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Decisions, Decisions: Review of *Mindware: Tools for Smart Thinking* by Richard E. Nisbett

Anne Kelly

Dakota Wesleyan University, ankelly@dwu.edu

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Abstract

Richard Nisbett. 2015. *Mindware: Tools for Smart Thinking*. (New York, NY: Farrar, Strauss, and Giroux). 336 pp. ISBN: 9780374536244.

Social psychologist Richard E. Nisbett provides help in identifying and overcoming faulty cognitive strategies and replacing them with more accurate heuristics. To do so, Nisbett draws from statistics, correlation, experiments, differences in Western and Eastern thought, and, especially, social influence.

Keywords

metacognition, heuristics, schemas, statistics, correlation, dialectical reasoning, critical thinking, psychology

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Cover Page Footnote

Anne Kelly is a professor of behavioral sciences and chair of the psychology department at Dakota Wesleyan University. Her research focuses on the causes, treatment and prevention of suicide, the psychological mechanisms underlying suicide ideation, and the cognitive and social factors that influence detection of suicide risk in others.

Interest in the cognitive processes used in judgment and decision making spiked in the first decades of the current century, if quantity and popularity of related scholarly social science books may be used as a metric. This trend, which began with *Blink* (Gladwell 2005) and saw *Nudge* (Thaler and Sunstein 2008), hit full stride soon thereafter with the near-contemporaneous publication of *How We Decide* (Lehrer 2009), *You Are Not So Smart* (McRaney 2011), *Mindhacker* (Hale-Evans 2011), and *Thinking, Fast and Slow* (Kahneman 2011). Among the many titles dedicated to identifying and overcoming cognitive biases, heuristics, and fallacies, Richard E. Nisbett's *Mindware: Tools for Smart Thinking* (2015) came toward the end. While addressing much of the same material, it also offers some new insights.

As did the authors who preceded him, Nisbett challenges traditional assumptions that human thinking is entirely rational. He argues that the information we have is often incomplete, whether drawn from memory or gathered afresh in a given situation. In the former case, this information is stored in mental knowledge-organization structures called schemas, the recognition or recall of which is later activated by associated events. Poor judgment and error can easily arise, however, when information is unclear or incomplete, and we then fill in the blanks using partial or maladaptive schemas. This tendency makes us more vulnerable to the influence of biases, fallacies, and sloppy heuristics that pervade our thinking and can lead to bad decision making.

Although he acknowledges the importance of schemas in interpreting and guiding our behavior, Nisbett does not extensively explain the underpinnings of cognition, which would have contributed to a more complete picture. For example, he might have explained the two different ways the brain forms thoughts as popularized by Kahneman (2011) in *Thinking, Fast and Slow*: System 1, responsible for making quick judgments and requiring few resources but often producing errors; and System 2, critical thinking which requires more effort but minimizes error.¹ Of course, Nisbett is allowed to focus upon what he wishes, and one thing that makes his focus unique is his exploration of social and cultural contexts in which these errors arise, and the social implications of them.

As have others, Nisbett explains several heuristics, such as the representativeness heuristic (an estimation of the likelihood of an event made by comparing it to the most typical example of an event that already exists in our minds) and availability heuristic (the mental shortcut that depends on examples related to a particular problem or event that come immediately to mind); thus, much of the content of *Mindware* will be familiar. A reader new to the subject, however, might come away from *Mindware* with a skewed understanding, as its emphasis on

¹ The editor would like to point out that two reviews of Kahneman, one by Anne Kelly, appeared in [Numeracy 10\(2\), Articles 15 and 16](#).

the contribution of social context to errors in decision making often leaves cognition treated as a byproduct of social interaction and culture—yet cognition is both prior and indispensable, for without it one could not even interpret social situations.

It is important to note here that Nisbett is a giant in his field who, along with Edward E. Jones, gave us the actor-observer bias and its fundamental attribution error. This error tends to explain our own behaviors and shortcomings in terms of situational factors, whereas the behavior and shortcomings of other people, about whom we have limited information, are explained in terms of dispositional factors. Because information about others is limited, we fall back on shortcuts, or heuristics—one example of which is a stereotype—to assign cause for another's shortcomings. A similar attribution error, also related to prejudice but on the group level, is the ultimate attribution error. Both cases show how a lack of both information and the skills to interpret it can easily lead to mistakes in thinking.

So that we might avoid such mistakes and learn to mitigate or prevent cognitive errors in our decision making, Nisbett spends a significant portion of the book explaining statistics, correlation, experiments, and research methods used in a variety of fields including social sciences and medicine. The extensive treatment of this material distinguishes *Mindware* from other works in a good way, and the reader will likely find especially useful the demonstrations of practical application to daily life. Nisbett wants to help the reader in “learning how to *frame* events in such a way that the relevance of the principles to the solutions of particular problems is made clear, and learning how to *code* events in such a way that the principles can actually be applied to the events,” viz., to identify certain error-prone mental habits and shortcuts and supplant them with accurate replacements of our own choosing which will serve us better.

To this end, two of the concepts he presents for consideration are the law of large numbers and regression to the mean. The law of large numbers states that as a sample size gets bigger, the mean tends to become closer to that of the whole population. Small samples contain greater variability, and, if we neglect to consider this phenomenon, we inflate the significance of the information conveyed. If individual cases or small samples are used, then we cannot draw accurate conclusions. Nisbett uses the example of a quarterback's performance over one or more seasons. His coach may insist he is a great player; he has a lot of evidence – lots of data points – which indicate the player is good overall. But, should a visiting scout see the player perform poorly, the law of large numbers should tell him that the small snapshot is not necessarily an accurate picture of the player's ability. If the player's poor performance is wrongly seen by the scout as fixed and exemplifying the skillset of a poor player, the scout has both failed to recognize the law of large numbers and is committing the fundamental attribution error. A closely related concept is that of regression to the mean. According to this principle,

extreme scores will likely be closer to the mean when measured a second time; if the same player performed considerably worse than typical on the day the scout evaluated him, his performance will most likely be better the next time. It would be unwise for the scout to think the quarterback was not as good as the coach said, only based on one extremely poor score. He needs to evaluate the quarterback a few times to get a more accurate picture and reduce the impact of assumptions stemming from an extreme score. Here Nisbett does an especially good job of connecting elements of cognition and examining them from several angles.

Another two of the several topics addressed in the book are logic and dialectical reasoning. Nisbett describes logic models and reviews how tied they are to the history of Western Civilization. They have defined our analytic worldview that emphasizes the logical concepts of identity and noncontradiction. He notes that Westerners do not place adequate weight on contextual factors and understanding the sequence of events leading up to an event. Instead, we focus on causality. Our overemphasis on logic contributes to distortion and error. We insist on an unchanging and stable world, which Nisbett links to our use of dispositions, or personality, to explain a person's behavior—again, the fundamental attribution error. Nisbett contrasts Western logic with Eastern dialecticism. Dialectical reasoning makes use of conversation or debate to arrive at truth by stimulating critical thinking, clarifying ideas, and understanding contradictions that may ultimately prompt more comprehensive views. It emphasizes context, and is concerned with useful conclusions and finding a middle way between extremes. Both approaches have strengths and weaknesses, and each provides something useful: logic is crucial for scientific thought and solving some kinds of well-defined problems; dialectical thinking, with its attention to the influence of context, improves our everyday decision making and judgment.

In the six sections of his book, Nisbett addresses how we think about the world and ourselves, how we make choices and how we think they ought to be made, how to detect relationships among events, and how to detect errors in reasoning. These sections first appear somewhat fragmented. Viewed from a distance, however, we see the more or less self-contained systems described therein working together in a whole and bound together by Nisbett's particular perspective as a social psychologist. This perspective is, naturally, Nisbett's strength and what makes *Mindware* different from other works in the genre, with which it otherwise has much overlap.

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