Opportunity Lost

Major Ian T. Brown, USMC


Air Force Colonel John R. Boyd was a polarizing figure in his lifetime. His legacy includes practical and theoretical contributions to American national security that remain influential today, such as the Energy-Maneuverability Theory, development of the McDonnell Douglas F-15 Eagle and General Dynamics F-16 Fighting Falcon fighter aircraft, and a deep influence on the U.S. Marine Corps’ maneuver warfare doctrine. Yet, woven among these accomplishments was another legacy, dominated by an almost puritanical personality that drew to him a tight group of zealous friends; alienated senior military and civilian leaders; and kept his family in borderline poverty so that his reputation for independence be untainted by allegations of material self-interest. Much of that legacy was turned into legend by Robert Coram’s hagiography *Boyd: The Fighter Pilot Who Changed the Art of War* (2002). However, in the years following, a number of works sought to move past the legend and reexamine Boyd’s original concepts—not the often sensationalist interpretations of those concepts promulgated by both critics and proponents—to determine whether the man’s reputation as “the most influential military thinker since Sun Tzu” was deserved.¹

*Maj Ian T. Brown currently serves as the operations officer for the Brute Krulak Center for Innovation and Future Warfare at Marine Corps University. He has written for the Marine Corps Gazette, Strategy Bridge, War on the Rocks, the Australian Defence College’s Forge website, the Center for International Maritime Security, the Krulak Center’s Destination Unknown PME graphic novel series, and Marine Corps University’s Journal of Advanced Military Studies. He is also the author of A New Conception of War: John Boyd, the U.S. Marines, and Maneuver Warfare, published by Marine Corps University Press in 2018, and which was added to the most recent iteration of the Commandant’s Professional Reading Program.*
lian author Stephen Robinson, aims to add its own decidedly negative answer to that reputational question. Robinson’s previous two books—False Flags: Disguised German Raiders of World War II, and Panzer Commander Hermann Balck: Germany’s Master Tactician—focus on specific tactical-level operations and leaders. Here, he turns to a much broader subject, seeking to assess not only the intellectual development of Boyd’s conflict theories but their impact, both conceptually and in execution, across decades of American military operations. This reviewer, having conducted research and writing on this subject, viewed its publication with excitement after learning of its pending release last summer. Yet, on reading the galley proofs, excitement turned to sufficient disappointment that this reviewer declined a requested endorsement, and that disappointment remains with the final published work. There exists a great deal of raw, unassessed archival material on Boyd that could be fed into the growing pool of scholarship on the former fighter pilot’s ideas on conflict—with their attendant influence, strengths, and weaknesses. Unfortunately, Robinson’s product is an opportunity missed, which—with its own internal confusion, selective evidentiary standard, and recycling of old Boyd myths that newer scholarship has already disproven—stands as its own obstacle to gleaning deeper lessons.

Analyzing Boyd’s thought is not easy; the challenge in determining his impact on American military thought, or what Boyd did or did not truly think, lies in the fact that his body of work is ensconced in the Marine Corps History Division’s Historical Resources Branch (hereafter HD Archives) in formats not easily digestible. Outside of the dense and entirely abstract essay “Destruction and Creation,” Boyd rarely conveyed his ideas in written prose. His mode of communication was the multi-hour briefing, anchored on acetate slides and executed via lecture and Socratic inquiry. Researchers can easily access the slides, which are digitized on the internet beyond the walls of the History Division; yet, Boyd’s much more detailed speaker notes were all in his head. Had Boyd lived in the age of YouTube and TED Talks, this might not be a problem, as those wanting to hear Boyd in his own words could, at their leisure, play back high-resolution videos with crisp audio and artificial intelligence-generated captions and transcripts. But Boyd was a YouTube personality in a VHS age. The HD Archives holds a number of audio and visual recordings of Boyd delivering his various briefings, but their quality combines the limits of late twentieth-century cassette recording technology with the vagaries of time on such media.

As mentioned above, despite these challenges, several recent researchers have sought to bring Boyd’s original thinking to light piece by painstaking piece, both to more objectively assess his impact at the time and analyze what themes remain relevant, even prescient. Daniel Ford’s A Vision So Noble reevaluated Boyd’s commentary on insurgency in the context of the Global War on Terrorism; Airpower Reborn, edited by John Andreas Olsen, looked at Boyd’s
strategic concepts as they related to airpower theory and strategy; and Frans P. B. Osinga's *Science, Strategy and War* provided arguably the most detailed intellectual assessment of Boyd's various briefings to date.³ This reviewer's *A New Conception of War* focused on Boyd's influence on the Marine Corps' maneuver warfare debate following Vietnam.⁴ Each work moved the arguments about Boyd's thinking a little further from sensationalism and a little closer to true scholarship. The central issue with *The Blind Strategist* is its questionable selectivity in what it chooses to present from these works—when it does not ignore the scholarship or archival material altogether.

Robinson opens by claiming that Boyd's ideas are not merely flawed but literally rest on lies. As he states in the introduction:

> [Boyd] trusted historical accounts of World War II which professional historians later exposed as dishonest fabrications and, as a result, maneuver warfare rests upon a foundation of deceit. Boyd at first innocently injected misinformation into his theory, unaware of the dishonesty of others, but after major anomalies eventually appeared, he failed to re-evaluate his grand narrative. He ignored and misrepresented damming evidence in complete contrast to his own intellectual standards.⁵

A slate of German generals who commanded the *Wehrmacht* in World War II, and British military officer and theorist Basil Liddell Hart, form the two pillars on which Boyd's alleged deceptions rest. This argument is a significant departure from the historiography on Boyd, even among those assessments most critical of Boyd's ideas. While no theorist is beyond critique, such an indictment—damning not only Boyd's method but motive—would require a substantial body of new evidence in its favor. Yet, in condemning Boyd for ignoring and misusing history, Robinson succumbs to the same malady throughout *The Blind Strategist*—the book ignores or selectively uses much of the recent Boyd historiography and makes no use whatsoever of the archival holdings in the Marine Corps History Division. A close look at these primary sources and the broader historiography reveals a wealth of contradictory evidence that severely undercut Robinson's most critical assessments.

*The Blind Strategist* falls roughly into three sections, with the first two chapters examining Boyd's career and the genesis and development of his ideas. Chapters 3 through 6 lay out the “myths” and proponents thereof, which Robinson argues weakens Boyd’s theories; and chapters 8 through 11 outline different areas of American military thought wherein Boyd's allegedly malign concepts wrought their negative influence. The book's trend of ignoring modern Boyd historiography manifests itself early on in the introduction and chapter 1. Here, Robinson describes the famous observation-orientation-decision-action
Both of these arguments are precisely backward: Boyd repeatedly corrected the OODA loop’s origins in his own lifetime, and as the archival holdings show, in his own hand. Figure 1 shows one such rebuttal dating to the early 1980s that Boyd wrote in the margins of a critique by Roger Spiller, a professor at the Army’s Combat Studies Institute.7
Boyd was emphatic that the OODA loop emerged as an output of the variations in human performance and perception he first observed during flight tests of F-16 and Northrop YF-17 prototype aircraft in the early 1970s. Many previous authors have recycled the Korean War “origin story” of the OODA loop, and The Blind Strategist continues this pattern, though the available documentation and historiography show otherwise.

As to Robinson’s assertion that the OODA loop preceded the rest of Boyd’s thought, the archival sources and historiography are clear that this is not the case. As Frans P. B. Osinga noted, Boyd did not draw out an actual graphical “loop” until 1995, only two years before his own death. Disappointingly, Osinga’s detailed discussion of the OODA loop is omitted in The Blind Strategist. Also omitted are Osinga’s 100 pages spent laying out Boyd’s intellectual evolution as Boyd pulled in information from disparate sources like the ancient Chinese military philosopher Sun Tzu, Thomas Kuhn’s approach to scientific inquiry as “paradigm shifts,” chaos theory, and nonlinearity and complex adaptive systems. Osinga’s Science, Strategy and War remains the single most detailed source on the genesis and evolution of Boyd’s many strands of thought; but following a handful of citations in his introduction, Robinson ignores Osinga’s work in the rest of The Blind Strategist. There is one exception: Robinson passingly cites Osinga to observe “Boyd never finished Patterns of Conflict as he always altered its content with improved insights.” This habit is indeed well-documented across the Boyd historiography; but while Robinson duly notes it here, he does not carry forward its implications in his later chapters, especially regarding the influence of German generals on Boyd’s work. As will be discussed shortly, this failure undermines Robinson’s core critique of the German impact.

Returning to the OODA loop—Boyd regularly mentioned it in his briefings but usually in passing as part of more detailed ideas he was exploring with his audience. It was only in 1995 that he depicted it; and the illustrations in his own hand show it was not the beginning of his ideas but rather the culmination of his decades spent thinking and rethinking them. Two drawings from the archives make this clear (figures 2 and 3).

Figure 2 shows some of the variations that Boyd had considered for depicting the final loop. Figure 3 is a key that highlights which of his mental lines of inquiry, manifested in his different briefings, fed into each of the loop’s components. “[A/S] = (D&C)” drew on his concept of analysis and synthesis in “Destruction and Creation.” “[OODA] = (POC)” cites his regular references to the OODA loop as a process for creating mismatches in “Patterns of Conflict.” “GH, CT, PE, UC = ODCC” highlights the different filters applied in the loop’s orientation phase—genetic heritage, cultural tradition, previous experiences, and unfolding circumstances—upon which Boyd elaborated in his presentation “Organic Design for Command and Control.” “I&I” refers to the
**Figure 2.** Original OODA loop handwritten drafts developed by Boyd for the “Essence of Winning and Losing” presentation

![Image of handwritten OODA loop drafts]

*Source: “OODA Loops [Handwritten Draft of the ‘Essence of Winning and Losing’],” folder 9, box 7, Col John R. Boyd Papers, HD Archives.*

**Figure 3.** Handwritten key to OODA loop components from draft notes for “Essence of Winning and Losing” presentation

![Image of handwritten OODA loop key]

*Source: “OODA Loops [Handwritten Draft of the ‘Essence of Winning and Losing’],” folder 9, box 7, Col John R. Boyd Papers, HD Archives.*
duality of interaction and isolation he described in the briefing “The Strategic Game of ? And ?” Finally, “[O, A/S, H, T] in (CS)” captures Boyd’s description of the scientific process—observations, analyses/synthesis, hypothesis, and test—as an analog to the OODA loop in the “Conceptual Spiral” presentation. These few lines demonstrate that the OODA loop was the ultimate consolidation—not the origin—of the different ideas on conflict and survival that he developed over decades of study.

While the errors of The Blind Strategist’s early chapters may seem relatively marginal, they foreshadow far more significant issues—generated by the same decision to omit or truncate available archival sources and historiography—that manifest themselves in the middle section of the book. Moreover, in chapter 1 Robinson prefigures another common problem in Boyd critiques, noting almost as an aside that “[William] Lind . . . more than anybody else defined maneuver warfare to the wider world.” Conflating Lind’s ideas and influence with Boyd’s is not a new phenomenon, and Robinson carries that trend forward in his own narrative. Lind recurs frequently, sometimes as a muddled stand-in for Boyd. In other instances, however, Lind is inserted as a vector by which to bind Boyd by mere association to controversial concepts otherwise unconnected to Boyd’s own ideas; this will also be discussed shortly.

Chapters 3–6 form the evidentiary crux of Robinson’s argument, and the strictly historical analysis throughout these chapters are the book’s strongest part. Robinson’s original thesis largely collapses when he applies this historical analysis to Boyd’s theories. Chapter 3 unpacks the self-serving postwar memoirs of German Wehrmacht generals such as Franz Halder, Heinz Guderian, Erich von Manstein, Hermann Balck, and Friedrich von Mellenthin. Chapter 5 covers Wehrmacht operations in World War II writ large, whose supposed effectiveness and cohesion gained mythical status. Chapter 6 reviews how myths of the blitzkrieg found their origins in equally mythical Western perceptions of German infiltration or “stormtrooper” tactics from World War I. Standing somewhat apart from the German narrative is chapter 4, which covers the problems in Basil Liddell Hart’s historical analysis and strategic writing. Hart was a British officer and theorist, but his experiences in the First World War deeply influenced his postwar writings, which aimed to avoid another such bloodletting. Following World War II, Hart would also attempt to claim intellectual credit for blitzkrieg. Many of the problems in both the German narratives and Hart’s self-promotion are documented in other works, but Robinson effectively collects those arguments to set the stage for his core critique of Boyd.

However, in analyzing the impact of those arguments on Boyd’s own work, Robinson’s thesis unravels in several ways. In chapter 6, the author comes closest to making his case by describing a number of exchanges between Boyd,
some of his associates, and former German generals Mellenthin and Balck during a series of conferences conducted in the United States in 1979 and 1980. These conferences provided Boyd, Lind, and others in the maneuver warfare and military reform movements the opportunity to validate their tentative ideas with the best-alleged practitioners of them. But in questioning Mellenthin and Balck on everything from mission tactics to blitzkrieg to arguments of maneuver versus attrition, Boyd’s group found that the Germans contradicted many of their presuppositions.13 Robinson argues that, by Boyd’s own professed intellectual standards, Boyd should have revised and modified his theories based on this new information. Instead, Boyd, Lind, and the rest remained in a “fantasy world” with their ideas unchanged.14 This is a damning charge, and Robinson’s quotations from those conferences raise entirely valid questions about the integrity of a conflict theory that relied heavily on ideas disproven by their own alleged practitioners.

Yet, Robinson’s own standard is absent from his subsequent assessment of Boyd’s ideas from this point onward, because he does not revisit later versions of Boyd’s brief to prove that Boyd indeed “ignored and misrepresented damning evidence.”15 This omission undercuts Robinson’s allegation that Boyd was not only a poor historian but was also deliberately deceiving his later audiences. The charge that Boyd’s motive was one of conscious misrepresentation permeates The Blind Strategist, and it requires a significantly higher evidentiary standard than a mere charge of poor historical craft.16 Robinson fails to provide such evidence in his subsequent analysis of those conferences’ impact.

To critique Boyd’s “fantasy world,” he relies exclusively on a 1978 version of “Patterns of Conflict,” delivered before these key interviews with the German commanders in 1979 and 1980. This is problematic, because as noted above and by Robinson’s own observation, Boyd constantly updated his briefings nearly to the time of his death. The Boyd papers at the HD Archives include 33 separate slide versions of “Patterns of Conflict,” with several dated after the 1979/1980 series of conferences.17 This is in addition to numerous editions of Boyd’s other briefings—“Organic Design for Command and Control,” “The Strategic Game of ? and ?,” “Conceptual Spiral,” and “The Essence of Winning and Losing”—which combined amount to 44 different versions, all of which are dated after 1980 (with the last update marked as 28 June 1995).18 Thus, the preponderance of Boyd’s work on conflict, competition, and decision making came after the 1980 conference on which half of The Blind Strategist’s argument hinges; and this work goes completely unexamined in Robinson’s book.19 Nor does this tally count the innumerable variations in presentation that likely occurred in stride as Boyd briefed different audiences. Chapter 6 offers the strongest potential line of criticism on the foundations of Boyd’s theories; yet omitting the entirety of Boyd’s post-1980 work renders the charge that Boyd never reexamined his ideas
unsupported and the more sensational charge of deliberate deception entirely spurious.

It is in the characterization of Boyd’s views on Basil Liddell Hart, however, that this omission fatally undermines The Blind Strategist’s argument. There exist fewer recorded copies of Boyd presenting “Patterns of Conflict” than slide versions; but enough exist to gain a clear sense of what Boyd thought of his various sources outside the slide text, specifically Hart. In characterizing Hart’s influence on Boyd, Robinson is unambiguous: “heavily influenced,” “uncritically accepted,” and “trusted another deceiver” number among the epithets. Absent in the evidence supporting these characterizations are Boyd’s own words on the subject. Yet, Boyd shared specific comments on Hart, and one can find these comments in two recordings of “Patterns of Conflict” made after 1980. The first comes from an iteration of the brief given around 1986 to congressional staffers. Early on, Boyd calls out Hart’s internal intellectual confusion: “another notion here, primarily attributable to . . . Liddell Hart. Operate in a line, or operate in a direction that threatens alternative objectives . . . I’ll also point out, Liddell Hart didn’t even understand his own idea. I’ll bring that out later on.” Boyd indeed brought out his opinion on Hart later on; it was scathing and unambiguous:

For you people who have read Liddell-Hart, I can give you a much better book. Liddell-Hart’s book, I think it’s a lot of garbage . . . how many people have read Liddell-Hart’s Strategy and the Indirect Approach? Remember, we talked about the indirect approach being dislocation, and dislocation being the indirect approach. My God, he’s got circular reasoning—he’s going to dislocate a guy’s mind. You don’t dislocate a mind—you disorient it! He talks about dislocation . . . he’s [sic] chiropractor of war!

Hart’s ideas were sufficiently “garbage” that in a later recording of “Patterns of Conflict”—dated 1989, and given to a Marine Corps Command and Staff College audience—Boyd’s passing references to them damn with faint praise: “in fact, how many people have read Liddell Hart’s book, Strategy? I don’t necessarily recommend it too highly.” Boyd later cites an interview Hart conducts with German general Gerd von Rundstedt in The German Generals Talk, but he observes it was “one of the few good things I found in his book.” If volume of citation is any indication, Hart did not heavily influence “Patterns of Conflict” in any meaningful fashion beyond acting as a foil for theorists whom Boyd found more worthy of attention. In the 1989 version, Boyd cites Hart by name only six times, and as seen above, not favorably; and Boyd does not quote Hart’s famous term indirect approach once. In contrast, the 1989 brief has Boyd citing
Sun Tzu by name 37 times; Sun Tzu’s concept of *cheng/chi* 30 times; and Prussian theorist Carl von Clausewitz by name 46 times. Basil Liddell Hart barely registered on John Boyd’s radar when compared to the sages of ancient China and nineteenth century Europe. There is no reconciling Boyd’s dismissal of Hart as “garbage” with the book’s presentation of the British thinker as fundamental to Boyd’s theories. And it is here that Robinson’s failure to leverage the available archival and historiographic evidence wipes out *The Blind Strategist’s* argument.

The final section of the book is a broad indictment of American military strategy and performance from the 1980s onward, viewed through Robinson’s lens that Boyd was a conduit for the malign ideas of Hart and the German generals. But the deep flaws in *The Blind Strategist’s* central thesis, as outlined above, make the arguments in the book’s last part unconvincing. The remaining chapters examine “operational art,” the alleged influence of maneuver warfare on North Atlantic Treaty Organization (NATO) defense plans for Europe, Operation Desert Storm, the Global War on Terrorism, and finally “fourth-generation warfare.” The trends of selective or omitted historiography and conflation of Boyd with others in his circle continue throughout. Robinson repeatedly quotes and critiques William Lind’s views on maneuver warfare, Hart, the German generals, and other things, with Boyd’s own words frequently missing from the discussion. Chapters 8 and 11—on the defense of NATO and Lind’s “fourth-generation warfare” construct respectively—are superfluous in a book claiming Boyd’s ideas as its focus. In the latter case, Robinson opens the chapter by stating, “Lind’s fourth generation framework is truly his own creation and it did not originate from Boyd.” Despite Boyd’s absence, Robinson devotes a full chapter to deconstructing Lind’s theory. His conclusion that “Lind’s prophecies of unstoppable fourth generation forces never materialized” implies that Lind’s failed prognostication is sufficient to undercut Boyd’s separate conflict framework simply by the personal association between the two men. The chapter on NATO’s defense is equally removed from Boyd’s ideas, with Boyd not once mentioned by name or cited across 30 pages discussing U.S. Army general William E. DePuy’s “Active Defense” doctrine, and William Lind’s critique thereof. Indeed, aside from yet another opportunity to critique Lind, chapter 8 largely reads as a vector to inject the racialist perspectives of the German generals toward the Soviet military’s “Slavic-Mongol hordes” adjacent to the wider critique of Boyd and allow the reader to make their own mental association.

Though there are a number of other problematic interpretations of Boyd and modern conflict in the later chapters, all fall under the book’s central failure: selective use or entire omission of pertinent historiography and archival sources. Having surveyed these failures throughout this review, Robinson’s conclusion rings hollow in the face of the evidence: “[maneuver warfare’s] foun-
dational base [is] built upon the deception of Wehrmacht generals and Liddell Hart as well as Boyd and Lind’s evasion of Balck and Mellenthin’s inconvenient testimony which rejected the fundamentals of the theory.”32 This conclusion stands only if one freezes Boyd in place in 1980; ignores 17 additional years of conceptual refinement that followed the 1980 meeting with Mellenthin and Balck and which is evident in the archival holdings; and selectively uses the recent historiography, which has sought to bring more of those holdings into scholarly discourse. Far from its claim to be a “detailed evidence-based investigation,” The Blind Strategist undertakes the very evidentiary gymnastics of which it accuses Boyd.33 This is unfortunate because, as stated at the beginning of this review, there remains a vast quantity of untapped material in the Boyd papers that would greatly enhance the scholarship on the subject. No one has yet written the “definitive Boyd,” be it a lifetime intellectual assessment based on all the archival material, or an exhaustive study of Boyd’s impact on the totality of American military thought. Recent works have captured pieces of the puzzle; but this reviewer knows firsthand just how much archival material exists in the Boyd collection remaining to be processed, assessed, and made publicly accessible. The Blind Strategist was an opportunity to dig into that material and provide new insights on Boyd’s ideas, inclusive of strengths and weaknesses. Instead, it stands as an opportunity missed, putting its own blinders on a deeper understanding of Boyd’s thought. Readers will need to wait for another work to advance that understanding further.

Endnotes
6. Robinson, The Blind Strategist, 11, 30. Robinson does observe in an endnote that Boyd stated that the OODA loop came from the YF-16 and YF-17 fly-off tests; see Robinson, The Blind Strategist, 321. However, Robinson does not inject this rather salient observation by the OODA loop’s creator anywhere in the main body of the book’s text, reiterating instead the Korean War version of the loop’s origin.
7. Roger Spiller, “Critique of John Boyd’s ‘Patterns of Conflict’,” undated, folder 6, box 7, Col John R. Boyd Papers, Marine Corps History Division Historical Resources Branch, Quantico, VA, hereafter HD Archives. Though the Spiller critique is undated,
it references another critique of “Patterns of Conflict” by Jay Luvaas (then a history professor at West Point Military Academy), which is dated in 1981, so it is fair to assume Spiller’s critique was also written in 1981 or shortly thereafter. See also Jay Luvaas, “Patterns of Conflict in History,” 9 March 1981, folder 5, box 7, Col John R. Boyd Papers, HD Archives.

12. Robinson, The Blind Strategist, 47. Robinson quotes Lind extensively many times throughout the book, but he rarely makes the distinction that Lind’s views on maneuver warfare were not clones of Boyd’s; examples of Lind’s views can be found in Robinson, The Blind Strategist, 19, 62, 66–67, 131, 189, 221, 240, 286. For an extensive discussion on the frequent conflation of Lind’s ideas with Boyd’s in the maneuver warfare debate, see Brown, A New Conception of War, 145–48.
16. In addition to the above quote, Robinson states that Boyd “ignored . . . devastating testimony”; “ignored . . . evidence”; “followed the path of least resistance”; “inconceivable that Boyd casually read his sources and never noticed the critical anomalies”; engaged in a “refusal to update and modify [his] ideas”; “ignored damning evidence”; “injected enormous amounts of disinformation into his synthesis”; “[refused] to deal with problematic evidence”; “refused to use . . . testimony as an opportunity to revise maneuver warfare”; “guided by . . . confirmation bias”; and undertook “evasion of . . . inconvenient testimony”; Robinson, The Blind Strategist, 20, 180, 181, 182, 183, 301, 305.
19. Robinson acknowledges the existence of briefings developed by Boyd after the 1980 conference; see Robinson, The Blind Strategist, 46. However, a cross-reference of Robinson’s endnotes shows that he makes no use whatsoever of these later briefings or later versions of “Patterns of Conflict”—with one exception—in his analysis of Boyd’s concepts. The only verbal version of “Patterns of Conflict” referenced is the 1978 version, which predates the conferences (see Robinson, The Blind Strategist, 306). Robinson does refer to the 1986 version of the slides only for “Patterns of Conflict” (Robinson, The Blind Strategist, 306); however, as noted throughout this essay, the slides in and of themselves do not capture the volume of additional details Boyd delivered verbally in his presentations, and the extant recordings of “Patterns of Conflict” referenced in this essay clearly demonstrate that Boyd expressed critical opinions of some of the theorists referred to in the slides like Hart.
21. John R. Boyd, “Patterns of Conflict,” transcript of lecture to staff of Representative Jim Lightfoot, ca. 1986, part 4 (16 YouTube videos), transcribed by Shawn Callahan from 2014–20, 24, hereafter Callahan transcript. This reviewer is deeply grateful to Mr. Callahan for generously sharing his work.
23. John R. Boyd, “Discourse on Winning and Losing,” transcript of lecture to U.S. Marine Corps Command and Staff College, 25 April 1989, tape 1, side 2 (8 audio cassette tapes/8 compact discs), HD Archives, 25. Note that the audio transcript is labeled as “Discourse on Winning and Losing,” but it is in fact an audio transcript of Boyd presenting his lecture, “Patterns of Conflict.” The author has retained the label in citations for ease of use by other researchers.