 doi: https://doi.org/10.35699/2525-8036.2025.53978

AN EPISTEMIC DEFENSE OF DEMOCRACY

Robson Vitor Freitas Reis[*] *& Edson Lugatti Silva Bissiati*[**]

Abstract: This work presents an epistemic defense of democratic governance, mainly analyzing the works of Condorcet and Landemore. The study begins by establishing rationality as a foundational concept for the analysis. It then explores Condorcet's Jury Theorem and Paradox, highlighting the paradox's implications for democratic theory and voting systems. Subsequent sections propose solutions to Condorcet's Paradox, including the elimination of minor pluralities and the concept of the median voter, demonstrating how these strategies address cyclicality in collective decision-making. The final section delves into Landemore's epistemic advocacy for democracy, discussing political cognitivism, the labyrinth metaphor, and the concept of Democratic Reason as the collective intelligence of the people. Landemore argues that democracy, through inclusive decision-making processes, can harness the collective intelligence of diverse perspectives, leading to superior outcomes. Her arguments underscore the epistemic virtues of democracy, suggesting that diverse and inclusive participation improves the quality of decisions by leveraging the collective wisdom of the populace. By synthesizing mathematical, philosophical, and political insights, this work underscores the complexities and strengths of democracy from an epistemic viewpoint. It demonstrates how democratic processes, informed by Condorcet's and Landemore's theories, can lead to decisions that are not only representative of the populace but also wise and well-informed. Ultimately, the work presents a compelling case for democracy's inherent value in producing informed, rational, and beneficial outcomes, thus advocating for its epistemic superiority over other forms of governance.

Keywords: Epistemic Democracy; Condorcet's Jury Theorem; Condorcet's Paradox; Political Cognitivism; Collective Intelligence.

UMA DEFESA EPISTÊMICA DA DEMOCRACIA

Resumo: Este trabalho apresenta uma defesa epistêmica da governança democrática, analisando principalmente os trabalhos do Condorcet e da Landemore. O estudo começa estabelecendo a racionalidade como um conceito fundamental para a análise. Em seguida, explora o Teorema do Júri e o Paradoxo de Condorcet, destacando as implicações do paradoxo para a teoria democrática e os sistemas de votação. Seções subsequentes propõem soluções para o Paradoxo de Condorcet, incluindo a eliminação de pluralidades menores e o conceito do eleitor mediano, demonstrando como essas estratégias abordam a ciclicidade na tomada de decisões coletivas. A seção final aprofunda-se na defesa epistêmica da democracia por Landemore, discutindo o cognitivismo político, a metáfora do labirinto e o conceito de Razão

[*] PhD Candidate in Political Science at the Institute of Social and Political Studies of the State University of Rio de Janeiro, Brazil, Legum Magister (LL. M) at the Law School of the Federal University of Minas Gerais, and Legum Baccalaureus (LL. B) at the Law School of the Federal University of Juiz de Fora. Public Servant at the Varginha Campus of the Federal University of Alfenas. ORCID: https://orcid.org/0000-0002-0534-6743. Contact: robsonvitor@gmail.com.

[**] Master's degree in Social Ciences from the Federal University of Juiz de For a, Brazil. Graduated in Social Sciences from the State University of Minas Gerais Barbacena Campus, he was a research fellow funded by FAPEMIG. He is currently a PhD student in Political Science at the Institute of Social and Political Studies of the State University of Rio de Janeiro (IESP-UERJ), Brazil. He is interested and has experience in the following areas: Brazilian political thought; Political ideologies; Studies on Rights; History of concepts; Political and Democratic Theory; Sociology of Religion. ORCID: https://orcid.org/0000-0002-4813-7562. Contact: edbissiati@outlook.com.

Democrática como a inteligência coletiva do povo. Landemore argumenta que a democracia, através de processos de tomada de decisão inclusivos, pode aproveitar a inteligência coletiva de perspectivas diversas, levando a resultados superiores. Seus argumentos ressaltam as virtudes epistêmicas da democracia, sugerindo que a participação diversa e inclusiva melhora a qualidade das decisões ao aproveitar a sabedoria coletiva da população. Ao sintetizar insights matemáticos, filosóficos e políticos, este trabalho destaca as complexidades e os pontos fortes da democracia do ponto de vista epistêmico. Demonstra como os processos democráticos, informados pelas teorias de Condorcet e Landemore, podem levar a decisões que são não apenas representativas da população, mas também sábias e bem informadas. Em última análise, o trabalho apresenta um argumento convincente para o valor inerente da democracia em produzir resultados informados, racionais e benéficos, defendendo assim sua superioridade epistêmica sobre outras formas de governança.

Palavras-chave: Democracia Epistêmica; Teorema do Júri de Condorcet; Paradoxo de Condorcet; Cognitivismo Político; Inteligência Coletiva.

UNA DEFENSA EPISTÉMICA DE LA DEMOCRACIA

Resumen: Este trabajo presenta una defensa epistémica de la gobernanza democrática, analizando principalmente las obras de Condorcet y Landemore. El estudio comienza estableciendo la racionalidad como un concepto fundamental para el análisis. Luego explora el Teorema del Jurado y la Paradoja de Condorcet, destacando las implicaciones de la paradoja para la teoría democrática y los sistemas de votación. Secciones subsecuentes proponen soluciones para la Paradoja de Condorcet, incluyendo la eliminación de pluralidades menores y el concepto del votante mediano, demostrando cómo estas estrategias abordan la ciclicidad en la toma de decisiones colectivas. La sección final profundiza en la defensa epistémica de la democracia por parte de Landemore, discutiendo el cognitivismo político, la metáfora del laberinto y el concepto de Razón Democrática como la inteligencia colectiva del pueblo. Landemore argumenta que la democracia, a través de procesos de toma de decisiones inclusivos, puede aprovechar la inteligencia colectiva de perspectivas diversas, llevando a resultados superiores. Sus argumentos resaltan las virtudes epistémicas de la democracia, sugiriendo que la participación diversa e inclusiva mejora la calidad de las decisiones al aprovechar la sabiduría colectiva de la población. Al sintetizar conocimientos matemáticos, filosóficos y políticos, este trabajo destaca las complejidades y fortalezas de la democracia desde una perspectiva epistémica. Demuestra cómo los procesos democráticos, informados por las teorías de Condorcet y Landemore, pueden llevar a decisiones que no solo son representativas de la población, sino también sabias y bien informadas. En última instancia, el trabajo presenta un argumento convincente para el valor inherente de la democracia en producir resultados informados, racionales y beneficiosos, defendiendo así su superioridad epistémica sobre otras formas de gobernanza.

Palabras clave: Democracia Epistémica; Teorema del Jurado de Condorcet; Paradoja de Condorcet; Cognitivismo Político; Inteligencia Colectiva.

---

1 Introduction

The aim of this work is to provide an epistemic defense of democratic governance. It is organized into four sections, with the final section divided into three subtopics.

The first section introduces the concept of rationality, laying the groundwork for the subsequent analysis. The second section explores the Jury Theorem and Condorcet's Paradox, highlighting the significant influence of Condorcet's contributions on later research in the field. The third section examines various strategies to address the challenges posed by Condorcet's Paradox, analyzing solutions proposed by Condorcet himself as well as by subsequent scholars.

The fourth and final part of the work focuses on Landemore's epistemic advocacy for democracy. This section is broken down into three subparts, as said above. Initially, we discuss political cognitivism as a preliminary epistemological premise. Following this, Landemore's labyrinth metaphor is examined to shed further light on her arguments. Lastly, we detail her concept of Democratic Reason as the Collective Intelligence of the People and, in the conclusion, we aim to more cohesively tie together all aspects discussed throughout the paper.

2 Rationality

For the assumptions of this work rationality is composed of three essential properties that together form the basis for rational decision-making: 1st) Ability to Differentiate Alternatives in the Course of Actions: this property refers to the ability to identify and distinguish between different options or paths of action. In a decision-making context, this means being able to clearly see the various choices available and understand their differences. 2nd) Ordering of Alternatives: after identifying the alternatives, rationality involves the ability to evaluate and rank them based on specific criteria. This can include assessing pros and cons, costs and benefits, or any other relevant metric for the situation. The goal is to determine which alternative is preferable or more valuable. 3rd) Transitivity: transitivity is an important concept in logic and mathematics, especially in the theory of preferences. If a person prefers option A to option B, and option B to option C, then, to be considered rational, they must prefer option A to option C. This ensures logical consistency in preferences or choices, avoiding contradictions in the ordering of alternatives.

3 The Jury Theorem and the Condorcet Paradox

In the year 1785, Condorcet published the "*Essai sur l'application de l'analyse à des probabilités de decisions rendues à la pluralité de voix*"[1]. The two most important findings of the essay are the jury theorem and the discovery of the possibility of cyclical majorities, which

[1] CONDORCET, Marie Jean Antoine Nicolas de Caritat de. *Essai sur l'application de l'analyse à la probabilité des décisions, rendues à la pluralité des voix*. Paris: De l'imprimerie Royale, 1785.

underlie the paradox[2]. In this context, the "paradox" is nothing more than a byproduct, an unfolding of the studies that led to the theorem. The Condorcet Paradox, also known as the voting paradox, is a concept from social choice theory that highlights a situation where the collective preferences of a group can be inconsistent and cyclical, even though individual preferences within that group are consistent and linear.

The Jury Theorem is based on the idea that if each member of a jury has a better than random chance of making a correct decision, the probability that the majority decision of the jury is correct increases with the number of jurors. Essentially, it suggests that under certain conditions, the collective judgment of a group is likely to be superior to that of a single individual.

The key assumptions of the Jury Theorem include: a) each juror has an independent probability of being right, which is greater than 0.5 (i.e., better than chance). b) the jurors make their decisions independently of each other.

Therefore, this theorem is important to demonstrate the potential benefits of democratic decision-making processes, where the wisdom of the crowd can lead to better outcomes than decisions made by individuals.

The Condorcet Paradox, in turn, can be briefly explained as follows: 1st) Consistent Individual Preferences: imagine three options (A, B, C) and three voters (1, 2, 3) with linear preferences. For example, voter 1 prefers A over B, B over C, and consequently A over C. This is a consistent and linear preference. 2nd) Cyclical Collective Preferences: however, when we combine the preferences of all voters, we can end up with a cycle. For example: the majority prefers A over B; the majority prefers B over C; but the majority also prefers C over A. This is a paradoxical situation, as there is no clear option that is preferred over the others in a majority vote. Each option is defeated by another in a pairwise vote, leading to a cycle of preferences without an obvious or consistent choice. 3rd) Implications: The Condorcet Paradox demonstrates a fundamental problem in aggregating individual preferences into a collective decision. It shows that even under conditions of individual rationality, collective rationality can fail, leading to inconsistent or undesirable outcomes. This is particularly relevant in voting systems and democratic decisions, where the goal is to reflect the majority's preferences.

Consequently, these two concepts - Jury Theorem and the Condorcet Paradox - are central to the study of democratic theory and voting systems, offering insights into both the strengths and limitations of collective decision-making processes. They demonstrate the

[2] CONDORCET, Marie Jean Antoine Nicolas de Caritat de. *Matémathique et societé*. Collection Savoir. Paris: Hermann, 1974.

complexity involved in aggregating individual preferences and the challenges in designing fair and effective voting and decision-making systems.

"The popularization of these ideas was first due to their transformation into Arrow's impossibility theorem (1963), and, some time later, to the famous counterposition by Riker[3] (1982), which he called the populist version of democracy[4]"[5]. The Condorcet Paradox and Arrow's Impossibility Theorem[6] are fundamental concepts in social choice theory, addressing the complexities and limitations of aggregating individual preferences into a collective decision.

Condorcet Paradox as previously mentioned occurs when the collective preferences of a group are cyclical and inconsistent, despite individual preferences being consistent and linear. Arrow's Impossibility Theorem, in turn, establishes that given three or more options it is impossible for a voting system to satisfy a set of criteria deemed desirable for a fair and rational decision. These criteria include[7]:

a) Non-Dictatorship: There should not be a single individual whose preferences always prevail.

b) Pareto Efficiency: If every individual prefers one option over another, this preference should be reflected in the collective outcome.

c) Independence of Irrelevant Alternatives: The preference between two options should not be affected by the introduction or removal of other options.

d) Unrestricted Domain (or Universality): Any set of individual preferences should be able to be aggregated.

e) Transitivity: for any profile, if A is socially preferred to B and B is socially preferred to C, then A must be socially preferred to C.

This implies that every collective decision based on individual preferences will inevitably involve some form of compromise or failure in the established criteria.

Together, the Condorcet Paradox and Arrow's Impossibility Theorem reveal significant challenges in social choice theory and in the formulation of voting and decision-making systems

---

[3] RIKER, William Harrison. *Liberalism against populism*: a confrontation between the theory of democracy and the theory of social choice. Long Grove: Waveland Press, 1982.

[4] In the original language: "A popularização deveu-se primeiro à sua transformação no teorema da impossibilidade, de Arrow (1963) e, algum tempo depois, à famosa contraposição de Riker (1982), chamada por ele de versão populista da democracia".

[5] SANTOS, Fabiano Guilherme Mendes. Reavaliando a contribuição do "Paradoxo" de Condorcet para a moderna análise da política. *Revista de Sociologia e Política*, v. 31, 2023, p. 3.

[6] ARROW, Kenneth Joseph. *Social Choice and Individual Values.* New Haven and London: Yale University Press, 2012.

[7] ARROW, *Social Choice and Individual Values,* c*it.* p. 22-33 and SANTOS, Reavaliando a contribuição do "Paradoxo" de Condorcet para a moderna análise da política, c*it.*, p. 12-13.

that are fair, rational, and representative of individual preferences. They underpin many debates and research on how collective decisions should be made in democratic societies.

4 Some Possible Paths

The next step consists of knowing, albeit in a very brief way, how Condorcet arrived at the solution to the paradox, that is, in the cases of cyclicality, how to define the winning option. One of the solutions proposed by Condorcet can be better understood through Young[8] and Santos[9] works. Thus, a possible solution would be to eliminate minor pluralities. Suppose a situation with 11 voters choosing between three options: A, B, and C. All voters rank their preferences in a consistent and transitive manner. Through a voting matrix, we identify a cycle in majority preferences: a majority prefers A over B (8 to 3), another majority prefers B over C (11 to 0), but there is also a majority that prefers C over A (7 to 4). This raises the question: what is the actual collective preference?

To resolve this cycle, we apply a rule that simplifies the analysis. We eliminate the pairwise comparison with the smallest vote difference, in this case, C versus A. Considering that A survives the elimination of C, the next comparison is between A and B. Here, A wins over B (8 to 3). Therefore, A is the winning option.

We generalize this result by assuming that it is sufficient to consider the pairwise comparisons in which there is no cyclicality. In cases of intransitivity, we apply the rule of eliminating comparisons with the smallest pluralities. We continue this process until only one winner remains. This approach helps us identify a clear winning option, even in the face of initially cyclical preferences among voters.

Another possible path occurs through the idea of a median voter. The widely recognized concept of the median voter finds its roots in the Condorcet Paradox. This concept was introduced into political analysis by Duncan Black[10], who developed it in a series of articles that culminated in his influential book of 1958. Subsequently, Anthony Downs[11] also utilized this concept in his seminal work of 1957. Black directly tackled the challenge posed by Condorcet, proposing a solution that was both formally rigorous and empirically applicable.

At the heart of this concept, two premises are fundamental:

---

[8] YOUNG, Hobart Peyton. Condorcet's theory of voting. *American Political science review*, v. 82, n. 4, p. 1231-1244, 1988.
[9] SANTOS, Reavaliando a contribuição do "Paradoxo" de Condorcet para a moderna análise da política, c*it.*
[10] BLACK, Duncan. *The theory of committees and elections*. Boston, Dordecht and Lancaster: Kluwer Academic Publishers, 1986.
[11] DOWNS, Anthony. *An economic theory of democracy*. New York: Harper and Row, 1957.

a) It is assumed that individual preferences are unimodal, meaning they have a single peak. This implies that each person has a clear and well-defined preference that can be identified.

b) The spectrum of political conflict is considered to be unidimensional and can be represented on a Euclidean plane. Within this space, voters are positioned at specific points, which represent their "ideal points". These ideal points are locations in the political space where voters achieve maximum satisfaction or utility.

At its core, the median voter theorem is based on the assumption that voters' preferences over policy issues are distributed unimodally, meaning most voters' preferences center around a median point. It also assumes that each voter has single-peaked preferences, with a most-preferred policy, and that their satisfaction decreases as policies move away from this peak. The model typically simplifies the political landscape into a one-dimensional policy space, although this simplification can sometimes be a point of criticism, as it might not capture the complexities of real-world politics.

One of the key implications of the median voter theorem is the tendency towards centrism in two-party systems. The theorem suggests that both parties are incentivized to move towards the policy position of the median voter. Capturing the median voter is theoretically seen as a way to ensure a majority, leading to a prediction of policy convergence where parties or candidates adopt similar, centrist policy positions. This convergence is supposed to represent a stable point of democratic equilibrium, as the position of the median voter becomes a decisive factor in election outcomes.

After describing these two possible, but not exhaustive, solutions, let's now move to the main objective of our work, which is to build a bridge between Condorcet and Landemore.

5 Landemore and Epistemic Argument for Democracy

5.1 A Defense of Political Cognitivism

Underlying the main discussion of her book *Democratic Reason*: Politics, Collective Intelligence, and the Rule of the Many[12] is an epistemological question about whether there is a truth to be sought, that is, regarding the relativity of things (facts and values). In this context, it is necessary to talk a bit about political cognitivism. Landemore raises this issue at the end of her book, however, here we choose to start with it because we believe it would be a preliminary question to her main discussion.

[12] LANDEMORE, Hélène. *Democratic Reason*: Politics, Collective Intelligence and the Rule of the Many. Princeton: Princeton University Press, 2013.

Political cognitivism loosely refers to the belief that some political questions have better or worse answers, indicating the existence of a standard of correctness independent of the decision-making procedure used to resolve these questions. This notion suggests that outcomes of political decisions, whether achieved through democratic means such as deliberation and majority rule or through nondemocratic methods like relying on nonelected experts, should ideally be assessed against a standard that is distinct from the procedure itself. This approach seeks to avoid tautological definitions of correctness, which might otherwise equate to whatever a deliberating group, majority, or expert decides.

The independence of the standard from the decision procedure does not necessarily mean it is detached from all other factors. For instance, the standard could depend on specific contexts, historical backgrounds, cultures, or inherent human traits. Alternatively, one might envision a standard that is entirely independent, resembling a Platonic absolute or a universal perspective, linking political cognitivism to a strong form of moral realism where values exist beyond human subjectivity. According to Landemore[13], however, endorsing an independent standard of correctness does not require adhering to moral realism; it could simply refer to a norm-generating ideal, like Habermas's ideal speech situation or Rawls's original position.

Political cognitivism compels us to view political decision-making akin to Rawls's concept of "imperfect procedural justice"[14][15][16] which recognizes an independent criterion for a fair outcome without guaranteeing its achievement. In contrast, "perfect procedural justice" defines an independent criterion for fairness and prescribes a procedure that ensures the fair outcome is reached. Imperfect procedural justice, exemplified by the workings of a jury, acknowledges an independent justice standard - such as the actual guilt or innocence of a defendant - while accepting that there's no infallible method to ensure the fair outcome is always realized.

This approach extends the application of imperfect procedural justice, traditionally confined to distributive justice questions within society's basic structure, to a broader political context. It suggests that democracy's epistemic value lies not only in identifying an independent correctness standard but also in employing, albeit imperfectly, a decision-making procedure that offers a reliable means of approximating this standard.

---

[13] *Ibidem*, p. 210.
[14] RAWLS, John. *Political Liberarism*. New York: Columbia University Press, 1993.
[15] RAWLS, John. *A Theory of Justice*. Revised ed. Cambridge: Harvard University Press, 1999.
[16] RAWLS, John. *Justice as Fairness:* A Restatement. Cambridge, London: Harvard University Press, 2001.

The idea that some political decisions are categorically better or worse suggests that there is a realm of political judgment that transcends the specifics of any given decision-making process. This notion does not necessarily posit that all political questions have clear right or wrong answers, nor does it assert that the answers to such questions are universal or unique. However, it does imply that decisions can be ranked based on their outcomes, with some being objectively worse due to the harm they cause.

A minimal interpretation of this standard focuses on harm avoidance, proposing that political cognitivism need not claim a definitive truth but should recognize the existence of political mistakes and, by extension, the possibility of correct decisions. This "weak political cognitivism" suggests that a political decision procedure that successfully avoids major errors can be considered to produce correct results, as seen in James Bohman's definition of deliberation not as truth tracking but as error avoidance[17].

Yet, one might also advocate for a more robust, substantive standard of correctness that defines certain outcomes or a range of outcomes as desirable. For example, a classical utilitarian might measure the correctness of a political decision by its ability to maximize welfare for the greatest number, not merely by its capacity to avoid disaster. This broader standard might assess decisions based on their contribution to specific goals, such as economic growth or reducing infant mortality rates, indicating that the standard of correctness can vary depending on the political question at hand, though some objectives may be universally valid.

In addition to the distinction between weak and strong political cognitivism there is a differentiation of these concepts based on the relative or absolute nature of their standards. A procedure-independent standard of correctness, while independent of decision-making processes, may still rely on other factors, particularly public values, which shape the nature of political decisions. Political cognitivists face a choice between adopting a set of values specific to a community - termed the "culturalist" view - or advocating for universally valid moral principles, referred to as the "absolutist" view of political cognitivism.

Culturalist political cognitivism views standards of correctness as determined by the social and cultural context, emphasizing that political decisions are deemed correct when they align with the prevailing public values within a specific community. This approach is compatible with various metaethical positions and emphasizes the importance of contextual values in defining what constitutes a correct political decision.

[17] *Apud* LANDEMORE, *Democratic Reason*, *cit.*, p. 213.

In contrast, absolutist political cognitivism posits a universal standard of moral correctness, independent of specific public values, arguing that policy decisions are right if they are empirically accurate and adhere to transcendent moral norms. This view suggests that some political decisions, like avoiding famines, wars, and genocides, are objectively correct, while others, such as those aiming for Pareto optimality or defined by classical utilitarianism, may present challenges in practice due to the inevitable harm they cause to some individuals.

The effectiveness of the epistemic argument in support of democracy significantly depends on the specific approach to political cognitivism adopted. For proponents of a weaker form of political cognitivism, the epistemic case for democracy primarily highlights its efficiency in steering clear of detrimental outcomes, regardless of whether these are evaluated against relative or absolute benchmarks. Conversely, advocates for a more robust form of political cognitivism argue that democratic processes excel in generating beneficial solutions to challenges, with the appropriateness of these solutions varying from culturally specific to universally applicable.

The Landemore[18] perspective could be described as a nuanced blend of the more assertive version of political cognitivism, integrating both culturalist perspectives for certain issues and absolutist stances for others. She holds the view that democracy is adept at engendering outcomes that are desirable, defining "desirable outcomes" partly through a lens of communal values that are contextually relevant (for instance, perspectives on the balance between equality and freedom) and partly through a set of principles universally recognized (such as the principles underlying human rights and fundamental freedoms). This amalgamated approach to political cognitivism, in her opinion, offers a more accurate reflection of collective approach to values.

5.2 The Maze and the Masses

According to Landemore[19], democracy, especially in the Western context, is seen as the most legitimate form of governance. The term not only describes a system of governance characterized by public participation but also carries an inherent positive connotation in Western discourse. However, there is prominent skepticism about the masses' ability to govern themselves effectively. The common perception tends to associate intelligence and political wisdom with aristocratic or elitist forms of governance, rather than democracies. This perception is further reinforced by concerns about the "madness of crowds".

[18] *Ibidem,* p. 219.
[19] *Ibidem,* p. 3-9.

Nevertheless, the book seeks to present a counter-narrative, proposing that democracy embodies a form of collective intelligence. The central argument is that democratic systems, under the right conditions, can harness the collective intelligence of their citizens in a way that makes the system smarter than other governance structures. This idea suggests that the focus should not necessarily be on the individual intelligence of each voter but rather on the collective cognitive capabilities of the population as a whole.

Over time, various scholars and political theorists have examined this idea, and Landemore aims to provide an overview of these arguments, coining the term "democratic reason" to describe the collective intelligence of the people. Drawing parallels with the literature on the "wisdom of crowds", the book makes a strong epistemic case for democracy, weighing its advantages over non-democratic systems.

While the Landemore's book is largely theoretical in its approach, the arguments it presents can be empirically tested. An example supporting this epistemic perspective on democracy is a study of Athenian democracy by Josiah Ober[20]. The study suggests that the success of classical Athens, compared to its rivals, lay in the ability of its democratic institutions to harness the collective knowledge and insights of its citizens more effectively than less democratic regimes.

In her book she defends the concept that democracy embodies "collective intelligence". It argues that under the right conditions and with proper deliberation, democratic decision-making is likely superior to other forms, such as rule by experts or a single benevolent dictator. Essentially, often the collective can make better decisions than the few. One of the main reasons for this is cognitive diversity - the collective intelligence that arises from the inclusion of diverse perspectives and approaches.

This idea of intelligence inherent in democracy is not new and dates back to the reflections of philosophers like Aristotle. Landemore uses the metaphor of a labyrinth to illustrate her point. In this metaphor, a group of people is lost in a maze filled with clues to the exit, written in different languages and symbols. Faced with a series of decisions about which path to take at various forks, the group can choose among several decision-making methods: random choice, dictatorship, a council of experts (oligarchy), or democratic deliberation.

The author argues that to have the best chances of successfully navigating the labyrinth, the democratic approach is the most effective. This is because while a single expert or a small group of them might get some decisions right, they will not always have the diversity

[20] *Ibidem,* p. 2.

of knowledge and perspectives needed for each challenge. Therefore, in a constantly changing maze, a collective decision-making process that leverages the diversified expertise of many will fare better.

This argument not only provides a defense of the value of democracy from an instrumental perspective but also reinforces the normative authority of democratic decision-making. Its primary claim is that democracy not only makes better decisions than a random approach but also outperforms other non-democratic systems. Thus, the central argument is that democracy, due to its collective intelligence, is not just a right, but also a superior decision-making system, emphasizing its unique approach to understanding democracy by linking inclusive decision-making to the role of cognitive diversity in fostering democratic reason. While various thinkers have promoted the idea that diverse viewpoints enrich democracy, this book specifically highlights the epistemic benefits of this diversity in decision-making.

Using concepts from thinkers like John Stuart Mill and Cass Sunstein, Landemore suggests that while diverse perspectives enrich liberal societies, they do not necessarily support more inclusive decision-making. The book aims to bridge this gap by highlighting how a broader and more diverse group, often present in democratic settings, is likely to be smarter in its decision-making than a smaller, homogeneous group.

From these assumptions, it’s not difficult to see how Condorcet's Jury Theorem harmonizes with and supports Landemore's ideas, and she expressly recognizes this connection.[21].

5.3 Democratic Reason as Collective Intelligence of the People

Landemore[22] introduces the concept of “democratic reason” to encapsulate the idea of collective intelligence or the wisdom of the people, particularly when this intelligence involves learning over time and from mistakes. She examines how intelligence, as understood in cognitive science, is not just an individual attribute but can also be distributed or extended through various factors, including activities, environments, and social settings. Collective intelligence is conceptualized as more than the sum of individual intelligences and can be likened to the emergent behaviors seen in social animal groups, like bees with their “collective mind”.

[21] *Ibidem*, p. 70-75.
[22] *Ibidem*, p. 17-23.

The idea of "distributed cognition" challenges traditional notions of intelligence as being confined to one brain. Instead, cognitive processes often involve interactions among various brain modules, actions, and the environment. Using cognitive artifacts (tools or methods that assist in processing information), intelligence can be distributed both spatially and temporally. This idea has implications for democracy, suggesting that collective decision-making can be seen as a form of distributed intelligence, with democratic systems channeling the wisdom of many to produce intelligent outcomes.

She differentiates reason, intelligence, and wisdom. While reason is a broad faculty encompassing various mental abilities, intelligence specifically refers to cognitive capacities, and wisdom often points to time-tested elements in decisions. The term "democratic reason" is chosen partly to contrast with John Rawls's "public reason", which, according to her, tends to restrict democratic will based on liberal principles[23]. In Landemore's view, democratic reason should emerge from democratic processes, rather than serve as a preliminary filter. This approach emphasizes the epistemic dimension of collective judgment and highlights the importance of inclusive decision-making in democracy.

6 Conclusion

Therefore, in general terms, we can draw the following conclusions. The intricate relationship between the Jury Theorem, Condorcet's Paradox, its potential solutions, and Hélène Landemore's epistemic argument for democracy weaves together mathematical, philosophical, and political threads to shed light on the nature and potential of democratic decision-making. This relationship underscores the complexities and strengths of democracy from an epistemic viewpoint, highlighting how democratic processes can lead to decisions that are not only representative of the populace but also wise and well-informed.

At the core of this exploration is the Jury Theorem, which offers an optimistic view of collective decision-making. It suggests that under certain conditions - specifically when each member of a group has an independent probability greater than 50% of making a correct decision - the probability that the majority will reach the correct decision increases as the group size expands. This mathematical principle illuminates the potential for collective wisdom to exceed that of any individual member, pointing towards the inherent epistemic virtues of democratic systems where collective decisions are the norm.

[23] It is worth noting that we disagree with Landemore's interpretation of this Rawlsian concept. However, we will not delve into this further here, as such a discussion would go beyond the scope of the present work.

Contrasting with this optimistic perspective is Condorcet's Paradox, which reveals a significant challenge within the realm of collective decision-making. It demonstrates how the aggregation of rational individual preferences can lead to collective choices that are cyclical and lack transitivity, casting doubt on the coherence and rationality of the outcomes produced by democratic processes. This paradox highlights a potential epistemic flaw in democracy: the risk that no clear, rational decision can be derived from the aggregation of individual votes.

The search for solutions to Condorcet's Paradox has led to various innovations, including sophisticated voting systems designed to prevent intransitive outcomes and the adoption of deliberative democracy principles that prioritize informed consensus over simple preference aggregation. These approaches aim to rectify the epistemic shortcomings highlighted by the paradox, striving to ensure that collective decisions are not only representative but also epistemically sound, embodying a rational and coherent aggregation of individual preferences into a collective will.

Building on these foundations, Hélène Landemore's epistemic argument for democracy posits that democratic systems inherently possess epistemic virtues, which can be further enhanced by fostering inclusivity and diversity within the decision-making process. Landemore argues that democracy, by embracing a broad array of perspectives and knowledge, can overcome the limitations posed by Condorcet's Paradox. The diversity inherent in democratic participation is seen as a key to more informed and rational collective decisions, improving the epistemic quality of the outcomes. Landemore extends the logic of the Jury Theorem to political decision-making, suggesting that a decision-making body that is diverse and inclusive is more likely to arrive at correct decisions, thanks to the cumulative effect of its varied insights and expertise.

This nuanced understanding of democracy’s epistemic potential reveals that while the Jury Theorem and the solutions to Condorcet's Paradox outline the conditions under which collective decision-making can be supremely effective, Landemore’s work synthesizes these insights into a broader argument for democracy's inherent epistemic value. Her thesis advocates for a form of democracy that is not only a mechanism for representing the people's will but also a system capable of making decisions that are wise, informed, and rational. Through this lens, democracy is celebrated not just for its ethical and moral virtues but for its ability to harness the collective intelligence of its participants, making a strong case for its epistemic superiority.

Finally, to finish this paper, it is perhaps important to mention the possibility of a merely contingent defense of epistemic democracy. In this sense, Gustavo Hessmann Dalaqua[24], while broadly aligned with the epistemic defense of democracy, distinguishes his position from Landemore's by arguing that it is not always necessary to associate politics with truth claims: "in order to defend epistemic democracy, one does not need to argue that it is impossible for political discussion to proceed without truth-claims and assumptions" [25].

[24] DALAQUA, Gustavo Hessmann. Democracy and Truth: A Contingent Defense of Epistemic Democracy. *Critical Review*, v. 29, n. 1, p. 49–71, 2017.
[25] *Ibidem*, p. 65.

Bibliographic References

ARROW, Kenneth Joseph. *Social Choice and Individual Values.* New Haven and London: Yale University Press, 2012.

BLACK, Duncan. *The theory of committees and elections*. Boston, Dordecht and Lancaster: Kluwer Academic Publishers, 1986.

CONDORCET, Marie Jean Antoine Nicolas de Caritat de. *Essai sur l'application de l'analyse à la probabilité des décisions, rendues à la pluralité des voix*. Paris: De l'imprimerie Royale, 1785.

CONDORCET, Marie Jean Antoine Nicolas de Caritat de. *Matémathique et societé*. Collection Savoir. Paris: Hermann, 1974.

DALAQUA, Gustavo Hessmann. Democracy and Truth: A Contingent Defense of Epistemic Democracy. *Critical Review*, v. 29, n. 1, p. 49–71, 2017. Available on: https://doi.org/10.1080/08913811.2017.1290329, Accessed: March 2025.

DOWNS, Anthony. *An economic theory of democracy*. New York: Harper and Row, 1957.

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

RIKER, William Harrison. *Liberalism against populism*: a confrontation between the theory of democracy and the theory of social choice. Long Grove: Waveland Press, 1982.

RAWLS, John. *Political Liberarism*. New York: Columbia University Press, 1993.

RAWLS, John. *A Theory of Justice*. Revised Ed ed. Cambridge: Harvard University Press, 1999.

RAWLS, John. *Justice as Fairness:* A Restatement. Cambridge, London: Harvard University Press, 2001.

SANTOS, Fabiano Guilherme Mendes. Reavaliando a contribuição do "Paradoxo" de Condorcet para a moderna análise da política. *Revista de Sociologia e Política*, v. 31, p. e012, 2023. Available on: https://doi.org/10.1590/1678-98732331e012. Accessed: August 2024.

YOUNG, Hobart Peyton. Condorcet's theory of voting. *American Political science review*, v. 82, n. 4, p. 1231-1244, 1988. Available on: https://doi.org/10.2307/1961757. Accessed: August 2024.

How to cite this article: REIS, Robson Vitor Freitas; BISSIATI, Edson Lugatti Silva. An epistemic defense of democracy. *Revista de Ciências do Estado*, Belo Horizonte, v. 10, n. 1, p. 1–17, 2025.

Recebido em 10.08.2024

Publicado em 17.06.2025

CC BY 4.0 Atribuição 4.0 Internacional