



Rethinking Strategic Surprise

Defence Planning Under “Bounded Uncertainty”

Brian W. Greene
DRDC CORA

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Defence R&D Canada – Centre for Operational Research and Analysis (CORA)

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Abstract

This Technical Memorandum contends that the defence planning process is ill served by the assumption that uncertainty abounds. To the extent that uncertainty poses a serious impediment to effective defence planning against the threat of strategic surprise, it is a problem circumscribed by relatively firm knowledge as to the potential sources of danger. Accordingly, I propose recasting the problem of strategic surprise as one of “bounded uncertainty.” The argument is empirically illustrated through an examination of the Japanese attack on Pearl Harbor, the Korean War, and the 9/11 terrorist attacks.

Résumé

Le présent document technique soutient que le processus de planification de la défense est mal servi par l’hypothèse voulant que l’incertitude abonde. Dans la mesure où l’incertitude pose un obstacle sérieux à une planification efficace de la défense contre la menace d’une surprise stratégique, le problème est circonscrit par une connaissance relativement solide des sources potentielles de danger. Par conséquent, je propose de recadrer le problème de la surprise stratégique pour en faire un problème d’« incertitude bornée ». Cet argument est illustré de façon empirique grâce à un examen de l’attaque japonaise sur Pearl Harbor, de la guerre de Corée et des attaques terroristes du 11 Septembre.

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Executive summary

Rethinking Strategic Surprise: Defence Planning Under "Bounded Uncertainty"

Brian W. Greene; DRDC CORA TM 2010-186; Defence R&D Canada – CORA; August 2010.

The danger of falling victim to strategic surprise has long loomed as a matter of significant concern to government and military officials alike, for whom history is replete with examples of what is rightly considered the ultimate failure in defence planning. Notable cases in the modern era include Germany's invasion of the Soviet Union in 1941; the Japanese attack on Pearl Harbor that same year; North Korea's invasion of South Korea in June 1950 and China's subsequent entry into the conflict five months later; the joint British-French-Israeli attack on Egypt in 1956; Israel's pre-emptive strike against Egypt that launched the Six Day War in 1967; the Egyptian-Syrian attack on Israel in October 1973; Argentina's take-over of the Falkland Islands in 1982; Iraq's invasion and annexation of Kuwait in 1990; and the terrorist attacks of 11 September 2001.

According to Richard Betts, "Strategic surprise occurs to the degree that the victim does not appreciate whether, when, where, or how the adversary will strike." The key to mitigating the effects of surprise, if not avoiding surprise altogether, is thus seen to lie in more effectively managing the problem of uncertainty (i.e., the existence of insufficient and/or ambiguous data about the enemy's intentions). On its face, the challenge of managing uncertainty can appear overwhelming. As defence analyst Paul Davis observes, "not only is uncertainty ubiquitous, it is impossible to get rid of it by merely working hard to do so." That has not stopped defence planners from trying, however. Hoping to at least "shrink the boundary of uncertainty," contemporary defence planning has increasingly come to rely on a variety of sophisticated forecasting methodologies, ranging from scenario development to alternative futures analysis.

While the quest for improved foresight is understandable, care must be taken not to overstate the scope of the problem. At least insofar as the threat of surprise attack is concerned, a distinct and instructive historical pattern is clearly discernible. As Betts notes, "Pure bolts from the blue do not happen. Sudden attacks occur after prolonged political conflict. They often do not occur at the peak of tension, but they are preceded by periods in which the defender's leaders believe that war is possible." In other words, to the extent that uncertainty poses a serious obstacle to effective planning against the threat of strategic surprise, it is a problem circumscribed by relatively firm knowledge as to the potential sources of surprise.

Given the unusual duality of the situation facing defence planners – relative certainty as to the probable origins of strategic surprise, combined with extreme uncertainty as to when, where, how, or even whether surprise might occur – I propose recasting the problem of strategic surprise as one of "bounded uncertainty." Similar to its usage in mathematical statistics, the concept of "bounded uncertainty" neatly reflects the idea that the range of uncertainty confronting defence planners is actually delimited within clearly identifiable parameters.

Framing the problem as one of "bounded uncertainty" has distinct implications for the organization of defence planning. Most obviously, it suggests that defence planners should pay

more attention to known and probable adversaries, with scenario development and contingency planning prioritized accordingly. Indeed, defence planners would do well to abide by the axiom that there are no surprise adversaries, only surprise scenarios.

Sommaire

Rethinking Strategic Surprise: Defence Planning Under "Bounded Uncertainty"

Brian W. Greene; DRDC CORA TM 2010-186; R & D pour la défense Canada – CARO; Août 2010.

Le danger d'être victime d'une surprise stratégique a longtemps été un important sujet de préoccupation des autorités gouvernementales et militaires, l'histoire regorgeant d'exemples de ce qui est à juste titre considéré comme l'échec ultime en matière de planification de la défense. Parmi les cas dignes de mention de l'ère moderne, mentionnons l'invasion de l'Union soviétique par l'Allemagne en 1941; l'attaque japonaise de Pearl Harbor la même année; l'invasion de la Corée du Sud par la Corée du Nord en juin 1950 et l'entrée subséquente de la Chine dans ce conflit 5 mois plus tard; l'attaque conjointe de l'Égypte par la Grande-Bretagne, la France et Israël en 1956; l'attaque préventive d'Israël sur l'Égypte qui a enclenché la guerre des Six-Jours en 1967; l'attaque de l'Égypte et de la Syrie sur Israël en octobre 1973; la prise de contrôle des îles Malouines par l'Argentine en 1982; l'invasion de l'Iraq et l'annexion du Koweït en 1990; les attaques terroristes du 11 Septembre 2001.

Selon Richard Betts, « la surprise stratégique se produit dans la mesure où la victime ignore que l'adversaire frappera, et où, quand et comment il frappera. L'on estime donc que la clé pour atténuer les effets de surprise, voire les éviter, est de gérer plus efficacement le problème de l'incertitude (c.-à-d. l'existence de données insuffisantes ou ambiguës sur les intentions de l'ennemi). À première vue, la difficulté de la gestion de l'incertitude peut sembler insurmontable. En sa qualité d'analyste de la défense, Paul Davis observe que « non seulement l'incertitude est-elle omniprésente, mais il est impossible de s'en débarrasser simplement en y mettant des efforts. » Cela n'a cependant pas empêché les planificateurs de la défense de s'y risquer. Espérant à tout le moins « réduire les zones d'incertitude », les planificateurs de la défense contemporains en sont venus à dépendre de plus en plus d'une variété de méthodes prévisionnelles raffinées qui vont de l'élaboration de scénarios à l'analyse d'autres avenir possibles.

Si la quête d'une prévoyance accrue est compréhensible, l'on doit se garder de ne pas surestimer la portée du problème. Pour ce qui est, du moins, de la menace d'une attaque surprise, l'on peut clairement discerner une tendance historique instructive. Comme le souligne Betts : « On n'a jamais vu de frappes venues de nulle part. Les attaques soudaines se produisent après des conflits politiques prolongés. Souvent, elles n'ont pas lieu au paroxysme des tensions, mais elles sont précédées par des périodes durant lesquelles les chefs de la position défensive croient qu'une guerre est possible. » En d'autres termes, dans la mesure où l'incertitude constitue un obstacle sérieux à la planification efficace contre la menace de surprise stratégique, le problème peut être contourné par une connaissance assez solide des sources potentielles de surprise.

Compte tenu de la dualité étrange avec laquelle les planificateurs de la défense sont aux prises – certitude relative quant aux origines probables de la surprise stratégique conjuguée à une incertitude extrême quant au moment, au lieu, à la façon et à l'éventualité même d'une surprise – je propose de recadrer le problème de la surprise stratégique pour en faire un problème d'« incertitude bornée ». Semblable à son usage en statistique mathématique, le concept

d'«incertitude bornée» reflète bien l'idée que la zone d'incertitude avec laquelle les planificateurs de la défense doivent composer est, de fait, bornée par des paramètres clairement identifiables.

Le fait de recadrer le problème pour en faire un problème d'«incertitude bornée» a des effets marqués sur l'organisation de la planification de la défense. Bien évidemment, cela laisse prévoir que les planificateurs devraient porter une plus grande attention aux adversaires connus et probables, en accordant une priorité conséquente à l'élaboration de scénarios et à la planification d'urgence. En effet, les planificateurs de la défense auraient avantage à tenir compte de cette vérité : il n'y a pas d'adversaires surprises, seulement des scénarios surprises.

Table of contents

Abstract	i
Résumé	i
Executive summary	iii
Sommaire	v
Table of contents	vii
Acknowledgements	ix
1 Introduction.....	1
1.1 The Issue.....	1
1.2 The Argument.....	2
1.3 Outline.....	2
2 Why Surprise Matters	4
2.1 The Evolution of Surprise in Warfare	4
2.2 Surprise as a Force Multiplier	5
3 Uncertainty and Strategic Surprise	7
4 The Past as Prologue.....	9
4.1 Pearl Harbor.....	9
4.2 The Korean War	11
4.3 9/11	12
4.4 Learning the Right Lessons	13
5 Defence Planning Under “Bounded Uncertainty”	15
Bibliography	17
Distribution list.....	21

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1 Introduction

1.1 The Issue

The danger of falling victim to strategic surprise has long loomed as a matter of significant concern to government and military officials alike, for whom history is replete with examples of what is rightly considered the ultimate failure in defence planning. Notable cases in the modern era include Germany's invasion of the Soviet Union in 1941; the Japanese attack on Pearl Harbor that same year; North Korea's invasion of South Korea in June 1950 and China's subsequent entry into the conflict five months later; the joint British-French-Israeli attack on Egypt in 1956; Israel's pre-emptive strike against Egypt that launched the Six Day War in 1967; the Egyptian-Syrian attack on Israel in October 1973; Argentina's take-over of the Falkland Islands in 1982; Iraq's invasion and annexation of Kuwait in 1990; and the terrorist attacks of 11 September 2001 (9/11).

Although it has become fashionable in recent years to invoke the concept of strategic surprise in reference to any unexpected development of actual or potential strategic significance,¹ this paper's focus, as suggested by the preceding examples, is the phenomenon of strategic surprise as manifested through surprise military attack; specifically, surprise attacks that either initiate a war or, as with China's intervention in Korea, introduce an important new dimension to an ongoing conflict.

While it is certainly true that the 2004 Asian tsunami and the 2008 global financial crisis were far-reaching in their effects, it is important to recognize that such events represent a completely different kind of problem for defence planners than that which arises from being attacked by surprise. Unlike the former, surprise attack is a first-order problem for defence planners; that is, it is the one type of surprise that directly and immediately engages a state's defence establishment. A natural disaster, be it domestic or foreign, may or may not require a military response. The same is true even for so-called diplomatic surprises, where the connection to defence and/or national security might be assumed to be the most obvious.² A surprise attack, in contrast, is by definition a defence-relevant issue. Moreover, to the extent that actively preparing to impede an adversary's ability to achieve surprise can be expected to influence its strategic calculus regarding the advisability of carrying out such an attack, it is the only kind of surprise over which defence planners can actually hope to exert some measure of control. The case for drawing a sharp distinction, both conceptually and analytically, between strategic surprise attacks and every other type of surprise, as this paper does, is thus quite compelling.³

¹ See, for example, Peter Schwartz and Doug Randall, "Ahead of the Curve: Anticipating Strategic Surprise," in Francis Fukuyama, ed., *Blindside: How to Anticipate Forcing Events and Wild Cards in Global Politics* (Washington, D.C.: Brookings Institution Press, 2007), pp. 93-108; and Chester A. Crocker, "Reflections on Strategic Surprise," in Patrick M. Cronin, ed., *The Impenetrable Fog of War: Reflections on Modern Warfare and Strategic Surprise* (Westport, CT: Praeger Security International, 2008), pp. 177-185.

² On diplomatic surprise see Michael I. Handel, "Surprise and Change in International Politics," *International Security*, Vol. 4, No. 4 (Spring 1980), pp. 57-85.

³ A follow-on Technical Memorandum will examine the defence planning implications of these other types of surprise.

1.2 The Argument

According to Richard Betts, “Strategic surprise occurs to the degree that the victim does not appreciate whether, when, where, or how the adversary will strike.”⁴ The key to mitigating the effects of surprise, if not avoiding surprise altogether, is thus seen to lie in more effectively managing the problem of uncertainty (i.e., the existence of insufficient and/or ambiguous data about the enemy’s intentions). On its face, the challenge of managing uncertainty can appear overwhelming. As defence analyst Paul Davis observes, “not only is uncertainty ubiquitous, it is impossible to get rid of it by merely working hard to do so.”⁵ That has not stopped defence planners from trying, however. Hoping to at least “shrink the boundary of uncertainty,”⁶ contemporary defence planning has increasingly come to rely on a variety of sophisticated forecasting methodologies, ranging from scenario development to alternative futures analysis.

While the quest for improved foresight is understandable, care must be taken not to overstate the scope of the problem. At least insofar as the threat of surprise attack is concerned, a distinct and instructive historical pattern is clearly discernible. As Betts notes, “Pure bolts from the blue do not happen. Sudden attacks occur after prolonged political conflict. They often do not occur at the peak of tension, but they are preceded by periods in which the defender’s leaders believe that war is possible.”⁷ In other words, to the extent that uncertainty poses a serious obstacle to effective planning against the threat of strategic surprise, it is a problem circumscribed by relatively firm knowledge as to the potential sources of surprise.

Given the unusual duality of the situation facing defence planners – relative certainty as to the probable origins of strategic surprise, combined with extreme uncertainty as to when, where, how, or even whether surprise might occur – I propose recasting the problem of strategic surprise as one of “bounded uncertainty.” Similar to its usage in mathematical statistics, the concept of “bounded uncertainty” neatly reflects the idea that the range of uncertainty confronting defence planners is actually delimited within clearly identifiable parameters.

Framing the problem as one of “bounded uncertainty” has distinct implications for the organization of defence planning. Most obviously, it suggests that defence planners should pay more attention to known and probable adversaries, with scenario development and contingency planning prioritized accordingly. Indeed, defence planners would do well to abide by the axiom that there are no surprise adversaries, only surprise scenarios.

1.3 Outline

The next section of the paper explores why surprise matters, paying particular attention to the issue of how surprise can be utilized to achieve strategic effect. This is followed by a brief discussion of the assumption of uncertainty in contemporary defence planning. The concept of

⁴ Richard K. Betts, *Surprise Attack: Lessons for Defense Planning* (Washington: Brookings Institution Press, 1982), p. 4.

⁵ Paul K. Davis, “Defense Planning and Risk Management in the Presence of Deep Uncertainty,” in Paul Bracken, Ian Bremmer, and David Gordon, eds., *Managing Strategic Surprise: Lessons from Risk Management and Risk Assessment* (New York: Cambridge University Press, 2008), p. 200.

⁶ Patrick M. Cronin, “The Fog of War,” in Cronin, *The Impenetrable Fog of War*, p. 3.

⁷ Betts, *Surprise Attack*, p. 95.

“bounded uncertainty” is subsequently introduced as a more appropriate framing device. I then review several instances of surprise attack – the Japanese attack on Pearl Harbor, the Korean War, and the 9/11 terrorist attacks – in support of the thesis. The concluding section of the paper addresses the defence planning implications of the argument, particularly as it relates to the organization of the planning process.

2 Why Surprise Matters

2.1 The Evolution of Surprise in Warfare

As Michael Handel notes, “Although surprise has always been possible on the *tactical* level, its feasibility on the *strategic* level is a relatively new historical phenomenon of the twentieth century.”⁸ Indeed, the notion that surprise might be used to strategic effect is so recent that the great nineteenth century military strategist Carl von Clausewitz largely dismissed it as a matter of practical concern. “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,” wrote Clausewitz. “It would be a mistake, therefore, to regard surprise as a key element of success in war.”⁹

Clausewitz’s inability to see surprise as anything more than a tactical device reflected the technological and temporal realities of his time. Explains Handel,

Before the technological-industrial revolution, the rapid movement of large troop formations over long distances in a short period of time was virtually impossible. The slow pace of mobilization, not to mention that of troop concentration and movement, provided ample clues as to an adversary’s offensive intent. Furthermore, such evidence could be gathered in time to countermobilize and make all preparations necessary to intercept the expected attack.¹⁰

Such was the case until the introduction of new transportation and weapons technologies in the twentieth century, the combined and cumulative effects of which would come to have a revolutionary impact on the role of surprise in warfare. For example, with the advent of tracked vehicles and tanks, rapid movement over difficult terrain suddenly became possible, as demonstrated to dramatic effect by the German blitzkrieg strategy in the Second World War. The potential strategic advantage conferred by increased ground mobility paled in comparison to that which accrued from the development of air power, however. Perhaps most significantly, the introduction of air power eliminated the telltale mobilization patterns that had previously accompanied the preparation for war. An attack could now plausibly come without any warning whatsoever. Air power also provided the attacker with the ability to reach deep into enemy territory, exposing formerly invulnerable strategic assets to potentially quick destruction.¹¹

Technology’s impact on warfare continued apace throughout the twentieth century, reaching its apex with the invention of nuclear weapons and intercontinental ballistic missiles (ICBMs) in the 1940s and 1950s respectively. Whereas earlier technological advancements had merely increased the prospect of one side gaining a significant advantage in the prosecution of a war, the introduction of nuclear weapons and especially nuclear-armed ICBMs raised the stakes to an

⁸ Michael I. Handel, “Intelligence and the Problem of Strategic Surprise,” *Journal of Strategic Studies*, Vol. 7, No. 3 (September 1984), p. 231.

⁹ Carl von Clausewitz, *On War*, Michael Howard and Peter Paret, eds. and trans. (Princeton: Princeton University Press, 1976), p. 198.

¹⁰ Handel, “Intelligence and the Problem of Strategic Surprise,” p. 231.

¹¹ *Ibid.*, p. 232.

entirely different level. As Handel notes, a strategic surprise could now be “both the beginning and the end of a war.”¹²

2.2 Surprise as a Force Multiplier

Surprise is a particularly vexing problem from a defence planning perspective insofar as it has the potential to alter, even if only temporarily, the military balance between two adversaries. Observes Betts, “Increments of forces provide an arithmetical advantage, but the effects of successful shock are geometrical.” Simply put, “Surprise is a force multiplier.”¹³ According to one study, surprise nearly doubles an attacker’s combat capability.¹⁴ The normally positive relationship between capabilities and security is thus undermined by the possibility of surprise. Logically, then, as Handel points out, “the incentive to resort to strategic surprise is particularly strong for countries that are only too cognizant of their relative vulnerability.”¹⁵ Indeed, absent surprise, the weaker side in any *symmetric* contest has virtually no chance of prevailing in the long run.¹⁶

Conversely, argues Handel, “Stronger armies...lack the ‘natural incentive’ to employ such methods.”¹⁷ As James Wirtz explains, the stronger side can almost always “rely on more predictable attrition strategies to wear down weaker opponents.” “In fact,” notes Wirtz, “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.”¹⁸ That is not to say that the stronger side will *never* utilize surprise, only that the incentives for doing so are not structurally determined. A desire to avoid casualties, dispose of a specific opponent quickly, or limit the amount of resources dedicated to achieving a particular objective are just three possible reasons why a stronger actor might resort to strategic surprise.¹⁹

Whether a tool of the strong or weak, the advantage conferred by surprise differs in kind from that derived from other factors. According to Wirtz,

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.²⁰

¹² Ibid., p. 233.

¹³ Betts, *Surprise Attack*, p. 5.

¹⁴ Cited in Ibid.

¹⁵ Handel, “Intelligence and the Problem of Strategic Surprise,” p. 230.

¹⁶ Betts, *Surprise Attack*, p. 6. On the structural differences between symmetric and asymmetric conflicts see Andrew Mack, “Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict,” *World Politics*, Vol. 27, No. 2 (January 1975), p. 182.

¹⁷ Handel, “Intelligence and the Problem of Strategic Surprise,” p. 230.

¹⁸ James J. Wirtz, “Theory of Surprise,” in Richard K. Betts and Thomas G. Mahnken, eds., *Paradoxes of Strategic Intelligence: Essays in Honor of Michael I. Handel* (London: Frank Cass, 2003), p. 105.

¹⁹ I am grateful to Patrick Morgan for this observation.

²⁰ Wirtz, “Theory of Surprise,” p. 103.

Surprise, in this sense, has the power to transform the very idea of war. As Edward Luttwak observes, “Against a nonreacting enemy or, more realistically, within the limits of time and space of the surprise actually achieved, the conduct of war becomes mere administration.”²¹ Adds Wirtz, “Although usually a matter of degree, when it approximates to its ideal-type, surprise literally makes war go away.”²²

While the effects of surprise can be devastating, especially at the outset of a conflict, it is also the case that surprise is rarely decisive. As Handel notes, “There is...no positive correlation between the initial success of a strategic surprise and the outcome of a war.”²³ While the failure to convert the gains achieved via surprise into a more significant strategic advantage or even victory is often attributable to the inability of the attacking side to make the most of the opportunities created by surprise, it is also just as often a function of the attrition dynamic noted above. Having failed to knock the United States out of the Pacific War at the outset, Japan’s prospects for long-term success quickly evaporated, a risk the Japanese not only understood, but were more than willing to run.²⁴

However reassuring the checkered history of strategic surprise might be, it is anything but grounds for complacency. Even under the most advantageous circumstances, the cost of reversing strategic surprise can be extremely high. Hence, all else being equal, even the most powerful states would rather avoid strategic surprise than have to deal with its consequences.

²¹ Edward N. Luttwak, *Strategy: The Logic of War and Peace* (Cambridge, MA: Harvard University Press, 2001), p. 4.

²² Wirtz, “Theory of Surprise,” p. 103.

²³ Handel, “Intelligence and the Problem of Strategic Surprise,” p. 230.

²⁴ Admiral Isoroku Yamamoto, the architect of Japan’s naval strategy in the Second World War, is reported to have said to then Prime Minister Fumimaro Konoye in September 1940, “If I am told to fight regardless of the consequences, I shall run wild for the first six months or a year, but I have utterly no confidence for the second or third year.” Quoted in David M. Kennedy, *Freedom from Fear: The American People in Depression and War, 1929-1945* (New York: Oxford University Press, 1999), p. 526.

3 Uncertainty and Strategic Surprise

The emergence of uncertainty as a central organizing principle in strategic planning dates to the 1990s. Grappling to make sense of a world seized by the roiling effects of a new era of economic, political, social, and technological transformation, a growing number of analysts began to fix on the notion that the emerging international order was simultaneously more complex and fluid, and therefore less predictable, than that which had prevailed during the Cold War. The idea quickly found its way into official planning documents. “As the 21st century approaches, the United States faces a dynamic and uncertain security environment,” declared the 1997 Quadrennial Defense Review (QDR).²⁵

Subsequent instalments of the QDR have since reiterated this view. Released shortly after the 9/11 terrorist attacks, the 2001 QDR asserted there is “a great deal of uncertainty about the potential sources of military threats, the conduct of war in the future, and the form that threats and attacks against the [United States] will take.”²⁶ Likewise, the 2006 report described the new strategic environment as one “characterized by uncertainty and surprise.”²⁷ And according to the 2010 version, the first QDR prepared by the administration of President Barack Obama, “the United States faces a complex and uncertain security landscape in which the pace of change continues to accelerate.”²⁸

As might be expected, the vocabulary of uncertainty has found its way into the Canadian planning process as well. “Canadians live in a world characterized by volatility and unpredictability,” proclaims the 2008 *Canada First Defence Strategy*.²⁹ *The Future Security Environment 2008-2030* (FSE), the Canadian defence establishment’s most authoritative statement of current and emerging trends, strikes a similar tone. “With the proliferation of military and security threats,” the level of uncertainty and unpredictability” confronting the Canadian Forces “has increased,” notes the FSE.³⁰

Given the inherent unpredictability of future events, the emphasis on uncertainty in contemporary strategic planning is entirely understandable. Yet it can also be taken too far. For example, according to the 2001 QDR, “The United States cannot predict with a high degree of confidence the identity of the countries or the actors that may threaten its interests and security.”³¹ While it may well be impossible to predict the specific circumstances of any future attack (i.e., the when, where, and how of the attack), it is simply not true that an equivalent level of uncertainty prevails regarding the identity of those who might carry out such an attack. If anything, the probable sources of strategic surprise is one of the few things about which defence planners can be relatively certain. After all, there has yet to be a single instance of strategic surprise in which the attack was perpetrated by a previously unknown adversary. In fact, strategic surprise almost

²⁵ Department of Defense (United States), *Report of the Quadrennial Defense Review*, May 1997, p. 3.

²⁶ *Idem*, *Quadrennial Defense Review Report*, September 2001, p. 3.

²⁷ *Idem*, *Quadrennial Defense Review Report*, February 2006, p. vi.

²⁸ *Idem*, *Quadrennial Defense Review Report*, February 2010, p. 5.

²⁹ Department of National Defence (Canada), *Canada First Defence Strategy*, May 2008, p. 6.

³⁰ *Idem*, *The Future Security Environment 2008-2030, Part 1: Current and Emerging Trends* (Ottawa: Chief of Force Development, 2010), p. 100.

³¹ Department of Defense (United States), *Quadrennial Defense Review Report*, September 2001, p. 3.

always occurs in the context of a long-running political dispute in which one or both sides have already signalled a willingness to use force. In other words, to the extent that uncertainty represents a real impediment to effective planning against the threat of strategic surprise, it is a problem circumscribed by an extremely high degree of confidence as to the likely sources of surprise. The practical dilemma confronting defence planners is thus more accurately conceptualized as one of “bounded uncertainty,” a circumstance in which relative certainty as to the probable origins of surprise coexists with extreme uncertainty as to how such threats might manifest themselves, if at all.³²

While reframing the issue accordingly should translate into a more focused approach to the problem (to be discussed below), the challenges of operating under “bounded uncertainty” are not to be underestimated. As demonstrated in the next section, a state can be fully aware of the threat it is facing and still fall victim to strategic surprise due to any number of political, bureaucratic, and conceptual failures.

³² For a more general critique of the use of the concept of uncertainty in strategic planning see Michael Fitzsimmons, “The Problem of Uncertainty in Strategic Planning,” *Survival*, Vol. 48, No. 4 (Winter 2006-2007), pp. 131-146.

4 The Past as Prologue

The three cases discussed below – the Japanese attack on Pearl Harbor in December 1941; the double surprise of North Korea’s invasion of South Korea in June 1950 and China’s entry into the war later that same year; and the terrorist attacks of 11 September 2001 – are illustrative of the nature of the problem confronting defence planners. In none of the cases was the potential threat posed by the eventual attacker unknown. Indeed, as is usually the case, analysts and decision-makers in the victim state were generally alert to the threat they were facing. What they did not know was when, where, how, or even whether the threat would materialize.

4.1 Pearl Harbor

Although often portrayed as the quintessential “bolt from the blue,” Japan’s attack on the U.S. naval base at Pearl Harbor on 7 December 1941 actually came after years of rising tension between the two countries. In fact, by the time Japanese bombers appeared over Pearl Harbor, the possibility of war with Japan had long since ceased to be a matter of merely theoretical concern. When Washington alerted its forces in the Pacific in late November 1941 to a possible Japanese attack, it was the fourth such warning since June 1940.³³ The only real surprise on that fateful day was Japan’s selection of Pearl Harbor as the target for its opening military salvo (the prevailing assumption had been that Japan would strike somewhere in the western Pacific).³⁴

The deterioration in American-Japanese relations was precipitous. As Walter LaFeber writes, “In 1900, the two nations’ soldiers stood side by side in the bloody, shell-pockmarked streets of Peking. By 1912, Japan had sealed off Korea and much of South Manchuria while angry Washington officials vowed to pry open those closed doors.” More ominously, “Each began to see the other as a probable enemy in a not-distant war.”³⁵ Competing national visions had set the two rising imperial powers on a collision course. War would not come for another thirty years, however. In the interim, repeated clashes over China, amplified by racism, continued to undermine any sense of trust between them.

Although the road to Pearl Harbor is often traced to Japan’s attack on Manchuria in 1931, it was not until Japan invaded China in 1937 that war between the U.S. and Japan became a real possibility. As Japan’s planes rained bombs on Chinese cities, Americans increasingly found themselves caught in the crossfire. American-run schools and churches were destroyed; business

³³ Roberta Wohlstetter, *Pearl Harbor: Warning and Decision* (Stanford, CA: Stanford University Press, 1962), p. 71.

³⁴ The 27 November war warning reflected this thinking. “Negotiations with Japan looking toward stabilization of conditions in the Pacific have ceased and an aggressive move by Japan is expected within the next few days. The number and equipment of Japanese troops and the organization of naval task forces indicates an amphibious expedition against either the Philippines, Thai or Kra Peninsula or possibly Borneo.” Quoted in *Ibid.*, p. 45. Interestingly, it was also assumed that should war come, it would commence with a Japanese surprise attack. See Louis Morton, “War Plan Orange: Evolution of a Strategy,” *World Politics*, Vol. 11, No. 2 (January 1959), p. 248.

³⁵ Walter LaFeber, *The Clash: A History of U.S.-Japan Relations* (New York: W.W. Norton and Company, 1997), p. 65. American war planning for Japan commenced with Japan’s attack on Russia in February 1904. Morton, “War Plan Orange,” p. 222.

interests were harmed; and, on several occasions, American lives were lost. The effect on public opinion was dramatic. As Herbert Feis notes, “The economic and political causes of the struggle dropped out of mind; its brutality and disregard of American interests took their place. Though still diluted by dislike of war, the resolution formed that Japan must not be allowed in the end to win in China.”³⁶ Still, American policy remained cautious. As President Franklin Roosevelt was reminded by his close friend William Bullitt, “We have large emotional interests in China, small economic interests, and no vital interests.”³⁷

Only with the expansion of the war in Europe in 1940 did the American assessment of the situation change. Emboldened by Nazi Germany’s conquest of France and the Netherlands, Japan began eyeing French Indochina and the Dutch East Indies. For Japan, the time had come to consolidate its ‘New Order’ in East Asia. For the U.S., concern for the treaty structure in China fast gave way to more general concerns about the East Asian balance of power. Under pressure from hardliners in his administration, Roosevelt finally deployed the weapon he had judiciously sought to avoid. In July 1940, the U.S. imposed economic sanctions on Japan. The embargo, which forbade the export of scrap iron and steel, as well as aviation fuel, was designed to send a signal to import-dependent Japan that the U.S. would not idly stand by while Japan swallowed up the European powers’ colonies in Southeast Asia.³⁸ Japan’s response came in the form of its official accession to the Axis. Signed in September 1940, the Tripartite Pact committed Germany, Italy, and Japan to the principle of collective defence should any one of the signatories come under attack by a state not presently involved in the European war or the Sino-Japanese conflict. With a stroke of the pen, Japan had dramatically raised the stakes for the United States. War with Japan would now also presumably mean war with Germany, and vice versa, a prospect that Japan hoped would induce a more cautious attitude in Washington.³⁹ Notes Feis, “Contrary to the conceiving hope, the attitude of the United States toward Japan hardened.”⁴⁰ The spiral towards war would only accelerate from that point forward.

By November 1941, few high-ranking American officials believed that war with Japan could still be avoided. When Roosevelt met with his senior advisors on 25 November, the discussion centred entirely around the issue of how the U.S. should respond once Japan had made her move, which the president predicted could come as early as the following week.⁴¹ The only questions that remained to be answered were when and where (i.e., against whom) Japan would strike. Among the Americans’ many mistakes and errors in judgement in the days, weeks, and months preceding the Pearl Harbor attack, perhaps the greatest miscalculation came in assuming that Japan’s riskiest military option was also its least likely option.⁴²

³⁶ Herbert Feis, *The Road to Pearl Harbor: The Coming of the War Between the United States and Japan* (Princeton: Princeton University Press, 1950), p. 18.

³⁷ Quoted in Kennedy, *Freedom from Fear*, p. 502.

³⁸ Feis, *The Road to Pearl Harbor*, pp. 66-109.

³⁹ *Ibid.*, pp. 110-111.

⁴⁰ *Ibid.*, p. 112.

⁴¹ Wohlstetter, *Pearl Harbor*, pp. 239-240.

⁴² This is consistent with Handel’s “risk paradox.” According to Handel, “The greater the risk, the less likely it seems, and the less risky it becomes.” Michael I. Handel, “The Yom Kippur War and the Inevitability of Surprise,” *International Studies Quarterly*, Vol. 21, No. 3 (September 1977), p. 468.

4.2 The Korean War

Less than ten years on from Pearl Harbor, another series of strategic miscalculations led the United States to be surprised *twice* on the Korean peninsula within a span of just six months in 1950. The first surprise came on 25 June when North Korean troops launched a full-scale invasion of South Korea; the second in November when Chinese forces entered the war en masse to repel the American counterattack.

As documented in nearly every account of the war, the surprise achieved by North Korea on 25 June was primarily enabled by the constant state of tension that had prevailed on the peninsula for several years up to that point. “The repetition of small-scale violent incidents...served to dull sensitivity more than to heighten it,” notes Betts.⁴³ Harold Joyce Noble, first secretary of the American embassy in Seoul at the time of the attack, compared the prewar mood in the country to living on the edge of a volcano. “We knew it would explode some day, but as day after day, month after month, and year after year passed and it did not blow up, we could hardly believe that tomorrow would be any different,” said Noble.⁴⁴ After visiting the 38th parallel in April 1949, American Ambassador-at-large Philip Jessup went so far as to describe the border zone as the “front line in an actual shooting war.”⁴⁵ The constant incursions and false warnings evidently exacted a heavy toll on American readiness. When the North Korean invasion finally came, several hours passed before American officials even recognized the action as something more than just another guerrilla infiltration.⁴⁶

The surprise occurred despite the fact that the nature of the threat was well understood in Washington, where reports of an impending North Korean invasion had been circulating for some time.⁴⁷ The problem, as Alexander George and Richard Smoke point out, was that prior to the invasion, South Korea’s strategic significance “was assessed exclusively with reference to the contingency of another *general* war. Since the fate of Korea in a general war would be decided in other theaters of war, and since Soviet occupation of Korea would not constitute a major liability in a general war, Korea lacked strategic significance for the global pattern of American security.”⁴⁸

“The concept of ‘limited warfare’ never entered our councils,” recalled General Matthew Ridgway, the army’s deputy chief of staff for operations at the time of the attack.⁴⁹ Only after the attack did Washington realize that “considerations other than Korea’s strategic importance in a general war might require a U.S. commitment to its defense.”⁵⁰ The strategic surprise suffered by the U.S. on 25 June was thus very much of its own making.

⁴³ Betts, *Surprise Attack*, p. 53.

⁴⁴ Quoted in William Stueck, *The Korean War: An International History* (Princeton: Princeton University Press, 1995), p. 11.

⁴⁵ Quoted in Glenn D. Paige, *The Korean Decision: June 24-30, 1950* (New York: The Free Press, 1968), pp. 74-75.

⁴⁶ Betts, *Surprise Attack*, pp. 55-56.

⁴⁷ H.A. DeWeerd, “Strategic Surprise in the Korean War,” *Orbis*, Vol. 6, No. 3 (Fall 1962), pp. 438-440.

⁴⁸ Alexander L. George and Richard Smoke, *Deterrence in American Foreign Policy: Theory and Practice* (New York: Columbia University Press, 1974), p. 146. Italics in the original.

⁴⁹ Quoted in Betts, *Surprise Attack*, p. 52.

⁵⁰ George and Smoke, *Deterrence in American Foreign Policy*, p. 146.

The U.S. was similarly surprised by China's entry into the conflict in November 1950. Although China had repeatedly warned that it would intervene should UN forces cross the 38th parallel, American officials were generally dismissive of the Chinese threat. Having concluded that the North Korean invasion was not, in fact, part of a larger Soviet campaign, the U.S. now proceeded to compound its original mistake by assuming that, outside of a global war, China lacked any incentive to intervene in the conflict.⁵¹ The idea that China might actually feel threatened by the American-led counteroffensive simply did not resonate with American officials. As George and Smoke explain, "U.S. leaders miscalculated because they failed to understand the frame of reference from which the Chinese Communist leaders assessed the significance of what the United States was doing in Korea."⁵² Incredibly, American officials persisted in downplaying the threat of Chinese intervention even after evidence of China's presence in North Korea had become clear.⁵³ While the gains achieved via the first surprise in June were soon reversed, the second surprise would prove to be much more costly. With China's entry into the conflict, the war would last another three years and claim several hundred thousand additional lives.

4.3 9/11

Although the 9/11 terrorist attacks came as a complete surprise to most Americans, the threat posed by al Qaeda and its mysterious leader Osama bin Laden had been known to the American government for years. A veteran of the Islamist campaign to drive Soviet forces out of Afghanistan in the 1980s, bin Laden first appeared on the American counterterrorist radar in the early 1990s following the deployment of U.S. troops to Saudi Arabia as part of the American-led effort to contain Iraqi President Saddam Hussein, an arrangement bin Laden subsequently denounced as an affront to Islam.⁵⁴ Soon the name bin Laden started appearing in relation to a series of anti-American terrorist attacks throughout the region. As American investigators probed ever deeper into bin Laden's activities, the seriousness of the al Qaeda threat began to reveal itself. According to the 9/11 Commission Report,

By 1997, officers in the [Central Intelligence Agency's (CIA)] Bin Ladin unit recognized that Bin Ladin was more than just a financier. They learned that al Qaeda had a military committee that was planning operations against U.S. interests worldwide and was actively trying to obtain nuclear material. Analysts assigned to the station looked at the information it had gathered and „found connections everywhere,‘ including links to the attacks on U.S. troops in Aden and Somalia in 1992 and 1993 and to the Manila air plot in the Philippines in 1994-1995 [the plan to blow up as many as twelve U.S. commercial airliners over the Pacific Ocean].⁵⁵

⁵¹ DeWeerd, "Strategic Surprise in the Korean War," p. 446; and Paige, *The Korean Decision*, pp. 172-173.

⁵² George and Smoke, *Deterrence in American Foreign Policy*, p. 213.

⁵³ Betts, *Surprise Attack*, p. 59.

⁵⁴ On the rise of bin Laden and al Qaeda see Steve Coll, *Ghost Wars: The Secret History of the CIA, Afghanistan, and bin Laden, from the Soviet Invasion to September 10, 2001* (New York: Penguin, 2004); and Lawrence Wright, *The Looming Tower: Al-Qaeda and the Road to 9/11* (New York: Alfred A. Knopf, 2006).

⁵⁵ *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States* (Washington, D.C.: U.S. Government Printing Office, 2004), p. 109.

Any lingering doubts as to bin Laden's intentions were erased in February 1998 when he and his al Qaeda associate Ayman al Zawahiri issued a fatwa calling for the murder of American citizens.⁵⁶ Six months later, on 7 August 1998, truck bombs destroyed the American embassies in Nairobi, Kenya and Dar es Salaam, Tanzania. The bombings killed 224 people, including twelve Americans.⁵⁷ Another high-profile attack followed in October 2000, when suicide bombers struck the U.S. Navy destroyer the USS Cole while at anchor in the port of Aden, Yemen. Seventeen members of the crew were killed.⁵⁸

As with the Japanese attack on Pearl Harbor, the 9/11 attacks were also preceded by a dramatic escalation in threat reporting. A March 2001 terrorist threat advisory indicated "a heightened threat of Sunni extremist terrorist attacks against U.S. facilities, personnel, and other interests."⁵⁹ Another advisory in late June warned of a high probability of "near term 'spectacular' terrorist attacks resulting in numerous casualties."⁶⁰ Although most of the reporting suggested that the likely targets of such attacks would be overseas, the possibility that al Qaeda might directly attack the U.S. was not ruled out. Indeed, as early as December 1998 the CIA had warned of possible al Qaeda attacks inside the U.S., including airplane hijackings.⁶¹ More ominously, an article in the Presidential Daily Brief of 6 August 2001 was entitled, "Bin Ladin Determined to Strike in U.S."⁶²

The notion that the attacks could not have been foreseen became a choice talking point for administration officials in the wake of the disaster. As then National Security Advisor Condoleezza Rice said in May 2002, "I don't think anybody could have predicted that these people would take an airplane and slam it into the World Trade Center, take another one and slam it into the Pentagon, that they would try to use an airplane as a missile."⁶³ While it is certainly true that the specifics of the attacks were far from obvious and that the threat al Qaeda posed to the U.S. homeland was not well understood by some high-ranking officials, the idea that al Qaeda might strike the U.S. in the manner it did was far from inconceivable. There was, after all, credible intelligence pointing in that direction. Moreover, had the attacks been truly unimaginable, a federal law enforcement official investigating the case of Zacarias Moussaoui would not have thought to say in mid-August 2001 that he was "trying to keep someone from taking a plane and crashing [it] into the World Trade Center."⁶⁴

4.4 Learning the Right Lessons

The preceding examples illustrate well the kind of political, bureaucratic, and conceptual failures that enable successful surprise military attacks. Intelligence reports warning of a possible attack

⁵⁶ Ibid., p. 47.

⁵⁷ Ibid., p. 70.

⁵⁸ Ibid., p. 190.

⁵⁹ Ibid., p. 255.

⁶⁰ Ibid., p. 257.

⁶¹ Ibid., pp. 128-129.

⁶² Ibid., pp. 260-262.

⁶³ Quoted in David Johnston and James Risen, "Series of Warnings," *New York Times*, 17 May 2002, p. A1.

⁶⁴ Quoted in Wright, *The Looming Tower*, p. 396. Moussaoui was an al Qaeda agent who aroused suspicion while enrolled in flight school in Minnesota. He was arrested in August 2001 and would eventually be tried and found guilty of conspiring to commit a terrorist act.

were ignored or downplayed. Vital information which may have forestalled or lessened the severity of the attack was not passed up the chain of command to those who could have acted on it. Analysts misread the level of tension or incorrectly assessed the adversary's motivations. Political officials had their attention focused elsewhere.

The fact that the same types of failures have a habit of recurring should give pause to anyone who thinks that the challenge of avoiding surprise is easily overcome.⁶⁵ However, the situation is far from hopeless. Indeed, for defence officials trying to figure out where best to focus their analytical and planning capabilities, the fact that there is simply no such thing as a 'bolt from the blue' should be somewhat reassuring. At the very least, knowing where to look effectively reduces the defence planning challenge to one of limiting, if not avoiding altogether, the kind of mistakes that have proven to be so costly in the past.

⁶⁵ On the inevitability of surprise see Richard K. Betts, "Analysis, War, and Decision: Why Intelligence Failures Are Inevitable," *World Politics*, Vol. 31, No. 1 (October 1978), pp. 61-89.

5 Defence Planning Under “Bounded Uncertainty”

From a defence planning standpoint, the organizational implications of the preceding analysis are fairly straightforward. Insofar as combating the threat of strategic surprise is concerned, the planning emphasis should clearly fall on known and probable adversaries, with scenario development and contingency planning prioritized accordingly. While it may be necessary to develop scenarios and contingency plans related to other defence requirements (i.e., current operations, possible future deployments, disaster assistance, etc.), this work should be conducted with as much separation as possible from that which is primarily directed towards the problem of strategic surprise. In doing so, the routine planning challenges that come from living in an uncertain world can be clearly distinguished from the more specific problems that flow from possessing insufficient and/or ambiguous information about a particular adversary’s intentions.

Of course, knowing where to look is but one aspect of any successful strategy for avoiding surprise. As Betts notes, “Surprise in its most challenging forms is an intellectual and political phenomenon more than a technical or informational one that can be fixed by better monitoring.”⁶⁶ The crux of the problem was captured by Thomas Schelling nearly fifty years ago in his appraisal of the American failure to detect and deter the Japanese attack on Pearl Harbor. “If we think of the entire U.S. government and its far-flung military and diplomatic establishment, it is not true that we were caught napping at the time of Pearl Harbor,” writes Schelling. “Rarely has a government been more expectant. We just expected wrong. And it was not our warning that was most at fault, but our strategic analysis. We were so busy thinking through some ‘obvious’ Japanese moves that we neglected to hedge against the choice they actually made.”⁶⁷

Unfortunately, even with the right focus, failure remains a distinct possibility. Adds Schelling, “There is a tendency in our planning to confuse the unfamiliar with the improbable. The contingency we have not considered seriously looks strange; what looks strange is thought improbable; what is improbable need not be considered seriously.”⁶⁸ While there may be no surefire strategy for avoiding this particular pathology, defence planners would do well to remember that there are no surprise adversaries, only surprise scenarios.

⁶⁶ Betts, *Surprise Attack*, p. 19.

⁶⁷ Thomas C. Schelling, “Foreword,” in Wohlstetter, *Pearl Harbor*, p. vii.

⁶⁸ *Ibid.*

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Bibliography

Betts, Richard K. "Analysis, War, and Decision: Why Intelligence Failures Are Inevitable," *World Politics*, Vol. 31, No. 1 (October 1978), pp. 61-89.

_____. *Surprise Attack: Lessons for Defense Planning*. Washington: Brookings Institution Press, 1982.

Clausewitz, Carl von. *On War*. Michael Howard and Peter Paret, eds. and trans. Princeton: Princeton University Press, 1976.

Coll, Steve. *Ghost Wars: The Secret History of the CIA, Afghanistan, and bin Laden, from the Soviet Invasion to September 10, 2001*. New York: Penguin, 2004.

Crocker, Chester A. "Reflections on Strategic Surprise," in Patrick M. Cronin, ed., *The Impenetrable Fog of War: Reflections on Modern Warfare and Strategic Surprise*. Westport, CT: Praeger Security International, 2008, pp. 177-185.

Cronin, Patrick M. "The Fog of War," in Patrick M. Cronin, ed., *The Impenetrable Fog of War: Reflections on Modern Warfare and Strategic Surprise*. Westport, CT: Praeger Security International, 2008, pp.1-12.

Davis, Paul K. "Defense Planning and Risk Management in the Presence of Deep Uncertainty," in Paul Bracken, Ian Bremmer, and David Gordon, eds., *Managing Strategic Surprise: Lessons from Risk Management and Risk Assessment*. New York: Cambridge University Press, 2008, pp. 184-227.

Department of Defense (United States). *Report of the Quadrennial Defense Review*. May 1997.

_____. *Quadrennial Defense Review Report*. September 2001.

_____. *Quadrennial Defense Review Report*. February 2006.

_____. *Quadrennial Defense Review Report*. February 2010.

Department of National Defence (Canada). *Canada First Defence Strategy*. May 2008.

_____. *The Future Security Environment 2008-2030, Part 1: Current and Emerging Trends*. Ottawa: Chief of Force Development, 2010.

DeWeerd, H.A. "Strategic Surprise in the Korean War," *Orbis*, Vol. 6, No. 3 (Fall 1962), pp. 435-452.

Feis, Herbert. *The Road to Pearl Harbor: The Coming of the War Between the United States and Japan*. Princeton: Princeton University Press, 1950.

Fitzsimmons, Michael. "The Problem of Uncertainty in Strategic Planning," *Survival*, Vol. 48, No. 4 (Winter 2006-2007), pp. 131-146.

George, Alexander L., and Richard Smoke. *Deterrence in American Foreign Policy: Theory and Practice*. New York: Columbia University Press, 1974.

Handel, Michael I. "The Yom Kippur War and the Inevitability of Surprise," *International Studies Quarterly*, Vol. 21, No. 3 (September 1977), pp. 461-502.

_____. "Surprise and Change in International Politics," *International Security*, Vol. 4, No. 4 (Spring 1980), pp. 57-85.

_____. "Intelligence and the Problem of Strategic Surprise," *Journal of Strategic Studies*, Vol. 7, No. 3 (September 1984), pp. 229-281.

Johnston, David, and James Risen. "Series of Warnings," *New York Times*. 17 May 2002.

Kennedy, David M. *Freedom from Fear: The American People in Depression and War, 1929-1945*. New York: Oxford University Press, 1999.

LaFeber, Walter. *The Clash: A History of U.S.-Japan Relations*. New York: W.W. Norton and Company, 1997.

Luttwak, Edward N. *Strategy: The Logic of War and Peace*. Cambridge, MA: Harvard University Press, 2001.

Mack, Andrew. "Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict," *World Politics*, Vol. 27, No. 2 (January 1975), pp. 175-200.

Morton, Louis. "War Plan Orange: Evolution of a Strategy," *World Politics*, Vol. 11, No. 2 (January 1959), pp. 221-250.

Paige, Glenn D. *The Korean Decision: June 24-30, 1950*. New York: The Free Press, 1968.

Schelling, Thomas C. "Foreword," in Roberta Wohlstetter, *Pearl Harbor: Warning and Decision*. Stanford, CA: Stanford University Press, 1962.

Schwartz, Peter, and Doug Randall. "Ahead of the Curve: Anticipating Strategic Surprise," in Francis Fukuyama, ed., *Blindside: How to Anticipate Forcing Events and Wild Cards in Global Politics*. Washington, D.C.: Brookings Institution Press, 2007, pp. 93-108.

Stueck, William. *The Korean War: An International History*. Princeton: Princeton University Press, 1995.

The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States. Washington, D.C.: U.S. Government Printing Office, 2004.

Wirtz, James J. "Theory of Surprise," in Richard K. Betts and Thomas G. Mahnken, eds., *Paradoxes of Strategic Intelligence: Essays in Honor of Michael I. Handel*. London: Frank Cass, 2003, pp. 101-116.

Wohlstetter, Roberta. *Pearl Harbor: Warning and Decision*. Stanford, CA: Stanford University Press, 1962.

Wright, Lawrence. *The Looming Tower: Al-Qaeda and the Road to 9/11*. New York: Alfred A. Knopf, 2006.

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This Technical Memorandum contends that the defence planning process is ill served by the assumption that uncertainty abounds. To the extent that uncertainty poses a serious impediment to effective defence planning against the threat of strategic surprise, it is a problem circumscribed by relatively firm knowledge as to the potential sources of danger. Accordingly, I propose recasting the problem of strategic surprise as one of 'bounded uncertainty.' The argument is empirically illustrated through an examination of the Japanese attack on Pearl Harbor, the Korean War, and the 9/11 terrorist attacks.

Le présent document technique soutient que le processus de planification de la défense est mal servi par l'hypothèse voulant que l'incertitude abonde. Dans la mesure où l'incertitude pose un obstacle sérieux à une planification efficace de la défense contre la menace d'une surprise stratégique, le problème est circonscrit par une connaissance relativement solide des sources potentielles de danger. Par conséquent, je propose de recadrer le problème de la surprise stratégique pour en faire un problème d'« incertitude bornée ». Cet argument est illustré de façon empirique grâce à un examen de l'attaque japonaise sur Pearl Harbor, de la guerre de Corée et des attaques terroristes du 11 Septembre.

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