

Iconoclast: A Neuroscientist Reveals How to Think Differently¹

Reviewed by Major Glen E. Woodstuff*

*Perception, courage, and social skills. The successful iconoclast learns to see things clearly for what they are and is not influenced by other people's opinions. He keeps his amygdale in check and doesn't let fear rule his decisions. And he expertly navigates the complicated waters of social networking so that other people eventually come to see things the way he does.*²

I. Introduction

As the role of the judge advocate in the last ten years has morphed from pure staff officer to more of an active participant in military operations, the mindset of military members has had to change as well in terms of understanding that judge advocates assigned to their units can be value-added in real-world missions. In *Iconoclast: a Neuroscientist Reveals How to Think Differently*, author Gregory Berns³ puts forth the definition of an iconoclast as “as a person who does something that others say can't be done.”⁴ In this sense, judge advocates, as a corps, have proven to be iconoclasts. According to Berns, the modern iconoclast overcomes conventional ways of thinking. The brain of an iconoclast operates very differently from that of an ordinary person. Iconoclastic brains differ in the functions of perception, fear response, social intelligence, and the circuits that implement them.⁵

In his exploration of iconoclasts, Berns explains complex biological actions of the brain and body, ties them to experiments to reinforce the scientific principle at hand and then offers up a personal sketch of a real person who exemplifies particular iconoclastic traits. Berns is not completely successful in tying together his science and his definition of an iconoclast. More precisely, his approach bogs down in the area of social intelligence and his chosen real life examples. In fact, his profile of the iconoclast is almost a distraction, as it is not clear whether thinking differently or the impact of the mighty iconoclast is the book's focus.

While his study of iconoclasm vacillates, he also promises an opportunity for the reader to “learn to think a bit more iconoclastically by understanding how the three key brain circuits work.”⁶ Here he succeeds. Berns is clearly a scientist with solid understanding of how the brain works and how it can work differently. For an audience of service members and military legal advisors, his examination of these three areas of brain function may allow consideration of the genesis of one's own thoughts and perhaps provide some insight into the behavior of fellow Soldiers.

II. Examining Perception, Fear Response, and Social Intelligence

Berns describes iconoclasts with some inconsistency by defining them in terms of perception, fear response, and social intelligence. However, his steadfast principle that iconoclasts “see things differently because their brains do not fall into efficiency traps as much as the average person's brain” rings true.⁷ Readers will gain more benefit from the book if they remain open to the actual analysis of perception, fear response, and social intelligence, even if these areas are awkwardly applied to a definition of an iconoclast.

A. Perception

[P]erception is not something that is immutably hardwired into the brain. It is a process that is learned through experience, which is both a curse and an opportunity for change.⁸

Berns notes that visual information begins in the eyes and then travels along two separate paths in the brain to the

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¹ GREGORY BERNS, *ICONOCLAST: A NEUROSCIENTIST REVEALS HOW TO THINK DIFFERENTLY* (2010).

² *Id.* at app.

³ Gregory S. Berns is the Distinguished Professor of Neuroeconomics and Director of the Center for Neuropolicy. His primary field of research is neuroeconomics, “the study of the neurobiological basis for individual preferences and how neurobiology places constraints on the decisions people make.” See *Dr. Gregory S. Berns*, EMORY UNIV., <http://www.ccnl.emory.edu/greg/> (last visited Aug. 19, 2013).

⁴ *Id.* at 6.

⁵ *Id.* at 5.

⁶ *Id.* at 10.

⁷ *Id.* at 7.

⁸ *Id.* at 8. Berns goes on to explain,

The brain faces the fundamental problem of interpreting physical stimuli that originate from the senses. Everything that the brain sees or hears or touches has multiple interpretations. The one that is ultimately chosen—the thing that is perceived—is simply the brain's best guess at interpreting what flows into it.

Id.

frontal cortex where visual processing occurs. One path carries information about the location of objects with respect to the viewer, while the other carries information about the type of object.⁹ In order to process this information quickly, the brain takes shortcuts and makes assumptions.¹⁰ Because Berns explains this scientific process so well for the layperson, the reader understands that the brain “pigeonholes” objects into categories resulting in a conventional view of things.¹¹ Focusing on how the brain categorizes visual information, Berns postulates that unfamiliarity forces the brain to discard usual categories of perception and create new ones. He suggests actually looking at something differently may break the brain out of normal low effort categorization that it is already accustomed to doing. A change of environment or considering an outside opinion may also do the trick.¹² Similarly, Berns theorizes that status quo visualizing hobbles imagination. Depicting a mental scene with more detail may break loose new ways of thinking.¹³

Knowing this effect exists is useful for any service member. Imagine when faced with a castle wall how viewing the earth under it as a place to stand or a place to tunnel may change the day. Changing perception of the physical world could make all the difference in combat, but just knowing that the brain grabs categories so “efficiently” is also useful. For instance, Soldiers in uniform might experience a momentary sense of surety when they see another Soldier practicing military tradition with pride and dedication. Military leaders can use this in understanding the underlying brain operations at work to preserve and reinforce esprit de corps.

B. Fear Response

The stress system is not rational. It reacts when provoked, and this reaction is powerful enough to derail many of the most innovative people out there. The ability to tame the stress response represents the second great hurdle to becoming an iconoclast.¹⁴

Berns notes that fear causes people to avoid thinking and acting like iconoclasts. The brain will become sensitive to certain stressful scenarios and situations at the neuron level and avoid them.¹⁵ The primary fears that inhibit iconoclasm are fear of the unknown, fear of failure, and fear of “looking stupid.”¹⁶ Fear arises from two separate biological systems. Both the neural and hormonal systems play a part, with the hormonal system often having long-lasting effects. Unfortunately, while these stress reactions can be quite beneficial in life and death situations, they are more likely activated in social situations in today’s world where they are less helpful.¹⁷

In combat, a fuller understanding of fear’s effects on the mind and body is always helpful. Understanding why the fear is unreasonable and repeated exposure to the source of that fear are tips on overcoming fear that are quite helpful.¹⁸ However, Berns also recounts the experiments of Dr. Solomon E. Asch dealing with social pressure, explaining that “even when you strip away all the ambiguity of what an individual sees, and there is no possibility of personal gain or reprisal, people will still go along with the group.” Berns explains that, disturbingly, this may happen at the perceptual level. Not only are people going with the group, but they might not even know they are doing so.¹⁹

Knowing that people might actually not only fail to speak out, but also adjust their thoughts to agree with the group is a disturbing phenomenon.²⁰ This should give every military leader pause. Not only is this apparently a routine mechanism of the brain, but military culture reinforces this by institutionally discouraging dissent. While there are good reasons for not quibbling in life and death situations, shutting off one’s full analytical abilities in combat or even in general staff work can also have dire consequences. Helpfully, Berns notes that Asch’s study shows that one additional dissenter is normally enough to break this “groupthink” effect. As a work around, Berns suggests that committees should not be required to arrive at a unanimous decision.²¹ When just one other person shares a dissenting

⁹ *Id.* at 20 (recounting the vision process, as detailed in Brian A. Wandell, *Foundations of Vision* (1995)).

¹⁰ *Id.* at 28.

¹¹ *Id.* at 29.

¹² *Id.* at 33–35.

¹³ *Id.* at 58.

¹⁴ *Id.* at 62 (“In fact, the stress system is so important, and so active, that it can override every other system in the brain.”).

¹⁵ *Id.* at 68.

¹⁶ *Id.* at 107.

¹⁷ *Id.* at 62–63 (For an explanation of the human stress system, this author recommends Robert M. Sapolsky, *Why Zebras Don’t Get Ulcers* (2004)).

¹⁸ *Id.* at 104.

¹⁹ *Id.* at 92 (Berns reconstructed and commented on Asch’s published observations of the experiment and his subjects’ reactions.).

²⁰ See generally David Crump, *The Social Psychology of Evil: Can the Law Prevent Groups from Making Good People Go Bad?*, B.Y.U. L. REV. 1441 (2008) (exploring several negative incidents resulting in part from social pressure).

²¹ The majority of sentences require two-thirds concurrence by the military panel. See 10 U.S.C. § 852(c) (2006). However, a sentence of death requires concurrence by all the members of the military panel. See *id.* §

opinion, the brain is far more likely to allow preservation of one's own judgment.²²

Perhaps legal advisors should give in to temptation to play devil's advocate on occasion to encourage someone to speak up. If just one Soldier dons the beret of dissenting opinion, it is entirely possible that it may break open a floodgate of well-reasoned alternatives. Knowing this effect exists, military leaders may want to consider when it is appropriate to have committees meet in smaller groups before joining into a larger one. They may want to poll for opinions in writing before opening a topic for discussion. The workarounds are endless, but knowing that the effect exists is crucial. Remember: it is not that people will not speak up later, they may actually forget that they once had a differing opinion.

C. Social Intelligence

Berns notes the two key aspects of social intelligence as familiarity and reputation. He explains the phenomenon logically and clearly. It is not surprising that being familiar to others and having a good reputation is key to successful networking, yet Berns goes further and drills down into the neuroeconomics of familiarity. Berns explains that the brain clearly has a preference for familiarity at a subconscious level. He cites the work of psychologist Robert Zajonc and his "mere exposure effect,"²³ where people demonstrated a clear preference for images they had been exposed to previously. The exposure can be so brief that the images shown may not even be processed by the subject's minds. The subjects were not even aware they had seen them.²⁴

The discussion of familiarity and reputation reinforces what every good military leader already knows. Similarly, networking is the bread and butter of any competent legal advisor. Nevertheless, understanding this familiarity phenomenon may be useful in implementing training and its effects can be seen every time changes occur in a more rigid institution like the military. The key is to get people comfortable with an idea before trying to implement it.

The book further explores some interesting networking phenomena by another renowned social scientist, Stanley Milgram, who cleverly demonstrated that two randomly selected people are normally only separated by six degrees. This connection usually is done through a few connectors

who form the glue of local society.²⁵ This study really demonstrates the exponential impact of successful networking and the effect should be considered by every military legal advisor. In the JAG Corps, when meeting a new colleague, it usually only takes a few minutes of conversation to figure out which JAs both co-workers know.

III. Where Things Fall Apart

While the topic of social intelligence is thoughtfully explored, this is where the book really starts to lose cohesion. Berns originally contends that social intelligence is a key aspect of being an iconoclast, but then toward the conclusion clarifies that social intelligence is required to be a "successful" iconoclast.²⁶ In terms of social intelligence, the author's theory just does not mesh as elegantly as it did in terms of perception, brain efficiency, and fear response. He is quite correct that networking is effective and an interesting topic to boot. However, this is where the book deteriorates from an interesting study of the brain to a rather meager and arguably impossible "how to" guide. Berns quibbles over his own proposed definition, going back and forth between a "true iconoclast," a "successful iconoclast," drawing the reader away from the sound principles he just spent over one hundred pages detailing and into strange semantic arguments.²⁷ This is just difficult to follow. Perhaps this inconsistency is best exemplified by his attempt to tie Milgrim's experiment on random people falling within six degrees of separation back to the iconoclast:

Who were these common channels? . . . It makes sense that as the packets reached the vicinity of Boston, they should funnel to people who are viewed by the local community as well connected. These people are not iconoclasts. They couldn't be. As well-respected, upstanding citizens, connectors form the glue of local society. Iconoclasts, by their very nature, upset this delicate web of connectedness. But iconoclasts need connectors. Without them, the iconoclast stands no chance of achieving success. Sometimes iconoclasts have to create the connectors themselves.²⁸

Thus, the reader will likely recall the original premise that iconoclasts are by definition socially intelligent. Then, the reader is told, successful iconoclasts are socially intelligent. On the other hand, socially intelligent people are well-

852(b)(1). Following the logic of Asch's study, does this requirement of unanimity make the sentence of death less likely or more?

²² BARNES, *supra* not 1, at 103.

²³ *Id.* at 142 (describing the work of Robert Zajonc and the "mere exposure effect" he developed).

²⁴ *Id.* at 142.

²⁵ *Id.* at 134.

²⁶ *Id.* at 129.

²⁷ *Id.* at 6, 7, 129, 152.

²⁸ *Id.* at 135.

connected and that clearly iconoclasts upset connectedness. But then, the reader must understand that without connectedness an iconoclast will not be successful. Finally, the readers should be aware that sometimes iconoclasts create connectors themselves. Hopefully everyone is still tracking.

Intuitively, the reader will grasp that all the science offered so far seems to point toward the idea that iconoclasts think differently because their brains are different. Their brains categorize differently. Their brains do not shy away when others fear to think and act. Now Berns really tries to oversell iconoclasts as engaging paragons of social intelligence. It is almost as if the author wrote his study of the brain, decided to sell his idea, and then quickly wrote the book to make iconoclasm sound like a fun thing that you too can do.²⁹ No doubt glamourizing iconoclasm—appealing to the reader's secret hope that he is an iconoclast who is ready to shake worlds—will sell more books. It just does not ring true. Did the author not say that their brains were different? Is there no link between overcoming innate social awkwardness at an early age and having a more controlled fear response? Is there no intuitively obvious inverse proportion between inability to see the world as others do combined with willingness to stand outside a group and social intelligence? Berns may have left some interesting observations on the table. In doing so, he definitely detracts from the quality observations already made.

Berns also gives a few distracting examples of real life iconoclasts, no doubt because they are familiar or admirable figures. Some fail as instances of the trait of iconoclasm he is referencing and on a few occasions these cases fail his own definition of iconoclasm, which of course includes social intelligence. Oddly, Berns uses as his very first example an iconoclast who kills himself after a miserable failure in business.³⁰ Later in the book, to demonstrate

overcoming fear response, he tells the story of a Dixie Chick. Natalie Maines overcame fear brought on by a change in public opinion after she criticized the President. According to Berns, this made her an iconoclast.³¹ It is never made clear how a singer, being paid good money to sing, who continues to sing without really changing anything or going against any traditional norm or cultural edifice, might be an iconoclast.

IV. Conclusion

Iconoclast is an often interesting read that offers much in the way of scientific factoids and entertaining sketches. Berns has a knack for explaining the complex. It is unfortunate that *Iconoclast* fails to deliver on a unifying theme or consistent definition of an iconoclast. It forces the reader to hunt through the book searching for usable ideas instead of providing a cohesive read. If the author had explained the brain of an iconoclast and then divided out the benefit of social intelligence, the book would have been easier to digest. Similarly, many of the anecdotal stories meant to exemplify a particular iconoclastic trait fail to fit the mold he cast. Regardless, the strength of this book is not in how iconoclasts are exceptional and how you may secretly be one, notwithstanding the emerging role of the judge advocate being compared to an iconoclast; it is in the repeatedly referenced and thoroughly explained observation that the brain is a lazy piece of meat.³² If judge advocate readers commit many of the scientific phenomena to practice and endeavor to spot their own lazy thinking, they may not wake in themselves a fully formed iconoclast, but another tool might be added to their problem-solving kits.

²⁹ *Id.* at 200.

³⁰ *Id.* at 2.

³¹ *Id.* at 65–67.

³² *Id.* at 36.