals are smart is too strong to be satisfied in democratic decision-making.

Second, DTA implicitly assumes that all individuals agree on the values of each available solution. Recall the case discussed in section 2.2. It assumes that M1 and M2 agree on the values of all potential solutions. E.g., the value of funding  $p_1$  only is 40, and that of funding  $p_2$  and  $p_3$  is 70. However, in many democratic decision-making cases, there is no consensus about the value of a particular solution. In fact, the question of how much value a solution has is usually what democratic decision-making aims to provide answer for. For these reasons, although Landemore's account is better than Estlund's and Anderson's, it does not provide satisfying justification for the epistemic value of democracy.

#### 4. Conclusion

In this chapter, I have examined three deliberative models of democracy, which attributes the epistemic value of democracy to deliberation. I have indicated three weaknesses of Estlund's model deliberation—It fails to provide a theoretical basis and

<sup>33.</sup> Page, *The Difference*, 160; Landemore, "Deliberation, Cognitive Diversity, and Democratic Inclusiveness," 1213.

a systematic account for how deliberation gathers and uses dispersed information, it ignores the epistemic benefits of majority voting rule, and it does not compare the epistemic value of democracy with non-democracy. I have also shown that Anderson's experimentalist model shares the same problems with Estlund's model deliberation.

Landemore's account, as I have argued, overcomes the weaknesses of Estlund's and Anderson's accounts. However, Landemore's account relies on two problematic assumptions—all individuals are smart and all individuals agree on the values of all solutions. These two assumptions, as I have shown, are often not met in democracy. This undermines the strength of Landemore's account.

The discussion in this chapter suggests that the deliberative models are not adequate for justifying the epistemic value of democracy. In the next chapter, I shall examine an aggregative model of the epistemic value of democracy.

# **Chapter 3: The Aggregative Model of Democracy**

In chapter 2, I examined three deliberative models of democracy. I argued that the deliberative models, which attribute the epistemic value of democracy to deliberation, failed to provide adequate justification for the epistemic value of democracy. In this chapter, I consider the aggregative model of democracy, which attributes the epistemic value of democracy to the aggregative rules employed in democracy (e.g., majority voting rule). In particular, I examine the most prominent aggregative model—Condorcet's jury theorem. I argue that this model fails to justify the epistemic value of democracy because it is not applicable to democracy.

In the first section, I introduce the basic idea of the jury theorem. In the second section, I present the main challenges to the applicability of the jury theorem to democracy. The third section discusses several responses to the challenge of independence, which claims that the jury theorem is not applicable to democracy because the votes are not independent in democratic decision-making. I argue that those responses are not successful. I end this chapter by indicating a promising way of justifying the epistemic value of democracy, which will be developed in the next chapter.

### 1. The Main Ideas of Condorcet's Jury Theorem

Before introducing Condorcet's jury theorem, let us consider two cases. In the first case, you toss a coin eleven times. Suppose the coin is unfair—for each toss, the

probability of getting a head is 0.53. What is the probability that you will get at least six heads in those eleven tosses? Condorcet's jury theorem asserts that the probability will be greater than 0.53, the probability of getting a head in each tossing. In this case, it is not hard to verify that the probability is 0.581, which is greater than 0.53. Moreover, according to the jury theorem, as the number of tosses approaches infinity, the probability that there are more than half of heads approaches one. We can also verify this intuitively by assuming that you toss the coin for 1010 times. The probability of getting more than half heads will be 0.99, which is close to one.

In a second case, a jury consisting of thirteen jurors is determining whether a defendant is guilty or not guilty. Suppose the defendant in fact commits the crime. For each juror, the probability that he/she votes correctly (i.e., votes for "guilty") is 0.53. What is the probability that the majority of the jurors will vote correctly? According to Condorcet's jury theorem, the probability that the majority votes correctly will be higher than 0.53, the probability that each juror votes correctly. To verify this, we can easily calculate that the probability of the majority's voting correctly is 0.644, which is higher than 0.53. Moreover, the theorem tells us that when the size of the jury is large enough, the probability that the majority votes correctly will be close to one. We can illustrate this conclusion by increasing the size of the jury to be 1010 jurors. The probability that more than 505 jurors vote correctly will be 0.99, which is very close to one.

From these two cases above, we can identify the assumptions of Condorcet's jury theorem. First, in each trial, there are only two possible outcomes ("head" and "tail", "guilty" and "not guilty"). We may generally refer to them as "success" and "failure". Second, the probability of "success" is identical and greater than .5 in each

trail. Third, the trials are statistically independent. Condorcet's jury theorem can be applied to any case that satisfies those three conditions.

Now let me explain how the jury theorem might be applied to justify the epistemic value of democracy. Suppose in a democratic political decision-making case, there are two alternative options (e.g., raising income tax or keeping the status quo) and only one of them is correct. Also suppose that the voters have independent and greater than 0.5 competence of voting for the correct alternative. According to Condorcet's jury theorem, the majority is more likely than the individual voters to vote correctly. Moreover, the theorem asserts that when the number of voters is large enough, the majority is almost infallible.

Of course, if the theorem requires individual voters to have a very high probability of voting correctly (e.g., 0.99), or if it requires the number of voters to be unreasonable large (e.g., 10 billion), then the jury theorem cannot be applied to any feasible democracy. However, as the two cases presented above show, when the individual voters have a 0.53 chance of voting correctly and when there are 1010 voters, the majority will have 0.99 chance of voting correctly. These two requirements seem reasonable. After all, a probability of 0.53 is not too high for a typical voter. It only means being slightly better than a random procedure such as flipping a coin. Nor is the number of voters a difficulty, since in a modern society there are usually millions of voters. Thus, it seems that the jury theorem can be applied to justify the epistemic value of democracy.

Before I turn to the discussion of the objections against the application of the jury theorem to democracy, it is helpful to present the theorem more formally. I define

<sup>1.</sup> The original version of the jury theorem requires all voters to have identical competence. Grofman, Owen and Feld (1983) present an extension of Condorcet's jury theorem that does not involve this requirement. The extended version only requires the average competence of individual voters to be better than .5. In what follows, I shall adopt this extended version of Condorcet's jury theorem. See Bernard Grofman, Guillermo Owen, and Scott L. Feld, "Thirteen Theorems in Search of the Truth," *Theory and Decision* 15, no. 3 (1983): 261–78.

*group competence* as the probability of an individual's voting correctly and define *group competence* as the probability of a group's making correct decisions on the basis of the aggregating rule that it uses. In majority rule, group competence is identical with *majority competence*—the probability of the majority's voting correctly. For example, the individual competence of a juror is the probability that she votes for the correct alternative (e.g., 'guilty'). Group competence or majority competence, in a jury case, is the probability that more than half of the jurors vote for the correct alternative (e.g., 'guilty').

The two assumptions of the jury theorem are as follows:

The Competence Assumption: The average individual competence of all voters is greater than 0.5.

The Independence Assumption: The individual competences of all voters are statistically independent.

When these assumptions hold, the jury theorem claims that the following two statements are true:

- (C1) The group competence is greater than the average individual competence.
- (C2) The group competence increases towards certainty, as the number of the voters approaches infinity.<sup>2</sup>

<sup>2.</sup> As noted above, the group competence is the same as the majority competence in majority rule.

### 2. The Challenges to Condorcet's Jury Theorem

There are three main challenges to the application of the jury theorem to defending the epistemic value of democracy. First, in political decision-making, many cases involve more than two alternative options (e.g., three candidates). Condorcet's jury theorem only applies to two-option cases. Second, there is no sufficient justification for the claim that average individual competence will be higher than 0.5 in democracy.<sup>3</sup> Third, the independence of votes will usually be compromised by communication, deference to opinion leaders, and many other factors.<sup>4</sup>

List and Robert Goodin extend the jury theorem to multiple-option cases. The extended version can support the epistemic value of plurality rule.<sup>5</sup> I take this to be a sufficient response to the first objection. For simplicity, the discussion below will only focus on two-option cases. Whether the version of the jury theorem I defend below can be extended to multiple-option cases is a question that cannot be addressed in this chapter.

In rejecting the competence assumption, the opponents of the jury theorem raise two objections. First, systematic biases and errors can make most people's competence lower than .5 and therefore render the average competence lower than 0.5.6 Second, voters usually do not have necessary information, expertise, or adequate time for making good decisions about complex political issues. Thus, the opponents claim that the competence assumption of the jury theorem is not justified. In the next chapter, I will argue that this objection only applies to the traditional

<sup>3.</sup> Estlund, *Democratic Authority*; Landemore, "Deliberation, Cognitive Diversity, and Democratic Inclusiveness."

<sup>4.</sup> Anderson, "The Epistemology of Democracy"; Landemore, "Deliberation, Cognitive Diversity, and Democratic Inclusiveness."

<sup>5.</sup> List and Goodin, "Epistemic Democracy."

<sup>6.</sup> Estlund, Democratic Authority, 16; 228-229.

version of the jury theorem. The version developed in this dissertation is not subject to this objection.

The most common objection against the applicability of the jury theorem to democracy is that the independence of votes in democracy is usually compromised, since there are unavoidable connections between voters' votes (e.g., communication). Call this *the challenge of independence*. As many authors point out, the independence required by the jury theorem is *statistical* independence rather than *causal* independence. Events A and B are statistically independent if and only if the probability of event A is not affected by the occurrence of event B and vice versa. A simple example of statistical independence is tossing two different coins sequentially. It is obvious that whatever happened in the first toss does not affect the result of the second toss. Let  $H_1$  be the event of the first toss being a "head" and  $H_2$  be the event of the second toss being a "head." The probability of  $H_2$  will not be affected by the (non)occurrence of  $H_1$ , or equivalently, the unconditional probability of  $H_2$  is the same as the probability of  $H_2$  given  $H_1$ . For this reason, we say that  $H_1$  and  $H_2$  are statistically independent events.

In majority rule voting, the events in question are the votes of all voters, or more precisely, the voters' voting correctly. Let  $C_i$  be the event of the *i*th voter voting correctly. When there are *n* voters, the independence assumption requires the set of  $\{C_1, C_2, ..., C_n\}$  to be mutually independent. When n > 2, the mutual independence of

<sup>7.</sup> Dietrich, "The Premises of Jury Theorem"; David M. Estlund, "Opinion Leaders, Independence, and Condorcet's Jury Theorem," *Theory and Decision* 36, no. 2 (1994): 131–62; Estlund, *Democratic Authority*; Krishna K. Ladha, "The Condorcet Jury Theorem, Free Speech, and Correlated Votes," *American Journal of Political Science* 36, no. 3 (August 1992): 617–34, doi:10.2307/2111584.

<sup>8.</sup> The probability discussed here is *objective* probability rather than *evidential* or *subjective* probability. Roughly, the objective probability of an event is independent of our evidence, while evidential or subjective probability is the probability that we attribute to the event based on our evidence. So, even if the first toss gives us evidence that the coin is biased towards heads, it does not change the objective probability of the events in the second toss. The evidence only changes the probability that we attribute to the events in the second toss. For discussion about the difference between objective and subjective probabilities, see Joseph Y. Halpern, *Reasoning about Uncertainty* (Cambridge, Mass: MIT Press, 2003), 19.

the set of  $\{C_1, C_2, ..., C_n\}$  is more complex than that of two events. For the purpose of illustration, however, we only need to consider the independence of two events  $C_i$  and  $C_j$ . This is because the independence of a set implies the independence of any two events within the set. If we can show how the independence of  $C_i$  and  $C_j$  are undermined, then we can show how the independence of the set  $\{C_1, C_2, ..., C_n\}$  is undermined. In other words, to show how the independence assumption of the classic jury theorem is challenged, it is enough, for the purpose of illustration, to show how the independence of two random events  $C_i$  and  $C_j$  is compromised in democratic decision-making.

The opponents of the applicability of the jury theorem point out several sources of correlated votes, including discussion, common information, influences of schools of thoughts, and deference to opinion leaders. Since those mutual and common influences are unavoidable in democracy, they argue, the independence assumption does not hold. Thus the classic jury theorem, according to the opponents, cannot be applied to justify the epistemic value of democracy.

Two simple cases will help to show how mutual and common influences can undermine independence of voters' competences. Suppose the individual competences of the *i*th voter and the *j*th voter are 0.7. They discuss and share information with each other before they vote. After their discussion, they make judgments based on the same set of information. In this case, given that the *i*th voter votes correctly, it is very likely that the *j*th voter will also vote correctly. It is reasonable to expect that this probability will be much higher than 0.7. In other words, the probability that the *i*th voter votes correctly is different from the probability that the *i*th voter votes correctly given the *j*th voter's voting correctly. This violates the

<sup>9.</sup> Dietrich, "The Premises of Jury Theorem"; Robert E. Goodin, *Reflective Democracy* (Oxford University Press, 2003); Ladha, "Correlated Votes."

definition of independence. Thus, the discussion between those two voters compromises the independence of their votes.

Now let us consider another case where both voters are influenced by a third party. Suppose the *i*th voter and the *j*th voter make their judgments defer to the same opinion leader. For simplicity, assume that they vote exactly the same as the opinion leader views as correct. Suppose the individual competence of the opinion leader is 0.7. It follows that the individual competences of both voters are also 0.7. However, if the *j*th voter votes correctly, then the probability of the *i*th voter's voting correctly would be 1. This is because they always vote for the same option. Again, in this case, the probability that the *i*th voter votes correctly is different from the probability that the *i*th voter votes correctly given the *j*th voter's voting correctly. The independence between their votes is undermined by their deference to the same opinion leader.

If the opponents are right that there are unavoidable mutual and common influences in democracy and these influences will significantly undermine independence, then the jury theorem is not applicable to the epistemic justification of democracy.

In the next section, I examine several responses to the challenge of independence and argue that these responses are insufficient to defend the applicability of the classic jury theorem. Some other authors attempt to avoid the challenge of independence by adopting a different conception of competence and developing new versions of the jury theorem. Although these attempts have their own problems, I think they represent the best strategy of avoiding the challenges to the classic jury theorem. Based on their work, I shall develop a new version of the jury theorem in the next chapter.

### 3. Responses to the Challenge of Independence

In responding to the challenge of independence, Estlund argues that, "The presence of mutual or common influence among voters does not necessarily violate the requirement of independence." He attempts to show that whether deference to opinion leaders violates independence depends on whether the deference is blind or informed. As Estlund argues, if the deference is informed and partial, then independence may not be violated even in realistic cases. Although I agree with most of Estlund's arguments, I want to indicate two limitations of his strategy as a response to the challenge of independence.

First, Estlund only considers cases of common influences (deference to opinion leaders) and does not consider cases of mutual influences. Thus, even if Estlund successfully shows that common influences do not compromise independence, mutual influences between voters (e.g., communication) can still compromise independence. Second, Estlund's arguments, even if they succeed, can only show that common influences do not *in principle* compromise independence. In order to apply the jury theorem to the epistemic justification of democracy, however, what we need to show is that the influences in democratic decision-making will not *actually* violate the independence assumption. As Estlund himself admits, it is not clear whether "actual patterns of influence are within allowable bounds." For these reasons, Estlund's arguments cannot successfully defend the classic jury theorem against the challenge of independence.

Krishna Ladha proves that the classic jury theorem can be extended to correlated votes. The extended version does not require independence. Instead, it only requires

<sup>10.</sup> Estlund, "Opinion Leaders," 312.

<sup>11.</sup> Estlund, "Beyond Fairness and Deliberation," 189.

this requirement is that "debate and deliberation among citizens are welcome," <sup>12</sup> since they help to decrease the correlation of votes. Roughly, what Ladha means is that when two voters have different opinions on the same decision problems, they will tend to vote differently. It follows that when the probability of one voter's voting correctly increase, the probability of the other voter's voting correctly decreases. In this sense, the competences of these two voters are negatively correlated. Ladha's extended version, if successful, can avoid the challenge of independence, because it does not require the votes to be independent. However, Ladha's version has three difficulties that make it not applicable to the epistemic justification of democracy.

First, the correlation of votes among a large society is hard to calculate. This means it is hard to know whether any feasible democracy can satisfy the assumption of Ladha's extended jury theorem. Second, when we extend the theorem to multiple-option cases, the requirement of low correlation of votes may undermine the average individual competence. If there are too many different opinions and only one of them is correct, then most of the individuals will be wrong. This might render the average individual competence lower than .5. For simplicity, suppose there are five voters and three different views. Voter #1 and #2 hold view A, voter #3 and #4 hold view B, and Voter #5 holds view C. Suppose view C is the correct view. In such a case, the correlation between the voters might be low, but the average competence might also be low because voters #1, #2, #3, and #4 hold the wrong views. The strategy I will propose in the next chapter does not require low correlations of votes, and therefore is not subject to this potential problem. Third, the requirement of low correlation may also be at odds with deliberation. Sometimes deliberation may tend to

<sup>12.</sup> Ladha, "Correlated Votes," 630.

increase correlation by eliminating disagreements based on misunderstanding, ignorance, and so on. For these reasons, it is not obvious that Ladha's extended version of the classic jury theorem can be applied to democracy.

Both Estlund's and Ladha's responses are based on the classic version of the jury theorem. Unlike Estlund and Ladha, Franz Dietrich and Christian List attempt to avoid the challenge of independence by developing a different version of the jury theorem. Below I examine Dietrich's strategy of avoiding the challenging of independence. I indicate two problems with the jury theorem developed by Dietrich.<sup>13</sup>

Dietrich's fixed problem jury theorem

A decision problem, according to Dietrich's understanding, consists of the state of the world and the circumstances. The state of the world is usually an objective fact (e.g., the defendant is guilty). When a decision matches the state (e.g., the juror votes for "guilt"), we say that the decision is a correct decision. The circumstances refer to the common causes of all voters' votes. They include both evidential factors (e.g., the testimony of the witness) and non-evidential factors (e.g., the court room temperature).

A decision problem can either be fixed or variable depending on whether the state and the circumstances are subject to uncertainty. A decision problem is fixed if both the state and the circumstances are not subject to uncertainty. Suppose, for example, the jury's deliberation is over and the jurors are about to vote. Also, suppose the defendant in fact committed the crime. In this case, the decision problem is fixed, since both the state and the circumstances are certain. First, the state of the world is fixed—the defendant is guilty. Second, the circumstances are also fixed because the

<sup>13.</sup> The versions of jury theorem developed in Dietrich and List (2004) and Dietrich (2008) are similar in important ways and share similar problems. Thus, I only discuss one of them here. See Franz Dietrich and Christian List, "A Model of Jury Decisions Where All Jurors Have the Same Evidence," *Synthese* 142, no. 2 (2004): 175–202; Dietrich, "The Premises of Jury Theorem."

deliberation is over. A decision problem is variable if both the state of the world and the circumstances are subject to uncertainty. A variable decision problem, according to Dietrich, might be viewed as "randomly drawn from a reference class of relevant problems, such as all criminal court problems or all medical decision problems."<sup>14</sup>

Based on the distinction between a fixed decision problem and a variable decision problem, Dietrich makes a distinction between the fixed-problem jury theorem and the variable-problem jury theorem. The fixed-problem jury theorem is concerned with group competence in particular decision problems, while the variable-problem jury theorem is concerned with group competence in general.

Dietrich argues that while independence of votes is usually violated in the variable-problem jury theorem, the independence assumption always holds in the fixed-problem version. The reason is that, in the fixed-problem version, all the common causes of the votes are fixed, so they will not undermine independence. It might be argued that the votes of two individuals can be correlated even if the common causes of their votes are fixed. After all, the correlation of votes is a statistical matter, which is not necessarily related to the causal relationship between the votes. For instance, Estlund proposes several examples showing how people's votes can be correlated even though they are not causally connected. However, Dietrich can respond as follows. Even if we grant that people's votes can be correlated when the common causes of their votes are fixed, such cases are exceptions rather than the common situation. The challenge of independence is that common causes such as deliberation will significantly undermine the independence of votes.

<sup>14.</sup> Dietrich, "The Premises of Jury Theorem," 63.

<sup>15.</sup> Estlund, "Opinion Leaders."

The exceptional cases where correlations derive from other sources do not seriously threaten the applicability of the jury theorem.<sup>16</sup>

The problem with Dietrich's strategy, however, is that his distinction does not apply to all decision-making cases. Recall that the fixed-problem jury theorem applies to cases where both the state and the circumstances are fixed and the variable-problem jury theorem applies to cases where both the state and the circumstances are variable. However, there are two other possibilities, where the state is fixed but the circumstances are variable, and where the state is variable and the circumstances are fixed.

First, let us consider a case in which the state of the world is fixed but the circumstances are variable. Suppose the defendant, who actually committed the crime, is about to be on a trial. In this case, the state of the world is fixed, because the defendant's action has been completed. Yet the circumstances are not fixed, because the jury has not met, the witness has not testified, etc. In challenging the independence of the classic jury theorem, the opponents often appeal to such cases. Their worry is that the discussion of the jury might undermine the independence of their votes. This type of decision problem, however, does not fit into either of Dietrich's versions of the jury theorem. It is not a fixed-problem because the circumstances are variable. Nor is it a variable problem because the state is fixed.

Let us consider another case in which the state of the world is variable but the circumstances are fixed. Suppose a group is predicting the weather tomorrow.

Suppose they have finished deliberation and are about to vote. In this case, the state is uncertain because the weather is a variable. But the circumstances are fixed since the

<sup>16.</sup> That two events are uncorrelated does not entail their independence. That is, two events may be uncorrelated but dependent. The purpose here is to respond to the challenge that the correlations caused by deliberation will undermine independence. It does not guarantee the independence of votes.

deliberation has ended. In this case, independence is not violated because the circumstances are fixed. This type of decision problem is not covered by Dietrich's versions of jury theorem because only one of the components is fixed.

Despite that problem, Dietrich is right in pointing out that, "Variables in the world that do not causally affect each other...are probabilistically independent conditional on their common causes." Thus, for the purpose of avoiding the challenge of independence, we only need fix the circumstances. Whether the state is fixed or variable does not matter. The problem with the fixed-problem jury theorem is that it requires the state of the world to be fixed and thereby excludes cases where the state is variable and the circumstances are fixed. However, in the latter cases, the independence can also be guaranteed since the circumstances are fixed.

#### Waldron's responses

Jeremy Waldron considers the question of whether discussion can improve individual competence without compromising independence. He claims that deliberation does not undermine the independence required by the jury theorem. According to Waldron, "It does not matter, for Condorcet's argument, whether or not individual *competences* are independent of one another... What matters, for the purposes of independence, is what happens when the competence is exercised." Here Waldron makes a distinction between the *generation* of individual competence and the *exercise* of individual competence. The generation of individual competence refers to the process of a voter's acquiring the ability of making correct decisions. It may include the processes of collecting information, examining arguments, weighing

<sup>17.</sup> Here Dietrich appeals to Reichenbach's common cause principle. See Dietrich, "The Premises of Jury Theorem," 71.

<sup>18</sup> David M. Estlund et al., "Democratic Theory and the Public Interest: Condorcet and Rousseau Revisited," *The American Political Science Review* 83, no. 4 (December 1989): 1317, doi:10.2307/1961672. 19. Ibid., 1327.

different evidence, and so on. The exercise of competence refers to the act of making judgments or voting.

For Waldron, the jury theorem does not require the abilities of voters to be *generated* independently. It only requires their abilities to be *exercised* independently. The competences of two voters are generated dependently if they collect information from the same sources (e.g., TV, newspaper), receive the same evidence, or rely on the same arguments. But Waldron argues that this does not matter for the purpose of the jury theorem. What would undermine the independence required by the jury theorem are cases where the competences of two voters are exercised dependently, namely, they vote for a certain alternative just because other voters voted for that alternative (e.g., the voters take a look at each other's ticket and vote accordingly).

Moreover, Waldron makes a distinction between the competence calculated *before* deliberation and the competence calculated *after* deliberation. Waldron says that "it is always trivially true that if we allow discussion to take place between the time average competence is calculated and the time the vote is taken, our application of the theorem may go awry,"<sup>20</sup> and that in order to apply the jury theorem, "it [individual competence] should be calculated at the moment just before the vote is taken."<sup>21</sup>

What Waldron means by the competence exercised or the competence calculated after deliberation is the same as what Dietrich means by the competence conditional on the common causes. But unlike Dietrich, Waldron does not require the state of the world to be fixed. Thus Waldron's strategy can apply to cases where the state is variable and the circumstances are fixed. In this sense Waldron's strategy is better

<sup>20.</sup> Ibid., 1328.

<sup>21.</sup> Ibid.

than Dietrich's fixed-problem jury theorem. However, Waldron's responses are not sufficient for they do not answer the following questions:

- 1. How does the new conception of competence and independence avoid the challenge of independence?
- 2. By adopting this new conception of competence and independence, would the competence assumption be satisfied?

In the next chapter, I aim to answer the above questions. Based on Dietrich's and Waldron's strategy, I will distinguish two conceptions of competence—the pre-deliberation competence and the post-deliberation competence. I will argue that Condorcet's jury theorem is subject to the challenges presented in this chapter because it relies on the pre-deliberation conception of competence. To avoid the problems of the traditional jury theorem, I propose the post-deliberation version of the jury theorem, which is based on the post-deliberation conception of competence. I will show how this new version of the jury theorem can provide a justification for the epistemic value of democracy.

#### 4. Conclusion

In this chapter, I have examined an aggregative model of democracy—Condorcet's jury theorem—which attributes the epistemic value of democracy to the epistemic function of majority voting rule. I have presented the main challenges against the applicability of the jury theorem to democracy. The most common challenge maintains that the independence assumption of the theorem cannot be satisifed in

democarcy because the communication and discussion between individuals will undermine the independence of their votes.

I have also considered several responses to the challenge of independence.

According to my view, Esltund's and Ladha's responses are not successful because they rely on the same conception of competence as the jury theorem. Dietrich's and Waldron's responses also fail for different reasons. Hence, I conclude that Condorcet's Jury Theorem is not a successful model for justifying the epistemic value of democracy.

However, Dietrich's and Waldron's responses indicate a promising way of modifying the jury theorem. As I shall argue in the next chapter, the modified version of the theorem can successfully avoid the problems indicated in Chapters 2 and 3 and can thus provide a satisfying justification for the epistemic value of democracy.

## **Chapter 4: Defending the Post-Deliberation Jury Theorem**

In Chapter 3, I considered an aggregative model of the epistemic value of democracy—Condorcet's jury theorem. This model is subject to several challenges. The most common challenge is that the jury theorem is incompatible with deliberation, because deliberation among individuals will compromise the independence assumption of the jury theorem. In this chapter, I propose a new version of the jury theorem—the post-deliberation jury theorem—that can be shown to be compatible with deliberation. I show how this version of the jury theorem can provide a more adequate justification for the epistemic value of democracy than the deliberative models and the Condorcet's original version of the jury theorem.

### 1. Two Senses of Competence

In Chapter 3, I defined individual competence as the probability that an individual votes correctly and group competence as the probability that the majority vote correctly. As Waldron suggests, how much competence an individual or a group has depends on the time we calculate it. Take a juror as an example. Since a juror can adjust her beliefs in accordance with evidence, at the end of the trial she might have different beliefs from what she believed at the beginning of the trial. For example,

<sup>1.</sup> A decision maker may make judgment based on non-evidential factors. For example, a juror may tend to judge that the defendant is guilty if the court room temperature is high. However, for the purposes of this paper, I will assume that the voters only make judgments based on evidential factors.

she might believe that the defendant is not guilty at the beginning of the trial because certain evidence was not presented (e.g., the testimony of a witness). But after the witness testified, the juror may adjust her belief accordingly and believe that the defendant is guilty. Suppose the defendant is in fact guilty. We may say that the competence of the juror was low before the witness testified and her competence is high after that. Thus the value of individual competence is relative to time. The same applies to group competence. When we talk about individual and group competence, it is necessary to specify the time at which the competence is calculated.

Here I distinguish two conceptions of individual competence—pre-deliberation competence and post-deliberation competence—based on the time when the competence is calculated. Pre-deliberation competence refers to individual competence calculated *before* public deliberation. Post-deliberation competence refers to individual competence calculated *after* public deliberation. As I shall argue below, the challenge of independence works only if individual competence is understood as pre-deliberation. If individual competence is understood as post-deliberation competence, deliberation does not challenge the independence of individual competences.

Before I turn to the challenge of independence, it is helpful to consider a few simpler cases. Suppose the probability that the bus delays on a certain day (D) depends on whether it rains on that day (R). If it rains, the probability that the bus will delay is 0.7. If it does not rain, the probability is 0.2. Thus we know that P(D|R) = 0.7,  $P(D|\sim R) = 0.2$ . What is the probability of the bus's delaying? To answer this question, we need distinguish two different conceptions of the probability in question. The first conception measures the probability of the bus's delaying where it is uncertain

whether it will rain the next day. We may call it the *pre-raining probability*. The pre-raining probability of the bus's delaying is

$$P(D) = P(R)P(D|R) + P(\sim R)P(D|\sim R)$$
$$= 0.7P(R) + 0.2P(\sim R)$$
$$= 0.2 + 0.5P(R).$$

The second conception of probability measures the probability of the bus's delaying based on the actual rain conditions. We may call it the *post-raining probability*. Suppose we know that it is raining today. (The same applies to not raining). This means P(R) = 1 and  $P(\sim R) = 0$ . Thus the post-raining probability of the bus's delaying given raining is

$$Pr(D) = P(R)P(D|R) + P(\sim R)P(D|\sim R)$$
$$= P(D|R)$$
$$= 0.7.^{2}$$

The above two conceptions illustrate the distinction between pre-deliberation individual competence and post-deliberation competence. Now let us consider a second event and show how independence is compromised under one conception of probability but not compromised under the other conception.

Suppose the probability of a student's being late for school (L) also depends on whether it rains. If it rains, the probability of the student's being late is 0.6. If it does

<sup>2.</sup> To highlight the distinction between those two conceptions of probability, I use P(A) to represent the probability of A in the 'pre-' sense, and use P(A) to represent the probability of A in the 'post-' sense.

not rain, the probability is 0.3. In this case, P(L|R) = 0.6, P(L|R) = 0.3 The pre-raining probability of the student's being late is

$$P(L) = P(R)P(L|R) + P(\sim R) P(L|\sim R)$$
$$= 0.6P(R) + 0.3P(\sim R)$$
$$= 0.3 + 0.3P(R).$$

The post-raining probability of the student's being late given raining is

$$Pr(L) = P(R)P(L|R) + P(\sim R)P(L|\sim R)$$
$$= P(L|R)$$
$$= 0.6.$$

Now we can see why the pre-raining probabilities of D and L are dependent. As it is shown above, both P(D) and P(L) are positively correlated to P(R), namely, P(D) and P(L) increase as P(R) increases. Hence, P(D) and P(L) are also positively correlated with each other, namely, P(D) increases as P(L) increases, and vice versa. The post-raining probabilities P(D) and P(L), on the other hand, are independent from each other. As shown above, P(D) is only determined by P(D|R), and P(L) is only determined by P(L|R). Since P(D|R) and P(L|R) are not correlated, P(D) and P(L) are not correlated either.

Applying this distinction to democratic decision-making, we can show that the independence of individual competence in the *post-deliberation* sense will not be compromised by deliberation, while it may be compromised in the *pre-deliberation* 

sense. Suppose the probabilities of voter's voting correctly depend on whether there is public deliberation. If there is deliberation (D), the probability of voter #1's voting correctly ( $C_1$ ) is 0.85, and the probability of voter #2's voting correctly ( $C_2$ ) is 0.78. If there is no deliberation, the probabilities of their voting correctly are 0.45 and 0.35 respectively. We know that  $P(C_1|D) = 0.85$ ,  $P(C_2|D) = 0.78$ ,  $P(C_1|\sim D) = 0.45$ , and  $P(C_2|\sim D) = 0.35$ . The pre-deliberation probability of  $C_1$  is

$$P(C_{I}) = P(D)P(C_{I}|D) + P(\sim D)P(C_{I}|\sim D)$$
$$= 0.85P(D) + 0.45P(\sim D)$$
$$= 0.45 + 0.4P(D).$$

The pre-deliberation probability of  $C_2$  is

$$P(C_2) = P(D)P(C_2|D) + P(\sim D)P(C_2|\sim D)$$
$$= 0.78 P(D) + 0.35P(\sim D)$$
$$= 0.35 + 0.43P(D).$$

It is easy to see why these two probabilities are dependent. Since both  $P(C_1)$  and  $P(C_2)$  are positively correlated with P(D),  $P(C_1)$  and  $P(C_2)$  are also positively correlated with each other. That is, as  $P(C_1)$  increases,  $P(C_2)$  will increase too. For example, as  $P(C_1)$  increases from 0.69 to 0.73, it means that P(D) increases from .6 to 0.7, so  $P(C_2)$  will increase from 0.608 to 0.651.

The post-deliberation probability of  $C_I$  is

<sup>3.</sup> If P(CI) is increased by factors that do not affect P(C2), then the increase of P(CI) does not imply the increase of P(C2). However, since we are concerned with the question of whether deliberation challenges the independence of individual competences, here I assume that only deliberation can increase individual competence.

$$Pr(C_{I}) = P(D)P(C_{I}|D) + P(\sim D)P(C_{I}|\sim D)$$
$$= P(C_{I}|D)$$
$$= 0.85.$$

The post-deliberation probability of  $C_2$  is

$$Pr(C_2) = P(D)P(C_2|D) + P(\sim D)P(C_2|\sim D)$$
  
=  $P(C_2|D)$   
= 0.78.

When the probability of deliberation is fixed,  $Pr(C_1)$  and  $Pr(C_2)$  are independent, because each will remain the same when the other probability changes. Deliberation will not undermine their independence, because no matter whether deliberation happens or not, the probability of  $C_1$  given D and the probability of  $C_2$  given D will be the same.

Define the *post-deliberative individual competence* as the probability that an individual votes correctly after deliberation, and define *post-deliberative group competence* as the probability that a group votes correctly after deliberation. In majority rule voting, post-deliberative group competence is equivalent to post-deliberative *majority competence*, which is defined as the probability that the majority of the group vote correctly after deliberation.

Now we can present the assumptions of the post-deliberation jury theorem as follows:

The competence assumption: The average post-deliberative individual competence is better than .5

The independence assumption: The post-deliberative individual competences are statistically independent.

When these two assumptions are satisfied, the post-deliberation jury theorem states that the following two propositions are true:

- (C1). The post-deliberative group competence is greater than the post-deliberative average individual competence.
- (C2). The post-deliberative group competence increases towards certainty, as the number of the voters approaches infinity.

The distinction between the pre-deliberative competence and the post-deliberative competence explains why deliberation may compromise the independence in the classic jury theorem but does not compromise the independence in the post-deliberation jury theorem. The classic jury theorem understands individual competence in the pre-deliberative sense. For the reason explained above, this conception of competence is subject to the challenge of independence. The jury theorem, however, can adopt the post-deliberative conception of competence instead. When competence is understood as a probability after or conditional on deliberation, deliberation does not compromise independence. Thus the post-deliberation version of the jury theorem can meet the challenge of independence.

<sup>4.</sup> Evidentially speaking, the post-deliberation competences of two individuals may still be correlated to the extent that the increase of an individual's competence is evidence for the increase of the other individual's competence. However, the individual competences concerned here are objective probability of their voting for the

At the end of Chapter 3, I raised two questions to Waldron's responses to the challenge of independence and argued that Waldron failed to answer those questions. In this section, I have provided answer to the first question: How does the new conception of competence and independence avoid the challenge of independence? Although I do not provide formal proof for my answers, I have provided sufficient illustration for the answers.<sup>5</sup> In next section, I shall answer the second question: Would the competence assumption be satisfied if the jury theorem adopts the new conception of competence and independence?

# 2. Defending the Competence Assumption

In Chapter 3, we mentioned that some authors reject the applicability of the classic jury theorem to democracy by rejecting the competence assumption. They indicate two reasons. First, systematic biases and errors can make most people's competence lower than 0.5 and therefore render the average competence lower than 0.5. Second, voters usually do not have necessary information, expertise, or adequate time for making good decisions about complex political issues. The average competence is thus not justified.

These objections may apply to the classic jury theorem, where individual competence is understood in the pre-deliberative sense. Without public deliberation, biases and ignorance are good reasons to doubt the competence assumption. However, if we understand individual competence in the post-deliberation sense, the objections

correct decisions, rather than the probability that an observer will attribute to the individual concerning her voting correctly.

<sup>5.</sup> For formal proof, see Dietrich, "The Premises of Jury Theorem"; Dietrich and List, "A Model of Jury Decisions Where All Jurors Have the Same Evidence"; Judea Pearl, *Causality: Models, Reasoning, and Inference* (Cambridge, U.K.; New York: Cambridge University Press, 2000).

do not necessarily challenge the competence assumption, which means the objections do not apply to the post-deliberation jury theorem. Below I explain how the post-deliberation jury theorem can avoid those objections by appealing to the epistemic power of deliberation.

As discussed in Chapter 2, in justifying the epistemic value of democracy, many theorists appeal to the epistemic power of deliberation. They attempt to show that deliberation can improve the probability of voters' making correct decisions. Using my distinction, deliberative theorists aim to show that post-deliberation competence is better than pre-deliberation competence. Thus, their arguments for the epistemic value of deliberation can be used to justify the competence assumption of the post-deliberation jury theorem, where individual competence is understood in the post-deliberation sense. Instead of verifying their arguments, here I shall just review the main points of their arguments and indicate how deliberation can be used to justify the competence assumption of the post-deliberation jury theorem.

There are three features of deliberation that can usually improve individual competence.<sup>7</sup> First, deliberation enlarges the pool of information. This helps improve competence in various ways. For instance, it may eliminate biases that are based on misunderstanding or ignorance. Second, deliberation requires open debate and justifying one's positions to others. Open debate and arguments press participants to give up some views that are obviously biased and mistaken and to adopt reasons that are more likely to be accepted by others. This feature also helps to weed out good reasons and arguments from bad ones. Third, when there are a few competent people, they can persuade other people to accept their good reasons if there is deliberation.

<sup>6.</sup> Anderson, "The Epistemology of Democracy"; Estlund, *Democratic Authority*; Landemore, "Collective Intelligence"; Landemore, "Deliberation, Cognitive Diversity, and Democratic Inclusiveness."

<sup>7.</sup> Estlund et al., "Democratic Theory and the Public Interest"; Landemore, "Deliberation, Cognitive Diversity, and Democratic Inclusiveness."

Deliberation, of course, cannot guarantee that average individual competence will be higher than 0.5. However, with deliberation, it is reasonable to expect average individual competence, understood in the post-deliberation sense, to be better than 0.5. Hence, the objections against the competence assumption of the classic jury theorem do not apply to the post-deliberation jury theorem.

It might be argued that in some cases deliberation can decrease individual competence. For example, some influential person may present misleading evidence that a proposition is true when in fact it is false. People may tend to believe this person and form their judgments based on the misleading evidence. In such cases, people will tend to choose the incorrect options and thus have low individual competence. If people's individual competences are undermined so much that the average competence becomes lower than 0.5, it follows from the jury theorem that the group competence would be lower than 0.5. And the more voters there are, the worse the group competence would be.

This possibility, however, does not threaten the application of post-deliberation jury theorem to the justification of the epistemic value of democracy. In order to justify the epistemic value of democracy, it is not necessary to show that the group competence is high in *every* decision-making case. What we need is instead that the group competence is high in *most* cases. Thus, as long as the possibility of misleading deliberation does not occur often in democratic decision-making, we can still expect democracy to be epistemically valuable based on the post-deliberative version of jury theorem. Of course, here the epistemic value of democracy means that it tends to make correct decisions in most cases. It does not mean that democracy can improve decision-making in every case.

### 3. Dietrich's Objections

In Chapter 3, I discussed the two versions of the jury theorem distinguished by Dietrich. The fixed-problem jury theorem applies to cases where the state of the world and the circumstances are both fixed. The variable-problem jury theorem applies to cases where these two elements are both variable. Dietrich argues that the independence assumption in the fixed-problem jury theorem is a safe assumption. However, he argues that the competence assumption in the fixed-problem jury theorem cannot be *known* to hold. Since the fixed-problem jury theorem and the post-deliberation jury theorem are similar in important ways, Dietrich's objection might be applied to the post-deliberation jury theorem as well. Below, however, I show that the post-deliberation jury theorem can avoid Dietrich's objection.

Dietrich's objection is as follows. In order to know whether a voter is likely to vote correctly given the decision problem, we must know whether the circumstances of the decision problem are good or bad. The circumstances are good when the evidence involved in the circumstances is not misleading, and the circumstances are bad when the evidence involved is misleading. In good circumstances the voter is likely to vote correctly, while in bad circumstances the voter is likely to vote incorrectly.

The problem, Dietrich argues, is that we cannot know whether the circumstances are good or bad unless we know what the state of the world is. The reason is that the former question depends on the latter question. However, we do not have access to the state of the world except through the circumstances. Hence it is not possible for us to know whether the circumstances are good or bad. Consequently, it is not possible for us to know whether the voters are competent or not given the circumstances. It

follows that the competence assumption, which states that the average individual competence exceeds 0.5, cannot be known to hold.

In a jury case, for instance, in order to know whether the jurors are competent, we have to know whether the evidence on which the jurors rely is misleading or not. In order to know whether the evidence is misleading or not, we have to know whether the defendant is in fact guilty or not guilty. Suppose the evidence suggests that the defendant is guilty. Without knowing whether the defendant is *in fact* guilty or not, we only know that the evidence supports the decision "guilty," but we do not know whether it supports the *correct* decision. Thus, we only know that the jurors are likely to vote for "guilty," but do not know the jurors are likely to vote *correctly*. The problem, according to Dietrich, is that we do not have evidence-independent access to the facts about the defendant, so we have to rely on the evidence to judge whether the defendant is guilty or not. Dietrich's objection is that we cannot know whether the evidence on which the jurors rely is misleading or not, so we cannot know whether the jurors are likely or not to vote correctly given the evidence.

Dietrich's reasoning is as follows:

- (1) In order to know whether the voters are competent or not in a decision problem, we have to know whether the circumstances of the decision problem are good or bad.
- (2) In order to know whether the circumstances are good or bad, we have to know the state of the world in advance.
- (3) We cannot know the state of the world in advance.
- (4) Therefore, we cannot know whether the voters are competent or not in a decision problem.

Dietrich's objection can be revised and applied to the post-deliberation jury theorem:

- (1\*) In order to know whether the voters are competent or not after deliberation in a decision problem, we have to know whether the deliberation is 'good' or 'bad'.
- (2\*) In order to know whether the deliberation is 'good' or 'bad', we have to know the state of the world in advance.
- (3\*) We cannot know the state of the world in advance.
- (4\*) Therefore, we cannot know whether the voters are competent or not after deliberation in a decision problem.

As mentioned above, the circumstances are good means the evidence involved is not misleading. Similarly, the deliberation is good means it tends to improve individual competence.

The argument above is not sound, because premise (2\*) is false. As suggested in Chapter 2 and section 2 of this chapter, there is a way of knowing the deliberation's being good without knowing the state of the world. In defending the epistemic value of deliberation, deliberative theorists usually specify several formal features of deliberation. Different authors specify these features in different ways. But some essential features of a good deliberation include the equality of participants, the participants' ability to recognize good reasons, sufficient time for discussing, open debate, and so on. The deliberative theorists argue that deliberation with these

<sup>8.</sup> Estlund, Democratic Authority.

features can be expected to improve individual competence. As these arguments show, in order to know whether the deliberation is good or not, we do not have to know what the state of the world is. In other words, we can know whether the deliberation is good or not by considering whether deliberation has some form features, which does not rely on the state of the world. The deliberative democrats are concerned with the value of deliberation in general, while Dietrich is concerned with whether deliberation is good in a particular case. However, I think the arguments provided by the deliberative democrats can also be applied to particular cases. In any particular case, we can examine whether deliberation is organized in proper ways (e.g., whether everyone has equal access to forum, etc.). If deliberation, in a particular case, has the desirable features necessary for making correct decisions, then we can reasonably expect deliberation to be good in that case. If deliberation does not have those features, then we can expect it to be incompetent. In other words, we can know whether deliberation is good or not in a particular case without knowing the state of the world. Thus premise (2\*) is false.

A further objection might be that these features of deliberation cannot guarantee that the deliberation is good. There might be some unlucky cases, in which properly organized deliberation produces bad reasons and arguments and thereby decreases individual competences. Dietrich's objection, then, is that for any specific decision problem, we cannot know that we are not in an unlucky case.

This objection can be rebutted as follows. For the purposes of justifying the epistemic value of democracy, we do not have to know that the reasons and arguments provided in deliberation are good in *every* case. We only need to show that in most cases the reasons and arguments are reliable, from which we may conclude that the competence assumption of the jury theorem holds in most cases. It follows

that the jury theorem applies in most cases. This means that democracy makes correct decisions in most cases, or equivalently, democracy has a tendency to make correct decisions.

## 4. Anderson and Estlund's Objection

Instead of challenging the assumptions of the jury theorem, Anderson and Estlund raise a more general objection against the applicability of the jury theorem. Their objection is that the jury theorem is not an accurate epistemological model of democracy. For Anderson and Estlund, the epistemic value of democracy at least partly has to do with "the sharing of diverse perspectives" and its ability to "take advantage of the epistemic diversity of individuals." However, the jury theorem does not represent democratic decision-making in this way. According to Anderson and Estlund, deliberative models of democracy can better account for the epistemic value of democracy.

I agree with Anderson and Estlund that the jury theorem, in whichever version, does not model democracy in terms of the diversity of individuals. However, I do not think this is a serious objection against the jury theorem. First, there is no ground for favoring a model that represents democracy as in terms of its ability to take advantage of the diversity of individuals. As I argued in Chapter 2, taking advantage of diversity is only part of what renders democracy epistemically valuable. There are other mechanisms employed in democracy such as majority rule that help enhance the quality of collective decision-making. Instead of focusing on one feature of democracy such as diversity, an adequate account of the epistemic value of

<sup>9.</sup> Ibid., 232.

<sup>10.</sup> Anderson, "The Epistemology of Democracy," 11.

democracy should take into account all mechanisms that help improve collective competence.

Second, although the post-deliberation jury theorem does not directly appeal to diversity in its justification of the epistemic value of democracy, it includes diversity in its justification. More specifically, in defending the competence assumption of the post-deliberation jury theorem, diversity and deliberation are used to show how individuals can be competent after deliberation.

Unlike Anderson and Estlund, and many other deliberative theorists, I think an adequate justification of the epistemic value of democracy should appeal to both ideal deliberation and the jury theorem. Ideal deliberation accounts for the epistemic value of actual deliberative process, which is used to vindicate the competence assumption of the post-deliberation jury theorem, and the jury theorem accounts for the epistemic value of majority rule.

Many deliberative theorists do not consider the epistemic value of majority rule in their account of the epistemic value of democracy. One reason might be that the classic jury theorem is viewed as incompatible with deliberation. However, as the previous sections have shown, there is another version of the jury theorem—the post-deliberation jury theorem—that is compatible with deliberation.

Even deliberative theorists agree that majority rule voting is necessary for democracy.<sup>11</sup> The most obvious reason is that deliberation, whether in reality or in ideal, usually cannot result in unanimity. In reality, deliberation rarely results in unanimous agreement due to the limitation of time. Even in ideal deliberation, it cannot be expected to resolve all disagreements because some disagreements are

78

<sup>11.</sup> Goodin, Reflective Democracy.

about the fundamental values. When deliberation fails to produce unanimity and decisions must be made, majority rule voting is necessary for making decisions.

Since majority rule voting is necessary for democratic decision-making, an adequate epistemological model of democracy should take into account the epistemic value of majority rule. But the deliberative model itself cannot account for the epistemic value of majority rule. Only a model such as the jury theorem can explain how the majority opinion can have epistemic value.

If the post-deliberation jury theorem correctly applies, majority rule voting can significantly enhance group competence. An account excluding majority rule voting will usually underestimate the epistemic value of democracy. Thus, any theory that aims for an accurate account of the epistemic value of democracy should take the epistemic power of majority rule into consideration.

#### 5. Conclusion

In this chapter, I defended the post-deliberation version of the jury theorem. I argued that the classic version of the jury theorem is subject to several objections—the independence assumption cannot hold and the competence assumption is not warranted—because it is based on the pre-deliberation conception of competence, according to which individual competence is a probability of voting correctly calculated before deliberation. The post-deliberation version of the theorem, by contrast, adopts the post-deliberative conception of individual competence, i.e., the probability of voting correctly calculated after deliberation. I argued that the post-deliberation jury theorem avoided the objections to which the classic version is subject. Moreover, I considered Dietrich's fixed-problem version of the jury theorem

and his objection against this theorem. I argued that the post-deliberation jury theorem avoided Dietrich's objection.

Finally, I indicated an implication of the defense of the post-deliberation jury theorem. Some deliberative democrats do not take majority rule voting into account in their accounts of the epistemic value of democracy. I argued that an adequate epistemological model of democracy should appeal to the epistemic value of both deliberation and majority rule. Since the post-deliberation jury theorem appeals to the epistemic benefits of both deliberation and majority rule, it provides a better account for the epistemic value of democracy than the deliberative models.

# **Chapter 5: Epistemic value and Democratic Legitimacy**

The previous two chapters provided a justification for the epistemic value of democracy. I argued in those chapters that democracy could be epistemically valuable owing to the epistemic merits of deliberation and majority-decision. This chapter will address the issue of how the epistemic value of democracy is related to the legitimacy of democracy. According to epistemic theories of democratic legitimacy, the legitimacy of democracy is at least partly based on the epistemic value of democracy. In the first section, I will raise an objection against this view. The objection is that since people disagree about the epistemic value of democracy, it is not an appropriate basis for the legitimacy of democracy. In the second section, I offer a purely proceduralist argument for democratic legitimacy. The argument only appeals to the intrinsic value of democracy (i.e., the equality of democratic procedure) and avoids relying on any instrumental value of democracy. This argument shows that the epistemic value of democracy is not necessary for democratic legitimacy.

# 1. Rejecting Epistemic Theories of Democratic Legitimacy

Epistemic theories of democratic legitimacy assert that the epistemic value of democracy is necessary and at least partially sufficient for justifying the legitimacy of democracy. For epistemic democrats, democracy is legitimate, at least partly, because democracy has a tendency of making correct political decisions. In this section, I shall raise an objection against epistemic theories of democratic legitimacy from the fact of

disagreement. The objection is that the epistemic value of democracy is controversial and thus cannot be used as a ground for democratic legitimacy.

We may distinguish two versions of epistemic theory, depending on how much epistemic value is required for democracy to be legitimate. The stronger version of epistemic theory requires democracy being epistemically the *best* among all feasible political decision procedures. The weaker version, by contrast, only requires democracy being epistemically *adequate* (e.g., being epistemically better than random procedure, or not being too much worse than the best procedures). The objection raised in this section applies to both versions. For brevity, in the following discussion, I shall present epistemic theories in its stronger version.

Let me begin with the fact of disagreement. In complex, diverse societies there are substantial disagreements about what ought to be done collectively. On the one hand, people disagree about what justice consists in, what rights we have, and what the common good is. On the other hand, people disagree about what the best means are for achieving justice, protecting rights, and promoting the common good. Despite their disagreements, citizens living in the same society need common rules on which they can act. So, the fact of disagreement poses the following question: What is the legitimate procedure of deciding what to do collectively when we disagree about what ought to be done?

For many theorists, democracy provides an answer to this question: When there is disagreement about what political decisions to make, the legitimate procedure is one in which decisions are made by all citizens or the representatives elected by the citizens. But different theories of democratic legitimacy offer different explanation for why democracy is a legitimate solution to the problem posed by disagreement. For

<sup>1.</sup> For accounts of the fact of disagreement, see Estlund, *Democratic Authority*, 99; Ingham, "Disagreement and Epistemic Arguments for Democracy," 139; Waldron, *Law and Disagreement*, 1; 102; 189.

example, a purely procedualist theory maintains that the legitimacy of democracy is grounded in the procedural fairness of democracy. Epistemic theories, by contrast, claim that it is because democracy is epistemically the best procedure (i.e., democracy is more likely than any other procedures to make correct political decisions).

Before I present my objection to epistemic justification for democracy, it is helpful to consider how an epistemic justification for non-democracy (e.g., aristocracy or authoritarianism) will fail. The failure of such a justification will help to explain why epistemic theories of democratic legitimacy should be rejected. Suppose someone argues that when there are disagreements about political matters, decisions should be made by the experts because the experts are most likely to make correct decisions. This justification for aristocracy cannot succeed. The reason is that there is no agreement on who the experts are. For one thing, people disagree about the standards of expertise. For example, there is no consensus about who are experts concerning making just laws, because people disagree about the principles of justice. For another thing, there is disagreement about whether an individual satisfies the standards of expertise. It is the disagreement about the correctness of political decisions that raises the question of who ought to make decisions. So, it does not help to answer the question by saying that decisions ought to be made by those who tend to make correct decisions.

Epistemic theories of democratic legitimacy are subject to a similar objection.

Recall the question posed the fact of disagreement: What is the legitimate procedure of deciding what to do collectively when we disagree about what ought to be done?

Epistemic democrats attempt to answer this question by asserting that democracy is a legitimate decision procedure under the circumstance of disagreement because it is more likely than any other procedures to make correct political decisions. However,

the problem with epistemic theories is that the epistemic value of democracy is itself in disagreement. In responding to the question of what we ought to do when there is disagreement about correctness of decisions, epistemic theories suggest that we implement the epistemically best procedure. But if there is disagreement about the epistemic value of decision procedures, the suggestion of epistemic theories does not help to answer the question posed by disagreement. So, epistemic theories fail to justify the legitimacy of democracy by relying on the epistemic value of democracy.

Waldron and Sean Ingham raise a version of this objection against epistemic democracy.<sup>2</sup> Although I will indicate below that their version of the objection does not apply to all types of epistemic theories, it is worthy of consideration because it helps to clarify the main idea of my objection against epistemic theories. Their objection can be presented as follows. The epistemic justification of democracy relies on the claim that democracy is epistemically the best, meaning that it is better than any alternative procedure at making correct decisions. In order to determine the epistemic value of democracy, epistemic democrats have to know how likely democracy can make correct decisions in particular case or how frequent democracy makes correct decisions in general. However, there is no uncontroversial way of showing that the decisions made by democracy are correct. As the fact of disagreement indicates, there are disagreements about whether a particular decision is correct or not, because people disagree about either the standards of correctness or the measurement of correctness against certain standard. If an epistemic justification of democracy relies on claims that are themselves in disagreement, the justification would only be convincing for those who accept those controversial claims, but would be question-begging for those who reject those claims. Thus, Waldron and Ingham

<sup>2.</sup> Waldron, "Against Judicial Review"; Ingham, "Disagreement and Epistemic Arguments for Democracy."

claim that epistemic theorists cannot provide any non-question-begging justification for democratic legitimacy.

Take Condorcet's Jury Theorem as an example. According to the jury theorem, the majority of a group is likely to arrive at correct decisions, if the individual members have independent and greater-than-random chances of voting correctly. This conclusion of the jury theorem can be used to justify the epistemic value of democracy. However, in order to apply the jury theorem to the epistemic justification of democracy, we need at least show that the individual members are better than random at voting for the correct decisions. The opponents do not deny that this assumption might be true. But they worry that it cannot be shown to be true without appealing to controversial claims about correctness. For example, if epistemic democrats want to show that an individual tends to make decisions that respect rights, they have to appeal to controversial claim that decisions made by that individual usually respect rights. The latter claim is controversial because there is disagreement about what rights we have and whether a particular decision respect a right. Thus the jury theorem cannot provide an uncontroversial epistemic justification for democracy.

However, the objection raised by Waldron and Ingham does not apply to all forms of epistemic justification for democratic legitimacy. Some justifications for the epistemic value of democracy do not rely on the correctness of any particular decisions made by democracy. Estlund helpfully distinguishes between the substantive argument and the formal argument for the epistemic value of democracy. As will be shown below, only the substantive argument is subject to Waldron and Ingham's objection. The substantive argument appeals to certain standards of correctness and argues that democracy tends to make correct decisions according to

<sup>3.</sup> Estlund, Democratic Authority, 169-71.

those standards. For example, one may appeal to a list of human rights and argue that democracy tends to make decisions that respect those rights. As argued above, this type of argument is vulnerable to the objection that the standards of correctness are controversial.

The formal argument, by contrast, does not make any assumption of standards of correctness. Instead it tries to show that the decision procedure has a tendency of tracking truth, no matter what the truth is. For example, a formal argument can argue that democracy tends to make just laws no matter what the right principles of justice are. This kind of argument usually appeals to the formal features of democracy such as the cognitive diversity of participants. If the epistemic justification of democratic legitimacy relies on formal arguments, then it is not subject to the objection raised by Waldron and Ingham. This is because it does not rely on the correctness of any particular decision made by democracy.

However, this does not mean that epistemic theories relying on formal arguments can avoid the difficulty posed by the fact of disagreement. Although the formal arguments for the epistemic value of democracy do not assume the correctness of any particular decision made by democracy, and can thereby avoid the controversies of the correctness of particular decisions, the arguments can be subject to disagreement in other ways. For example, in justifying the epistemic value of democracy, some theorists appeal to the diversity of participants. They argue that by including all citizens in deliberation democratic procedure has the highest level of cognitive diversity and thereby has the best epistemic value among all alternative procedures. But other theorists point out that by including all citizens in deliberation, the average competence of individuals will be decreased and thereby the group competence will be undermined. Alternatively, it can be argued that a more exclusive decision

procedure can be epistemically more valuable than democracy. For example, if two individuals are cognitively similar, then we can exclude the less competent individual from the decision-making process. That way the decision procedure can maximize the average competence of individuals but not decrease the level of cognitive diversity. Indeed, many theorists have argued that non-democratic procedures such as judicial review are better than democracy at making decisions concerning certain issues.<sup>4</sup>

By using the examples above, I do not intend to show that democracy is less epistemically valuable than non-democracy. Rather, the purpose is to indicate that even the formal arguments for the epistemic value of democracy are subject to disagreement. Thus, because the epistemic democrats appeal to formal arguments in justifying the epistemic value of democracy, their justification will still be controversial. Recall, again, the problem posed by the fact of disagreement: What is the legitimate procedure of deciding what to do collectively when we disagree about what ought to be done? Epistemic theories fail to provide a satisfactory answer to this question. They assert that democracy is the legitimate procedure under the circumstances of disagreement because democracy is epistemically the best procedure. However, if one denies the epistemic value of democracy, they will deny the legitimacy of democracy. Since the epistemic value of democracy is controversial, the legitimacy of democracy based on its epistemic value is also controversial. For this reason, epistemic theories, which take democratic legitimacy to be grounded in the epistemic value of democracy, fail to provide a satisfactory justification for democratic legitimacy.

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<sup>4.</sup> Waldron (1999) raises a similar objection against what he calls the "modest rights-instrumentalism". However, the epistemic justification provided by modest rights-instrumentalism is not purely formal according to my definition here, since it involves certain substantive moral conceptions. Thus, Waldron's objection does not fully apply to the formal argument for the epistemic value of democracy. See Waldron, *Law and Disagreement*, 253–54.

This section argued that basing democratic legitimacy on its epistemic value is problematic. In next section, I shall offer a purely proceduralist argument for democratic legitimacy, which further shows that the epistemic value of democracy is not necessary for justifying democratic legitimacy.

### 2. A Purely Proceduralist Argument for Democratic Legitimacy

In this section, I lay out a purely proceduralist argument for democratic legitimacy. The argument proceeds in three steps. First, I assume that a state, in order to be legitimate, must treat all citizens with equal respect. This assumption is based on the widely accepted egalitarian ideal that every citizen has equal moral worth. Second, I argue that equal respect for citizens requires that the state treat their political views with equal respect. The reason is that equal respect for citizens requires equal respect for their agency, which in turn requires equal respect for their views about political matters. In what follows, people's views only refer to their views about political matters or their political views. Finally, from the fact that only democracy treats citizens' views with equal respect, I conclude that only democracy can be legitimate. Based on the reasonable assumption that there can be legitimate states, this argument provides a justification for the legitimacy of democracy. The argument is purely proceduralist, because it only refers to the intrinsic properties of democracy (i.e., the political equality among citizens in democratic process) and does not rely on the instrumental effects of democracy. This argument shows that epistemic theories of democratic legitimacy, which take epistemic value of democracy to be necessary for justifying democratic legitimacy, are mistaken.

The argument can be presented as follows:

- P1. A state, in order to be legitimate, must treat all citizens with equal respect.
- P2. To treat all citizens with equal respect, a state must treat their political views with equal respect.
- P3. Only democracy treats all citizens' political views with equal respect.
- C. Therefore, only democracy can be legitimate.<sup>5</sup>

At first glance, this argument only shows the necessity of democracy for legitimacy. It might be argued that this does not defeat the epistemic theories, because it is possible that both respecting citizens' views and having epistemic value are necessary for justifying democratic legitimacy. However, the argument above, if combined with another reasonable assumption, can show the sufficiency of democracy. The assumption is that at least some forms of state (perhaps only in ideal conditions) are legitimate. Here I take this assumption to be reasonable, so I do not provide any justification for it. If there are some legitimate states, and democracy is the only form of state that can be legitimate, as the argument shows, then some form of democracy is legitimate.

As mentioned above, P1 is a requirement on political institutions imposed by the egalitarian principle, which states that all citizens are morally equally important and ought to be treated with equal respect. Here I simply assume that this premise is true. The truth of P2 and P3 are more controversial and will be defended below.

#### 2.1. Defending P2

<sup>5.</sup> This argument is adapted from the "egalitarian argument for democracy" in Wall (2007). Although Wall rejects this argument, I aim to defend it. See Wall, "Democracy and Equality," 417.

P2 states that, to treat all citizens with equal respect, a state must respect their views about political matters. Here I assume that this involves moral matters such as justice, individual rights, and the common good. Treating citizens with equal respect roughly means that treat them as equally important in moral considerations. For example, no citizen's interests should be weighed more than others' in evaluating the justice of a policy. It is not clear, at first glance, how the idea of equal respect of citizens implies equal respect of their views. One may argue, against P2, that there are many different ways to treat citizens as equals and it is not obvious that respecting citizens' views is necessary.<sup>6</sup> Thus, in order to defend P2, we need an account for the derivation from the requirement of treating all citizens with equal respect to the requirement of treating their views with equal respect.

There are two main accounts that try to connect the requirement of equal respect for citizens with that of equal respect for their views. The first account appeals to the connection between people's views and their interests. According to this account, the legitimacy of a state requires that people's views should be treated equally by the state because its legitimacy requires equal consideration of their interests, which in turn requires equal respect of their views. The second account appeals to the idea of individual agency. Individual agency includes people's capacity to form their views about matters like justice, human rights, and the common good. According to this account, a state should respect people's views because it should respect their capacity

<sup>6.</sup> Wall, "Democracy and Equality."

<sup>7.</sup> Ibid

<sup>8.</sup> Christiano, "Knowledge and Power"; Christiano, *The Constitution of Equality*; Waldron, *Law and Disagreement*; Waldron, "Against Judicial Review"; Jeremy Waldron, "Democracy," in *The Oxford Handbook of Political Philosophy*, ed. David Estlund (Oxford; New York: Oxford University Press, 2012), 187–203.

<sup>9.</sup> Individual agency involves individual's capacity to choose what to believe and what to do. Here I only focus on the doxastic dimension of individual agency. Agency below thus refers to doxastic agency.

to form their views on such matters.<sup>10</sup> Below I argue that the first account fails to ground P2. However, the second account can succeed.

### **Equal Consideration of Interests**

The first way of showing why a legitimate state must respect citizens' views is to argue that people's views are closely related to their own interests. Since a state is required by the egalitarian principle to equally advance all citizens' interests, as the argument proceeds, a state is required to treat their views equally.

First, let me briefly explain the idea of equal consideration of interests. Here interests roughly refer to "what is good overall for a person." As mentioned above, the egalitarian principle asserts that all citizens have equal moral worth and ought to be treated with equal concern and respect. For some theorists, an important implication of equal concern and respect for persons is equal consideration of their interests. Thus, if a state is required to treat citizens with equal respect, according to these theorists, the state is required to equally advance citizens' interests.

It might be argued that citizens' interests could be equally advanced by non-democratic state, which does not necessarily treat citizens' views with equal respect. For instance, we can imagine a benign monarch or an impartial group of elitists, who may take all citizens' interests into account and advance their interests equally when there is conflict. However, as Thomas Christiano notices, there are two facts about political judgment that can show why citizens' interests are unlikely to be equally advanced in non-democracy and why the equal advancement of interests requires equal respect of citizens' views.

<sup>10.</sup> Waldron, Law and Disagreement; Waldron, "Democracy"; Peter, "Pure Epistemic Proceduralism," 36-37.

<sup>11.</sup> Christiano, "Knowledge and Power," 202.

<sup>12.</sup> Waldron, "Democracy," 191-92.

The first fact is that individuals' political views are usually biased towards their own interests. On the one hand, individuals tend to interpret others' interests based on their understanding of their own interests. This is because they have better understanding of their own interests than those of others'. On the other hand, individuals tend to attribute less weight to others' interests than to their own interests, because they are more sensitive to the harms they might undergo than those to others. For these reasons, individuals' views about justice and the common good usually fail to accurately reflect or attribute enough weight to others' interests.

The second fact is the fact of disagreement about political matters. As discussed in previous section, in complex societies there are substantial disagreements about the ends that a society ought to pursue and the means for achieving those ends. Since individuals' views are biased towards their own interests, disagreements about political issues among people usually reflect conflicts of interests. Thus, the ignorance of some individuals' views in a political decision procedure usually means the ignorance of their interests. Based on the fact of disagreement and the fact that individuals' views are biased towards their interests, some theorists maintain that equal consideration of interests requires equal respect for citizens' views.<sup>13</sup>

P2 states that, to treat all citizens with equal respect, a state must treat their political views with equal respect. If the argument above succeeds, P2 can be defended. The argument states that equal respect for all citizens requires equal consideration of their interests, and equal consideration of interests requires equal respect for their views. It follows that equal respect for citizens requires equal respect for their views. However, the argument from equal consideration of interests is subject to two objections, which render it unsuccessful.

<sup>13.</sup> For more discussion of those facts, see Christiano, "Knowledge and Power," 205-7.

First, the argument relies on the assumption that the interests reflected by all individuals' political views should be equally advanced. This claim is problematic. As Steven Wall points out, some views might reflect interests that are rationally or morally unacceptable and therefore should not be advanced. Suppose I claim that I ought to rule over other people. It is clear that the interest reflected by this claim (i.e., being able to rule over other people) should not be advanced. Also, some of my claims might be based on inconsistent beliefs that I hold. In such cases, given the inconsistency of my beliefs it is not clear that the state should equally advance the interests I claim to have. If the interest should not be equally advanced, the view that reflects the interest should not be respected either. Since some interests of some individuals may be rationally or morally unacceptable, the state is not required to equally advance all interests of all individuals. For this reason, the argument fails to establish that a state ought to respect all citizens' views.

Second, even if the interests of all citizens are acceptable, and should be equally advanced, it still does not follow that citizens' views should be equally respected. The reason is that a law or policy will affect different citizens' interests to different degrees. If people's interests are to be advanced equally, then those who have more at stake should have more say than those who have less at stake. Thus, from equal consideration of interests, it does not follow that citizens' views should be treated equally. The argument from equal consideration of interests fails to justify P2.

#### Equal Respect for Individual Agency

Let us now consider the argument from equal respect for individual agency. The main idea of this argument is that equal respect for citizens implies equal respect for their individual agency, and equal respect for individual agency implies equal respect for

their political views. So, it provides a defense for P2, which states that to treat all citizens with equal respect, a state must treat their views with equal respect.<sup>14</sup>

The idea of individual agency is that individuals have the capacity to form views about moral issues such as justice and human rights. Recall that the egalitarian principle requires a legitimate state to treats all citizens with equal regard since they are morally equally important. According to the egalitarian principle, a state that fails to treat individuals with equal respect is illegitimate. Equal respect for all individuals requires the equal respect for their rational nature, which involves their capacity to form political views. Thus the egalitarian principle requires that a state respect citizens' individual agency. A state that fails to respect citizens' agency is illegitimate.

Now let me explain how respecting citizens' agency is connected to equal respect for their views. Recall the fact of disagreement described in the previous section. People disagree about what ought to be done collectively either because they disagree about what justice requires, what rights we have, and what the common good consists in, etc., or because they disagree about what the best means are for achieving justice. Under the circumstances of disagreement, if an individual's views are not treated as seriously as those of others', that individual is treated as inferior to others with respect to their capacity to form political views. Thus, to respect citizens' agency, under the circumstances of disagreement, requires equal respect of their views.

The argument above has received some objections. For example, Wall denies the connection between equal treatment of agency and equal treatment of views by arguing that to design institutions that favor sound views over misguided views does not necessarily show disrespect for people's agency. Wall's objection can be

<sup>14.</sup> For this kind of argument, see Waldron, *Law and Disagreement*; Waldron, "Against Judicial Review"; Peter, "Pure Epistemic Proceduralism."

supported if we consider why deliberative theorists recommend the establishment of deliberative decision procedures. For many deliberative democrats, deliberation is a reliable mechanism for arriving at correct political decisions. It is expected that deliberation will help the participants recognize better reasons presented by other people and correct their misguided views accordingly. Under ideal conditions, people will be very likely to arrive at consensus on a view that is best supported by reasons and arguments. Under less favorable conditions, people will hold several different views that are well supported by reasons and arguments. But in any case, the views that are obviously mistaken, unreasonable, or not supported by good reasons will not be accepted by any participant. Hence, only the sound views have good chance to be accepted, while the misguided views will be abandoned. Deliberation, in this sense, does not respect all initial views. Rather, it favors views supported by good reasons and arguments over misguided views. But this does not necessarily mean that the employment of deliberation in democracy shows disrespect for people's capacity to form their views.

To reply to Wall's objection, we need to distinguish three sources of disagreement among people.<sup>15</sup> First, disagreement might be the result of some people's unreasonableness, ignorance, or incompetence. In such cases, reasonable, well-informed, and competent judges would not disagree. Second, in some cases there are disagreements among reasonable, well-informed, and competent judges because some of them made "demonstrable mistakes" in their reasoning.<sup>16</sup> But as long as the mistakes are pointed out to those people, they will realize the mistakes and be able to correct them. The disagreement will disappear after that. For the third kind of case,

<sup>15.</sup> This distinction is adopted from Arneson (2009). See Arneson, "The Supposed Right to a Democratic Say." 206–7.

<sup>16</sup> Ibid., 206.

there are disagreements among reasonable, well-informed, and competent judges even though none of them made demonstrable mistakes. Rather, disagreement is unavoidable in these cases given our epistemic conditions.

The respect of individual agency is concerned with the third kind of disagreement. When people disagree, and the disagreement is not due to unreasonableness, ignorance, incompetence, or demonstrable mistakes, it would be disrespectful to consider some citizens' views as less important. In other words, equal respect for individual agency requires equal respect for *informed* views rather than any views. Deliberation, as mentioned above, is designed to favor sounded views over misguided views. It is true that, in deliberative processes, not all views are given equal weights. This is because some views are formed by not well-formed, incompetent people, or are based on mistakes. But if the disagreement belongs to the third category, deliberation will not favor some views over other views. It will give all views equal weights.

Also, we should notice that the ability of recognizing good reasons and adjusting beliefs according to new evidence is a part of people's agency. Deliberation, by favoring sound views over misguided views, respects people's ability of recognizing good reasons and thereby respects their agency. Thus, Wall's objection does not threaten the argument from equal respect for citizens' agency to equal respect for their views. Hence, I conclude that the argument from equal respect for individual agency provides a defense for P2.

#### 2.2. Defending P3

The argument advanced in this section aims to show that democracy is necessary for legitimacy. In the previous subsection, I defended the second premise of the

argument, which states that equal respect of citizens requires equal respect of their views. This subsection will defend another premise P3, which states that only democracy treats citizens' political views with equal respect.

First, let me briefly explain how citizens' views are equally respected by democracy. It is helpful to recall the basic ideas of democracy. Democracy is a kind of collective decision procedure in which all citizens are given an equal political right to vote for the laws or the representatives who make laws. By giving each citizen an equal say in political decision-making, democracy gives each citizen's view an equal opportunity to influence the results of political decision. It is in this sense that democracy treats people's views with equal respect.

A potential objection against P3 is that citizens' views can be respected by non-democracy. It might be argued that random decision procedures can treat citizens' views with equal respect as well because they are fair procedures. For example, when we have two options and we disagree about which option is correct, we can toss a coin to decide which option to implement. When we have a few options and we disagree about which option is right, we can randomly choose one from a lottery to implement. For another example, we may randomly choose an individual to be a queen for the day and do whatever the selected queen thinks is the best (Call this method "Queen for a Day" 17).

Although random procedures such as coin-tossing or "Queen for a Day" are at least as fair as democracy, there are some advantages of democracy over random procedures that can explain why citizens' views are equally respected by democracy but not by random procedures. Waldron argues that, although both democracy and random procedures are fair in certain sense, democracy is better than random

<sup>17.</sup> Estlund, "Beyond Fairness and Deliberation," 178.

procedures, because the latter does not give each citizen as much positive weight as possible. In a coin-tossing or "Queen for a Day," only one individual has actual influence over the results of political decision-making. In democracy, by contrast, all citizens' views have some positive effects on the results.<sup>18</sup>

To see this point clearer, we may distinguish between having an equal *say* and having an equal *chance* in political decision process. In random procedures, each citizen has an equal chance in political decision process in the sense that each of them has the same probability of being chosen by the procedure. However, the citizens do not have equal say in political decision process. Only the citizen being chosen has a say, and other citizens have no say at all. An example is helpful for illustrating the distinction. Suppose we need to distribute \$100 among 100 persons. A random distributive procedure will randomly choose a person and give that person \$100. In such a case, although everyone has an equal chance to get the money, they do not have an equal share of the money. A democratic distributive procedure, however, will not only distribute the money fairly but also distribute as much to each person as possible. The result of such distributive procedure is to give \$1 to each person. In a democracy, thus, everyone has an equal share of the money.

But why does respecting citizens' views require that each citizen have a say in political decision-making process? Why isn't it enough to given all citizens equal chance to be a queen for a day, even though that means only the selected queen will have a say? To answer these questions, Waldron appeals to the importance of political decisions. Political decisions are about the basic structure of a society. They specify what rights and duties we have and how benefits are to be distributed. According to Waldron, given the important effects of political decisions on citizens, it is better that

<sup>18.</sup> Waldron, Law and Disagreement, 113-16.

the citizens have some control over the decisions than letting one person makes all decisions for them.<sup>19</sup>

To explain why it is better that citizens have control over the decisions than letting one person be queen for a day, we may appeal to the epistemic value of majority rule. By adopting majority rule, we are more likely to make correct political decisions than giving all authority to one person. Since political decisions are important, it is better that all citizens have control. This answer, however, is subject to the following objection. As Estlund argues, the importance of political decisions is a value beyond democratic procedure. So, if an argument appeals to the importance of political decisions in accounting for the legitimacy of democracy, it is not a purely proceduralist argument, because it appeals to some non-procedural value of democracy. Thus, Estlund thinks that pure proceduralism faces a dilemma. One the one hand, in order to explain why democracy is legitimate and random procedures are not legitimate, we need appeal to the value of political decisions. But if an account of democratic legitimacy appeals to the importance of political decisions, it is not a purely proceduralist account. On the other hand, if pure proceduralism only appeals to the idea of fairness and refuses to rely on the importance of political decisions, then it has a mistaken implication that random procedures, due to their fairness, are legitimate.<sup>20</sup>

There is another explanation for why giving each citizen an equal say is necessary for equal respect for citizens' views, which can avoid Estlund's objection. The answer is not that people have some substantive interests in having a say in political decision. Purely proceduralist account cannot appeal to substantive interests, which are non-procedural values. Rather, the answer is that citizens have "interests in

<sup>19.</sup> Ibid., 242.

<sup>20.</sup> Estlund, Democratic Authority, 65-97.

influence." Citizens' interests in influence are not about what outcomes would be brought about by the decisions. Nor is it about whether the results would correspond with one's will. As Kolodny defines it, having an interest in influence is just to ensure the result be positively sensitive to one's view. Democracy promotes citizens' interests in influence in two ways. First, it promotes their absolute influence. In democracy, everyone has a share of influencing the results of political decision-making. To be sure, when the number of voters is large, each citizen only gets a very small amount of share. But citizens' interests in absolute influence are still promoted to certain extent. Second, in democracy, everyone has equal share of influence, so their interests in *relative* influence are also promoted. Unlike democracy, random procedures are not concerned with citizens' interests in influence. The reason is that in random procedures the results of political decision-making process are only positively sensitive to the selected citizens. This explains why citizens' views are respected by democracy but not by random procedures, even though both democracy and random procedures are fair procedures. Since the advancement of citizens' interests in influence is not an instrumental value of democracy, by appealing to citizens' interests in influence, a purely proceduralist argument is not subject to Estlund's objection above.

#### 3. Conclusion

In this chapter, I raised an objection against epistemic theories of democratic legitimacy, which claim that democratic legitimacy partly relies on the epistemic value of democracy. By relying on the epistemic value of democracy, an epistemic

<sup>21.</sup> Niko Kolodny, "Rule Over None I: What Justifies Democracy?," *Philosophy & Public Affairs* 42, no. 3 (2014): 199.

justification of democratic legitimacy relies on something in disagreement. Thus, epistemic theories fail to answer the question of how political institutions ought to be arranged and who can legitimately make political decisions under the circumstances of disagreement.

After rejecting the epistemic theories, I provided a purely proceduralist argument for democratic legitimacy. The argument starts with the egalitarian principle that all citizens ought to be treated with equal respect. I argued that this principle requires people's agency being treated equally by a legitimate state, which in turn requires people's views being treated equally. Since only democracy treats people's views equally in political decision-making, democracy is the only form of state that can be legitimate. This argument shows that the epistemic value of democracy is not necessary for justifying democratic legitimacy.

# **Chapter 6: Estlund's Epistemic Proceduralism**

Estlund develops the most prominent epistemic theory of democratic legitimacy, which he calls "epistemic proceduralism." According to epistemic proceduralism, in order to be legitimate, a state must have certain degree of epistemic value that is justifiable "within the terms of public reason." In this chapter, I examine the main claims of epistemic proceduralism. By indicating two main problems with epistemic proceduralism, I argue that it fails to provide a satisfying epistemic justification for democratic legitimacy.

## 1. The Main Claims of Epistemic Proceduralism

According to Estlund's epistemic proceduralism, democracy is legitimate partly because it "is better than random and is epistemically the best among those that are generally acceptable." Epistemic proceduralism grounds democratic legitimacy partly on the following two epistemic claims about democracy:

(EC1). Democracy is epistemically better than random decision-procedures. (EC2). Democracy is epistemically the best among those decision-procedures that are generally acceptable.

<sup>1.</sup> Estlund, Democratic Authority, 168.

<sup>2.</sup> Ibid., 8.

Let me explain each claim. ECI states that democracy is epistemically better than random decision-procedures. A random decision-procedure is understood as follows. When there are n alternative options, among which m options are correct, a random procedure will choose a correct option with a probability of m/n. For example, suppose we need to draw a spade from a deck of fifty-two cards. In this case, there are 52 alternative options, among which 13 options are correct. If we draw a card randomly, the probability of getting a spade is 13/52. To say that democracy is better than random is to say that democracy has a greater than m/n probability of choosing a correct option in such a case. For instance, when there are two candidates and one of them is competent for the position, a random procedure has a 0.5 probability of selecting the competent candidate. Being better than random, democracy can choose the competent candidate with a greater than 0.5 probability. According to Estlund's epistemic proceduralism, democracy is legitimate partly because it is better than random in the sense described above.

EC2 states that democracy is epistemically the best among those that are generally acceptable. To clarify this claim, we need introduce Estlund's qualified acceptability requirement (QAR). This requirement states that a necessary condition for a state's being legitimate is that the epistemic value of the state is acceptable to all possible qualified points of view. A few points of this requirement need to be explained. First, as will be indicated latter, the epistemic value of a state is a matter of degree. We can at least distinguish two different senses of epistemic value: being better than random and being the best among all alternative states. Depending on which sense of epistemic value is used, two different versions of QAR can be

<sup>3.</sup> See Section 1, Chapter 2 for discussion of how correctness is settled in general.

<sup>4.</sup> In rejecting non-democracy, Estlund thinks that his argument shows "that the epistemic case for any nondemocratic arrangements is bound to go beyond what can be accepted in public reason." Estlund, *Democratic Authority*, 168.

developed. As I will argue in the next section, *EC2* is problematic regardless of which version of *QAR* is adopted.

Second, Estlund does not specify what counts as a qualified point of view. He mentions that some crazy points of view are clearly disqualified. For example, someone who thinks he is born to be a ruler over other people is not qualified. For present purposes, we only need to notice that there are some points of view that are qualified and that not all points of view are qualified.

Third, the meaning of acceptability is ambiguous. In the first sense, a claim is acceptable to a person just in case that person does not have *any* objection against that claim. In this sense, a claim's acceptability can be defeated by any objection. In the second sense, a claim is acceptable to a person just in case that person has *positive* reasons to accept that claim and does not have decisive objections against that claim. In the third sense, a claim is acceptable to a person just in case that person does not have *decisive* objections against that claim. She might have some objections against the claim, but as long as the objections are not decisive, the claim is acceptable to her.

Estlund uses acceptability in the first sense—there is no objection against the relevant claim. Thus, when *QAR* says that in order to for a state to be legitimate the epistemic value of the state must be acceptable to all qualified points of view, it means that the epistemic value of the state must be beyond any objections from all possible qualified points of view. In other words, if there is an objection from a possible qualified point of view against the epistemic value of a state, then the epistemic value of the state is not acceptable to that point of view and *QAR* is not satisfied.

Fourth, *QAR* requires a state to be acceptable to all *possible* qualified points of view. Estlund does not specify what sense of possibility is used here. But for our

purposes, we need to notice that all possible qualified points of view include those that are not points of view of actual subjects of the states. For example, they may include potential citizens, citizens in the next generation, the future points of view of the actual citizens, and so on.

Thus, *QAR* means that, in order for a state *S* to be legitimate, it is necessary that there is no possible qualified objection against the claim that *S* has epistemic value. In principle, we can examine the main kinds of state and identify those that satisfy *QAR*. Let *A* be the set of the main kinds of state that satisfy *QAR*. Then, *EC2* says that democracy belongs to set *A* and it is epistemically the best within this set. Normally, the main kinds of state include dictatorship, aristocracy, authoritarianism, democracy, etc. However, in Estlund's book, he focuses on two kinds of state—democracy and epistocracy (the rule of the wise). For this reason, the discussion below will also focus on democracy and epistocracy and set aside other forms of state.

In Chapter 2, I have examined Estlund's argument for *EC1*. Estlund's argument is divided into two main parts. The first part explains how an *ideal* form of democracy, called "model deliberation", can have better-than-random epistemic value. The second part explains how *actual* forms of democracy, by deviating from the ideal in certain ways, can be expected to perform better than random. I have argued that Estlund failed to provide an adequate justification for the better-than-random epistemic value of ideal democracy due to (1) the lack of a systematic account of how deliberation improves group competency; (2) the exclusion of majority voting as a mechanism of improving group competency; and (3) the limitation of not recognizing the importance of individual competence for collective decision-making. In this chapter, I shall focus on *EC2*. In the next section, I shall raise an objection against the qualified acceptability requirement (*OAR*).

#### 2. Rejecting the Qualified Acceptability Requirement

In this section, I examine the qualified acceptability requirement (QAR) of epistemic proceduralism. I argue that this requirement, even being interpreted in its weakest version, is problematic and should be rejected. According to QAR, a necessary condition of legitimacy is that the epistemic value of legitimacy is acceptable to all possible qualified points of view. That is, in order for a state S to be legitimate, it is necessary that there is no possible qualified objection against the claim that S has epistemic value.

Before I raise my objection, it is helpful to review two points of this requirement. First, by acceptable Estlund means there is no qualified objection. Second, *QAR* requires a state to be acceptable to all *possible* qualified points of view. Thus, if there is a possible qualified objection against the epistemic value of a state, then the state fails to satisfy *QAR*.

Following Copp and Gaus,<sup>5</sup> my first objection against *QAR* is that it is in conflict with some plausible claims about sufficient conditions for legitimacy, or specifically, with consent theory. It is plausible that actual consent from all citizens is sufficient for legitimacy, when reasonably well informed and free. However, *QAR* implies that actual consent from all citizens is not sufficient for legitimacy, because a qualified objection from a *possible* point of view can defeat the justification provided by the actual consent from all citizens. As Copp and Gaus argue, since it is very plausible that actual consent from all citizens is sufficient for legitimacy and *QAR* implies the opposite, *QAR* is false.

<sup>5.</sup> David Copp, "Reasonable Acceptability and Democratic Legitimacy: Estlund's Qualified Acceptability Requirement\*," *Ethics* 121, no. 2 (January 2011): 239–69, doi:10.1086/658139; Gaus, "On Seeking the Truth."

In responding to this objection, Estlund denies that actual consent from all citizens is sufficient for legitimacy. Estlund's reason is that what people consent to today might be something they would not accept tomorrow. The possibility that people might change their minds and thereby not consent tomorrow, according to Estlund, can defeat the justification of the consent they make today. In Estlund's words, "a policy that will extend over time cannot be justified today if I have a reason to fear that, owing to possible and reasonable changes in my view, it won't be justified tomorrow because I would not then consent to it."

Estlund's reply is not convincing, however. If I am aware that I might change my mind tomorrow about selling you my car and might not consent to this tomorrow, but I consent to selling it anyway, then it seems that my consent is valid despite the possibility that I might not consent tomorrow. In other words, if I am fully aware of the possibility of non-consent in the future when I make my consent, then that possibility does not render my consent null. My explicit refusal of consent in the future might be able to nullify my consent in the past, but it does not mean the mere possibility of future non-consent can nullify my actual consent at this moment.

To clarify this point, it is helpful to distinguish revocable consent from irrevocable consent. Suppose that, by inviting you to my home for dinner, I implicitly consent that you may enter my house. My consent in this case is revocable, since I can withdraw my previous consent if I change my mind. If I withdraw my consent and ask you to leave, then my previous consent becomes irrelevant and you are obligated to leave my house. However, suppose I sell my house to you. By signing the contract, I consent that I give up my ownership of the house and you will own the house in the

<sup>6.</sup> David Estlund, "Reply to Copp, Gaus, Richardson, and Edmundson," Ethics 121, no. 2 (2011): 361.

future. In this case, my consent is irrevocable, since I cannot withdraw my consent and ask you to leave the house just because I change my mind.

In the case of consent to obeying a state, the consent is irrevocable. Estlund's worry is that since our consent to a state is irrevocable, that is, once we consent to obey, we cannot (at least not easily) take it back, the standards of validity of our consent should be high in order to protect our interests. Let us grant this. However, it does not follow that the mere possibility that I may change my mind in the future is sufficient to defeat my consent. My consent to selling my car to you is irrevocable. But it does not follow that the possibility that I might change my mind in the future can defeat my consent. When our deal is done, I cannot freely get the car back.

It might be argued that if all citizens will, for good reason, withdraw consent tomorrow, consent made by all citizens today will not establish legitimacy. As a response, we need distinguish the *possibility* that all citizens will withdraw consent tomorrow and the *actuality* that all citizens withdraw their consent. Although the state might become illegitimate if all citizens actually withdraw their consent for good reason, the mere possibility that all citizens will withdraw consent tomorrow does not defeat the validity of their consent today. Thus, Estlund's reply is not successful. *QAR* is false since it implies that consent from all actual citizens is not sufficient for legitimacy.

Estlund's *QAR* fails because it is too strong in two respects. First, it requires a claim to be acceptable to all *possible* qualified points of view, even if not represented by any actual individual. Second, it understands acceptability in a strong sense that there is no objection at all (as opposed to it is acceptable to all). Could some weaker versions of *QAR* be defended?

Let us first consider weakening QAR by only requiring a claim to all *actual* qualified points of view. This weaker version of QAR is formulated as follows:

The Qualified Acceptability Requirement\* (QAR\*): A necessary condition for legitimacy is that the epistemic value of the state is acceptable to all actual qualified points of view, where a claim's being acceptable to a point of view means there is no objection from that point of view.

 $QAR^*$  is subject to the same objection as QAR. Suppose a person consents to obey a state. However, her consent is compatible with the possibility that this person does not fully accept the claim that the state has epistemic value. She may have some non-decisive objections against that claim and consent to obey the state anyway. If that is the case, it means that a state can receive consent from all actual citizens but does not satisfy the  $QAR^*$ , because there are qualified objections against the epistemic value of the state. Again, I assume that consent from all actual citizens is sufficient for legitimacy. It follows that  $QAR^*$  is not necessary for legitimacy.

To avoid the objection from consent theory, *OAR*\* needs to be further weakened:

The Qualified Acceptability Requirement\*\* (QAR\*\*): A necessary condition for legitimacy is that the epistemic value of the state is acceptable to all actual qualified points of view, where a claim's being acceptable to a point of view means the claim is not rejected by that point of view.

 $QAR^{**}$  understands acceptability in a different sense from QAR and  $QAR^{*}$ . In the latter two requirements, acceptability means the absence of any objection. But in  $QAR^{**}$ , acceptability means the absence of *rejection* or decisive objection.

By adopting a different sense of acceptability, could  $QAR^{**}$  be compatible with consent theory? This depends on whether we can make valid consent to a state when we reject the epistemic value of the state. I do not think one's rejection of the epistemic value of the state defeats the validity of his consent to obey a state. For example, one may reject the idea that democracy is epistemic valuable, but consent to obey a democracy because he thinks that democracy is intrinsically valuable (e.g., fair). For the sake of argument, however, let us assume that our consent to a state is not valid if we reject the epistemic value of the state. Based on this assumption.  $QAR^{**}$  can avoid the challenge from consent theory. This is because when there is unanimous and reasonable consent, it follows from this assumption that there is no rejection from the points of view of actual citizens, which means  $QAR^{**}$  is satisfied.

However, even if *QAR*\*\* can avoid the difficulty imposed by consent theory, it has another problem. The problem is that it is *ad hoc* to the extent that it is reformulated only for the purpose of avoiding the difficulties with *QAR* and is not motivated by any independent principles. In his defense of *QAR*, Estlund appeals to liberal tradition of toleration. He argues that, "it would be a kind of intolerance to think that any doctrines could form a part of political justification even if some citizens conscientiously held reasonable moral, religious, or philosophical views that conflicted with them." Here what Estlund means by conflict is that there are objections (decisive or non-decisive) from the citizens' views against the justification. This is why Estlund thinks that there must be no objections from a qualified point of

<sup>7.</sup> Estlund, Democratic Authority, 44.

view against the epistemic value of a state in order for the state to be legitimate. In other words, the idea of toleration is the ground of QAR (no qualified objections). Unlike QAR,  $QAR^{**}$  is not supported by the idea of toleration or other similar ideas. This is because  $QAR^{**}$  is compatible with intolerance.  $QAR^{**}$  only requires there is no *rejection* or decisive objection from all actual points of view. It is compatible with the existence of some non-decisive objections raised by actual citizens. The idea of toleration, however, is to exclude any objection (decisive or non-decisive) from public justification. That is, there is no ground for requiring there to be no decisive objection or rejection against the epistemic value of the state. This shows that Estlund's qualified acceptability requirement (QAR), even interpreted in its weakest form, is not justified.

# 3. Estlund's Argument for EC2

As mentioned above, epistemic proceduralism grounds democratic legitimacy on two epistemic claims about democracy. The second claim (*EC2*) maintains that democracy is epistemically the best among all states that satisfy the qualified acceptability requirement (*QAR*). This section examines Estlund's argument for *EC2*. In Section 2, I argued that *QAR* is a problematic requirement. In this section, I assume that *QAR* is correct. However, even with that assumption, *EC2* is still not justified.

Estlund's argument for EC2 is as follows. Democracy satisfies QAR, and all non-democratic states fail to satisfy QAR. So, democracy is the only form of state that

satisfies QAR. It follows, trivially, that democracy is epistemically the best among all states that satisfy QAR. This argument can be more formally presented as follows:

- P1. Democracy satisfies *QAR*.
- P2. All non-democratic states fail to satisfy *QAR*.
- C1. Only democracy satisfies *QAR*.
- C2. Democracy is epistemically the best among all states that satisfy *QAR*.

The problem with Estlund's argument, as I shall argue, is that it is equivocating. In particular, two different versions of *QAR* are applied in P1 and P2.

QAR maintains that in order for a state to be legitimate, the epistemic value of the state must be acceptable to all possible qualified points of view. However, the epistemic value of a state is a matter of degree. For our purposes, we can distinguish two different senses of epistemic value. In the weaker sense, a state has epistemic value if and only if it is epistemically better than random. In the stronger sense, a state has epistemic value if and only if it is epistemically the best among all feasible alternative states. Based on these two different senses of epistemic value, we can distinguish two versions of QAR:

Weak QAR: In order for a state S to be legitimate, it must be acceptable to all possible qualified points of view that S is epistemically better than random.<sup>9</sup>

<sup>8.</sup> Ibid., 42; 168.

<sup>9.</sup> Notice that the Weak QAR is different from  $QAR^*$  discussed in the previous section. The Weak QAR is a weaker version of QAR in the sense that it adopts the weaker sense of epistemic value—being better than random.  $QAR^*$  is a weaker version of QAR in the sense that it requires the acceptability of all actual qualified points of view rather than that of all possible qualified points of view.

Strong QAR: In order for a state S to be legitimate, it must be acceptable to all possible qualified points of view that S is epistemically the best among all feasible alternative states.

When Estlund claims that (P1) democracy satisfies *QAR*, what he applies is the *Weak QAR*. As he says, his "task...is to argue...that some democratic arrangements are epistemically better than random, the argument proceeding within the terms of public reason." But when he claims that (P2) all non-democratic states fail to satisfy *QAR*, he applies the *Strong QAR*. In rejecting the legitimacy of epistocracy (i.e., the rule of the wise), Estlund's argument is that there are always qualified objections against *the epistocracy of the educated thesis*, namely, the view that giving the well educated more votes would be epistemically better than giving all citizens equal votes. In other words, it is *not* acceptable to all possible qualified points of view that epistocracy is epistemically the best among all feasible alternative states. Here the *Strong QAR* is applied.

With the two versions of *QAR* being distinguished, Estlund's argument for *EC2* can be more accurately presented as follows:

- P1. Democracy satisfies the Weak QAR.
- P2. All non-democratic states fail to satisfy the Strong QAR.
- C1. Only democracy satisfies the *QAR*.
- C2. Democracy is epistemically the best among all states that satisfy the *QAR*.

<sup>10.</sup> Estlund, Democratic Authority, 168.

<sup>11.</sup> See ibid., chap. 11.

It is clear that P1 and P2 do not support C1, because there are two different senses of *QAR* applied in those two premises. So, Estlund's argument fails to provide support for *EC2*.

In order to avoid the problem of equivocation, Estlund has to adopt the same version of *QAR* throughout his argument. Let us consider the first option—adopting the *Weak QAR*. Estlund's argument for *EC2*, then, becomes as follows:

- P1. Democracy satisfies the *Weak QAR*.
- P2'. All non-democratic states fail to satisfy the Weak QAR.
- C1'. Only democracy satisfies the *Weak QAR*.
- C2'. Democracy is epistemically the best among all states that satisfy the *Weak*OAR.

This revised argument is not equivocating, because the *Weak QAR* is applied in all premises and conclusions. However, there are two other problems with this argument. First, P2' is not justified. As mentioned above, Estlund only provides justification for P2, the claim that all non-democratic states fail to satisfy the *Strong QAR*. However, since P2 is weaker than P2', even if Estlund's justification is sufficient for P2, it might not be sufficient for P2'. Here is why P2 is weaker than P2'. In order to justify P2, we only need to argue that for any non-democratic state *S*, there is some qualified objection against the claim that *S* is epistemically the *best* among all feasible alternative states. To justify P2', however, we need to argue that for any non-democratic state *S*, there is always some qualified objection against the claim that *S* is epistemically *better than random*. Since the claim that *S* is epistemically the best is stronger than the claim that *S* is epistemically better than random, it is easier to

raise qualified objections against the former claim than against the latter claim. In other words, it is easier to show that non-democracies fail to satisfy the *Strong QAR* than to show that they fail to satisfy the *Weak QAR*.

The second problem with the argument above is that the conclusion is too weak to provide an adequate epistemic justification for democratic legitimacy. The conclusion of this argument says that democracy is epistemically the best among those that satisfy the *Weak QAR*. However, since according to this argument, democracy is the only form of state that satisfied the *Weak QAR*, saying that democracy is the best among those that satisfy the *Weak QAR* does not provide any epistemic justification for democracy. The reason is that democracy is not compared to any other form of decision-procedure (e.g., random procedures). One may think that the claim that democracy satisfies the *Weak QAR* provides justification for the epistemic value of democracy, because it means that there is public agreement that democracy is better than random. However, this claim only shows how people think about the epistemic value of democracy rather than how democracy actually performs epistemically.

Recall that epistemic proceduralism grounds democratic legitimacy on two epistemic claims:

(EC1). Democracy is epistemically better than random.

(EC2). Democracy is epistemically the best among those that are generally acceptable.

By adopting the *Weak QAR*, these two claims can be presented as follows:

(EC1): Democracy is epistemically better than random.

(EC2'): Democracy is epistemically the best among those that satisfy Weak QAR.

As argued above, *EC2*' is not very informative as an epistemic claim. It does not provide any information about how democracy performs compared to other forms of decision-procedures. So, the only useful epistemic claim used in epistemic proceduralism to justify democratic legitimacy is *EC1*. *EC1* only claims that democracy is better than random, but it does not consider how much better democracy is than random or whether democracy is epistemically better than any non-democratic alternatives. This leaves the possibility that democracy is only slightly better than random and there are non-democratic states that are far better than democracy. If that is the case, it is hard to say that the epistemic value of democracy is sufficient to ground its legitimacy. For this reason, the justification for democratic legitimacy provided by epistemic proceduralism does not provide sufficient epistemic justification for democratic legitimacy. Thus, by adopting the *Weak QAR*, Estlund's argument for *EC2* cannot succeed.

Alternatively, Estlund can adopt the *Strong QAR* and revise his argument to be as follows:

- P1'. Democracy satisfies *Strong QAR*.
- P2. All non-democratic states fail to satisfy *Strong QAR*.
- C1". Only democracy satisfies *Strong QAR*.
- C2". Democracy is epistemically the best among all states that satisfy *Strong QAR*.

<sup>12.</sup> For a similar criticism, see Elizabeth Anderson, "An Epistemic Defense of Democracy: David Estlund's Democratic Authority," *Episteme* 5, no. 1 (2008): 129–39.

The problem with this argument is that P1' is not justified. As mentioned above, Estlund only provides argument for the weaker claim that democracy satisfies Weak QAR. And he says explicitly that he does not intend to argue that democracy is epistemically the best or that the epistemic value of democracy in this strong sense is publicly justifiable. 13 Moreover, even if Estlund intends to justify P1', there is a reason to doubt that such an argument can be provided. In order to justify P1', we need to argue that it is acceptable to all possible qualified points of view that democracy is epistemically the best among all feasible alternative states. In other words, we need an argument that there is no possible qualified objection against the epistemic value of democracy in the strong sense. However, there are many qualified objections against the view the democracy is epistemically the best. The most prominent examples would be Plato's criticism of democracy and Mill's advocacy of unequal voting rules (giving the educated more votes). Of course, the critics of democracy such as Plato and Mill might be wrong, and democracy might in fact be the best decision procedure. But as long as their objections are qualified (e.g., not crazy), the Strong OAR is not satisfied by democracy. Thus, P1' is not justified. This shows that the second way of revising Estlund's argument for EC2—adopting the Strong QAR—does not succeed.

#### 4. Conclusion

In this chapter, I examined the most prominent epistemic theory of democratic legitimacy—Estlund's epistemic proceduralism. According to Estlund's theory,

<sup>13.</sup> Estlund, Democratic Authority, 168.

democracy is legitimate partly because it is epistemically better than random (*EC1*) and it is epistemically the best among those that satisfy the qualified acceptability requirement (*EC2*).

In section 2, I argued that Estlund's qualified acceptability requirement is false. The reason is that it conflicts with the more plausible consent theory of legitimacy. I considered two weaker versions of the qualified acceptability requirement. However, even in its weaker form, this requirement is still problematic either because it conflicts with the consent theory or because it is ungrounded.

In section 3, I argued that Estlund's argument for *EC2* fails because it equivocates. It applies two different versions of the qualified acceptability requirement in the premises. I proposed two ways of revising Estlund's argument. Although those revised arguments can avoid the problem of equivocation, they both involve unjustified premises.

# **Chapter 7: Conclusion**

Epistemic democracy is mainly concerned with two questions: (1) Is democracy epistemically valuable in the sense that it has a tendency to make correct decisions? (2) Is the epistemic value of democracy, if it has any, necessary for justifying its legitimacy? For epistemic democrats, the answers to both questions are positive—democracy has epistemic value and the epistemic value of democracy is necessary for justifying its legitimacy. In the previous chapters, I argued that epistemic democrats are right for claiming that democracy in certain form could have epistemic value, but they are wrong for claiming that the epistemic value is necessary for democratic legitimacy.

Chapter 2-4 focused on the first question—the epistemic value of democracy. In Chapter 2, I examined three recently developed *deliberative* models of democracy, which attribute the epistemic value of democracy to public deliberation. A common problem with those models is that they do not take the epistemic benefits of voting into consideration. I argued that, since voting is necessary for democratic decision-making, ignoring the epistemic benefits of voting rules leads the deliberative models to underestimate the epistemic value of democracy. Thus, the deliberative models fails to provide a satisfying justification for the epistemic value of democracy.

In Chapter 3, I examined the most prominent *aggregative* model of democracy—Condorcet's Jury Theorem. The aggregative models attribute the epistemic value of democracy to voting rules. In particular, Condorcet's Jury Theorem is concerned with the epistemic benefits of majority rule. It says that if the

average individual competence is higher than 0.5 (the "competence assumption") and if individual votes are independent (the "independence assumption"), then the majority is more likely than the individuals to vote for the correct decisions. The problem with the theorem is that its assumptions are problematic. First, factors such as systematic biases and errors can significantly undermine individual competences. So, without justification, individual votes cannot simply be assumed to be competent on average. Second, factors such as public deliberation, opinion leaders, and common information, which are common in democracy, will compromise the independence of citizens' votes. Hence, Condorcet's Jury Theorem is not applicable to democracy.

Chapters 2 and 3 showed that the deliberative model and the aggregative model both fail to provide a satisfying justification for the epistemic value of democracy. In Chapter 4, I proposed a more promising model of the epistemic value of democracy, which is called the post-deliberation jury theorem. This model is developed from Condorcet's Jury Theorem. The main difference between Condorcet's Jury Theorem and the post-deliberation jury theorem is that they rely on different conceptions of individual competence: Condorcet's version is based on pre-deliberation individual competence (i.e., the probability that an individual votes correctly before deliberation) and the post-deliberation version is based on post-deliberation individual competence (i.e., the probability that an individual votes correctly after deliberation). I argued that the post-deliberation jury theorem could avoid the main objections against Condorcet's version. First, by appealing to the epistemic benefits of deliberation such as information pooling, the average individual competence after deliberation can be shown to be higher than 0.5 in most cases. Second, deliberation does not undermine the independence among individual votes when individual competences are calculated after deliberation.

An advantage of the post-deliberation jury theorem is that it makes use of the epistemic benefits of both deliberation and voting. The epistemic benefits of deliberation are used to justify the competence assumption of the theorem—showing that the average individual competence after deliberation is higher than 0.5 in most cases. Voting, on the other hand, is used to show how the group can be competent given that the individuals are competent on average. Since the post-deliberation jury theorem overcomes the difficulties of the main deliberative models and the most prominent aggregative model, I concluded that it is a promising model of the epistemic value of democracy. According to this model, democracy can be epistemically valuable.

Chapters 5 and 6 focused on the question of the relationship between the epistemic value of democracy and its legitimacy (understood as the moral permissibility of a state's issuing and enforcing laws). According to epistemic democracy, the epistemic value of democracy is a necessary component of democratic legitimacy. In Chapter 5, I argued against the necessity of epistemic value for legitimacy. First, I argued that epistemic theories failed to solve the problem of disagreement: What is the legitimate procedure of deciding what to do collectively when we disagree about what ought to be done? According to epistemic democracy, democracy is a legitimate decision-making procedure under the circumstances of disagreement, (at least partly) because democracy is epistemically better than non-democracy. However, the claim that democracy is epistemically the best is itself subject to disagreement. For instance, theorists such as Mill and Richard Arneson contend that some kind of elitist decision procedure would be epistemically better

than democracy.<sup>1</sup> For this reason, epistemic democracy does not successfully answer the question raised by disagreement.

Moreover, I provided a purely proceduralist argument for democratic legitimacy. The argument begins with a plausible assumption that a legitimate state must treat all citizens with equal respect. This assumption implies that citizens' agency ought to be treated with equal respect, which in turn implies the equal respect for citizens' political views. Since only democracy respects citizens' view equally, only democracy can be legitimate. This argument justifies democratic legitimacy without appealing to the epistemic value of democracy, which shows that epistemic value is not necessary for legitimacy.

In Chapter 6, I examined the most prominent epistemic theory of legitimacy—Estlund's epistemic proceduralism. According to epistemic proceduralism, in order to be legitimate, a state must be epistemically valuable and the epistemic value must be publically justifiable. I indicated two main problems with Estlund's theory. The first problem is that the Qualified Acceptability Requirement is false because it conflicts with consent theory. Consent theory states, plausibly, that actual consent from all citizens is sufficient for legitimacy. However, the Qualified Acceptability Requirement implies that in some cases actual consent from all citizens is not sufficient for legitimacy. Since consent theory is plausible, the Qualified Acceptability Requirement should be rejected.

The second problem is that Estlund fails to provide a sound argument for the claim that democracy is epistemically the best among those that satisfy the Qualified Acceptability Requirement. I showed that Estlund's argument either equivocates or

<sup>&</sup>lt;sup>1</sup> Arneson, "Defending the Purely Instrumental Account of Democratic Legitimacy"; Arneson, "The Supposed Right to a Democratic Say."

involves unjustified premises. For these reasons, Estlund's epistemic proceduralism fails to provide an epistemic justification for democratic legitimacy.

To end this dissertation, I want to indicate two implications of the main results of the previous chapters. First, the results confirm a widely held claim among democratic theorists that democracy is necessary for political legitimacy. The reason is that only democracy equally respects citizens' views, not that democracy is epistemically valuable.

Second, this dissertation provides two independent justifications for democracy. First, since only democracy can be legitimate, if any state is legitimate, it must be democratic. Democracy is justified in the sense that it is legitimate on the condition that there is legitimate state. This justification is comparative since it gives us a reason to favor democracy over non-democracy. Second, democracy is justified because it is epistemically valuable (i.e., it has a tendency to make correct decisions). This dissertation does not claim that democracy is epistemically the best among all alternative forms of state. Rather, it only claims that democracy is epistemically valuable, which leaves it open that there might better forms of state.

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### **VITA**

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