

## The Wisdom of Crowds

Juliette ROUSSIN

**Are we better able to make decisions and to produce knowledge as a group? Do the many have virtues that elude the individual? In this volume, the authors attempt to provide a collective answer to this question, thus laying the foundations for a theory of collective wisdom.**

Reviewed: Jon Elster and H el ene Landemore, eds., *Collective Wisdom. Principles and Mechanisms*, Cambridge, Cambridge University Press, 2012. 424 p.

Guessing the weight of a boneless beef within a pound of its actual weight, predicting Barack Obama’s victory in the Democratic primaries, writing Wikipedia entries as reliable as the *Encyclopedia Britannica* (and possibly more so), or creating a legislative system superior to any group of political experts: these are just some examples of what we can collectively accomplish when sufficiently numerous and diverse. To grasp the mysterious alchemy of the “wisdom of crowds”<sup>1</sup>, an edited multidisciplinary volume is exactly what we need. The proceedings of a Coll ege de France international conference held in May 2008, *Collective Wisdom: Principles and Mechanisms*, edited by Jon Elster and H el ene Landemore, brings together accounts from political theory, collective action theory, economy, law, cognitive science and social epistemology on collective wisdom<sup>2</sup>.

### “Two Heads Are Better Than One”

The concept of “collective wisdom” refers to the idea that “two heads are better than one” when it comes to judging, making decisions, or even generating knowledge and arguments. The claim is not new: in a well-known *Politics*’ passage, Aristotle suggests that “the many are better judges” than the individual in political and aesthetic affairs, because their judgment is informed by that of all the diversely competent members<sup>3</sup>. Centuries later, Condorcet’s jury theorem and the “miracle of aggregation” lent credence to the idea that under the right conditions, the more numerous a group, the more likely it is to make the right decision. The reason for this is either that wrong answers to a complex factual question cancel each other out, clearing the way for the right answer to emerge (as the “miracle of aggregation” holds), or that summing people’s

---

<sup>1</sup> James Surowiecki, *The Wisdom of Crowds*, New York, Anchor Books, 2005.

<sup>2</sup> ] Six of the book’s fifteen chapters were first published in French in *Raison publique*, 2010/12. See Didier Mineur’s review for [La Vie des Id ees](#).

<sup>3</sup> Aristotle, *Politics*, Indianapolis/Cambridge, Hackett, 1998, tr. C. D. C. Reeve, III, 11, 1281b, p. 83.

average competences eventually leads to nearly infallible collective competence (as Condorcet's jury theorem demonstrates)<sup>4</sup>

During the last few decades, the internet and social networking helped promote new ways of collecting and creating information: collective encyclopedias, user forums, and search motors now shape an anonymous and global collective wisdom. By relying on recent theoretical developments to account for these new social practices, the contributors help cast a new light on the ways in which collective wisdom actually works.

## What Is Wisdom?

The editors did not arrange the articles thematically, preserving instead the order in which they were presented at the conference. Even so, the essays can be classified into three categories. A first set seeks to explain the concepts of group and collective wisdom (John Ferejohn, Christian List, Dan Sperber and Hugo Mercier). Authors agree that collective wisdom is an "emergent and systemic property" (Landemore, p. 8) of groups, whose unity and intentionality may vary in degree. Collective wisdom is also thought to arise from the cooperation between competent individuals and various "mechanisms" (p.5) which individuals rely on when making a decision as a group. These mechanisms are things like political institutions, aggregation, accumulated experience, or deliberation.

Though the philosopher Daniel Andler devotes an entire article to clarifying the concepts of wisdom and collective wisdom, the editors chose to let several definitions coexist within the collection. Most contributors admit that wisdom should be defined "epistemically", as an ability to track the truth, where "truth" can refer either to true statements, accurate predictions, or the smartest solutions to practical problems (Emile Servan-Schreiber, Lu Hong and Scott Page, and David Estlund). According to Andler, however, such a definition conflates wisdom with intelligence, and overlooks wisdom's practical and temporal character. For this reason, Andler argues, wisdom should be defined as the art of making long-term predictions resulting from considerable past experience (p. 82-84; Josiah Ober, Adrian Vermeule and Gloria Origgi also conceive wisdom as accumulated experience). In a concluding chapter, Elster reminds us of the distinctive moral quality wisdom also has: in the political realm especially, group wisdom consists as much in a collective concern for justice and the common good as in epistemic efficiency (p. 395).

Collective wisdom is based on two "principles" (Landemore, p. 5). First, it is rooted in individual wisdom: a certain amount of judgment and knowledge is required of all members, or at least of a good number of them, if a group is to be wise. The second principle is "cognitive diversity", that is, the existence within a group of a variety of points of view, interpretations, and "heuristics". Hong and Page (p. 68-9) show that aggregating distinct "interpretations" favors accurate collective predictions. Hence the quality of collective outcomes depends as much on the group's cognitive diversity as on individual competence.

---

<sup>4</sup> Condorcet, *Essai sur l'application de l'analyse à la probabilité des décisions rendues à la pluralité des voix*, in *Sur les élections et autres textes*, Paris, Fayard, 1986.

In some circumstances, diversity may even prove more decisive than individual intelligence. Page's "Diversity Trumps Competence" theorem<sup>5</sup> states that moderately competent individuals with different perspectives will arrive at better solutions than experts when it comes to problem-solving. The more cognitively diverse a group is — the more their interpretations, heuristics, and worldviews differ — the more diverse the solutions it considers will be. The resulting solution will be all the more informed and ingenious as it reflects a wide variety of points of view. This argument is frequently invoked in favor of inclusive polling and decision-making. On dealing with environmental questions for instance, the cognitively and socially diverse perspectives of "lay" citizens sometimes provide more insightful solutions than monolithic "expert" knowledge.

## Predicting and Evaluating

A second set of articles addresses the phenomenon of collective wisdom in the social and economic realm. The case of the internet calls for particular attention: the collaborative encyclopedia Wikipedia, or Google search algorithms, are some of the most striking examples of collective wisdom.

The founder of the online "prediction market" NewsFuture, Emile Servan-Schreiber shows how the internet not only increases our knowledge of what already exists, but also allows us to predict that which has yet to occur. Online prediction markets assemble numerous amateur bets on the likelihood of various events – a movie's commercial success, Obama's success in the primaries – to generate general predictions. The interesting point is that these predictions tend to outperform public opinion polls' and individual experts' forecast (p. 21)<sup>6</sup>. According to Servan-Schreiber, the success of prediction markets is not due to a small group of professional betters guiding the rest, but rather to the large size and relative diversity of the betting pool as a whole. Indeed, the larger the number of betters, the greater their accuracy compared to experts (p. 33). Servan-Schreiber's contribution thus offers as a perfect illustration of Page's theorem: to some extent, diversity compensates for a lack of expertise.

Gloria Origgi addresses the issue of users' evaluation and classification practices on the internet. She shows that the Web's epistemic value stems from the conjunction of a vast amount of available information and the ranking of this information by commercial websites and search engines. On sites like eBay or TripAdvisor, aggregate evaluations of sellers by thousands of previous buyers attribute each seller a "reputation" (p. 49), which in turn serves as a guide to future buyers. "Customized" reading suggestions offered by Amazon obey the same principle, with users' purchases being automatically ranked by an algorithm that "predicts" their future purchases. In this instance, "collective wisdom" refers to the accumulated experience of various consumers whose preferences have vested "the authority of tradition" (p. 41).

---

<sup>5</sup> Scott Page, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*, Princeton, Princeton University Press, 2008, p. 163.

<sup>6</sup> See Luc Goupil's and Clément Imbert's interview with Augustin Landier on the French prediction market Prédipol on [La Vie des Idées](#).

Despite its originality, Origgi's account encounters a number of objections. While one may speak of collective wisdom in the case of user forums, where information gathering allows for collective problem-solving, applying the concept to online evaluation practices seems somewhat more problematic. Evaluation and ranking are typically fostered and shaped by websites and aim at standardizing users' preferences. Amazon's service is a marketing tool: it is not designed to help a community of readers discover what a "good" book is, but to increase sales of a finite number of products by exploiting personal data.

## **Democracy: Instituting Wisdom**

One of the merits of *Collective Wisdom* lies in the fact that it does not exclusively focus on collective wisdom's political dimension, but also accounts for its decentralized manifestations on the internet and price markets. Most chapters, however, aim at building a political theory of collective wisdom.

Many chapters discuss collective wisdom in democratic contexts. The crux of the debate concerns the epistemic performances of democracies as opposed to the rule of experts. Alone among the contributors, the economist Bryan Caplan rejects the idea of democratic wisdom and recommends that decisions on economic policy be confined to experts (p. 324). H el ene Landemore, David Estlund, and Adrian Vermeule defend the opposite view that a large assembly's decision is always epistemically superior to that of a smaller group, however enlightened it might be. Caplan charges average voters with ignorance and irrationality, arguing that voters' views on economy are systematically mistaken (p. 319)<sup>7</sup>. In response to Caplan, Landemore describes the ways in which citizens and their representatives express what she calls "democratic reason" (p. 254). Drawing heavily on Page's theorem, Landemore shows that the cognitive diversity that occurs when a large number of individuals are involved in political decision-making makes democracy epistemically superior to any other political system, including a technocratic one. In his fascinating study of classical Athens' Council of 500, the historian Josiah Ober reaches the same conclusion: by selecting both competent and socially diverse Council members (p. 121), Athenian democracy managed to be "participatory" and "epistemic" at the same time (p. 118), thus establishing its military, political, cultural and economic supremacy over other Greek city-states. The emergence of collective wisdom thus depends crucially on viable political institutions.

The book indeed constantly emphasizes the importance of "mechanisms" for producing collective wisdom. No group is spontaneously wise – only under specific institutional and procedural conditions can a democracy make the right decisions. Reflecting on various democratic assemblies, Josiah Ober, David Estlund, Jon Elster, and Adrian Vermeule all seek to define institutional mechanisms likely to increase either members' individual competence (e.g., election, information gathering), their diversity (e.g. proportional representation, selection by lot), or the assembly's overall performance. Estlund and Elster both reflect on the democratic

---

<sup>7</sup> Caplan argues elsewhere that average voters are characterized by an "antimarket bias", an "anti-foreign bias", a "make-work bias", and a "pessimistic bias". See *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*, Princeton, Princeton University Press, p. 9.

assembly's optimal size: at what threshold does a group become more inclined to make wise decisions? Conversely, at what point does an assembly become too numerous to think and decide judiciously? As Estlund points out, some "expanding factors" count in favor of a large assembly (p. 237), but this does not imply that all citizens should be routinely included in the decision-making process. Because diversity of viewpoints and interests is ultimately limited (p. 242) and because "specialization" can sometimes compensate for a decrease in the number of participants (List, p. 225), representative democracy ultimately provides the appropriate framework for collective wisdom.

Finally, a key feature of collective political wisdom naturally relates to the group's decision-making rules. As Christian List's account of the "discursive dilemma" shows, the quality of a group's responses largely depends on the procedures the group adopts for "decomposing" and aggregating judgments. Philippe Urfalino compares French and American medicine evaluation committees' decision rules for determining whether a molecule qualifies as a medicine and can be put on the market. He pays particular attention to "apparent consensus decision-making", where a decision is reached once members no longer express objections to a proposal. The consensus is "apparent", Urfalino argues, because it often results from partial delegation of judgment by some to more competent members (p. 186, p. 199)<sup>8</sup>. However interesting, this method probably illustrates scientific decision-making's special features more than it tells us about political and democratic decision-making. In a democratic context, the decision rule with the least controversial "epistemic properties" (Landemore, p. 265) is still majority rule.

## **Deliberation and Aggregation**

The significance of *Collective Wisdom* partly lies in the "post-deliberative turn" it initiates. While the authors acknowledge the importance of discussion and debate between group members (Landemore, p. 257-62), they do not consider deliberation as the necessary and sufficient condition of collective wisdom. As Origgi's and Vermeule's contributions suggest, an aggregation procedure alone might well produce correct decisions and predictions. A group can be wise without having to abide by the constraining and often unrealistic rituals of deliberative theory, such as shared norms of rationality by the partners, indefinite time for discussion, or rational consensus in favor of the best argument.

Aggregation may well produce miracles and diversity may well broaden perspectives; however, deliberation often unites and deepens a group's positions. In that regard, one cannot but regret the book's lack of a genuinely collective voice on collective wisdom. Despite Landemore's illuminating introduction and Elster's synthetic conclusion, the unity of the matter at hand is still in question: are the authors really talking about the same thing? Can the production of consumer conformism be compared to the public search for the common good, or democratic decision-making to the conclusions of a panel of doctors? The chapters' random arrangement, as well as their competing conceptions of collective wisdom and of what counts as

---

<sup>8</sup> See Stéphanie Novak's interview with Philippe Urfalino on [La Vie des Idées](#).

a right decision, highlight the book's relative failure to elicit a real dialogue between the various disciplines and fields that it intended to bring closer to one another.

Published by Books&Ideas, February 20<sup>th</sup> 2014. ©**booksandideas.net**

First Published in [laviedesidees.fr](http://laviedesidees.fr), on 21<sup>st</sup> September 2012