

CRITIQUE OF JOHN BOYD'S "PATTERNS OF CONFLICT"

On May 3, Colonel John Boyd (USAF, ret.) delivered his well-known lecture, "Patterns of Conflict," before a selected audience of USAC&GSC faculty members. Since that presentation, Colonel Boyd and I have had two extensive conversations by phone. During those conversations, Boyd elaborated upon his views and I registered my disagreements with those views. These were frank, forthright and stimulating discussions. I have attempted to incorporate Boyd's positions as developed during those discussions into this critique, and I have promised to provide a copy of this paper to him. He may well disagree with some of my views (in fact, I am sure he will), but in each case I will represent his views as I understand them, and in as fair a light as possible under the circumstances.

The organization of this critique does not follow the organization of Boyd's presentation, although within each major part I intend to preserve the evolution of Boyd's lecture. Instead, I will discuss the provenance of Boyd's presentation, his view of war, his historical methodology, the historicity (or historical accuracy) of his evidences, his hypothesis, his presentation techniques and their results. Finally, I intend to counterpose my own view of warfare and history. This last will do much to explain why my disagreements with Boyd are so numerous, and why we will probably never meet on common historical grounds.

John Boyd begins his lecture by quoting Voltaire's remark that "history is the lie agreed upon." He then tells his audience that for the next four hours he is going to contribute to that lie. And so, in some respects, he does.

By his own account, Boyd began investigating the history of land warfare in August, 1976, following retirement from the US Air Force and spending several years in fighter aircraft development. While in the service, Boyd enjoyed a reputation as an accomplished fighter pilot, theorist of aerial combat, and developmental engineer, pursuits which he carried over into civilian life. All these experiences were formative in the eventual development of the set of ideas Boyd introduces into the earliest part of his lecture--ideas expressed in the term "OODA Loop."

OODA is an acronym for Observation, Orientation, Decision and Action. The foundation of the OODA Loop is to be found in the aerial combat of the Korean War between the MIG-15 and the F-86. In certain important flight characteristics, the MIG was the superior aircraft. Kill ratios did not reflect the MIG's superiority, however. The disagreement between technological capability and actual results suggested that tactics had overturned technical superiority. Boyd's explanation, developed much later, was that American pilots moved through the spectrum of observation to action much more rapidly than their opponents in a process that was both physical and mental. The basic data that gave rise to the OODA Loop hypothesis has never been openly challenged; however, there apparently is classified information that may call these conclusions to question. During our conversation, Boyd indicated that he was aware of this information, and he discounted the possibility of its adverse impact on his view.

The provenance of Boyd's theory is important. During a later part of his lecture, Boyd argues that one's orientation preconditions one's views. That point is very well taken, and could be applied to Boyd himself. I believe that Boyd's early work in both the actual and theoretical aspects of aerial combat has preconditioned him to a particular view of warfare and thereby substantially colors his later work. In Boyd's views there is still a good deal of the fighter pilot. That sort of war is maneuver-intensive, usually of very short duration, productive of immediate and visible results, and cojoins one combatant with one weapon against another similarly armed. The friction that so animates land combat reveals only a negligible presence in air-to-air combat. Aerial combat lends itself rather more easily to abstraction, if only because it is relatively simpler and so can be presented in a doctrinally "pure" form. By contrast to land warfare, aerial war has something of the quality of a gentlemanly duel. One need not contend with the aftermath of combat (which often adds to the impediments of land warfare); instead, one must only move to the next encounter. Boyd would argue that this interpretation places entirely too much weight upon his own history, that he has since risen above this pre-conditioning by virtue of his more recent studies. I would reply simply that it is in the nature of perspective that we are all too often led to views without realizing the impact upon us of such forces. One cannot expunge entirely these forces of influence; the most that one can do is seek out and identify them, and try as best he can to minimize their deleterious effect on his thinking. To my mind, Boyd has not paid enough attention to this problem.

The OODA Loop is an interesting concept, arrestingly presented. That is why the OODA Loop seems to permeate Boyd's entire lecture. My impression was that the OODA Loop was the point of the lecture, and that history was marshalled to its support, or discarded if it did not support the Loop.

Boyd has categorically rejected this criticism, arguing that the OODA Loop was merely a starting point, not meant to establish an overarching theme into which selected historical examples were made to fit. My opinion is that Boyd does not declare this important point with an emphasis sufficient to avoid misleading his audience. I think he is obliged to do so if only because when someone remembers Boyd's lecture, he will remember inevitably the OODA Loop and not Boyd's disclaimer (which I do not remember). Such a thing happened to S. L. A. Marshall, who is known now chiefly for his contention that only 25 per cent of all infantrymen in World War II fired their weapons in combat. To the exclusion of all his other work, memory seizes upon this finding, and it is now quoted authoritatively. Yet, there is no solid evidence for this contention, and it is just possible that Marshall wanted only to state an hypothesis.

Boyd says that he is not a historian. By this, he means to say that he has not been classically trained, and that he is largely self-taught. On one hand, he appears to regard this as a liability that affects his credibility when he uses history in his lectures. He seems to assign greater weight than is reasonable to the tendency of professional historians to close ranks against those who are not part of the club. On the other hand, he prides himself on his independence from the preconceptions that bind professional historians. I have no patience with the ethic that makes history an exclusive society in which the sole price of admission is classical training. That is the view of the narrow mind, grasping for imaginary virtue where no other kind is available. Many in this country study military history with varying degrees of success. But what separates Boyd definitively from both casual and professional students of history is his influence. Because he has influence, because he is listened to in important quarters, he thereby takes on the most serious obligation of the most serious historian--to be scrupulously accurate and complete and

reasoned in his approaches, his research, and in the communication of his findings. The consequences of doing otherwise are too great: in military history, to a degree absent in other fields of history, the connections between thought and action are too often direct and mortal. And because Boyd's views carry a potential effect upon the defense policies of the United States, their importance is all the greater.

Throughout his lecture (and in our conversations), Boyd speaks of the subtleties in the patterns he reveals. Yet, there is subsumed within Boyd's lecture a subtlety of approach that he does not acknowledge. Boyd is the latest in a long line of military theorists (mostly in the modern period) who have employed military history in a search for the Rosetta Stone of battle. Ulterior to all such efforts is the belief that one need only find those historical examples in warfare that seem invariably to promise victory. So finding, these theorists have argued that the professional soldier need only to fix his mind's eye upon this universal battle (composed of various elements, according to the theorist). The closer the soldier's own operations verge upon this vision of military perfection, the greater his chances of victory.

Western military theorists seem to be particularly susceptible to this tradition; Sun Tzu and other Oriental thinkers successfully avoid this rigidity of aim. As Bernard Brodie rightly points out in his last essay on Clausewitz, that theorist as well as Jomini had revived the ancient practice of arguing to the ideal. One need only isolate and then recombine the constituent elements of the ideal. Reality thus becomes a lesser version of that ideal. Liddell Hart and J. F. C. Fuller both incorporated the argument to the ideal in their work; both looked for what could today be called a "unified field theory" of warfare. Liddell Hart gave his findings the name of the strategy of the

indirect approach.

So much for general questions of historical methodology. I have specific objections that I will detail later in connection with the accuracy of Boyd's historical evidence. For the present, I should say that in some ways Boyd's innocence of these questions, or his discounting of their importance, does much to explain my disagreements with his approach. Perhaps he would say that I rely too much on these conventions of practice, that I have not freed myself sufficiently to think in a truly creative fashion about these subjects. To this I would reply that such practices have evolved over the course of centuries, and that some of the practices he employs in his presentation have been among those that have been discarded because of their tendency to distort or misinform.

Boyd takes what I regard to be an excessively flexible approach to historical fact and interpretation. He argues that history is by nature selective (his word). I argue that history is discriminating, and that this is not an irrelevant distinction. The effects of this distinction became evident to me during the course of Boyd's presentation. Historical accuracy thereby suffered a blow by Boyd's approach. A few examples will demonstrate my meaning here.

Early in the presentation, Boyd offers the Mongol army's operations under Ghengis Khan as a demonstration of the theories of Sun Tzu. Boyd admires the Mongols' strategic and tactical audacity, their talent for deception, and their impatience with any objective that does not tend to the mental and physical disintegration of their opponents. This is the traditional picture of Mongol operations, and it is most attractive to those theorists who admire that part of military history that seems to demonstrate a superiority of art over mechanics. This is the picture

that can be easily found in such wo

that can be found in the work of Harold Lamb and Lynn Montross. But it is an oversimplified picture of this army and its accomplishments. Boyd concentrates his remarks upon the Mongols' talent for the unconventional. He does not mention the factor of technology in the Mongols' success, nor does he mention their frequent deviation from the general picture of their operations he gives us. During our discussion, I asked Boyd whether he had forsaken technology altogether as a viable aspect of operational theory, as if to reject the technological side of his own past. When he said that he had not, I replied that I therefore found it curious that he would ignore the iron stirrup and the superior bow as factors in the Mongols' successes. Clearly, too much can be made of such material items (as they are today), but in the case of the stirrup a compelling factor must be accounted for in some way, if only to put it in its proper perspective. The stirrup enabled the Mongols to attain very high rates of march and assault; it allowed for much greater maneuverability while in contact; it allowed for lances to be couched instead of thrown; and it allowed the rider to stand at a gallop to employ the bow (reputedly better than the Welsh longbow) at a greater distance. Boyd also declared that the Mongols avoided towns when possible; often, it was not possible to do so, and the Mongols provided very well for those occasions by incorporating into their columns extensive siege trains with Chinese engineers in attendance. These, the Mongols used to besiege one city in Khwarezmia for twelve years. Finally, Boyd uses for effect the word "horde," implying that this was the description the Mongols' enemies gave to an army that seemed to them to embody insensate violence and irresistible combat power. Yet that word comes from the Mongol word that those people called themselves. This is a mistake often repeated: it has survived because it rhetorically conveys somehow the character of the army.

What is the sum of these objections? Boyd declares that he knew all this, but that it did not appear in the lecture. My objection is that this information did not seem to inform his view of the Mongols. I think that for anything like an accurate picture of this army, one must--at a minimum--examine several works: The Secret History of the Mongols, Ghengis Khan and the Conquest of North China, The History of the Archers, George Vernadsky's history of early Russia, The Tartar Relation, and perhaps even the work of several contemporary European chroniclers (such as Roger of Wendover). If Boyd had done this, I would find his conclusions on the Mongols much more palatable. His lecture might not be one inch longer, but the informed listener could quickly see that this part had been informed by an awareness of these factors.

Boyd then introduces his audience to the battles of Leuctra, Cannae, and Leuthen. The first of these are ancient battles, and as such bear special burdens, for very little of substance is known of them. Boyd knows very well the historical shortcomings of how these battles have been reported, having read Delbrück's studies. He is also aware of Clausewitz' injunctions against depending too much upon the lessons of ancient battle. I think that Boyd need not have adduced these two battles. His presentation would not have suffered by their elimination and he could have used that time to better effect. The purpose of their use is to demonstrate the techniques of the single and double envelopment. Boyd then uses Leuthen to demonstrate what he argues is a variation on the single envelopment, the oblique attack or the attack by echelon. But the attack by echelon is (at least as it was played out at Leuthen) not an enveloping attack or even a flanking attack and in my view has more to do with the attack on the "point of unequal distribution" that Boyd discusses later in the lecture. Therefore, much

of what I heard at this point of the lecture struck me as being misdirected. This part of the discussion carried much less effect than could have been achieved by other means; i.e., by reference to more modern operations. On the other hand, I think that if Boyd insists upon including the 18th century to maintain continuity, he should look at the operations and the writing of Marshal Saxe, who documents what has been condemned as an exceedingly stylized and clinical view of war (condemned wrongly, I think) in his Reveries. The difference between Saxe's historical image and an operation like his victory at Fontenoy (1745) is considerable. Boyd could make much of this.

We now come to that part of Boyd's lecture where the historical information is at its densest: Napoleon and his chief publicists, Clausewitz and Jomini. Boyd places a great weight upon the effect of the Ordonnance of 1791 upon Napoleonic practices, particularly after 1805. It was because of an overreliance upon this manual of drill, Boyd argues, that the French army's operations became stolid and predictable, and so declined in effectiveness, with the implication (though he does not say outright) that Waterloo was the preordained conclusion of the decline. I have many objections to this interpretation. First, single causation in historical interpretation always seems to make complex affairs too simple and tend to distort the realities of the time. Boyd sees a distinct difference between the General Bonaparte of old, and the Emperor of later times, a relatively old interpretation that has been considerably revised by modern Napoleonists. People, not even Napoleon, do not live in "stages," and they do not evolve in a symmetrical fashion to suit historians (historians often ignore or forget this). Moreover, although there is no doubt that Napoleon worked a tremendous effect upon events, he was just as often victimized by events like any other important (or unimportant) figure. Between the early days of the Revolution and the

end at Waterloo, the French nation, the French army, and the enemies of France all suffered enormous changes. The passion of the Revolution waned and declined to a virtual dictatorship; after 1805, the French army was only half French (the rest being short-service soldiers from tributary states); and the armies of other combatant nations were beginning to accommodate themselves to the Napoleonic style of warfare. The character of the French army in my opinion had a good deal more to do with how that army fought after 1805 than did one field manual. When military skills are at a premium but manpower is not, an army must arrange its affairs far differently than the army that enjoys much skill and adequate manpower. One noticeable reflection of such a situation is the movement of firepower toward the line of contact. It is of some importance that artillery concentrations at the battle of Valmy (at the beginning of the revolution) were every bit as great as those seen after 1805.

In my opinion, Boyd has projected too much of the present into the past in this section of his lecture. With so much talk about doctrine today, it is easy to be misled about its real effect on the battlefield. I asked Boyd how much he thought about doctrine when he was in aerial combat over Korea. I suggested that if he was thinking about anything, it was probably the last conversation he had with his comrades in the ready room concerning air-to-air tactics. He agreed. I then asked why he expected more of 18th century French officers (and 18th century doctrines) than he allowed himself. I freely confess that my view of military doctrines and their effect upon operations diverges considerably from conventional wisdom; I think that the chief value of doctrine is that it reflects the intellectual context in which it is devised. As for its ability to foretell future action, I think doctrine has put in a negligible performance. Still, I would not discard doctrine alto-

gether, if only because it is one of the ways an army thinks aloud.

It is while discussing Napoleon that Boyd introduces yet another tactical form, the strategy of the central position. Even Napoleonists are fond of talking about the General's talent for this strategy (or, to be precise, grand tactic). Because Boyd associates this strategy with Napoleon, the implication is that Napoleon invented it (in fact, Napoleon invented very little. His great gift was the ability to be definitive in war, not seminal). Yet, this technique was used by Cortes and other conquistadors in the conquest of the Valley of Mexico in the early 16th century, and I have a feeling that one would find similar strategies in other colonial campaigns.

When one comes to that part of Boyd's lecture that deals with Clausewitz and Jomini, it is a bit like debating over the Bible, especially in the former case. I would have preferred a much more substantial discussion of both theorists: Clausewitz, because he has had his ideas corrupted so often by moderns; and Jomini, because he is seldom talked about at all. Boyd is particularly interested in Clausewitz' remarks on friction, remarks which take up about three pages in about six hundred, a proportion which suggests what Clausewitz himself thought about the subject. I do not agree with Boyd's argument that this notion is the most important aspect of Clausewitz, if only because I do not think the finding of the most important aspect is the way to approach Clausewitz. He criticizes Clausewitz for concentrating too much upon the friction one's own forces are likely to suffer, and ignoring the friction of one's enemy, yet in other parts of his lecture Boyd does precisely the same--that is, he talks about one force without taking the enemy into account (particularly when he begins to talk about the Germans in WW I and II). In fact, during most of Boyd's lecture, the enemy disappears from view, or becomes a puppet at the end of a military artist's strings.

Boyd further criticizes Clausewitz because he "incorrectly stated" that the center of gravity in a formation corresponds to the center of the mass. I wonder (because I have not asked Boyd about this) whether Boyd sees that armies in the 18th and 19th century were constructed in precisely this way, to achieve this effect of weight. Jomini's insistence upon decisive force at the decisive point (the *pont a feu*) is a tactical exploitation of one's own and the enemy's force structure. It seems unfair to criticize Clausewitz on strictly modern grounds, therefore. Modern armies may (and most do) have multiple "centers of gravity" that are vulnerable to attack. I am less sure about the armies of Clausewitz' day.

Before leaving the matter of friction as expressed by Clausewitz, another of Boyd's points should be addressed. This is where the matter of friction first appears in his lecture. He believes this to be a telling point of departure for discussing the remainder of military history, and he constructs an analogy between friction in war and the 2nd Law of Thermodynamics. Yet, throughout the lecture, Boyd stresses the mental (in our conversations, he used the term "temporal") aspects of conflict in association with the physical. This analogy, then, does not bear up under standards of scrutiny set by Boyd himself, for the 2nd Law addresses the physical world, not the "temporal" world in which so much of Boyd's war takes place.

Concerning Boyd's treatment of Jomini, I have no great quarrel. We both understand that Jomini has gone out of fashion in the modern military world, and that much of what he has to say that is good is lost to us. Military mechanics have attached themselves to the form of what Jomini said, rather than the function and substance. I have suggested to Boyd that Jomini is much more congenial to his ideas than Clausewitz, and that by looking at Robert E. Lee's and Winfield Scott's use of Jominian practices, some interesting

insights could be found. To summarize my objections to Boyd's treatment of these two theorists, I think his statement that their major flaw was that they saw operations from the top down is misleading. So did everyone else during this period. So do professional armies today. So do most military historians, for that matter. The hierarchical model is a very compelling one, and very difficult to break out of. Few people at any time are able to do it.

Following this section of the lecture, for the first time, really, Boyd discusses technology. His aim here is to describe how the rapid advance of technology so outstripped military thought that an hypertrophy of intellect was created. All this is broadly true. What gives me pause is that this subject seems to be so closely associated with his current interests that I was surprised he did not make more of it. But he leaves this subject very quickly, and when he resumes the march with World War I, he says very little about it.

From this point until the end of the lecture, Boyd digresses regularly into the rise of Marxism, insurrection, revolution, and guerrilla war. All this was presented in a most unsatisfying fashion. Distinctions were not made between these forms of conflict, distinctions that should have been made. Guerrilla war and Revolution (especially of the Asian type) have their own idioms, their own culture of useage, and their own--sometimes unique--operational styles. I understand the great reluctance of any American to discuss the Asian wars these days, and that is why I think those wars should be discussed. If he would introduce this topic, he is obliged to elaborate upon it. My sense of this section of the lecture is that is one of the most poorly formulated in his own mind, and that he has not quite decided what he shall do with it. That much showed through to me.

Perhaps it was only a matter of time before Boyd got to the Germans. He obviously is a great admirer of their style of war, like many other people in uniform and out. For myself, I am getting rather sick of hearing about the Germans and how marvelous they are at war. During his presentation, Boyd argued that for one to check this love of the Germans against the fact they they have not won a war since 1871 is a cheap shot, but at some point it does make a difference. This of course does not mean that there is nothing to learn from the Germans, but I would ask whether we study the Japanese today with the same fervor?

Boyd is much taken with the German style of the operational art. He heartily approves of Auftragstaktik (mission orders, usually given verbally), the technique of the Schwerpunkt, and a word of his own coining, Nebenpunkt. All these combined seem to ratify his devotion to the mental and physical idioms of maneuver warfare, and we hear much today in the press about the desirability of such a style. Yet to what degree is this mental style of war a product of the peculiarities of German intellectual, social and cultural history. Boyd will not go so far as to say that this style of war should be adopted by the American army, but the implication is there and others have said it outright. To return once more to Boyd's remarks on "orientation," it seems enough to say that the German orientation is not the American orientation, for better or worse. Leaving aside whether such patent imitation is at all desirable, there is the problem of changing the entire mental set of the American defense establishment in order to effect this change. American military men have always hesitated to look to their own operational traditions, thinking instead that foreign armies had much more to offer them. For the first three-quarters of our first century as a nation, military America was little more than an intellectual colony of Europe. We should have outgrown

this, but we have not.

By now, the cumulative effect of the disagreements I have already registered indicate how far apart Boyd and I really are in the ways we use military history and our views of military operations. Within Boyd's lecture, there is a nascent theory of warfare, and that is what I will address next.

Boyd's successful warrior is a military artist, a near genius who wages war not as a sequence of discrete actions but war as an holistic process that is composed of the interactive parts of deception, maneuver, indirect and multiple assaults, all calculated to attack the enemy's mental as well as physical cohesion. He is a warrior that all theorists could be proud of, and he is the star of history's battlefields, the dramatic, eccentric presence that subdues us mere mortals, takes history by the throat and shakes her until she does his bidding. Traditional military history has been told in precisely such terms, and Boyd's lecture is replete with references to these artists. It is truly wonderful for the student of military history to watch such men play out their magic on the battlefield, and it is impossible to withhold one's admiration for them. All the qualities and abilities listed by Boyd are indeed desirable, and perhaps no one would reject them if offered.

But, if one views the entire span of military history across the centuries, what does one see? Is all military history, and by implication, all the military future, to be comprised of such artists? Doubtless, some will appear, and genius will often get its way. But what about the rest? Boyd's view of military history is centered squarely upon the great men and great events. This is where we part company, philosophically, definitively.

By far the larger part of military history has been made, in my view, by men who were entirely ordinary as leaders and followers, using unremarkable strategy and tactics, producing results that were ephemeral except in the

number of lives and amount of treasure spent in the folly. The ordinariness of military history stands as a critical question before those who, like Boyd, would study such affairs only through the medium of exception. There is no meeting ground between this view and Boyd's. We may argue as long as we please, but the argument will not be resolved (and this does not necessarily bother me).

During the course of this paper, I have often referred to the manner, organization, and character of Boyd's lecture and suggested ways for its improvement. Boyd's insistence upon four hours for this lecture is unfair, both to him and to his audience. The length of the lecture leads him to believe that he can discuss more than he actually can to my satisfaction. He tries to do too much, despite the length of the lecture. As for the audience, it is a rare one that learns much after an hour of formal lecture. At the end of four hours, I was ready for oxygen, not questions. In my view, Boyd overreacts to questions as personal attacks when he should not. For historians, at least, argument is the sole of the discipline and is viewed as an exercise, not an assault. I have attempted to convince Boyd of this, perhaps to no avail. If I were to suggest a revised format for this lecture, it would be to break the lecture in half and arbitrarily cut the lecture another half. A separate time should be arranged for questions, perhaps even on the next day. In discussion, Boyd is hardly so rigid as he seems in lecture. If an audience is really to learn much, they should be given the best chance possible; the present format of the lecture does not do that. Instead, it merely creates an oppressive environment, where silence is construed as approval.

Anyone who presumes to speak or write in public automatically takes on an obligation not to waste their audience's time. There are many parts

of this lecture that do waste time; i.e., they are present to no good effect. Apparently, Boyd is comfortable with this format (otherwise, I should think he definitely would not do it this way), but I would warn him against being too comfortable--comfort too easily is turned into intellectual complaisance. Views must be tested if they are to be worth very much. That is why I have told Boyd that he should teach what he has to say over an entire term. He has said that he eventually wishes to write all this down and publish, yet he needs to test his ideas against the hardest audience he can find--a class of bright students whose awe of the prof fades after about thirty seconds.

I will finish by reiterating a point made earlier. Boyd's influence places him above the general run of historians (maybe all historians, in fact), but at the same time that influence carries with it all the obligations of the most professional of historians--the obligation to scholarship as best he can practice it.

RECOMMENDATIONS:

1. That Colonel John Boyd be invited to CGSC at least once a year to lecture, and that the format of the visit be altered to provide a separate question and discussion period.
2. That all other members of the military reform group be tendered similar invitations to present their views.
3. That no alteration in curriculum occur without a thorough evaluation of Colonel Boyd's views in light of Army doctrine and current college needs.
4. That, because of the large role that military history plays in the work of Colonel Boyd and similar commentators, CSI be tasked to participate

in all such lectures and discussions.

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