The first definition of surprise in *Merriam-Webster's Collegiate Dictionary* says, "to attack unexpectedly; also: to capture by an unexpected attack." It is interesting that the dictionary places the word *surprise* within a military context. Yet, the definition falls short of describing the essential elements of military surprise. In keeping with Webster's, Army and Air Force doctrine is constructed using this terminology as a framework. The development of technology that diminishes or eliminates surprise may require a reevaluation of defense strategies currently thought sufficient.

*Air Force Manual (AFM) 1-1, Basic Aerospace Doctrine of the United States Air Force,* describes surprise this way:

*Strike the enemy at a time or place or in a manner for which he is unprepared* [italics in original]. To a large degree, the principle of surprise is the reciprocal of the principle of security. Concealing one's capabilities and intentions creates the opportunity to strike the enemy when he is unaware or unprepared, but *strategic surprise is difficult to achieve* [italics added]. Rapid advances in strategic surveillance technology make it increasingly difficult to mask or cloak large-scale marshaling or movement of personnel and equipment.

Clearly, Air Force doctrine acknowledges that quantum advances in overhead surveillance technology seriously jeopardize the military's ability to achieve strategic surprise. While the statement that "surprise is difficult to achieve" does not speak to the past, it certainly describes current and expected conditions of war fighting. Army doctrine seems to concur. The newest Army Field Manual (FM) 100-5, *Operations,* has modified its understanding of surprise while still maintaining that achieving outright
surprise once hostilities have begun is difficult. The proliferation of modern
surveillance and warning systems and the presence of global commercial news
networks make complete surprise less likely.  

This new understanding seems to come closer to the mark than previous FM-
100 definitions. Yet the essence of this understanding is based upon the capability of
technology to negate the potential for surprise at the strategic and, less consistently, at
the operational level of war.

Each of these services has relegated strategic surprise to the annals of history
or, at best, to the realm of being "difficult to achieve." The nature of strategic surprise,
however, suggests a future different from that which is currently supposed.

The underlying assumption of current thought places considerable "faith" in the
efficacy, reliability, timeliness, and accuracy of intelligence. Faith in intelligence,
including overhead imagery, is a two-edged sword: we believe it prevents others from
achieving surprise against us and believe it keeps us from surprising others. If this
faith is unfounded, then we face the sword ourselves. Consequently, this belief system
requires a close examination.

The thesis of this article is that strategic surprise is difficult to prevent, even in
the face of accurate and timely intelligence (including overhead imagery), because it is
based on exploiting a leader's or nation's personality and characteristics as well as the
bureaucracies that serve them. Historical evidence seems to indicate that strategic
surprise in the twentieth century has rarely been prevented despite a plethora of
available intelligence. If the presence of reliable and timely intelligence does not
prevent surprise, then a reevaluation of our current thinking is in order. Strategic
surprise, in this case, may not only be possible, it may be inevitable. This is a sword that also cuts both ways. While we may not be able to prevent strategic surprise, we can expect to use this principle of war to our military advantage.

This article examines the elements of strategic surprise—its foundation, nature, and potential. It proposes a notional definition for strategic surprise that offers a more relevant application to the military art. Additionally, it identifies and examines the validity of assumptions that form the basis for military doctrine on strategic surprise. It uses historical case studies to test the assumptions of current doctrine that link the availability of intelligence to strategic surprise. Finally, it draws conclusions and makes recommendations for those at the operational level and those involved in restructuring a shrinking military force.

It is significant that Joint Publication (Pub) 1 acknowledges, "The principles of war [of which surprise in one] represent the best efforts of military thinkers to identify those aspects of warfare that are universally true and relevant" (italics mine).4 It is possible that this concert of thought generally refers to the operational and tactical levels. Yet, US history is not without examples of surprise at the strategic level—both inflicting it and receiving it. Consequently, it is more logical to conclude that joint doctrine acknowledges the potential for surprise at any level. If this is so, then a thorough investigation of strategic surprise is in order before we discard what was previously believed as "true and relevant."

The Nature, Definition, and Potential of Strategic Surprise

There are two schools of thought regarding the potential for strategic surprise that provide a framework for contemporary military theorists. In one corner stand Carl
von Clausewitz and Henri de Jomini and in the other Sun Tzu. Certainly, the age in which each lived influenced their assessment of surprise.

Clausewitz takes a dim view of the potential for strategic surprise:

While the wish to achieve surprise is common and, indeed, indispensable, and while it is true that it will never be completely ineffective, it is equally true that by its very nature surprise can rarely be outstandingly successful. . . . It is very rare therefore that one side surprises another, either by an attack or by preparations for war.⁵

Jomini, too, disparages the potential for achieving surprise in even more drastic terms than Clausewitz:

The surprise of an army is now next to an impossibility. . . . Prearranged surprises are rare and difficult because in order to plan one it becomes necessary to have an accurate knowledge of the enemy's camp.⁶

Interestingly, Jomini unwittingly presages the potential for surprise should the means (technology?) exist to get "accurate knowledge of the enemy's camp."

In the opposing corner, Sun Tzu expresses considerable faith in the potential for surprise to assist the commander. In Barton Whaley's *Compilation of Principles of War*, surprise ranked third in priority for Sun Tzu, sixth for Clausewitz, and not at all for Jomini.⁷ Sun Tzu advocates surprise through conversations between his commanders:

*Chang Yu:* . . . Come like the wind, go like lightning. . . . The enemy must not know where I intend to give battle. For if he does not know where I intend to give battle he must prepare in a great many places [italics in original]. . . . Take him unaware by surprise attacks where he is unprepared. Hit him suddenly with shock troops.⁸

In fairness, Sun Tzu and Clausewitz were speaking about surprise from different vantage points. Michael I. Handel writes that "when Clausewitz speaks of the near-impossibility of achieving surprise, he is primarily referring to the higher operational or
strategic levels, whereas Sun Tzu's high estimation of the utility of surprise is mainly in
the context of the tactical level of war. Jomini also discards surprise at the strategic
and operational levels. In summary, at the operational and strategic levels of war, the
three theorists agree more than they differ.

While these theorists reject the potential for strategic surprise due to a lack of
available intelligence, Jomini believed attaining timely or accurate intelligence of the
enemy's camp was unlikely. The availability of reliable intelligence sources and data
might have altered his disdain for strategic surprise. Had comprehensive intelligence
been available (imagery, etc.), it is likely that these theorists would have retained their
low opinion of surprise, but for exactly the opposite reason. That is, because I know all
about the enemy's camp, and he knows all about me, strategic surprise isn't possible.
This brings the reasoning full circle to the place where we find current military thought.

The weight of academia appears to place current military thought and doctrine
on solid ground. Yet, theorists and their theories must be borne out by practical and
historical example. A closer examination of historical examples is provided in this
article to determine whether technological intelligence, and intelligence in general,
provides the means to prevent or achieve strategic surprise.

Exploring the nature and definition of strategic surprise, and reasons for its
success or failure, are essential to correctly interpreting historical examples in which
this phenomenon occurs. Yet, the nature of strategic surprise is more inscrutable than
is readily apparent. According to Handel, "the study of strategic surprise can be rather
disappointing for those who have always assumed that a better theoretical
understanding of the subject at hand would logically lead to the discovery of more
effective practical means to anticipate strategic surprise and alleviate its impact." 10 If so, then a cursory look at the subject is pointless, and conclusions derived from such studies should be eyed cautiously.

Thus, the nature of strategic surprise is not as simple as it appears at first blush. Surprise is not an absolute reality but a relative concept, and rarely an all or nothing proposition. Further, it is not usually one-dimensional and may involve different facets and phases. If only one facet or phase succeeds out of several attempted, the condition of surprise is still created. (A man who purchases 10 lottery tickets and wins on one does not consider the purchase a wasted effort.)

Finally, though only peripheral to this article's interest, strategic surprise springs from well-developed intelligence operations. In most cases, examples of achieving surprise include aspects of deception operations, confusing the victim with illusions in the midst of reality. Political and military leaders unschooled in the art of deception—and even those familiar with such operations—find it difficult to distinguish between deception and reality. Therefore, skill in these areas can provide leaders at the operational and strategic levels with the tools needed to ably develop plans to achieve surprise from their respective positions.

Coming to a clearer understanding of the nature and foundation of strategic surprise is the first step towards producing a definition that is consistent with history, relevant to the present, and useful for the future. This, in turn, should provide a solid foundation upon which coherent doctrine can be constructed.
The Definition Redefined

As indicated in the introduction, the current dictionary definition of *surprise* has a more lexical than practical value. Certainly, as Webster concludes, to surprise is "to attack unexpectedly . . . to capture by an unexpected attack." Yet war is not won without losses or fought without opponents, and surprise is not an absolute but a relative concept. If it took two weeks to prepare defenses against a Soviet invasion of Central Europe and only two days warning was received, the Soviets would have achieved strategic surprise. Defenses would be inadequate to the task by the time the first tanks were rolled across the Fulda Gap.

While lines are blurred between strategic and operational aspects of surprise, certain characteristics are apparent. Strategic surprise is generally understood to occur during initial and, generally, major operations against the enemy. Normally, these operations are launched on directions from the highest levels of government and involve assets and devices not normally assigned to the operational commander. These are usually directed at a single theater of operations. (Due to the enormous size of such operations, most nations are constrained by cost and personnel from undertaking more than one of them at a time.) Operation Overlord, the Allied invasion of Normandy, is a good example of this. It was launched from within the European theater, initiated above the operational commander and involved national intelligence assets and plans (Ultra, Double Cross, Operation Fortitude South), which were all used to deceive the Germans as to the site of the Allied invasion.

If surprise is rarely complete, it is achieved in spite of some enemy expectation or anticipation. Even in World War II France, Hitler had a good idea that the Allies
would attack at any moment along the coast of France. There were numerous warning signs in the preceding weeks that led to his conclusion about the Allies' intentions. Within Webster's definition, however, there is room to argue that this operation was not a surprise. The point here is not to demean Webster but to point out the definition's limitations and relevancy, especially in light of current technology, for developing military doctrine.

A better definition of surprise would be "an attack that achieves a military advantage in the face of inadequate defenses or an unprepared enemy." Within this definition, allowances can be made for the normal warning signals an enemy receives before the attack. Furthermore, enemy preparations do not negate the advantage of surprise, if these preparations are less than adequate. While the German army in World War II had some defenses in Sicily and Normandy, they were less than adequate to the task when the Allies launched each operation. The advantage of strategic surprise was achieved, not because it was "unexpected" or "without warning" but because the enemy was led to make preparations that were inadequate to the task. In the case of Sicily, the Germans had diverted their defenses to Greece and, in France, to Pas de Calais.

Strategic surprise is often achieved in the face of an enemy unable to determine exactly where or when their opponent will attack. It is this brief gap of knowledge, a moment of time, or ignorance of intended method, that opens the door for strategic surprise. In war, this "gap" can involve time, location, method, or weight of an impending attack. Knowing a part of the plan is not enough to prevent strategic surprise, which is why it has been so often successful.
This redefinition, for military purposes, recognizes that strategic surprise occurs, not in the absence of enemy awareness, but in spite it. It acknowledges surprise as being more or less successful, depending on the state of enemy preparedness and defenses. It distinguishes surprise from the strictly lexical, and apparently doctrinal belief, of existing only when it is completely unexpected. This also is a far better understanding of how strategic surprise works, especially in an era in which technology has compressed time. The "gap" of warning time involved weeks in the early twentieth century, days during World War II, and now may be no more than hours (minutes in the case of intercontinental ballistic missiles). In this case, an enemy may have the intelligence capability to anticipate an attack yet be unable to prepare adequate defenses.

Unbalanced technology development between offensive weapons and defensive systems may yield a condition where no adequate defense exists. An attack under these conditions, where the enemy is aware of their own lack of defense, would hardly be a surprise. However, rapid and revolutionary technology developments in time of war is the rule rather than the exception. In such cases, the enemy can be surprised by the rapid appearance of new technologies that unbalance systems that were once roughly equivalent. (The fevered pitch of atomic research during the 1940s suggests that results occurred earlier than similar research under peacetime conditions. The application of talent, money, and government support should not be underestimated in developing new technologies during periods of crisis.)

With such potential, it seems less plausible to believe that surprise is in the realm of being "difficult to achieve." In these cases, the repercussions of
miscalculating the nature of strategic surprise are enormous. If weapons proliferation is increasing in a world fractured by multi-polar schisms, then coherent policy and doctrine is essential—especially in light of the unstable nature of nations seeking and acquiring nuclear, biological, and chemical (NBC) weapons.

This is a fundamental change of thinking from the current "all or nothing" approach. This approach may be both unworkable and historically untenable. Strategic surprise may be returned to leaders and commanders if planning involves methods and means to exploit these "gaps" of enemy awareness and corresponding weakness. The enemy may not be blind but may have enough blind spots to enable friendly forces to achieve strategic surprise.

Turning points in history and battles often occurred when resourceful individuals or nations found the means to do what conventional wisdom believed "impossible" or "difficult to achieve." The benefits of strategic surprise are too great for future adversaries to quickly abandon their search for the means to achieve it. Inversely, the potential consequences of misunderstanding or miscalculating its potential for harm and benefit should provide sufficient impetus for further military study.

Potential

The potential of strategic surprise is commonly viewed as a force multiplier. It creates the environment in which fewer lives and materials are spent in pursuit of national policy goals. "A successful unanticipated attack will facilitate the destruction of a sizable portion of the enemy's forces at a lower cost to the attacker by throwing the inherently stronger defense psychologically off balance, and hence temporarily reducing his resistance."11
Traditionally, *weaker* nations have more diligently sought to maximize their strength using force multipliers. Any activity that is viewed as a force multiplier (intelligence operations, deception, surprise, etc.) have been historically disdained by superpower nations. "Clearly, then, the incentive to resort to strategic surprise (as well as to deception) is particularly strong for countries that are only too cognizant of their relative vulnerability."\(^{12}\)

Recent contractions in superpower military forces will evoke more interest in tools that stretch diminishing resources while simultaneously increasing combat capabilities.

Along with saving lives and material, strategic surprise has the capacity to create something more intangible and insidious—a reaction paralysis. During preparations for launching an invasion in the Mediterranean, the British in World War II conducted a complex deception operation known as Operation Mincemeat. The goal was to make the Germans think that the Allies, who were preparing to land in Sicily, were about to land in Greece. The operation was so successful, and surprise so complete, that reaction paralysis occurred among the German High Command. Ewen Montague, who conducted this deception operation, concluded:

> It is clear that Hitler was completely sold on the idea that we were intending to land in Greece and, now that he had come to this conclusion, he stuck firmly to it. So much so that, on 23rd July, *nearly a fortnight after the Allied landing in Sicily, Hitler still believed that the main operation was going to be an invasion of Greece*, and appointed his favorite general, General Rommel, to command the forces that were being assembled there. [Italics in original]\(^{13}\)

In the Allied invasion of Europe, surprise was essential to reducing casualties and creating the best possibility for success. An intricate deception plan, Operation
Fortitude, produced this desired effect. This plan created a notional landing site and time in the area of Pas de Calais. Again, surprise was achieved to such a degree that when the invasion began in Normandy, German commanders were away from their troops, some even vacationing.\textsuperscript{14} Again, reaction paralysis occurred:

Moreover, because the German commanders (until the end of the second week) and Hitler (\textit{for seven weeks}) feared that the Normandy landings might be a feint to draw away forces from the intended main invasion in the Pas de Calais, the front was not reinforced to the extent that was desirable. Nor would Hitler allow any evacuation of the South of France either.\ldots \textsuperscript{15} [Italics in original]

The effect of this delay for the German High Command was catastrophic. With the Allies having an advantage of men and material, as well as complete air superiority, the Germans were unable to stem the Allied momentum. Notional or phantom, diversions at Pas de Calais and Greece amplified the effect of surprise and extended the paralysis—in these cases, for a period of several weeks.

The potential for harm or benefit nears the infinite in the category of nuclear weapons. Predicting and anticipating strategic surprise is far more difficult when there are only minutes rather than months to react appropriately. The proliferation of nuclear weapons to third world countries is not just a matter of concern but a matter of fact. If an attack were to be launched from such a nation on the US, what kind of assistance would launch-warning indicators provide? Indeed, while the attack may be limited to one or two weapons, the decision to respond or not, and at what level, would be far more complex than it was during the period of superpower confrontation. The one unalterable fact remaining from the cold war era is that missile flight times are still very short and adequate defenses do not yet exist.
Certain weaker nations may find the temptation to use such weapons irresistible, righting with one blow the perceived or real injustices suffered at the hands of disparate nations. The United States may face smaller, nuclear-capable nations who have no reservations about using these devices as "great equalizers." In any case, warning signals would be minimal.

It is no longer necessary for the aggressor to undertake huge movements of troops and ships in the weeks preceding an all-out war. . . . [Nuclear weapons from all platforms] have the capability of delivering a blow many times more devastating than anything imaginable without yielding any substantial intelligence warning. (Italics added)\textsuperscript{16}

Surprise is a powerful force multiplier that each side desires to achieve. The ability to reduce casualties and material losses and to ensure success and create a reaction paralysis are the benefits of creating such a condition.

Current military doctrine indicates an assumption that overhead technology negates strategic surprise and, inversely, any country possessing such capability cannot be strategically surprised. The doctrine also assumes a timely and unfettered flow of such information to appropriate decision makers. It is a kind of decision by algebra. That is, if timely and accurate intelligence is available, logical decisions will follow, military preparations will be adequate, and surprise will be prevented. If this is so, then historical examples will bear this out.

Despite current doctrine, the weight of history argues against this line of thinking. Strategic surprise has far more to do with the psychology and nature of man and his affairs than with the availability of intelligence. Either way, history should demonstrate whether the availability of accurate and timely intelligence is sufficient to prevent strategic surprise.
Intelligence and Surprise—Historical Overview

Current doctrine presupposes technology has done what previous technology and intelligence operations could not do to prevent strategic surprise. Yet, as will be shown in the following examples, the seeds of surprise originate in the heart and are sown by exploiting the nature of leaders and nations and the bureaucracies that serve them. Thus far, technology has yet to penetrate this enigma called man and reliably discern his intentions.

Beginning in the 1970s, the US pursued a course away from HUMINT (intelligence derived from human resources) and increased its reliance on technology. (This began during the 1970s when the idea of "spying" fell into disfavor under the Carter administration.) The technological approach to intelligence gathering has fiscal advantages and is relatively responsive to short-notice demands. Yet, even photographs cannot necessarily tell a leader the significance and meaning of what he is viewing. Technology may prove unreliable in the future, as it has in the past, when asked to do the yeoman work of predicting and preventing strategic surprise.

A brief look at some recent case studies will help determine the key elements that create the conditions that result in strategic surprise. Obviously, they vary from case to case, yet, three significant points emerge relevant to this discussion. First, strategic surprise occurred in the face of sufficient and accurate intelligence data (including photographic reconnaissance), not in the absence of it. Second, surprise exploited the nature of a leader or nation. The personalities, idiosyncrasies, peculiarities, and weakness of man all served as building blocks to create strategic surprise by a resourceful and committed enemy. Third, intelligence networks
themselves served as clogged conduits through which valuable information failed to flow.

These suppositions should be evident from the following three case studies. Space alone prevents a comprehensive study of the nearly two dozen examples of strategic surprise that have occurred since the outbreak of World War II. Another case, the Cuban missile crisis, is included to demonstrate how technology has made surprise difficult to achieve.

**Pearl Harbor—December 1941**

If our intelligence system and all our other channels of information failed to produce an accurate image of Japanese intentions and capabilities, it was not for want of the relevant materials. Never before have we had so complete an intelligence picture of the enemy.¹⁷

The committees and commissions that studied the attack on Pearl Harbor shortly after the war came to a similar conclusion: there was no lack of information on Japanese intentions, capabilities, communications, codes, and changes in operating procedures before the attack. Significant amounts of intelligence preceded the "surprise attack" to provide sufficient warning and should have been relayed by, to, and through elements of military forces stationed in Hawaii.

First, the US had broken the top-priority Japanese diplomatic code, which gave us access to communications between Tokyo and major embassies around the world.¹⁶

Additionally, "cryptanalysts also had some success in reading codes by Japanese agents in major American and foreign ports. [Magic was the code name for the US program for breaking Japanese codes]. . . . Our naval leaders also had at their disposal the results of radio traffic analysis."¹⁹ Unfortunately, no single person or
central collection agency ever had control of all these intercepts. They were divided between numerous agencies (as is the case today). "Some [intelligence data] traveled through rapid channels of communication, some were blocked by technical or procedural delays; some never reached a center of decision."^{20}

The bureaucratic failings and infighting among intelligence agencies is not particularly surprising. Each competes for limited funding and prestige. It is the nature of all bureaucracies to withhold embarrassing sensitive information, promote their own self-interests and proceed cautiously in the face of uncertainty. (Witness the recent admissions of the Central Intelligence Agency and the Federal Bureau of Investigation over their complicity in failing to coordinate intelligence gathered in the Bank of Commerce and Credit prosecution. The results in this case left the Justice Department holding an empty gun and unable to effectively prosecute their case).

On the diplomatic front, Magic analysis indicated that Tokyo was directing their ambassadors to vigorously pursue a diplomatic resolution to the growing conflict with Washington. Washington had knowledge of Tokyo's deadline "for the favorable conclusion of the negotiations, first for November 25, later postponed until November 29. In case of failure . . . Japan was determined to pursue her policy and 'things' would automatically begin to happen."^{21} Finally, information was passed to Ambassador Joseph C. Grew (and on to Washington) in January 1941 of a secret Japanese plan to attack Pearl Harbor. This information was discounted as unreliable.

The signals available to military and civilian authorities numbered in the dozens. Yet, "for every signal that arrived in 1941, there were usually several plausible alternative explanations, and it is not surprising that our observers and analysts were
inclined to select the explanations that fitted the popular hypothesis.\textsuperscript{22} This is a common phenomenon in intelligence analysis. Presupposed ideas are the glasses through which new intelligence data is seen and evaluated.

While signals were available, compartmentalization of secret information (such as Magic) meant few individuals had access to critical intelligence. Additionally, rivalries between military intelligence agencies further obstructed complete analysis and dissemination of available intelligence. Somewhat surprisingly, this kind of adversarial relationship existed among organizations within a single branch of service. "The most glaring example of rivalry in the Pearl Harbor case was that between Naval War Plans and Naval Intelligence."\textsuperscript{23}

Further exacerbating the problem was the low opinion held of intelligence analysts in the Pacific theater and correspondingly low budgets to finance their activities. Yet, during the same period England, Germany, and Japan raised intelligence budgets to a level that Congress regarded as utterly ludicrous.

In view of these problems, it is not surprising that the attack at Pearl Harbor resulted in an unpleasant strategic surprise for the United States. Even more distressing is the incident that occurred in the Philippines the following day.

The information that Pearl Harbor had been attacked arrived at Manila early in the morning of December 8 giving the Philippine forces some 9-10 hours to prepare for an attack. General MacArthur had received a war warning similar to the one received by General Short in Hawaii before the Japanese attacked there. There was no sense of urgency in preparing for a Japanese air attack . . . . When the Japanese bombers arrived shortly after noon, they found all the American aircraft wingtip to wingtip on the ground.\textsuperscript{24}
Clearly, signals from multiple sources indicated unfriendly and, in some cases, hostile Japanese intentions towards America. Yet, at Pearl Harbor, and later in the Philippines, the Japanese achieved strategic surprise—not in the absence of intelligence but in the face of it.

Could photographic evidence have prevented such an attack? The possibility cannot be completely ruled out, yet the intelligence evidence available was routinely interpreted as nonhostile. Even photographic evidence is interpreted in the light of currently held assumptions. That is both the rub and paradox. The best intelligence data can tell the entire story of an enemy and still be ruled "inconsequential," "unconvincing," or "so-what?" by analysts or politicians. "There is a good deal of evidence, some of it quantitative, that in conditions of great uncertainty people tend to predict that events they want to happen will actually happen."25 Those wishful thoughts may or may not correspond to the events at hand.

The surprise at Pearl Harbor happened for many reasons, but the lack of intelligence was not one of them. Bureaucratic infighting and rivalries, wishful thinking about Japanese intentions, failure to heed overt warnings, lack of diligent preparations, and general disbelief in the likelihood of attack led to this disaster. These are the real problems that preceded the strategic surprise at Pearl Harbor.

**Stalin and Operation Barbarossa—June 1941**

While there were numerous culprits in the surprise at Pearl Harbor, Joseph Stalin himself bears most of the blame for the surprise of Operation Barbarossa (Germany's 1941 invasion of the Soviet Union). In the preceding years, Stalin had led a series of bloody purges that eliminated his most capable military and civilian leaders.
So few senior leaders remained in June 1940 that Stalin promoted 479 officers to major general, the largest mass promotion of any army in history. With such inexperienced leadership, one might initially conclude Stalin was failed by those around him. Yet, the facts of the case don’t bear this out.

As was the case of Pearl Harbor, there was a plethora of intelligence available to the Soviets prior to the initiation of hostilities. Unlike the Pearl Harbor case, the intelligence was less cryptic and emanated from an even greater variety of sources. The key elements in this strategic surprise centered around Stalin—his wishful thinking, denial, and desire to save political face.

Beginning on the diplomatic front prior to hostilities, Stalin was well informed by both British and American governments that Germany had decided to attack Russia. These estimates came from Ultra (decipher of German secret messages by British Intelligence) HUMINT traffic decodes and sources in the Lucy network (a spy ring) operating from Switzerland. Stalin viewed these warnings as nothing more than provocations, believing the West was trying to goad him into entering the war. He viewed the West far more suspiciously than he did Germany. "It is obvious from his statements, speeches and addresses [Stalin] considered Britain the chief enemy of Russia."  

On the spy front, Stalin received excellent information from agents operating in Germany and Tokyo. "Richard Sorge [a double agent] was even able to report—from Tokyo on 15 May—the exact date of the impending German invasion and the details of Hitler's plans."
A lack of intelligence in this case could not be used as a plausible excuse for the
surprise of 22 June. "Throughout pre-war 1941 intelligence flooded the Kremlin from
various sources, among which were Winston Churchill, the American State
Department, Soviet military attachés, Soviet frontier troops, Soviet Military District
headquarters and German army deserters." Amazingly, Stalin continued to deny any
reports of German hostilities even after being attacked. Reports of the invasion began
to flood the Kremlin, yet Stalin considered them only provocations by renegade German
generals. The list goes on and on.

Stalin had invested a great deal of faith and political prestige in the Molotov-
Ribbentrop Pact of 1939. Determined to placate Hitler, Stalin continued to grant
Germany concessions (beyond treaty requirements) and strictly adhered to the
economic terms of the pact. His investment of political prestige in averting a war with
Germany led him to continue to deny incontrovertible intelligence that told a different
story. Political leaders, where the power to avert strategic surprise finally rests, see
through glasses fogged with issues not normally faced by the military.

Stalin also exhibited a strong tendency towards wishful thinking and denial in the
days preceding the hostilities. This is not uncommon in both governments and
individuals involved in moments of crisis situations. As mentioned before, during
periods of crisis many people react upon a priori beliefs of how that unexpected crisis
would develop. This may have little to do with the actual event itself.

Would satellite surveillance have made a difference in the case of Operation
Barbarossa? Various sources indicate that Stalin had upwards of 200 different
confirmations of an impending attack from Germany. Photographic intelligence would
not have prevented strategic surprise considering the fact that four hours after hostilities began, Stalin was still rejecting reports that Germany had invaded.

This case demonstrated the relationship between political leadership and achieving strategic surprise as well as the role of wishful thinking and reality denial in the face of unpleasant or unexpected intelligence. The weaknesses and strengths of a leader and nation are always available for resourceful enemies to exploit for this purpose.

Invasion of Kuwait—August 1990

The Iraqi invasion of Kuwait on 2 August 1990 demonstrated the difficulty in preventing strategic surprise, even in the age of satellite technology. Further, American diplomatic involvement was significant in the period of months preceding the outbreak of hostilities. Two important aspects of strategic surprise are evident from this particular case. First, intentions are difficult to measure and far more important in predicting and preventing surprise than the intelligence data itself. Second, satellite surveillance did not deter, predict, or prevent the Iraqi dash into Kuwait.

Aviation Week & Space Technology summed up the feeling of many when it reported in September 1990, "U.S. military planners, preoccupied with the post-cold war drawdown in Europe, were caught unprepared by the Iraqi invasion of Kuwait." The same comment could have been made about the administration in general, in spite of preinvasion diplomatic contact with the Hussein regime.

The diplomatic signals that were sent, but not received, began in February and ended just one week prior to the attack. If these signals were obscure to the American embassy in Baghdad, the tanks massing on the northern border of Kuwait
should have given pause for a more thorough investigation. Undoubtedly, the concerns that rose from satellite confirmation of this fact were put to rest by the assurances of Saddam Hussein to Ambassador April Glaspie. The mere ownership of sophisticated intelligence data did not prevent surprise in this situation.

The second relevant case in point relates to the satellites themselves. A Kuwaiti-owned Westinghouse system known as LASS (low-altitude surveillance system) "gave Kuwait the first warning of the Iraqi attack."\(^{35}\) The warning came at 0200 on 2 August, enough time for the royal family to flee, but not enough to prepare adequate defenses. The Kuwaiti military, unable or unprepared to face the Iraqi onslaught, fled into Saudi Arabia. Once the attack occurred, the American military began to shift satellites into an orbit that could provide round-the-clock coverage of the area.\(^{36}\) Nevertheless, this was after the fact. The ability to detect is one part of the equation. The ability to prevent strategic surprise is far more complex and difficult, as can be seen in this case.

The mere possession of satellite intelligence is not as significant as how the data is interpreted and briefed to political leaders. Moreover, the political interpretation of developing events is more likely to prevail than a technical evaluation of the intelligence data itself. This proved to be the weakness in the case of Iraq and Kuwait, at least from the Kuwaiti point of view.

**The Cuban Missile Crisis—October 1962**

Presenting a case in which strategic surprise has failed is not as simple as it seems. When a nation announces it has uncovered hostile intentions of a foreign power, the discovered nation is likely to deny the charge and call off its plans. (There
is certainly some evidence that this happened in the Middle East in 1973. Six months prior to the war, Israel discovered Egyptian invasion plans and announced them publicly. Egypt denied everything.) Nevertheless, the Cuban missile crisis presents an adequate case to support the current belief that satellite surveillance has made strategic surprise difficult to achieve. This case is also appropriate because it had the potential to alter the balance of power in a strategic way.

After the Bay of Pigs fiasco, which is widely accepted as an intelligence disaster, and numerous overt and covert US actions to weaken the Castro regime, Russia determined to shore up its socialist partner. Believing that Russian missiles in Cuba would be analogous to the US missiles in Turkey, Premier Nikita Khrushchev decided in April 1962 to make preparations to place medium-range missiles in Cuba.37

Believing this would be viewed as legitimate, especially if the operation was finished and presented as a fait accompli to the US, he used means that undermined this legitimacy. The means he used were covert, and ultimately Soviet weapons were not viewed as analogous to the US missiles in Turkey. US missiles had been placed there in a conspicuously overt manner. Secrecy undermined the legitimacy Khrushchev sought to gain through his actions. How these missiles were discovered, however, is the aspect of this case most pertinent to this article.

Early in September 1962, reports began to filter in from Cuba that Soviet ballistic missiles were being placed there. (These missiles are not the ones President Kennedy spoke about in his 4 September speech, in which he decried the buildup of Soviet military advisors and the introduction of antiaircraft missiles into Cuba.) At this time, the reports of ballistic missiles were originating strictly from hundreds of Cuban
refugees who were streaming into the country through Florida. These reports were what initiated further official US actions. At the same time, Sen Kenneth B. Keating (R-N.Y.) began to state he had proof of Soviet offensive weapons in Cuba. On 9 October, he rose to announce he had evidence of Soviet offensive missiles in Cuba. (Senator Keating never disclosed his source for these statements.)

These events led the administration to test the veracity of these unconfirmed reports on Cuban missiles by reinvigorating intelligence gathering there. (Intelligence collection had, apparently, fallen precipitously following the Bay of Pigs invasion and subsequent public opinion furor.) This diminished intelligence capability produced the questionable statement before Congress on 3 October by Under Secretary of State George Ball that "our intelligence is very good that the military equipment supplied to Cuba does not offer any offensive capabilities." At the time of Keating's speech, American intelligence had not yet uncovered the missiles. On 3 October, "CIA director John McCone ordered U-2 flights over western Cuba." On 5 October, the sights were determined to be launching beds for Soviet medium-range ballistic missiles. The end of the matter resulted in the removal of Soviet missiles from Cuba with a corresponding promise from America not to invade there.

At first blush, this would seem to be a case for the efficacy of intelligence and photography to prevent strategic surprise. This idea cannot be negated in its entirety. Yet, a closer look at the facts in this case is warranted. What intelligence believed and what the facts were in this case indicate that there is a shortfall in what imagery and intelligence can provide.

One consequence of the American failure to recognize the buildup of a Soviet military contingent was a serious underestimation of the number of
Soviet military personnel in Cuba. In September and early October the number was estimated at 4,000 to 4,500. By October 22, after identifying the missile bases (through U-2 imagery) the total was revised at 8,000 to 10,000. Later, the estimates were revised again to 12,000 to 16,000 troops. . . . Retroactive estimates in early 1963 raised the total to 22,000 and were never later revised.\(^{42}\)

How accurate were any of these figures? In 1979, Castro claimed there had been 40,000 Soviet troops in Cuba, though few believed him. However, "several Soviet sources have now confirmed that in fact, 42,000 Soviet military personnel were in Cuba at the time of the crisis. (Obviously, due to the quarantine, these arrived before the crisis, otherwise even more would have arrived.)\(^{43}\)

As to the photographic intelligence, serious efforts to determine what in fact was going on in Cuba began after revelations from other sources. Once information came to light that the area in question was on the western side of Cuba, CIA director John McCone redirected U-2 flights there. Even then, overcast skies delayed useful imagery for a day and a half. (Weather is still an issue, some 30 years later, when gathering intelligence using satellites.)

In summary, a case can be made that intelligence averted strategic surprise in Cuba in 1962. Yet, the facts of the case lead one to believe that the results are less than conclusive. Further, open sources drove the discoveries long before intelligence networks alerted the national command authorities. To depend on such fortuitous circumstances in the future is rather like tempting fate. Clearly, preparations must be more than adequate for whatever contingencies the future has to offer.
Conclusions and Recommendations

Napoleon once said, "Uncertainty is the essence of war, surprise its rule."\textsuperscript{44} Doctrine that supposes otherwise should be eyed cautiously. In spite of quantum advances in technological intelligence gathering, there has been no similar developments in identifying means to avert strategic surprise.

If so, this raises some discomforting issues for military leaders as well as nations at risk. Indeed, no nation can be confidently immune from being strategically surprised. Nevertheless, "history provides us with the consoling observation that there is no direct correlation between achieving the highest degree of surprise at the outbreak of a war and ultimately emerging victorious."\textsuperscript{45} The cases of surprise during World War II certainly bear this out.

If surprise is inevitable, as this article and the weight of history seem to indicate, then some changes need to be made in the way we view strategic surprise. First, a restatement of surprise, as written in FM 100-5 and AFM 1-1 needs to be made. Rather than "strategic surprise is difficult to achieve" (in light of technological advances in strategic surveillance), a more accurate view would be \textit{strategic surprise is difficult to prevent, in spite of technological advances in strategic surveillance}. Consequently, the military officer must be prepared to fight initial engagements at a disadvantage and in the midst of great confusion, loss of equipment and personnel, and a certain amount of disorder.

Specifically, certain changes are prudent in preparing for the aftermath of surprise. Dr Michael Handel, professor of strategy and policy at the Naval War College, suggests consideration be given to the following areas.
a. Upgrade military plans and preparations for operations in event of surprise attack. This must include detailed contingency plans, staff exercises, and military field exercises.

b. Special emphasis must be placed on the preparations and protection of headquarters, communications centers, military airfields, mobilization centers, weapons, ammunition, and fuel depots, major bridges, tunnels, and other "choke points." All primary bases and communications centers must be able to withstand a conventional first strike in order to provide a conventional second strike capability.

c. Special plans must be drawn up to carry out effectively and even accelerate mobilization procedures under attack conditions. Furthermore, they should be maintained and checked by exercises and updated at regular intervals.

d. A variety of defensive counter-surprises, both technical and operational, should be prepared.

1. On the technological side, the defender can ready more effective anti-aircraft and/or anti-tank missiles to be operated in layered concentrations. New technologies can include dynamic mining, or the preparations of minefields that will channel the attacker into specific killing zones. . . .

2. The initiation of counter-operations, and if possible interceptor attacks, against the attacker. A select number of units should always be available for counter-operations against enemy rear echelons, air fields, and communications and supply lines, to name a few.46

The idea of emphasizing second strike capability with diminished forces is not a condition normally exercised by military commanders. In light of this, a strategic surprise exercise should comprise an important part of determining unit readiness and capability. Specifically, training should be conducted within the constraints of peacetime safety with some of the following features:

1. Begin the exercise without notice and on a holiday. Announce the exercise through local radio rather than phone lines. (Coordination would be essential here with local community leaders, yet phone lines would likely be out after a strategic surprise.) Teams could be sent to notify service members of the exercise.
2. Begin the exercise by having an impartial observer select, from a list of participants, 25 percent as being killed in action by the first strike. These may or may not be the ones who could not be located for the exercise. (The list of names should be without rank or job title—war being fairly arbitrary when it comes to these considerations.)

3. Communications throughout the affair should begin by being completely out. Restoration could be phased in, with maybe one in four messages getting through by the end of the exercise.

4. The exercise command center should be located in a place not ordinarily used for such purposes.

5. The exercise should be evaluated as any normal readiness exercise is evaluated. Obviously, perfectly simulating wartime conditions following a surprise attack is not possible in peacetime. Each service would have to design the parameters of its own strategic surprise readiness evaluation. Even so, perhaps some of the above sounds farfetched and unworkable. Yet, the examples of Pearl Harbor and Operation Barbarossa are not so remote as to be unthinkable. In a world that is becoming more, rather than less, fractured and unstable, readiness is more important than ever.

In addition to these recommendations, a further examination of doctrine needs to be undertaken. There should be an evaluation of the curriculum of midlevel and senior professional military education. It seems intuitively obvious that teaching at these institutions form the basis for service doctrine. The minds of military leaders have been sharpened in the halls of the war colleges. If these institutions, however benignly, serve to dismiss the potential for strategic surprise, then alternate viewpoints must be incorporated into a meaningful curriculum. History is replete with examples of men and nations doing exactly what was thought could not be done.

As has been shown, the nature of surprise has little to do with the presence or absence of intelligence. Rather it is conceived in the heart of man and sown by exploiting the nature of enemy leaders and nations as well as the bureaucracies that serve them. Further, intelligence networks, as one of those bureaucracies, fail at inopportune times for a variety of reasons. It is not necessarily a failing of these
networks but the nature of all bureaucracies to proceed cautiously, withhold sensitive or embarrassing information, and promote their own self-interests.

Unless the nature of man changes, the principle of strategic surprise will remain, even in the midst of surveillance technology and accurate intelligence. Francis Bacon said it best when he commented on the condition of man and his view of truth: "In the end, no matter the facts, man will believe the truth that most pleases him." It is both a statement and warning that should not be lightly dismissed.
Notes


11. Ibid.

12. Ibid., 230.


15. Ibid., 504.


17. Ibid., 382.

18. Ibid.

19. Ibid.

20. Ibid., 385.

21. Ibid., 386.

22. Ibid., 393.

23. Ibid., 395.
24. Ibid., 396.
25. Ibid., 397.
27. Ibid., 180.
30. Ibid.
31. Ibid., 310.
38. Ibid., 28.
40. Garthoff, 34.
41. Divine, 18.
42. Garthoff, 35.
43. Ibid.
44. Handel, "Intelligence and the Problem of Strategic Surprise," 270.
45. Ibid., 271.
46. Ibid.
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