

Saddam Hussein: Master Air Strategist

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As far as Saddam Hussein being a great military strategist, he is neither a strategist, nor is he schooled in the operational arts, nor is he a tactician, nor is he a general, nor is he a soldier. Other than that, he's a great military man. I want you to know that.

General H. Norman Schwarzkopf¹

One may know how to win, but cannot necessarily do so.

Sun Tzu²

Fashionable thinking characterizes Saddam Hussein as the "antithesis of a strategist."³

But, as Sun Tzu suggests, it is precipitous to draw conclusions about the caliber of a strategist simply because he did not prevail in a given contest. Much of the credit for Hussein's failure to prevail is attributed to the air campaign. What was Hussein's strategy to deal with over 2,600 Coalition aircraft arrayed against his force of just 750 planes?⁴

Obviously, a definitive statement of Hussein's strategic plan is not available, and one might *never* be obtainable.⁵ Nonetheless, sufficient evidence exists to conclude that Hussein had a strategy, and one that was well-conceived given his situation. Moreover, his strategy was consonant with much of the thinking espoused by Sun Tzu, one of history's greatest theorists of military strategy. Of particular importance to U.S. planners is that Hussein's strategy was designed to employ *American* air power to achieve his objectives. Furthermore, some future despot might yet *successfully* use the strategy Hussein conceived.

Gulf War post-mortems almost universally criticize Hussein for failing to appreciate the potency of Coalition airpower, and especially that of the U.S.. The evidence is, however, to the contrary. Former Nicaraguan President Daniel Ortega spoke with Hussein shortly before the start of the air war. As Ortega relates the conversation, Hussein had no illusions:

[W]e were talking about massive air bombardment -- strategic [against] economic [targets] and against the civilian populations...He said he was *sure* that if the United States wanted to, they could carry out such an air campaign

as to destroy *all* the major cities in Iraq. *There might even be a million deaths.*⁶

Hussein had every reason to believe that the U.S. was planning such a deadly strategy. The former Chief of Staff of the Air Force, General Michael J. Dugan, announced in September 1990, that the air war against Iraq would be marked by "massive" attacks. He declared: "The cutting edge would be downtown Baghdad. This (bombing) would not be nibbling at the edges."⁷ Dugan's dismissal because of the remarks would serve to reinforce their strategic significance in Hussein's mind.

Sun Tzu insists that "what is of supreme importance in war is to attack the enemy's strategy."⁸ Hussein was presented the difficult task of attacking this air strategy with an air force smaller and less capable than that organized against him. But again, Sun Tzu provides the answer: "Should one ask: 'How do I cope with a well-ordered enemy host about to attack me?' I reply: 'Seize something he cherishes and he will conform to your desires.'"⁹ What Americans cherish is their perception of their righteousness and humanity, of occupying the moral 'high ground.' If Hussein could seize -- and destroy -- this American self-image, he could undermine American *will*, and by that upset the balance of what Sun Tzu calls the "*moral influence.*"

Sun Tzu defined "moral influence" as "that which causes the people to be in harmony with their leaders,"¹⁰ and believed it to be fundamental to success in war.¹¹ In a totalitarian state such as Iraq powerful internal security apparatus¹² can keep the populace in "harmony with their leaders." Still, Hussein appreciated that the Coalition was much more vulnerable. In particular, Hussein believed that the Vietnam War had weakened the American will. He commented to Ambassador April Glaspie shortly before the occupation of

Kuwait that the U.S. is a "society which cannot accept 10,000 dead in one battle."¹³ A bloody conflict rivaling Vietnam could disrupt the public support necessary to maintain the "harmony" to which Sun Tzu refers.

Not only did *American* deaths undermine public support for the Vietnam War,¹⁴ but *enemy* civilian casualties resulting from U.S. bombing did also.¹⁵ Likewise, substantial civilian casualties in the Gulf War could also "send shock waves through the Arab world."¹⁶ Such a reaction could further Sun Tzu's admonition to disrupt enemy alliances.¹⁷ No Arab government in the Coalition could have withstood the spectacle of a U.S.-led Coalition slaughtering Arab civilians.¹⁸ Without Arab patronage the U.S. effort would founder.

Sun Tzu believed that to succeed at war a strategist must contrive to apply his strength against the enemy's weakness.¹⁹ Hussein's great 'strength' lies in his abject cruelty and his freedom from public accountability. Humane and democratic societies such as the United States do not seek to match such 'strengths;' they are the province of tyrants. Nonetheless, Sun Tzu maintains that a humanitarian and compassionate instinct is a disadvantage in war.²⁰ Accordingly, if Hussein followed Sun Tzu's teaching he would seek to employ his 'strengths' to strike at the 'center of gravity' of the Coalition effort: public support.

Sun Tzu asserts that "those skilled in war subdue the enemy's army without battle."²¹ Though he blustered about the "mother of all battles," Hussein's real contest was the struggle, as one U.S. reporter put it, for "our minds; indeed, that battle is probably as important to Saddam Hussein as the shooting war."²² In considering this psychological battle, recall that a central premise of Sun Tzu's theory is that "all warfare is based on

deception."²³ Its vital corollary is the *indirect* approach.²⁴ In short, following Sun Tzu's conception of strategy, Hussein would *not* attempt to attack the powerful Coalition air armada directly. Instead, he would *indirectly* do so by somehow applying his ruthlessness against American humanity with a view towards undermining American will and simultaneously disrupting the Coalition alliance.²⁵

The evidence indicates that Hussein developed just such a strategy. And it was as innovative as it was chilling: he would *facilitate* the American air attack on Baghdad. If Hussein could orchestrate the butchery of his own people by U.S. bombing, then the ensuing outcry would destroy American will and splinter the Coalition. Through this strategy he could achieve victory *without fighting*, which Sun Tzu believes demonstrates the "acme of skill."²⁶ It is the ultimate application of Sun Tzu's indirect approach.

One of the great mysteries of the Gulf War is the poor showing of the Iraqi Air Force, and the flight of nearly 100 aircraft to Iran.²⁷ The U.S. Air Force view is that Iraqi pilots became convinced that they could not prevail and consequently 'opted out' of the war.²⁸ Others suggest that Iraqi pilots were simply cowards, or that the aircraft were being husbanded for some future conflict.²⁹ But these explanations ring false. It is doubtful that in a military establishment as tightly controlled as that of Iraq, the *systematic* desertion of aircraft to Iran could have proceeded without Hussein's approval.³⁰ Further, the 'coward-ice' theory conflicts with a pre-war U.S. Army study³¹ as well as the U.S. Air Force's own assessments of the pilots.³² It is also inconsistent to suggest that Hussein would 'husband' one weapons system while exposing so many others to decimation (such as his inventory of top-of-the-line T-72 tanks). There *is*, however, one resource Hussein has always displayed a

readiness to decimate when it served his purposes -- *his own people*.

The absence of the Iraqi Air Force *can* be explained as part of Hussein's strategy to attack his enemies "moral influence." In particular, it seems Hussein's strategy was to *deliberately* strip his country of their most effective air defense system in the *hopes of attracting massive U.S. air attacks that would cause substantial civilian casualties*. Sun Tzu suggests "enticing" the enemy "with bait,"³³ For Hussein the "bait" would be Baghdad citizenry unprotected by Iraqi interceptors. Sun Tzu would approve of Hussein's plan to weaken Baghdad's air defenses: "Feign inferiority and encourage [the enemy's] arrogance."³⁴ If he could make the air environment sufficiently permissive, perhaps the Americans could be induced to launch raids by giant B-52 bombers that would dump thousands of tons of high explosives into metropolitan Baghdad.

Early in the war a few Iraqi fighters rose to meet the air attacks. This token opposition was the kind of *deception* Sun Tzu encouraged: it would mislead the Coalition as to Hussein's actual plan to leave Baghdad exposed. As for his army, Hussein expected they could safely outlast the air war 'hunkered down' inside their extensive field fortifications.

The disappearance of the Iraqi Air Force was only part of Hussein's diabolical plan. For instance, although Baghdad air defenses had some fifteen minutes warning of the initial assault,³⁵ U.S. pilots found streetlights conveniently lit³⁶ -- easing their task. Certainly, there was ineffective missile and anti-aircraft fire, but Hussein may have concluded that the fire might encourage high altitude (and therefore less accurate) bombing without seriously threatening U.S. aircraft.³⁷ His purpose was *not to defeat* the bombing; rather, it was to *misdirect* the bombing. Every bomb that fell in a civilian area served his purpose. Addition-

ally, it is not without meaning that throughout the bombing campaign the civilian population remained in Baghdad -- despite having practiced evacuations the previous December.³⁸

Hussein also mobilized the media to record the expected destruction of civilian areas. Presumably concluding that one correspondent could be more easily controlled, Hussein permitted Cable News Network (CNN) reporter Peter Arnett to remain in Baghdad for much of the war. With CNN's world-wide audience of more than 70 millions -- including many top decision makers³⁹ -- Hussein preserved the perfect vehicle to influence international opinion. Similarly, Hussein permitted former U.S. Attorney General Ramsey Clark to visit Iraq. (Both Arnett and Clark claimed in subsequent reports that U.S. bombs struck civilian targets.⁴⁰)

But some in the media sensed Hussein's strategy. Time reported in its 18 February 1991 issue:

Saddam seems to be trying to *provoke* more [civilian casualties] by putting military installations among them -- placing anti-aircraft guns on top of apartment houses for example. Thus a dismal equation: more bombing equals more civilian deaths equals ever greater chance for Saddam to portray the war as an assault by Western colonialist and Zionists against the entire Arab world.⁴¹

Why then did Hussein's strategy fail? His strategy was derailed by the unforeseen -- and perhaps unforeseeable -- applications of advanced munitions technology. Not only did this technology enable Coalition forces to attack Hussein's military forces with disastrous effectiveness, it also frustrated his hopes for high civilian casualties. Baghdad *was* heavily attacked, but *only one tenth of one percent*⁴² of the precision-guided munitions (PGM) mistakenly struck civilian areas. The effect was ruinous for Hussein's plan. As Newsweek observed: "The relative precision of the air war deprived Saddam of a political goal:

arousing Arab anger and sapping American will at home."⁴³

What is more is that videos obtained from PGM targeting systems provided Coalition briefers with a 'weapons-eye-view' of attacks to show news-hungry audiences. The films repeatedly showed weapons 'zeroing-in' on distinctly military targets. As the Boston Globe put it: "The first images of the 43-day Persian Gulf War mesmerized most viewers: television pictures of targeted Iraqi bunkers and buildings, many in downtown Baghdad, being 'surgically' destroyed by precision-guided bombs dropped from stealthy aircraft."⁴⁴

When Iraqi propagandists tried to sway world sentiment with claims that a 'baby formula' factory had been bombed, and later claims that a mosque⁴⁵ and a civilian bomb shelter had been deliberately targeted,⁴⁶ audiences had already been conditioned by numerous television images of pin-point accurate bombings. The world was quite prepared to believe that every effort was being made to strike *military* targets with *meticulous* exactness.⁴⁷ If the occasional bomb went awry, plenty of pictures of precision attacks quickly rebutted the notion that the Coalition was engaged in any sort of genocidal bombing campaign. The anticipated flood of civilian casualties simply never materialized.

The synergistic effects of casualty-minimizing PGMs mated with the resourceful use of videos from their targeting mechanisms doomed Hussein's strategy.⁴⁸ The New Republic put it succinctly:

Propaganda was one of Saddam's most critical weapons in this war, particularly propaganda that would inflame Arabs and thereby sunder the coalition of Americans and Arabs arrayed against him. If we were not tormented with pictures of carnage in Baghdad, it may be because there was not much carnage in Baghdad.⁴⁹

Again, it should *not* be uncritically assumed that Hussein's strategy was suspect.

Even without massive civilian casualties, the mere *length* of the air campaign made Coalition members fear that Hussein would be seen "as a hero and Iraq as the victim of western imperialism."⁵⁰ Shortly before the start of the ground war King Hussein of Jordan articulated the very message Saddam wanted when he argued in a radio address that "The true aim behind this devastating war...is to return Iraq to a primitive life...This is a war on all Arabs and Muslims."⁵¹ Similarly, American empathy was building for Iraqi "civilians trapped inside a nation pounded by an aerial assault they could do nothing to prevent."⁵² Fortunately for the Coalition, the war ended shortly thereafter.

But in the next conflict time may not serve U.S. air strategists so well. The success the air war enjoyed in avoiding civilian casualties was much the result of the months of preparation that Desert Shield allowed Desert Storm. Planners had the time to devise attack routes and tactics that would diminish the likelihood that even misdirected bombs would cause civilian deaths.⁵³ Moreover, there was enough time to assemble the right aircraft and sufficient precision munitions to accomplish the military task in a manner which minimized the dangers to civilians.⁵⁴

Future wars might not be so accommodating. Despite the emphasis on PGMs, U.S. forces are still heavily dependent on 'dumb' bombs. Indeed, in Desert Storm *only 7.4%* of the air-delivered ordinance was PGMs.⁵⁵ While PGMs hit their target 90% of the time, 'dumb' bombs achieved a mere 25% "on target" rate.⁵⁶ Nevertheless, public expectations have been altered -- perhaps permanently. The images of the war "created an impression of [a] remote, bloodless, push-button battle in which only *military* targets were destroyed."⁵⁷ Even though perhaps as many as 100,000 Iraqis died during the conflict, the Gulf War *did*

not condition the American public to support a campaign that proffers images of thousands of dead human beings, even those of *enemies*.⁵⁸ It *only* conditioned them to accept -- and perhaps *demand* -- that the 'images' be of destroyed *things*.⁵⁹

PGMs *do* limit collateral civilian casualties but they are expensive.⁶⁰ And they are best launched from specially-outfitted delivery platforms.⁶¹ For example, *all* of the manned air attacks on Baghdad were conducted by sophisticated U.S. Air Force F-117s.⁶² In future contingencies PGMs or appropriate air assets (or both) may not be readily available, particularly in an era of reduced budgets. The likeliest prospect is that vital targets will still need to be attacked with 'iron' bombs that lack the ability to minimize civilian casualties.

Planners ought to ponder Sun Tzu's advice to not "put a premium on killing."⁶³ The American public may now believe that air campaigns can be conducted with relatively little risk to civilians. Military professionals realize that the Gulf War presented ideal circumstances for the application of air-delivered PGMs. Ironically, the failure to achieve similarly limited civilian casualties in a future campaign might be interpreted as a *deliberate* attack on civilians. The very success of the campaign that defeated Hussein's strategy might have established precedents and expectations which could encumber the future application of air power.

The question remains, was Hussein the "antithesis of a strategist?" Surely his failure to anticipate the phenomenal effectiveness of air-delivered PGMs would not rank him so. The success of the weapons astonished many respected experts.⁶⁴ Similarly, the ingenious use of videos at press briefings was nothing less than revolutionary.⁶⁵ In fact, the Air Force considers their use as engendering a "remarkable transformation in popular attitudes

toward air power."⁶⁶ Crystal balls are not yet on the TOA of even a master strategist.

Sun Tzu teaches that because war is "of vital importance to the State" it must be *thoroughly* studied."⁶⁷ It is sometimes difficult to accept that an abhorrent individual might conceive of something -- *anything* -- worthy of our attention. This paper has tried to suggest that what is submitted as Hussein's air strategy might have had some logic to it, and logic that is compatible with elements of Sun Tzu's theories. Quite obviously a comprehensive study might yield other, even contradictory conclusions.⁶⁸

Still, two points are clear: First, Sun Tzu remains relevant and *useful* in the high technology environment of modern war. Secondly, even the most loathsome adversary might have some evil genius within him that demands dispassionate study by military professionals. As to the second point Sun Tzu has a warning for us if we misjudge our defeated foe: "He who lacks foresight and underestimates his enemy will surely be captured by him."⁶⁹

Likewise, Shakespeare -- no strategist himself but nevertheless an uncannily accurate observer of the human condition -- cautions: "Tis best to weigh the enemy more mighty than he seems."⁷⁰

ENDNOTES

1. "Central Command Briefing," Military Review September 1991: 102-103.
2. Samuel B. Griffith, trans., The Art of War, by Sun Tzu (New York: Oxford University Press, 1971) 85.
3. Steven Metz, "The Mark of Strategic Genius," Parameters Autumn 1991: 56.
4. U.S. Air Force, Reaching Globally, Reaching Powerfully: The United States Air Force in the Gulf War (Washington: USAF, 1991) 4, 14.
5. Rick Atkinson, a reporter for The Washington Post, observes that "analyzing the mysteries of Iraqi strategy" at this point in time might be reduced to "legitimate guesses." See Rick Atkinson, "The Gulf War: An Instant Playback," rev. of Desert Victory: The War for Kuwait, by Norman Friedman, Washington Post Book World 3 Nov. 1991: 12.
6. As quoted by Christopher Duffy in "The War, Desert Storm," Newsweek 25 February 1991: 35 [emphasis added].
7. "Dugan's Quoted Statements," Air Force Times 1 October 1991: 15.
8. Sun Tzu 77.
9. Sun Tzu 134.
10. Sun Tzu 63-64.
11. Although Sun Tzu's contentions as to the role of popular support are less explicit than those of a theorist such as Clausewitz, it is nevertheless evident that he recognized the necessity for "the proper balance among the people, the army, and the government." See Michael I. Handel, Sun Tzu & Clausewitz Compared (Carlisle: USA War College, 1991) 20-21.
12. Prior to the ground war U.S. News & World Report estimated that Iraq's internal security forces could keep Hussein in power "even if Iraq's Army is badly mauled." See "The Real Target," U.S. News & World Report, 18 February 1991: 26.
13. "Iraqi Transcript of Hussein-Glaspie Meeting," The Middle East, 7th Ed. (Washington: The Congressional Quarterly, Inc. 1991) 376.
14. If Hussein drew lessons from America's involvement in the Vietnam conflict as some have suggested, then his assessment would be correct. Studies demonstrate that rising American casualties led to a concomitant fall in public support. See Phillip B. Davidson, Vietnam at War (Novato, CA: Presidio, 1988) 811.

15. See e.g. Harry G. Summers, On Strategy: The Vietnam War in Context (Carlisle: US Army War College, 1981) 24-25; and Michael Maclear, The Ten Thousand Day War, Vietnam: 1945-1975 (New York: St. Martin's, 1981) 241, 245-248.
16. Lucy Shackelford, "US Orders Pilots to Try to Avoid Civilian Casualties," Los Angeles Times 17 January 1991: 8.
17. Sun Tzu 78.
18. Correspondent Lance Morrow wrote in Time: "[I]f the battle is prolonged [and] if television cameras show bodies of Iraqi civilians blasted by American bombs, then Arabs will recoil from the U.S. and others in the Coalition." See Lance Morrow, "The Devil in the Hero," Time 28 January 1991.
19. Sun Tzu 96-101.
20. Sun Tzu 115.
21. Sun Tzu 77.
22. Charles P. Freund, "The War on Your Mind," Washington Post 27 January 1991: C3. Samuel B. Griffith wrote in his Introduction to his translation of Sun Tzu's Art of War that "Sun Tzu realized that an indispensable preliminary to battle was to attack the mind of the enemy." See Sun Tzu, 42.
23. Sun Tzu 66.
24. Sun Tzu 102.
25. For a discussion of a conceptual framework for considering an indirect strategy as applied against an opponent's will see John W. Taylor, "Strategic Military Employment Options," Comparative Strategy 1991: 162-163.
26. Sun Tzu 77.
27. The flight of Iraqi aircraft to Iran mystifies even sympathetic Arab commentators. See e.g. Hisham H. Ahmed, Arab Studies Quarterly, Winter/Spring 1991: 25.
28. Robert S. Dudney, "McPeak on the War," Air Force Magazine May 1991: 22.
29. Parenthetically, if such was Hussein's purpose it would conform to Sun Tzu's dictum that: "If the enemy is strong and I am weak, I temporarily withdraw and do not engage." See Sun Tzu 79-80.
30. Hussein was very suspicious of the loyalty of the Air Force and kept it on a "short leash." See Louise Lief, "Even Three Sets of Spies Aren't Enough," U.S. News & World Report, 4

February 1991: 39.

31. Stephen C. Pelletiere and Douglas Johnson, Lessons Learned: The Iran-Iraq War, (Carlisle: USA War College, 1991) 58.
32. Robert S. Dudley, "McPeak on the War," Air Force Magazine May 1991: 22.
33. Sun Tzu 102.
34. Sun Tzu 66.
35. Major General Buster C. Glosson, the air campaign architect, told the Air Force Times that "Baghdad did get a call, so they started shooting 15 minutes before the (F-)117s got there." See Casey Anderson, "War Planner: Civilians Didn't Change Target List," Air Force Times 8 July 1991: 27.
36. Brian Duffy, "Desert Storm," U.S. News & World Report, 25.
37. Had significant numbers of Iraqi fighters tried to attack, their mere *presence* might have driven U.S. aircraft down towards Iraq anti-aircraft defenses. See Tom Matthews, "The Secret History of the War," Newsweek, 18 March 1991: 31.
38. See e.g. "Wave of Gloom in Iraq," New York Times 20 December 1990: 1; and "Threats Precede Huddle in Iraq," Washington Times, 26 December 1990: 1.
39. Matthew Cooper, "The Very Nervy Win of CNN," U.S. News & World Report 28 January 1991: 44.
40. Moreover, according to CNN military analyst Perry Smith, Arnett is a "feeler" who "was very empathic to the plight of the citizens of Iraq." See Perry Smith, "How CNN Fought The War," Air Force Times 21 October 1991: 64. Harry Summers had a harsher view of Arnett. See "Treason, Pure and Simple," Air Force Times 15 April 1991: 62. Clark was denounced by other commentators. See e.g. John B. Judis, "The Strange Case of Ramsey Clark," New Republic 22 April 1991: 23.
41. George J. Church, "Calculus of Death," Time 18 February 1991: 25 [emphasis added]. See also Shackelford, 8.
42. "What Went Right," editorial, Detroit News 1 March 1991: 10.
43. John Barry and Evan Thomas, "A Textbook Victory," Newsweek, 11 March 1991: 39.
44. Paul F. Walker and Eric Stambler, "The Surgical Myth of The Gulf War," Boston Globe, 16 April 1991: 15.

45. The Pentagon insisted that the mosque "damage" was the product of an Iraqi deception campaign designed to support claims of damage to religious sites by Coalition aircraft. See "Ramsey's War," Washington Times 5 March 1991: 6. Deception is one of Sun Tzu's principles of war. See Sun Tzu, 66.
46. 400 Iraqi civilians died in an attack on what U.S. authorities maintained was a command and control bunker. The U.S. also claimed the strike was carefully planned to try to avoid civilian casualties. A reporter noted that the "houses around the shelter [were] untouched." See Paul Lewis, "Effects of War Begin to Fade In Iraq," New York Times 12 May 1991: E-2.
47. "The extraordinary efforts American pilots have made to avoid civilian targets have not been lost on the public." Nancy Gibbs, "Can the Pro-War Consensus Survive?" Time 18 February 1991: 32.
48. One frustrated critic complained -- probably correctly -- that the videos which showed the "atrocious nature of the war" were not shown. See John Pilger, "A One-sided Bloodfest," New Statesman & Society 8 March 1991: 9.
49. "The Dead," editorial, New Republic 25 March 1991: 7.
50. "The Real Target?" Newsweek, 18 February 1991: 24.
51. "The Real Target?" Newsweek, 18 February 1991: 24.
52. Gibbs 32.
53. Shackelford 8.
54. General Dugan noted that the military had been preparing for a war in the Middle East for nearly a decade, and the air campaign benefitted greatly from pre-positioned materials and special-built Saudi airfields. See Michael Dugan, "The Air War," U.S. News & World Report 11 February 1991: 27.
55. Robert S. Dudley, "McPeak on the War," Air Force Magazine May 1991: 24.
56. Barton Gellman, "U.S. Bombs Missed 70% of Time," Washington Post, 16 March 1991: A1.
57. Walker and Stambler 15.
58. One basis for seeming American insensitivity to the heavy Iraqi army casualty figures is that there have been no pictures of thousands of Iraqi dead. The reason is simple: As late as June, 1991, the U.S. had found the corpses of only 570 Iraqi soldiers. See R. Jeffrey Smith, "Iraqi Casualty Story Begins to Emerge," Washington Post 13 September 1991: A21. Likewise, a reporter examining the scene of the much decried "highway of death" air attack found evidence of only thirty-seven bodies. See Michael Kelly, "Highway to Hell," New Republic 1 April

1991: 11.

59. One indication that the American public is unready for much of the grim reality of modern combat is reflected in the outcry following disclosures that Iraqi troops were buried alive as U.S. forces broke through into Kuwait during the ground war. See Barton Gellman, "Reaction to Tactic They Invented Baffles 1st Division Members," Washington Post 13 September 1991: A21.

60. One analyst argues that despite their cost, cruise missiles are a cheaper alternative to munitions delivered by manned aircraft. See Vice Admiral J. Metcalf, USN (Ret.), "The Last Great Air Battle," U.S. Naval Institute Proceedings, March 1991: 26.

61. For example, because of their advanced PGM delivery systems, F-117 aircraft were used for the manned strikes against Baghdad, specifically to minimize civilian casualties. See John D. Morrocco, "Allied Strategists Altered Battle Plans Altered to Compensate for Dugan's Comments," Aviation Week & Space Technology 22 July 1991: 60. F-117s cannot be launched from aircraft carriers.

62. Indeed, 90% of the air launched PGMs were dropped from *Air Force* planes. See U.S. Air Force, Reaching Globally, Reaching Powerfully: The United States Air Force in the Gulf War (Washington: USAF, September 1991) 28, 56.

63. Sun Tzu 77.

64. For example, Colonel Harry Summers, USA (Ret.), considered one of the foremost experts on Clausewitz's strategic thought, grossly underestimated the effectiveness of air power in the Gulf war. See David C. Morrison, "Gulf War Punditry, Vietnam Lessons," National Journal 9 March 1991: 592. Moreover, PGMs employed in the raid on Libya "failed to live up to the promises made for them." See Stephen Budiansky et al., "Air Power's Ultimate Test," U.S. News & World Report 28 January 1991: 30. David C. Martin and John Walcott, Best Laid Plans (New York: Touchstone, 1989) 305-313.

65. The press conceded that the "Pentagon did a masterly job of controlling the flow of information." See Richard Zoglin, "It Was a Public relations Rout Too," Time 11 March 1991: 56.

66. U.S. Air Force, Reaching Globally, Reaching Powerfully: The United States Air Force in the Gulf War (Washington: USAF, September 1991) 36. The press conceded that the "Pentagon did a masterly job of controlling the flow of information." See Richard Zoglin, "It Was a Public relations Rout Too," Time 11 March 1991: 56.

67. Sun Tzu 63 [emphasis added].

68. In a pre-War article H.D.S. Greenway suggests Sun Tzu has lessons for all parties to the crisis. see H.D.S. Greenway, "Son of Sun Tzu," Washington Post 16 December 1990: K4.

69. Sun Tzu 122.

70. William Shakespeare, "Henry V." The Dictionary of Military and Naval Quotations.
Ed. Robert D. Heintz, Jr. Annapolis: US Naval Institute, 1966. 102.