

## **Slide 2: Theory of Surprise: Part 1, by James J. Wirtz**

### **Slide 3:**

Why do states, non-state actors or individuals attempt to surprise their opponents? Why do they often succeed? How does surprise affect strategic interactions, competitions in which the behavior of both sides determine the outcome? Why do some surprise initiatives succeed spectacularly, only to end in disaster for the side that initially benefited from surprise? If we can explain surprise, can we prevent it from occurring?

To answer these questions, one would have to develop a theory of surprise – a unifying explanation of why states, for example, attempt to surprise their opponents with diplomatic or military initiatives, why they succeed and how surprise helps them to achieve their objectives. Some might protest, however, that such a powerful and parsimonious explanation would be impossible to construct because of the many challenges that often bedevil those wishing to avoid surprise.<sup>1</sup> At the heart of the problem are the limits to human cognition that constrain our ability to anticipate the unexpected or novel, especially if the future fails to match our existing analytical concepts, beliefs or assumptions.<sup>2</sup> Idiosyncratic factors -- the “Ultra syndrome,” the “cry-wolf syndrome,” denial and deception or an unfavorable signal-to-noise ratio -- complicate institutional efforts at intelligence analysis and the production of finished estimates.<sup>3</sup> Compartmentalization, hierarchy, “group think,” a deference to organizational preferences or an organizational culture that creates “intelligence to please,” in other words, bureaucracy itself, can impede efforts to avoid surprise.<sup>4</sup> Historians also might note that each instance of surprise is wedded to a unique set of circumstances, institutions and personalities. They would suggest that efforts to surprise an opponent have been present throughout history, but attaining and benefiting from surprise really is embedded in a specific technical, political or military context.

### **Slide 4:**

Given this Pandora’s box of cognitive weaknesses, intelligence pathologies and bureaucratic nightmares, it is impossible to say exactly which combination of shortcomings will conspire to assist cunning opponents in surprising their victims. But it is possible to predict when and why that Pandora’s box will be opened and why its consequences can be devastating for the victim. It also is possible to explain why the side that achieved surprise can suffer a devastating setback when the box snaps shut. Additionally, the key role played by surprise in asymmetric attacks and special operations can be identified. There are discernable patterns in the history of

surprise in warfare and diplomacy, suggesting that surprise is a general phenomenon that can be explained with a general theory.<sup>5</sup>

To the best of my knowledge, the theory of surprise has never been fully articulated elsewhere. The theory is derived largely from Michael Handel's writings, especially his early philosophical musings about the nature of intelligence and surprise. It is no coincidence, therefore, that the theory of surprise is based on Clausewitz's concept of strategy and war. The theory relies on this Clausewitzian vision of war to explain why surprise is attractive to a specific party in a conflict, although it diverges sharply from the great Prussian philosopher's judgment that surprise was overrated as a strategic instrument in war. It then turns to Handel's insights about actors' incentives to base their strategy on the element of surprise and how this inherently risky enterprise increases the likelihood that efforts to achieve surprise will succeed. These insights, what I call "Handel's risk paradox," provide an important link between the structure of conflict and the psychology of surprise. The theory then explains why those who rely on surprise might win a battle, but rarely achieve overall victory in war. The theory also identifies a way at least to mitigate the threat of being victimized by surprise in the future.

### **Slide 5: War as Administration**

Surprise often is described as a force multiplier, something that increases the effectiveness of one's forces in combat. Across cultures and history, military doctrines have encouraged soldiers to incorporate surprise, along with other force multipliers such as the use of cover or maneuver, into their military operations because they increase the prospects for success and reduce casualties. In 1984, Handel summarized the battlefield advantages derived from surprise:

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 . . . the numerically inferior side is able to take the initiative by concentrating superior forces at the time and place of its choosing, thereby vastly improving the likelihood of achieving a decisive victory.<sup>6</sup>

Clearly surprise serves as a force multiplier or, as Handel notes, it allows one side to achieve the temporary numerical superiority needed to launch offensive operations. But Handel only alludes to how surprise produces this force multiplier effect.

Surprise temporarily suspends the dialectical nature of warfare (or any other strategic contest) by eliminating an active opponent from the battlefield. Surprise turns war into a stochastic exercise in which the probability of some event can be determined with a degree of certainty or, more rarely, an event in which the outcome can be not only known in advance, but determined by one side in the conflict.

Surprise literally transforms war from a strategic interaction into a matter of accounting and logistics. Probability and chance still influence administrative matters and friction still can bedevil any evolution, whether it is conducted in peacetime or in war. But surprise eliminates war's dialectic: achieving a military objective no longer is impeded by an opponent who can be expected to do everything in their power to make one's life miserable. This has a profound effect on military operations.<sup>7</sup> For example, the amount of time it might take to arrive and seize a destination can be derived from simple calculations about how fast a unit can drive down some autobahn. No account need be made for delays caused by roadblocks, blown bridges, pre-registered artillery or major enemy units astride one's path. "Without a reacting enemy," according to Edward Luttwak, "or rather to the extent and degree that surprise is achieved, the conduct of war becomes mere administration."<sup>8</sup>

## **Slide 6:**

Doctrine and planning guides universally encourage officers to incorporate surprise and other force multipliers into military operations. Even when surprise is virtually nonexistent, military planners appear compelled to explain that they have attained a degree of surprise. U.S. planners, for example, prior to the start of air strikes against Iraq in 1991 and Afghanistan in 2001, claimed they surprised their opponents, even though the attacks were preceded by very public force deployments and diplomacy.<sup>9</sup> But all of the lip service paid to the desirability of utilizing force multipliers hides the fact that surprise really offers a "silver bullet" in war. Whether it occurs at the tactical, theater, or strategic level of operations, surprise allows weak adversaries to contemplate operations that are simply beyond their capability in wartime.<sup>10</sup> Although surprise usually is a matter of degree,<sup>11</sup> when it approximates its ideal type, surprise literally makes war go away.

For a theory which is avowedly based on Clausewitz's work, it might at first appear a bit odd to reach a conclusion about the potential utility of surprise that diverges completely from the judgment of the great philosopher of war.<sup>12</sup> From a dialectical perspective, there is a cost to everything in war: operational security can prevent proper planning and briefing, diversionary attacks and deception operations can take on a life of their own or draw resources away from the main battle. Even spectacular successes like the 11 September attacks operate on the narrowest margins

of success. For instance, there simply were too few al-Qaida operatives aboard hijacked aircraft to maintain control in the face of determined opposition from the passengers and crew. But inserting more operatives into the United States only would have increased the chances of detection and overall failure of the terrorist attacks.<sup>13</sup> Clausewitz estimated that the costs of obtaining surprise generally outweighed the benefits surprise provided. Clausewitz, however, was more concerned with explaining war's dialectic and the way it shaped the nature, course and outcome of battle. What the theory of surprise posits is that under ideal circumstances that occasionally can be achieved in practice, war's dialectic can be eliminated. In other words, it identifies a way to eliminate one's opposition by pre-empting the "duel" that is war.

### **Slide 7:**

Surprise makes extraordinary kinds of military activity in warfare possible because it eliminates an active opponent from the battlefield. Special Operations or commando raids, for instance, are a good example of a type of activity that is made possible by the element of surprise. Despite their cultivated reputation for ferocity, combat skill and daring, commandos and other types of Special Forces are lightly armed, poorly supplied and generally outnumbered by their adversaries. In a pitched battle against competent conventional units, they would be quickly surrounded and outgunned. To achieve their objectives, they have become experts in unconventional modes of transportation and operations to enable them to appear and disappear in unexpected ways and at unanticipated times and places. Surprise is the key enabler of all types of unconventional operations because it allows commandos to achieve some objective or attack some target without significant opposition or no opposition at all. Surprise also creates the opportunity for special operations to produce strategic effects. A dozen or so operatives appearing at a crucial command center deep behind enemy lines can affect the course of some battle. But the same commandos would have no discernable impact on the course of a conflict if they joined a divisional engagement on the front line.<sup>14</sup>

Unless it produces complete victory, the ability of surprise to transform conflict is fleeting. Enjoying the benefits of complete surprise, the first wave of Japanese aircraft that attacked Pearl Harbor on 7 December 1941 apparently suffered few casualties. But by the time the second wave left the airspace over Oahu about two hours later, twenty-nine aircraft had been lost, even though the island's defenses had been damaged by the first wave of attacks.<sup>15</sup> When the Japanese returned in June 1942 to ambush the U.S. Navy in the waters around Midway, it had become extremely difficult to surprise Americans with a carrier air strike in the waters around Hawaii. After all, the concept was no longer novel after the attack on Pearl Harbor.

An outstanding American intelligence effort denied Japan the element of surprise that was crucial to their success in the engagement. The U.S. Navy then delivered a stunning defeat to the Japanese, making Midway the beginning of the end for Imperial Japan. Similarly, surprise was the crucial element in the 11 September 2001 terrorist attacks against the World Trade Center and the Pentagon. When passengers aboard a fourth hijacked airliner learned of their probable fate in cell phone conversations with loved ones, they stopped the terrorists from completing their mission. Without the surprise needed to prevent the passengers from realizing that they were engaged in a conflict, the terrorists lacked the forces necessary to maintain control of the aircraft.

### **Slide 8:**

Surprise is extraordinarily attractive because it allows actors to achieve objectives that would normally be well beyond their reach if they faced an alert and determined opponent. Surprise allows one side to operate with virtually no opposition. Relying on the element of surprise, however, is extraordinarily risky. It is impossible *ex ante* to guarantee that surprise will occur, or for that matter, exactly when the effects of surprise will begin to wear off, and the inability to achieve surprise will doom the operation to failure. Stronger adversaries always can rely on more predictable attrition strategies to wear down weaker opponents.<sup>16</sup> In fact, stronger adversaries generally do not want to surprise their opponents. They prefer to intimidate them into surrender by announcing clearly their intention to fight if the adversary does not comply with their demands. U.S. officials for example, made clear their intention to attack Afghanistan if the Taliban did not hand over the al-Qaida ringleaders responsible for the 11 September attacks. The Taliban might have been surprised by the way the U.S. campaign unfolded and by the speed with which their forces collapsed, but they were not really surprised by the war itself.

### **Slide 9: The Risk Paradox and Surprise**

Surprise is attractive to the weaker party in a conflict because it allows it to contemplate decisive actions against a stronger adversary.<sup>17</sup> But because achieving surprise is a risky proposition and because it allows actors to consider initiatives that are beyond their capabilities, the victim of surprise often will dismiss potential surprise scenarios as hare brained. In other words, even if the victims of surprise detect the beginnings of an initiative, they will have to overcome their existing assumption that the unfolding initiative is beyond the capability of their adversary or will prove to be suicidal. This asymmetry in the perception of what is prudent and

what is reckless creates a paradox, identified by Handel, which lies at the heart of the theory of surprise:

The greater the risk, the less likely it seems, and the less risky it becomes. In fact, the greater the risk, the smaller it becomes.<sup>18</sup>

Handel is suggesting that there is a direct link between the weaker party's incentive to use surprise and the stronger party's propensity actually to be surprised by the initiative. He offered this insight, however, without fully outlining the causal linkages he was suggesting. Elsewhere, for example, he wrote "The powerful stronger side conversely lacks the incentive to resort to surprise and thus not only sacrifices an important military advantage but also plays into his enemy's hands."<sup>19</sup> From this passage it would appear that Handel believes that weakness is a necessary condition for one side to gamble an entire operation on surprise. In this sense, he is probably correct; stronger parties lack the incentive to risk everything on an effort to gain surprise. Stronger parties, however, often hope to achieve and benefit from surprise. American officials thought that the technological surprise suffered by Japan over Hiroshima and Nagasaki would shock the Japanese into surrender, but they did not stop their preparations to launch a bloody attritional invasion of the home islands to force a surrender. They did not risk everything on gaining and benefiting from surprise. In other words, the causal claims made by Handel required some refinement (e.g., the weaker party in a conflict is more likely than the stronger side to attempt operations or strategies that *require* the element of surprise to succeed). Similarly, Handel never really explains how victims of surprise contribute to their own demise. In this sense, he missed an opportunity to offer an important advance in the theory of surprise.

From a political scientist's perspective, what is especially elegant about Handel's risk paradox is that it provides a link between explanatory levels of analysis.<sup>20</sup> The incentives to seek surprise are located at a systemic level of analysis, or in the very structure of the situation we find ourselves in. Without parties in competition, without surprise becoming a priority for the weaker party in its quest for victory, there would be no deliberate efforts to risk everything on strategies that require surprise for success. But surprise is not a systemic or a structural phenomenon; it exists in the mind of the victim. Surprise is about human cognition, perception and psychology. In other words, the different perceptions of risk between the stronger and weaker opponent link the structural setting, which creates the incentive for surprise, with the cognitive setting, which creates the opportunity to surprise an opponent. The weaker party has a stronger interest in basing its plans on

the element of surprise, while the more powerful side has reason to overlook the danger of enemy attack.

**Slide 10:**

The ex ante divergence in perceptions of risk and opportunity sets the stage for human cognition and psychology to create the phenomenon of surprise. The weaker side becomes mesmerized by the potential opportunity created by surprise (i.e., suspending the dialectic of war), while the stronger side fails to consider possible courses of enemy action based on stochastic estimates because it becomes focused on estimates of the enemy's *wartime* capabilities. This cognitive divergence, for example, sets the stage for the use of denial and deception. It is relatively easy for the weaker side to hide (deny) information from opponents who are not looking for it, or to mislead opponents by feeding them information that confirms their more realistic expectations of what is possible in war. A leading student of denial and deception has even gone so far as to claim that "deception operations usually have substantial payoffs and never backfire."<sup>21</sup> Moreover, if accurate information reaches the victim concerning what is about to transpire, it is likely to be dismissed as fantastic or implausible based on the real facts of the situation. In planning surprise, the weaker side, out of desperation, is likely to grasp at straws and to believe that they have opportunities that really do not exist with or without the element of surprise. Prior to the Tet offensive, most American analysts dismissed information that the North Vietnamese and their Viet Cong allies were planning to instigate a revolt among the South Vietnamese population because they accurately perceived that southerners would not rebel against the regime in Saigon.<sup>22</sup> Opponents who are desperate enough to gamble everything on surprise can be expected to ignore data that complicates their planning or calls into question their predictions about how their victims will respond to surprise.<sup>23</sup> Nikita Khrushchev was warned repeatedly by various advisors that even if he surprised Americans with his plan to deploy nuclear weapons and associated delivery vehicles to Cuba, the U.S. reaction to the deployment would erase any gains the Soviets might obtain from the gambit (The Central Intelligence Agency's Special National Intelligence Estimate [SNIE] 85-3-62 that was published in September 1962 also predicted that the Soviets would not place missiles in Cuba because it would be too risky).<sup>24</sup> The side planning surprise is prone to make mistakes because it walks an extraordinarily fine line between success and failure. This fact creates a real challenge for intelligence analysts: they often have to convince their chain of command that the opponent is about to launch an operation that appears ex ante to suffer from a fundamental flaw, a perception that is likely to undermine the plausibility of their warning.

## Slide 11:

To prevent surprise the victim must overcome several challenges. It must overcome efforts at denial and deception. It must anticipate how weaker opponents might expect to achieve wildly ambitious objectives aided by surprise. It must anticipate that its opponent's strategy might be riddled with errors of omission or commission, or at least an overly optimistic view of its prospects of success. All of this must occur, however, as analysts and policymakers are blinded by their own assumptions and theories about how the conflict should unfold, perceptions colored by their conservative, attritional, view of the battlefield. The possibility that the opponent will launch asymmetrical attacks is hard to imagine because of the inherent difficulty in discovering weaknesses in one's own forces or strategies. In the absence of compelling data, mirror imaging -- or the use of one's own preferences, culture and strategy to explain an opponent's behavior -- is likely to occur. This tendency to understand the opponent's behavior in light of one's own perception of the situation really constitutes the heart of the surprise problem from the victim's perspective. This is the point at which a host of cognitive biases, intelligence pathologies or bureaucratic weaknesses will conspire to hide the possibilities for surprise from potential victims.<sup>25</sup> Even more troubling is the fact that evidence of what is about to transpire, or an eerily prophetic analysis, generally can be identified somewhere in the intelligence pipeline in the aftermath of surprise.<sup>26</sup> What is missing from the victim's perspective is the analytical context necessary to use accurate data to generate a useful and timely warning.

The fundamental divergence in the perception of what is possible and what is foolish creates a paradox that leaves open the possibility for surprise to occur. Extraordinarily ambitious initiatives are not only planned, but are often brilliantly executed against opponents who fail to recognize what is happening before it is too late. They succeed because extraordinarily risky operations that require an acquiescent opponent to succeed appear implausible *ex ante* to the victim. This plausibility assumption will lead the victim to place impending signals of an opponent's unfolding initiative in an analytic context that is likely to be flawed.

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<sup>1</sup> A host of factors also bedevils those wishing to achieve surprise. For efforts to organize the body of theory related to intelligence and surprise see Michael Handel, "The Politics of Intelligence," *Intelligence and National Security* Vol. 2 No. 4 (October 1987), pp. 5-46; James J. Wirtz, "The Intelligence Paradigm," *Intelligence and National Security* Vol. 4, No. 4 (October 1989), pp. 829-837.

<sup>2</sup> Robert Jervis, *Perception and Misperception in World Politics* (Princeton: Princeton University Press, 1976); and Richards J. Heuer, Jr., *Psychology of Intelligence Analysis* (Center for the Study of Intelligence, Government Printing Office, 1999).

<sup>3</sup> The "Ultra Syndrome" is the tendency to become overly reliant on a clandestine source of information that has proven to be useful in the past, while the "cry-wolf syndrome" is the tendency for repeated false warnings to desensitize an audience to subsequent alarms Ephraim Kam, *Surprise Attack: The Victim's Perspective* (Cambridge: Harvard University Press, 1988).

<sup>4</sup> Walter Laqueur, *A World of Secrets: The Uses and Limits of Intelligence* (New York: Basic Books, 1985).

<sup>5</sup> For a similar argument about the prospects for a theory of deception see Barton Whaley and Jeffrey Busby, "Detecting Deception: Practice, Practitioners, and Theory," in Roy Godson and James J. Wirtz, *Strategic Denial and Deception* (New Brunswick: Transaction Publisher, 2002), pp. 181-221.

<sup>6</sup> Michael Handel, "Intelligence and the Problem of Strategic Surprise," *The Journal of Strategic Studies* Vol. 7, No. 3 September 1984, pp. 229-230.

<sup>7</sup> Surprise, however, cannot overcome gross incompetence (troops that cannot conduct basic maneuvers), or negligence (weapons that will not work or vehicles that will not run) on the part of the attacker.

<sup>8</sup> Edward Luttwak, *Strategy: The Logic of War and Peace* (Cambridge: Harvard University Press, 1987), p. 8.

<sup>9</sup> Although in both instances U.S. forces can be said to have benefited from technological surprise. On that phenomenon see Michael Handel, "Technological Surprise in War," *Intelligence and National Security* Vol. 2, No 1 (January 1987), pp. 1-53.

<sup>10</sup> Handel often made the similar point that "the weaker side has a very strong incentive to compensate for his weakness by resorting to the use of stratagem and surprise as a force multiplier." Michael Handel, "Crisis and Surprise in Three Arab-Israeli Wars," in Klaus Knorr and Patrick Morgan (eds.), *Strategic Military Surprise* (New Brunswick: Transaction Books, 1983), p. 113.

<sup>11</sup> Richard Betts, *Surprise Attack: Lessons for Defense Planning* (Washington, D.C.: The Brookings Institution, 1982), especially pp. 88-92.

<sup>12</sup> In his writings Handel often stated that Clausewitz was no fan of intelligence, deception and surprise, but he also often noted that since the early 19<sup>th</sup> century, changes in technology, logistics, and communications increased the attractiveness of surprise in war. In 1996, for instance, he wrote: "While for Clausewitz, surprise was rarely achievable on the strategic level but was more feasible on the operational or tactical levels, today the opposite is true. . . . the development of radars and other sensors have made operational and tactical surprise easier to prevent." Michael Handel *Masters of War* Second Rev edition (London: Frank Cass 1996), p. 131.

<sup>13</sup> After all, one of the would-be hijackers apparently was already in police custody prior to 11 September 2001.

<sup>14</sup> William McRaven, *Spec Ops Case Studies in Special Operations Warfare: Theory and Practice* (Novato, CA: Presidio Press, 1998).

<sup>15</sup> Samuel Eliot Morison, *The Two-Ocean War: A Short History of the United States Navy in the Second World War* (Boston: Little, Brown & Co., 1963), p. 67.

<sup>16</sup> In the revised edition of his seminal volume, Luttwak makes the same point: ". . . military leaders whose forces are altogether superior may be quite justified in spurning surprise, for the sake of ample preparations to use their full strength with the simplest methods, to minimize organizational risk. Edward Luttwak, *Strategy: The Logic of War and Peace* Revised Edition (Cambridge: Harvard University Press, 2001), p. 13.

<sup>17</sup> According to Luttwak "In a manner itself paradoxical, it is those who are materially weaker, and therefore have good reason to fear a straightforward clash of strength against strength, who can most benefit by self-weakening paradoxical conduct – if it obtains the advantage of surprise, which may yet offer victory." Luttwak, *Strategy Revised Edition*, p. 14.

<sup>18</sup> Michael Handel, "The Yom Kippur War and the Inevitability of Surprise," *International Studies Quarterly* Vol. 21 No. 3 September 1977, p. 468.

<sup>19</sup> Handel, "Crisis and Surprise in Three Arab-Israeli Wars," p. 113.

<sup>20</sup> Another important effort to link levels of analysis is Robert Putnam, "The Logic of Two-Level Games," *International Organization* Vol. 42, No. 2 (Spring 1988), pp. 427-460.

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<sup>21</sup> Barton Whaley, "Conditions Making for Success and Failure of D&D: Authoritarian and Transition Regimes," in Roy Godson and James J. Wirtz (eds.), *Strategic Denial and Deception: The 21<sup>st</sup> Century Challenge* (New Brunswick: Transaction, 2001), p. 67.

<sup>22</sup> James J. Wirtz, *The Tet Offensive: Intelligence Failure in War* (Ithaca: Cornell University Press, 1991).

<sup>23</sup> According to Jervis, "A person is less apt to reorganize evidence into a new theory or image if he is deeply committed to the established view." Jervis, *Perception and Misperception*, p. 196.

<sup>24</sup> Special National Intelligence Estimate 85-3-62, *The Military Buildup in Cuba* (September 1962), pp. 1-2, 8-9; and James J. Wirtz, "Organizing for Crisis Intelligence: Lessons from the Cuban Missile Crisis," in James G. Blight and David Welch (eds.), *Intelligence and the Cuban Missile Crisis* (London: Frank Cass, 1998).

<sup>25</sup> Betts, *Surprise Attack*, pp. 87-149. This also is the point at which the theory of surprise can integrate the existing literature and competing theories of surprise into a unified explanation of the phenomenon.

<sup>26</sup> Richard Betts, "Surprise Despite Warning," *Political Science Quarterly* Vol. 95, No. 4, pp. 551-572; and Michael Handel, *The Diplomacy of Surprise: Hitler, Nixon, Sadat* (Cambridge, MA: Center for the Study of International Affairs, 1981), p. 144. Roberta Wohlstetter's use of a metaphorical "signal to noise" ratio was an effort to show how accurate "signals" could always be found in an intelligence system, along with extraneous information described as "noise." Signals would have to grow stronger than this background noise before they could be perceived accurately. Ariel Levite offered a dissenting opinion on the issue, that surprise often occurred because of a lack of accurate warning, if not raw data, in an intelligence bureaucracy. See Ariel Levite, *Intelligence and Strategic Surprises* (New York: Columbia University Press, 1987).