



Book Review

The End of Average How We Succeed in a World That Values Sameness

Reviewed by Major Zach C. Simons

You have to lead men in war by requiring more from the individual than he thinks he can do. You have to lead men in war by bringing them along to endure and to display qualities of fortitude that are beyond the average man's thought of what he should be expected to do.¹

From the outset of *The End of Average*,² author Larry "Todd" Rose makes no effort to hide the ball. He unambiguously states

his thesis: "[N]o one is average."³ Rather than classifying his theory as a philosophical one, Rose declares it "a scientific fact with enormous practical consequences that [we] cannot afford to ignore."⁴ In *The End of Average*, Rose teaches his readers about the origin and rise of modern society's use of averages, gives examples of how often the application of averages has gone awry, and provides insight into how embracing individuality will enhance the effectiveness of any organization.

It is difficult to argue against Rose's position. While *The End of Average* is a quick read at only 196 pages, or approximately six hours in audio format,⁵ it is supported by 417 footnotes containing extensive citations to scientific writings, historical vignettes, and modern-day examples that support his argument.⁶ While not all lessons in this book will be universally applicable to judge advocates (JAs) in their professional capacity, with the closing chapters advocating for new business hiring models and educational reform,⁷ there remain several valuable lessons and takeaways throughout. All Army leaders are responsible for seeking professional development for both themselves and their subordinates.⁸ For a small investment of time, *The End of Average* is a worthwhile read that will yield significant returns for JAs in better understanding how embracing individuality can positively impact their profession.⁹

The End of Average and the Emerging Science of Individuality

Todd Rose: Author, Educator, and High School Dropout

Rose is an accomplished writer and graduate-level educator with a unique and even more surprising background as a high school dropout.¹⁰ He earned a bachelor of science in psychology from Weber State University in 2000, followed by a master's degree and doctorate in education from Harvard University in 2001 and 2007.¹¹ After earning his doctorate, Rose joined Harvard University's Graduate School of Education faculty, where he worked for twelve years from 2008 to 2020.¹² During that time, Rose established the Laboratory for the Science of Individuality, and from 2015 to 2020, he was the director

of Harvard's Mind, Brain, and Education program.¹³

Rose's extensive work and reputation in the science of individuality strengthen his credibility. After publishing *The End of Average*, Rose authored two additional books advocating for the science of individuality: *Dark Horse*¹⁴ and *Collective Illusions*.¹⁵ In addition to these books, Rose continually promotes the science of individuality through publishing academic papers,¹⁶ engaging with traditional news media,¹⁷ participating in Ted Talks,¹⁸ and utilizing various other mediums to share his ideas including YouTube videos with millions of views.¹⁹

The Principles of Individuality

In part one of his book, Rose takes the reader through the history of when and how averages became the standard by which we often measure people today.²⁰ Part three, titled "The Age of Individuals," shows how organizations will benefit from rejecting averages and embracing individuality.²¹ At the heart of Rose's argument, contained in part two, he explains the three guiding principles of the science of individuality: (1) the jaggedness principle, (2) the context principle, and (3) the pathways principle. Understanding these principles will enhance one's ability to understand subordinates' personalities, which is critical to providing leadership.²²

The Jaggedness Principle

The jaggedness principle is the idea that we cannot judge talent, which is innately complex, by one-dimensional measures.²³ Rose defines a quality as being "jagged" if it meets two criteria: "[I]t must consist of multiple dimensions" and "[t]hese dimensions must be weakly related to one another."²⁴ Rose uses the 2003 New York Knicks basketball team as an example. After the Knicks hired Isiah Thomas as president of basketball operations for the team in 2003, he set out to assemble a roster with the sole focus on acquiring players with the highest scoring averages; he succeeded when the Knicks started the 2003 season with a roster boasting the highest combined scoring average of all teams in the National Basketball Association (NBA) that year.²⁵ Basketball fans familiar with

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the Knicks' history will not be surprised to hear that Thomas's new team experienced four straight losing seasons with a winning average of approximately 33 percent.²⁶ In hindsight, Thomas's one-dimensional talent management was flawed, and front offices throughout the NBA now recognize the necessity of building teams that emphasize several dimensions of the game.²⁷

Lessons learned about leadership throughout the highest levels of sports and industry support Rose's position; organizations cannot succeed without recognizing and valuing the multi-dimensional individual.²⁸ Despite the ongoing transition throughout corporate America to hire and evaluate employees using multi-dimensional factors consistent with Rose's jaggedness principle,²⁹ Army JAs know all too well that on every evaluation report, they will be assigned a one-dimensional "block check" ranking among their peers in their officer evaluation reports. The senior rater can only award the highest ranking—most qualified—to less than 50 percent of their senior-rated officers, which would make them the mathematical definition of "above average."³⁰ However, this does not suggest the military places no emphasis on individuality. The Department of Defense recently directed all components to conduct diversity and inclusion messaging to emphasize the importance of "[p]ersonnel with diverse backgrounds, experiences, outlooks, and ways of thinking."³¹ Recent Army doctrine also reinforces the need for leaders to focus on understanding their subordinates as individuals.³²

The Context Principle

Rose credits University of Washington Professor Yuichi Shoda with establishing the basis for his context principle in the 1980s.³³ Before Shoda's work, psychologists existed in two camps: trait psychologists

and situation psychologists.³⁴ Trait psychologists believed behavior was determined by "well-defined personality traits, such as introversion and extroversion."³⁵ This contrasted with situation psychologists, who argued that "culture and immediate circumstances" dictate behavior.³⁶ Shoda proposed the following alternative: Behavior is not determined by either traits or situations; rather, it is determined through the constant interaction of both.³⁷

A key takeaway for JAs relates to the practical application of the Myers-Briggs Type Indicator (MBTI) test. Myers-Briggs touts its type of indicator as a way for an individual to "use self-awareness to unlock [their] potential" and for an organization to "build people development strateg[ies]."³⁸ The MBTI sorts individuals into one of sixteen personality types,³⁹ with each accompanied by a two- or three-sentence summary of the individual's personality.⁴⁰ The use of the MBTI is common throughout corporate America and government agencies.⁴¹ However, Rose identifies flaws in the MBTI and how its trait-based averages will fail to predict an individual's behavior in *specific* conditions.⁴² Rose explains how MBTI results merely provide insight into the *averages* of how an individual behaves; leaders must supplement this data point by applying the "if-then" approach.⁴³

Rose proposes the "if-then" approach to understanding personalities by utilizing Shoda's findings: An individual's behavior is only predictable and understandable when both traits and situations are considered *together*.⁴⁴ Military leaders will understand from experience that every subordinate requires differing approaches when providing purpose, motivation, and direction; a one-size-fits-all approach to leadership will rarely yield success.⁴⁵ Furthermore, Rose points out that leaders must also

be cognizant that their interactions with subordinates are limited to a narrow set of circumstances.⁴⁶ For example, a subordinate's "if-then" analysis might show them to be extremely introverted in an office setting, while their MBTI typing result of extroversion was a product of extroverted behavior in numerous other contexts.⁴⁷ Rose's assertion comports with Army Doctrine Publication (ADP) 6-22's view that attributes and characteristics must be framed "within certain conditions."⁴⁸ The lesson is simple: [I]f you rel[y] on averages, then you miss[] out on all the important details of a person's behavior."⁴⁹

The Pathways Principle

In describing the pathways principle, Rose explains how averages, even when meticulously and accurately calculated, simply cannot forecast a specific outcome for an individual.⁵⁰ The very first vignette in *The End of Average* shows how the application of averages dramatically failed the military. In the 1950s, the newly-established U.S. Air Force was struggling to figure out why so many pilots were crashing its new jets.⁵¹ There were 198 aircraft accidents in February of 1952 alone, and the Air Force determined the overwhelming majority of these resulted from pilot error.⁵² These new jets contained standardized cockpits, which were designed using averages calculated from several specific measurements taken from thousands of pilots to determine average body dimensions.⁵³ Rose describes how Lieutenant Gilbert Daniels discovered the fatal flaw in this decision to build the "perfect cockpit" based on averages.⁵⁴ After Daniels collected new measurements from over 4,000 pilots and calculated the averages for ten distinct body dimensions, he shockingly discovered that *no individual pilot* from that population fell within the average range for all ten measurements.⁵⁵

This discovery completely changed the U.S. Air Force's approach to cockpit design, and soon, every jet came with adjustable seats and foot pedals, tailored flight suits, and customizable helmets.⁵⁶ This also ushered in a new era in the U.S. military's approach to ensuring individual fit.⁵⁷ It would be abnormal today to expect a Soldier to accept ill-fitting gear,⁵⁸ and when Soldiers cannot be fitted properly from

existing stock, current regulations prescribe requests for special measurement clothing.⁵⁹

An Opportunity for Stewardship: Applying the Science of Individuality

Leaders act to improve the organization beyond their own tenure. Improving the organization for the long-term is deciding and taking action to manage people or resources when the benefits may not occur during a leader's tour of duty with an organization.⁶⁰

In ADP 6-22, stewardship is defined as "the responsibility of Soldiers . . . to strengthen the Army as a profession"⁶¹ and adds that individual stewardship requires that all Soldiers "*strive continuously for excellence* in the performance of duty, to pursue lifelong learning, and to accomplish every mission."⁶² The U.S. Army Judge Advocate General's Corps emphasizes the importance of stewardship by including it as one of the four constants of the Army legal profession.⁶³

Except for appearing in an excerpt from General George C. Marshall's testimony to the U.S. Senate Committee on Military Affairs,⁶⁴ the word "average" does not appear anywhere else throughout ADP 6-22.⁶⁵ The concept that our military Services do not embrace "being average" should not be surprising. One need only look to the current recruiting slogans for the Army ("be all you can be")⁶⁶ and the Air Force ("aim high").⁶⁷ On the U.S. Coast Guard's recruiting website, the slogan "make an impact" is immediately followed up by "there's no such thing as *an average day* in the Coast Guard."⁶⁸ These mottos underpin the notion that serving in the military demands a constant pursuit of excellence.⁶⁹

Army Doctrine Publication 6-22 charges Army leaders to provide motivation to inspire others to accomplish the mission.⁷⁰ In Field Manual 3-84, staff judge advocates (SJAs) are explicitly charged with the responsibility to professionally develop all subordinate legal personnel.⁷¹ Similarly, deputy staff judge advocates (DSJAs) are responsible for ensuring their offices receive the "mentorship, training, equipment, and support to meet mission requirements."⁷² These endeavors can greatly benefit from understanding Rose's three principles of individuality. Regardless of whether the

context is in professional sports or the military, "the mission is crucially important. But your team's people are the ones who are going to accomplish that mission."⁷³

Beyond SJAs and DSJAs, JAs of all ranks and positions can gain insight into how understanding individuality can enhance their office's performance. Junior JAs will benefit most from a better understanding of how their unique traits and personalities impact their actions. For instance, they can move beyond the four simple letters assigned to them under the MBTI and apply the "if-then" model to better understand their personality and behaviors.

Field-grade JAs will also benefit from this same understanding of themselves. Moreover, they can better understand and employ their subordinate JAs and paralegals based on this information combined with the knowledge of their subordinates' nuanced "if-then" factors (instead of simply assuming the four-letter MBTI results dictate a subordinate's behavior, interests, and motivation).

Conclusion

The End of Average is a worthwhile expenditure of time for all Judge Advocate Legal Services (JALS) personnel. It is captivating, well-supported by dozens of examples, and a quick read. "Good leaders create conditions where subordinates know they are valued for their individual talents, skills, and perspectives . . ."⁷⁴ Embracing individuality will only help your organization accomplish the mission, and in doing so, Army leaders will be better equipped to develop our JALS personnel and provide the stewardship we owe our Corps. **TAL**

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Notes

1. *Promotion of Promotion-list Officers of the Army: Hearing on S. 3712 Before the S. Comm. on Mil. Affs.*, 76th Cong. 13 (1940) (statement of General George C. Marshall, U.S. Army).
2. TODD ROSE, *THE END OF AVERAGE: HOW WE SUCCEED IN A WORLD THAT VALUES SAMENESS* (2016).
3. *Id.* at 11.
4. *Id.*

5. See TODD ROSE, *THE END OF AVERAGE* (Harper Audio 2016) (narrated by Fred Sanders) (downloaded from Audible).
6. See generally ROSE, *supra* note 2, at 197–231 ("Notes").
7. See *id.* at 165–96.
8. U.S. DEP'T OF ARMY, DOCTRINE PUB. 6-22, ARMY LEADERSHIP AND THE PROFESSION para. 6-3 (31 July 2019) (C1, 25 Nov. 2019) [hereinafter ADP 6-22] ("It is the individual professional responsibility of all leaders to develop their subordinates . . .").
9. See *id.* para. 1-87 (defining attributes as "characteristics internal to a leader" that "affect how an individual behaves, thinks, and learns *within certain conditions*") (emphasis added).
10. Sarah Sweeny, *A Wild Rose in Bloom*, HARV. GAZETTE (Mar. 15, 2013), <https://news.harvard.edu/gazette/story/2013/03/a-wild-rose-in-bloom/> ("When L. Todd Rose dropped out of high school, he had a 0.9 GPA. He had a pregnant girlfriend, was living in small-town Utah, was making less than \$5 an hour, and was subsisting on welfare checks.").
11. *Todd Rose*, LINKEDIN, <https://www.linkedin.com/in/todd-rose-94700367> (last visited Mar. 19, 2024).
12. *Id.*; see also TODD ROSE, <http://www.toddrose.com/about> (last visited Mar. 19, 2024).
13. Sarah Sweeny, *'Average' Gets His Ire Up*, HARV. GAZETTE (Mar. 21, 2016), <https://news.harvard.edu/gazette/story/2016/03/average-gets-his-ire-up>.
14. TODD ROSE & OGI OGAS, *DARK HORSE* (2018).
15. TODD ROSE, *COLLECTIVE ILLUSIONS* (2022).
16. E.g., L. Todd Rose et al., *The Science of the Individual*, 7 MIND, BRAIN, & EDUC. 152 (2013).
17. See, e.g., *Is College Necessary for Success? Todd Rose and Mike Rowe Discuss*, FORBES (Sept. 5, 2023, 3:19 PM), <https://www.forbes.com/sites/stand-together/2023/09/05/is-college-necessary-for-success-todd-rose-and-mike-rowe-discuss/?sh=4688ffde66f2>.
18. E.g., TEDx Talks, *The Myth of Average: Todd Rose at TEDxSonomaCounty*, YOUTUBE (June 19, 2012), https://youtu.be/4EbmtytcU4?si=ul9C_3v1mPUyyWC5 (953,332 views as of Mar. 19, 2024).
19. See, e.g., Big Think, *Psychologist Debunks 8 Myths of Mass Scale | Todd Rose*, YOUTUBE (Dec. 4, 2022), https://www.youtube.com/watch?v=BD_Euf_CBbs (1.7 million views as of Mar. 19, 2024).
20. ROSE, *supra* note 2, at 11 ("Our modern conception of the average person is not a mathematical truth but a human invention, created a century and a half ago by two European scientists to solve the social problems of their era."); see also *id.* at 36 ("By the dawn of the twentieth century, a majority of social scientists and policymakers were making decisions about people based on the average.").
21. See generally *id.* at 147–96.
22. See ADP 6-22, *supra* note 8, para. 5-40 ("Many leaders connect at a personal level with their subordinates, which helps leaders to anticipate and understand individual circumstances and needs.").
23. ROSE, *supra* note 2, at 82.
24. *Id.*
25. *Id.* at 84 & n.21 (citing DAVID BERRI & MARTIN SCHMIDT, *STUMBLING ON WINS* ch. 2 (2021)).

26. See *id.* at 84 (citing David Berri, *Bad Decision Making is a Pattern with the New York Knicks*, HUFF POST (May 14, 2016), https://www.huffpost.com/entry/bad-decision-making-is-a_b_7283466).
27. *Id.* at 85 (“The most successful basketball teams are composed of players with complimentary profiles of basketball talent.”) (citing DEAN OLIVER, *BASKETBALL ON PAPER: RULES AND TOOLS FOR PERFORMANCE ANALYSIS* 63–64 (2004)).
28. See MIKE KRZYZEWSKI, *THE GOLD STANDARD: BUILDING A WORLD-CLASS TEAM*, at 34:52 (Hachette Audio 2009) (downloaded using Audible) (“Great teams start with a base of talent but consist of a mixture of experienced people who bring instant credibility and institutional understanding, and young players who bring energy and keep you fresh.”).
29. Compare ROSE, *supra* note 2, at 78 (“[A]n estimated 60 percent of Fortune 500 firms still used some form of single-score ranking systems to evaluation employees in 2012.”), with *id.* at 79 (“At Deloitte, by 2014 they were also beginning to realize that its single-score employee evaluation method was not working as well as they expected.”), and *id.* at 80 (“Meanwhile, at Microsoft, stack ranking was an unmitigated disaster. . . . In late 2013, Microsoft abruptly jettisoned [that performance rating system].”).
30. See U.S. DEP’T OF ARMY, REG. 623-3, EVALUATION REPORTING SYSTEM para. 3-9(a)(3)(c)(1)(b) (14 June 2019).
31. U.S. DEP’T OF DEF., INSTR. 1020.05, DoD DIVERSITY AND INCLUSION MANAGEMENT PROGRAM para. 4.1(a) (9 Sept. 2020) (emphasis added).
32. See ADP 6-22, *supra* note 8, para. 4-12 (“Understanding the different backgrounds, qualifications, experiences, and potential of each of the individuals in an organization is an important part of being an effective leader. It is fundamental to knowing your people and harnessing their diverse skills and perspectives to build cohesive teams.”).
33. See ROSE, *supra* note 2, at 103.
34. See *id.* at 99.
35. *Id.*
36. *Id.*
37. *Id.* at 103; see also *id.* at 106 (defining the context principle to mean “individual behavior cannot be explained or predicted apart from a particular situation, and the influence of a [particular] situation cannot be specified without referencing the individual experiencing it”).
38. THE MYERS-BRIGGS CO., <https://www.themyers-briggs.com> (last visited Mar. 19, 2024).
39. See Myers & Briggs’ 16 Personality Types, TRUITY, <https://www.truity.com/blog/page/16-personality-types-myers-briggs> (last visited Mar. 19, 2024).
40. See, e.g., *id.* (describing ENTJs as “the commander[s]” who “are strategic leaders, motivated to organize change. They are quick to see inefficiency and conceptualize new solutions, and enjoy developing long-range plans to accomplish their vision. They excel at logical reasoning and are usually articulate and quick-witted”).
41. See ROSE, *supra* note 2, at 100–01.
42. See generally *id.* at 100–03.
43. See, e.g., *id.* at 106–07 (“IF Jack is in the office, THEN he is very extroverted. IF Jack is in a large group of strangers, THEN he is mildly extroverted. IF Jack is stressed, THEN he is very introverted.”).
44. *Id.* at 103 (“Shoda thought there was a third way to think about personality, not in terms of traits or situations, but in terms of the ways in which traits and situations interacted.”); see also discussion *supra* at notes 29–32 and accompanying text.
45. This assertion is based on the author’s recent professional experience as the Acting Chief, Military Justice, Combined Military Justice Office, Fort Knox, Kentucky, from 1 May 2023 to 1 July 2023.
46. See ROSE, *supra* note 2, at 119 (“Other people’s personalities seem stable to us, however, for a different reason: we tend to interact with most people within a narrow range of contexts.”).
47. See *id.* (“We simply do not see the diversity of contexts in the lives of our acquaintances or even those closest to us and, as a result, we make judgments about who they are based on limited information.”).
48. See *supra* note 9.
49. ROSE, *supra* note 2, at 105.
50. See *id.* at 10 (describing how the application of averages to measure or predict individuals is “almost always wrong”).
51. *Id.* at 1–2.
52. See *id.* at 1 & n.1 (citing USAAF Aircraft Accidents: February 1950, ACCIDENT-REPORT.COM, <http://www.accident-report.com/Yearly/1950/5002.html> (last visited Mar. 19, 2024)).
53. *Id.* at 2 & n.2 (citing AIR MATERIAL COMMAND, U.S. ARMY AIR FORCES, TECHNICAL REP. 5501, HUMAN BODY SIZE IN MILITARY AIRCRAFT AND PERSONAL EQUIPMENT 5 (1946)).
54. See *id.* at 4.
55. *Id.*
56. *Id.* at 8–9.
57. See *id.* at 8–9 (“By discarding the average as their reference standard, the [Air Force] initiated a quantum leap in its design philosophy, centered on a new guiding principle: *individual fit*. Rather than fitting the individual to the system, the military began fitting the system to the individual.”).
58. U.S. DEP’T OF ARMY, REG. 700-84, ISSUE AND SALE OF PERSONAL CLOTHING para. 2-5(a) (22 July 2014) (“[U]niforms will not be sold or issued until they have been tried on and checked by trained clothing fitters. . . . This is very important since garments of a given size may vary and all persons have different physical features.”).
59. *Id.* para. 1-6(h).
60. U.S. DEP’T OF ARMY, FIELD MANUAL 3-84 LEGAL SUPPORT TO OPERATIONS 1-2 fig.1-1 (1 Sept. 2023) [hereinafter FM 3-84] (defining “Stewardship,” one of the “[f]our constants of the Army legal profession”).
61. ADP 6-22, *supra* note 8, para. 1-32.
62. *Id.* para. 1-37 (emphasis added).
63. See FM 3-84, *supra* note 60, at 1-2 fig.1-1.
64. See *supra* text accompanying note 1.
65. See ADP 6-22, *supra* note 8.
66. U.S. ARMY, <https://www.goarmy.com> (last visited Mar. 19, 2024).
67. U.S. AIR FORCE, <https://www.airforce.com> (last visited Mar. 19, 2024).
68. U.S. COAST GUARD (emphasis added), <https://www.gocoastguard.com> (last visited Mar. 19, 2024).
69. But see U.S. DEP’T OF NAVY, <https://www.navy.com> (last visited Mar. 19, 2024) (containing “get up to \$140K now”; “enrich your life”; and six hyperlinks titled “earn 4+ years college tuition,” “30 days annual paid vacation,” “paid rent & housing,” “money for books, meals & living expenses,” “purchase a home with 0% down,” and “free health care for Sailors and Families”).
70. ADP 6-22, *supra* note 8, para. 1-79.
71. FM 3-84, *supra* note 60, para. 3-7.
72. *Id.* para. 3-9.
73. See KRZYZEWSKI, *supra* note 28, at 35:41.
74. ADP 6-22, *supra* note 8, para. 4-12.