

## Book Reviews

### How We Decide<sup>1</sup>

Reviewed by Major Keith A. Petty\*

*If the game seems simple or obvious, then you've made a mistake. The game is never simple. You've always got to wonder: what am I missing?*<sup>2</sup>

#### I. Introduction

In late 2002, top U.S. military and political leaders were heavily engaged in deciding whether and how to launch an armed attack against Iraq.<sup>3</sup> Following the invasion in 2003 and during the conflict, thousands of Soldiers made split-second decisions whether to engage the enemy with lethal force. Judge advocates supporting these efforts had to decide how to advise on issues ranging from targeting decisions to detention operations. Each of these actors—leaders, Soldiers, judge advocates—must make effective decisions in order to succeed. But how does the military professional, as the maxim goes, “get it right the first time, every time?” How can we avoid making bad decisions?

In his latest work, *How We Decide*, Jonah Lehrer attempts to shed light on two key issues: How the human mind makes decisions, and how we can make those decisions better.<sup>4</sup> His conclusions are surprising and illuminating. The conventional wisdom that logic ought always to prevail over emotion must be discarded, he argues convincingly.<sup>5</sup> Rather, different situations require the decision-making abilities of different parts of the brain and, sometimes, a cooperative combination of reason and feeling. Lehrer's arguments are strengthened by his use of the latest research from neuroscience and cognitive psychology. That this book is on the reading list at the U.S. Army Command and General Staff College reflects its applicability to the decision-making process of military leaders.<sup>6</sup> Any experienced trial attorney who reads it will readily see how it applies to the tactical decisions he must make, both out of court and on his feet.

#### II. The Complexities of the Human Mind

Lehrer explains the complex workings of the mind by relying on his storytelling gifts. For example, he demonstrates the power of the emotional brain through the story of Lieutenant Commander (LCDR) Michael Riley, a British Navy radar operator during the Gulf War.<sup>7</sup> Concerned that a blip on the radar approaching the USS *Missouri* did not “feel like” a friendly aircraft, he ordered that it be shot down because “he just knew” it was an incoming Iraqi missile.<sup>8</sup> His intuition saved the lives of hundreds on board the *Missouri*.<sup>9</sup> Or take the story of Wag Dodge, a parachuting firefighter in Montana in 1949, who was trapped with his brigade of smokejumpers by a wall of fire two hundred feet tall and three hundred feet deep.<sup>10</sup> Realizing they could not outrun the approaching flame, Dodge relied on his prefrontal cortex, the logic center of the brain, to come up with a creative solution—he lit a small fire where he was standing.<sup>11</sup> The burnt ground where he made the fire served as a protective buffer to the raging inferno.<sup>12</sup> Finally, Michael Binger, a particle physicist at Stanford and a professional poker player, demonstrates how a combination of logic (math) and instinct (judging your opponent's bluff) allow him to make the decisions that win poker tournaments.<sup>13</sup>

While these anecdotes add clarity to otherwise complex ideas, the structure of the book risks confusing the reader. Initially, Lehrer argues that emotions are undervalued and that dopamine neurons that control feelings can be extremely useful. Just look at the instincts of Tom Brady when he threw a last second pass that ultimately won the 2002 Super Bowl.<sup>14</sup> He relied on finely tuned dopamine cells, the same brain activity that allowed LCDR Riley to know the radar blip was an incoming missile.<sup>15</sup> Then Lehrer does an about face and cautions against using emotions too heavily. This

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\* Judge Advocate, U.S. Army. Student, 60th Judge Advocate Officer Graduate Course, The Judge Advocate General's Legal Center & School, U.S. Army, Charlottesville, Virginia.

<sup>1</sup> JONAH LEHRER, *HOW WE DECIDE* (2009).

<sup>2</sup> *Id.* at 241 (quoting Michael Binger, professional poker player and physicist).

<sup>3</sup> Peter Beaumont & Ed Vulliamy, *US Lays Out Plans to Invade Iraq with 200,000 Troops*, THE GUARDIAN, November 10, 2002, available at <http://www.guardian.co.uk/world/2002/nov/10/iraq3>.

<sup>4</sup> LEHRER, *supra* note 1, at xvii.

<sup>5</sup> *Id.* at xv.

<sup>6</sup> U.S. ARMY COMBINED ARMS CTR., COMMAND AND GENERAL STAFF COLLEGE, LEADERSHIP READING LIST, available at <http://www.cgsc.edu/dcl/readingList.asp> (last visited Nov. 10, 2011).

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<sup>7</sup> LEHRER, *supra* note 1, at 30.

<sup>8</sup> *Id.* at 32.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.* at 95.

<sup>11</sup> *Id.* at 96.

<sup>12</sup> *Id.*

<sup>13</sup> *Id.* at 219–29.

<sup>14</sup> *Id.* at 4.

<sup>15</sup> *Id.* at 34.

can lead to risky behavior—gambling, excessive credit card use—because our feelings have blinded us to the prospect of loss.<sup>16</sup> Later still, he trumpets the value of reason, and, paraphrasing Aristotle, states that “the key to cultivating virtue [is] learning how to manage one’s passions.”<sup>17</sup> And then he suggests that when we allow reason to take complete control we choke on thought.<sup>18</sup>

The patient reader is rewarded in the final chapter when Lehrer succinctly describes the situations best suited for each type of brain function and strategies to avoid mental traps. Simple problems, he suggests, require the simplicity of the logical mind.<sup>19</sup> If it can be reduced to a numerical value, then it is a simple problem for the prefrontal cortex. Novel problems that we have no experience with also require the creativity only derived from the logical part of the brain.<sup>20</sup> It is only in cases where we have experience—throwing a pass, swinging a golf club, firing a weapon—that we should allow our emotional instincts to thrive.<sup>21</sup> For complex problems, we must be cautious of overconfidence.<sup>22</sup> This can only be avoided if we embrace all of the evidence before making a choice, especially if it contradicts our preconceived notions. This is when, time permitting, the decision-making process should be extended. Ultimately, Lehrer urges the reader to think about how we think in order to recognize the type of problem we are facing and the kind of decision-making process it requires.<sup>23</sup>

### III. A Growing Field

Lehrer readily admits that “[t]he science of decision-making remains a young science.”<sup>24</sup> Nonetheless, efforts to determine why humans behave the way they do has been the focus of research for decades.<sup>25</sup> A rich body of literature already exists in the field of compliance theory, which seeks to answer why individuals, organizations, and governments

behave the way they do.<sup>26</sup> Lehrer misses the opportunity to illustrate how the dopamine neurons that control our emotions might explain Herbert Kelman’s influential theory of “identification.” This theory describes how individuals adopt the behavior of a superior in order to attain a desired relationship, and has been widely cited in behavioral scholarship.<sup>27</sup>

Also, by focusing his efforts on the inner workings of the mind, Lehrer gives little consideration to outside influences that affect individual behavior. Social psychologists have noted a tendency among professionals, including lawyers, to overlook external variables when examining individual decision-making.<sup>28</sup> In fact, the decision-making environment has a tremendous impact on human behavior, causing some scholars to suggest that greater emphasis needs to be placed on the institutional factors that affect the decision-making process.<sup>29</sup> And even though Lehrer touches upon the importance of internalizing experiences for future decision making,<sup>30</sup> he never capitalizes on research demonstrating that individuals tend to internalize the value sets of their organizations.<sup>31</sup>

Although Lehrer’s arguments are strong, they could be more persuasive if he cited, and rebutted, counterarguments. He refers to rational choice theory in microeconomics,<sup>32</sup> which maintains that human beings tend to act like rational agents out to get the most utility for the lowest possible price. Lehrer contends that this theory fails to account for bias and expectations, and that too much rational analysis leads to poor decisions.<sup>33</sup> He does not, however, take the time to explain—from a rational choice perspective—why there might be exceptions to the general theory. To his detriment, he also does not cite leading scholars in the field.<sup>34</sup> In spite of these shortcomings, the lessons derived

<sup>16</sup> *Id.* at 81.

<sup>17</sup> *Id.* at 107. The paraphrase is from Aristotle, *Nicomachean Ethics* (Martin Ostwald trans., New York: Macmillan 1962).

<sup>18</sup> LEHRER, *supra* note 1, at 138.

<sup>19</sup> *Id.* at 244. See also David J. Snowden & Mary E. Boone, *A Leader’s Framework for Decision Making*, HARV. BUS. REV., Nov. 2007, at 70 (arguing that simple problems require “straight-forward management and monitoring”).

<sup>20</sup> LEHRER, *supra* note 1, at 246.

<sup>21</sup> *Id.* at 248.

<sup>22</sup> *Id.* at 247.

<sup>23</sup> *Id.* at 250.

<sup>24</sup> *Id.* at 243. For a similar contribution in this field, see generally DAN ARIELY, *PREDICTABLY IRRATIONAL* (2009).

<sup>25</sup> John S. Hammond, Ralph L. Keeney & Howard Raiffa, *The Hidden Traps in Decision Making*, HARV. BUS. REV., Jan. 2006, at 118.

<sup>26</sup> See, e.g., FREDERICK SCHAUER, *PLAYING BY THE RULES: A PHILOSOPHICAL EXAMINATION OF RULE-BASED DECISION-MAKING IN LAW AND IN LIFE* (1991); Harold Hongju Koh, *Why Do Nations Obey International Law?*, 106 YALE L.J. 2599 (1997); Laura A. Dickinson, *Military Lawyers on the Battlefield: An Empirical Account of International Law Compliance*, 104 AM. J. INT’L L. 1 (2010).

<sup>27</sup> Herbert C. Kelman, *Compliance, Identification, and Internalization: Three Processes of Attitude Change*, 2 J. CONFLICT RESOL. 51, 52–53 (1958). See also, Koh, *supra* note 26, at 260 n.3.

<sup>28</sup> Andrew M. Perlman, *Unethical Obedience by Subordinate Attorneys: Lessons from Social Psychology*, 36 HOFSTRA L. REV. 451 (2007).

<sup>29</sup> W. Bradley Wendel, *Deference to Clients and Obedience to the Law: The Ethics of the Torture Lawyers (A Response to Professor Hatfield)*, 104 NW. U. L. REV. COLLOQUY 58, 63 (2009) (citation omitted).

<sup>30</sup> LEHRER, *supra* note 1, at 252.

<sup>31</sup> Orly Lobel, *Lawyering Loyalties: Speech Rights and Duties Within Twenty-First-Century New Governance*, 77 FORDHAM L. REV. 1245 (2009).

<sup>32</sup> LEHRER, *supra* note 1, at 148, 201.

<sup>33</sup> *Id.*

<sup>34</sup> See, e.g., JACK L. GOLDSMITH & ERIC A. POSNER, *THE LIMITS OF INTERNATIONAL LAW* (2005) (applying rational choice theory to international law).

from Lehrer's work are directly applicable to military professionals.

#### IV. Practical Applications

There are obvious benefits to Lehrer's normative prescriptions for commanders and judge advocates alike. Leaders can reinforce combat readiness by training Soldiers effectively. With sufficient experience, actions during combat—like LCDR Riley's ability to detect an Iraqi missile—will be instinctual and correct. Judge advocates similarly recognize that once the law of war and rules of engagement are committed to memory, a Soldier's decision to engage after positively identifying the enemy becomes automatic; a thought process that occurs in the dopamine neurons that the Soldier might not even be aware of.<sup>35</sup> This allows the kind of quick, decisive action that wins battles. But, as Lehrer states, "Dopamine neurons need to be continually trained and retrained, or else their predictive accuracy declines."<sup>36</sup> A combat Soldier, or courtroom advocate, whose experience gets "rusty" will need retraining or new experience before being sent into the "thick of battle."<sup>37</sup>

Complex military decisions cannot be left to feeling alone. The Army currently uses the military decision making process (MDMP),<sup>38</sup> which has a strong correlation to the Lehrer's key principles. The MDMP is a seven-step planning model that "establishes procedures for analyzing a mission, developing, analyzing, and comparing courses of action against criteria of success and each other, selecting the optimum courses of action, and producing a plan or order."<sup>39</sup> The intent of the MDMP is to organize the decision-making of commanders and staffs.<sup>40</sup>

Lehrer explains how the mind engages in a similarly structured three-step process when problem-solving.<sup>41</sup> First, the logical part of the brain establishes a "clean slate" by removing irrelevant thoughts. Second, the brain generates associations, searching for relevant strategies in different areas of the mind. Finally, when the correct answer is

found, it is passed to the frontal lobes and the mind instantly recognizes that the problem is solved.

Military planners must similarly focus on relevant information in order to generate creative solutions, as Wag Dodge did when he lit the protective fire that saved his life.<sup>42</sup> After dismissing irrelevant courses of action, planners then must consider all of the options, allowing Lehrer's inner "argument" to take effect.<sup>43</sup> This helps military decision-makers avoid the trap of preconceived notions (e.g., overconfidence in their own troop strength or overreliance on incomplete intelligence) and engage in a truthful analysis of the situation at hand.<sup>44</sup> Finally, and perhaps most importantly, it allows the commander to exert authority over operations. This is similar to the executive function of the prefrontal cortex, which reins in possibly impulsive behaviors of the emotional brain centers.<sup>45</sup>

Judge advocates are indispensable to the military decision-making process by providing support to the command. The ability to apply the law to a proposed course of action is directly analogous to Lehrer's description of the logical prefrontal cortex keeping the emotional mind under control.<sup>46</sup> For example, if the command wishes to purchase something (emotional activity), the judge advocate must be prepared to ask how much it costs and whether the purchase complies with relevant laws and regulations (logical reasoning).

Judge advocates also serve as the command's moral compass. Some will inevitably take issue with Lehrer's comparison of the immoral mind to a lawyer. He writes, "[A] psychopath is left with nothing but a rational lawyer inside his head, willing to justify anything."<sup>47</sup> It is understood in our profession, with morality codified in ethics regulations, that we are to help commanders find a way to "yes," but not at all costs and certainly not at the expense of the law. In the military decision-making process, perhaps the most important moral question a judge advocate can ask is this: "I know we *can* take this course of action, but *should* we?" The ability to consider the feelings of others—whether it is higher headquarters, the civilian population that might be affected by an operation, or the public reaction to certain actions—is required of military lawyers and a critical component of what Lehrer calls the "moral mind."<sup>48</sup>

<sup>35</sup> *Id.* at 34.

<sup>36</sup> LEHRER, *supra* note 1, at 49.

<sup>37</sup> This also suggests that a new trial counsel looking for a quick "gut check" might get a better answer from a senior trial counsel who has been in court continuously for the last two years than from a senior member of the office who has more experience and knowledge, but has not been in court lately. It also suggests that courtroom skills, as opposed to legal analysis, are best learned on the job from current practitioners, not in an academic setting.

<sup>38</sup> U.S. DEP'T OF ARMY, FIELD MANUAL 5-0 (101-5), ARMY PLANNING AND ORDERS PRODUCTION ch. 3 (20 Jan. 2005).

<sup>39</sup> *Id.* para. 3-1. The seven steps of the MDMP are: (1) receipt of missions; (2) mission analysis; (3) course of action development; (4) course of action analysis (war game); (5) course of action comparison; (6) course of action approval; and (7) orders production. *Id.* fig.3-1.

<sup>40</sup> *Id.* para. 3-2.

<sup>41</sup> LEHRER, *supra* note 1, at 119.

<sup>42</sup> *Id.* at 117.

<sup>43</sup> *Id.* at 199.

<sup>44</sup> Hammond et al., *supra* note 25, at 123.

<sup>45</sup> LEHRER, *supra* note 1, at 116.

<sup>46</sup> *Id.* at 127.

<sup>47</sup> *Id.* at 175.

<sup>48</sup> *Id.* at 182.

Lehrer provides yet another valuable lesson for those in the perfection-driven military ranks: “[T]he best decision-makers don’t despair.”<sup>49</sup> Instead, “they become students of error, determined to learn from what went wrong. They think about what they could have done differently so that the next time their neurons will know what to do.”<sup>50</sup> This advice may seem counter-intuitive to the profession of arms, particularly when there is so much at stake with operational decisions.<sup>51</sup> Still, unless we focus on our mistakes and “experience the unpleasant symptoms of being wrong,” the brain will never correct itself and make better instinctual decisions.<sup>52</sup> When we allow future leaders to learn from their mistakes, we add new meaning to the cliché, “getting the mind right.”

deficiencies. Some will undoubtedly find his advice to “think about thinking” too abstract,<sup>53</sup> but his conclusions bring the research into focus and provide guidance for problem-solvers. Two such groups, military professionals and lawyers, should take notice of this work, and so especially should those military professionals who are also lawyers. Whether it is commanders issuing orders, Soldiers engaged in training exercises, or judge advocates providing legal advice or preparing a case for trial, each can draw valuable lessons from Lehrer’s key message: “Whenever you make a decision, be aware of the kind of decision you are making and the kind of thought process it requires.”<sup>54</sup> That way, they can make the best possible decisions in the future.

## V. Conclusion

*How We Decide* is a fascinating exploration of the complex functions of the mind. Lehrer’s demonstrated expertise in neuroscience and strong writing make this a highly persuasive study, overcoming its minor analytical

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<sup>49</sup> *Id.* at 250.

<sup>50</sup> *Id.*

<sup>51</sup> In the business context, scholars warn against leaders being intolerant of mistakes. In complex problem-solving, failure “is an essential aspect of experimental understanding.” Snowden & Boone, *supra* note 19, at 74.

<sup>52</sup> LEHRER, *supra* note 1, at 54.

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<sup>53</sup> *Id.* at 249.

<sup>54</sup> *Id.* at 250.