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Introduction by James McAllister

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Introduction by James McAllister, Williams College

How do we understand the nuclear strategies of regional powers and how successful are those strategies in deterring conflict? These are obviously important questions for students of world politics, but unfortunately they are also questions that have been largely ignored as scholars focused their attention on the nuclear superpowers of the bipolar era. Of course, the relative lack of attention paid to regional nuclear powers would not matter all that much if these states acted similarly to the superpowers, but it is clear that they have acted quite differently. For example, none of the regional nuclear powers has attempted to build the large arsenals possessed by the superpowers during the Cold War. In his important and ambitious new book, Vipin Narang attempts to explain the decisions made by regional nuclear powers and to develop a new theoretical framework that will be relevant to understanding the current and future dynamics of what he calls the “second nuclear age”(1).

All the reviewers agree that Narang has produced an important addition to the literature on nuclear strategy and regional powers. Andrew Coe calls the book a “seminal contribution” and “an essential read for nuclear scholars.” Alexandre Debs believes that Narang has made a “path-breaking contribution to our understanding of the sources of nuclear posture of regional powers and the effect of nuclear weapons on international relations.” In the view of Alexander Montgomery, *Nuclear Strategy in the Modern Era* “deserves to be lauded for both its careful case studies across multiple countries as well as its dedication to demonstrating the causes and consequences of nuclear posture.”

The reviewers do raise some important concerns about various aspects of Narang’s argument. While Debs praises the books quantitative techniques as “state-of- the-art,” Coe suggests that the statistical analysis is the “weakest link” of the book. Both reviewers also raise questions about the importance of civil-military relations in Narang’s theory. In their view, security variables explain the vast majority of the cases Narang is seeking to explain and variations in the nature of civil-military relations do not add very much. In his very thoughtful response, Narang addresses both of these issues and explores what he calls “the disturbing policy implications” of his book: “the fact that the asymmetric escalation posture seems to work and successfully deter conventional conflict may encourage states to adopt this strategy, despite the heightened risks of inadvertent nuclear use.”

H-Diplo/ISSF thanks Professor Narang and all of the reviewers for contributing to this important debate over the nuclear postures of regional powers.

Participants:

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Resolution, The Washington Quarterly, and International Security. He has a B.S. and M.S. in chemical engineering from Stanford University, an M.Phil in International Relations from the University of Oxford, and a PhD from the Harvard University Department of Government.

Andrew J. Coe is an Assistant Professor of International Relations at the University of Southern California. He has been a Stanton Nuclear Security Fellow at the Council on Foreign Relations and, prior to becoming an academic, he worked on nuclear and other issues at the Institute for Defense Analyses, a federally-funded research and development center. His research interests include nuclear weapons issues in international relations, and the causes and consequences of war. His work has appeared in the *Journal of Conflict Resolution* and *The Washington Quarterly*.

Alexandre Debs is Assistant Professor of Political Science at Yale University. He is interested in the politics of weak institutions. His current projects look at the causes of international conflict, nuclear proliferation, and democratization. His previous work has appeared in *American Political Science Review, Economics of Peace and Security Journal, International Organization, International Security, Journal of Conflict Resolution, Journal of the History of Economic Thought, and Quarterly Journal of Political Science*. His book manuscript, *Nuclear Politics: The Strategic Logic of Proliferation* (with Nuno Monteiro), is forthcoming with Cambridge University Press. Alexandre received a Ph.D. degree in Economics from M.I.T., an M.Phil. from Oxford University and a B.Sc. from the Université de Montreal.

Alexander H. Montgomery has published articles on dismantling proliferation networks and on the effects of social networks of international organizations on interstate conflict. His research interests include political organizations, social networks, weapons of mass disruption and destruction, social studies of technology, and interstate social relations. Most recently, he has been a Residential Fellow at the [Woodrow Wilson International Center for Scholars](#); prior to that he was [Council on Foreign Relations International Affairs Fellow in Nuclear Security](#) with a placement in the US Office of the Secretary of Defense (Policy) working for the [Deputy Assistant Secretary of Defense for Countering Weapons of Mass Destruction](#). His portfolio included writing a new [Department of Defense Strategy for Countering Weapons of Mass Destruction](#).

I believe this book will soon be regarded as a seminal contribution to the study of nuclear weapons issues in international relations. It provides thorough answers to some obviously important questions in this field. How do the nuclear weapons postures of the regional powers differ from each other? What caused each of these states to select one posture over another? What consequences did these choices have for the ability of each to deter attacks from other states?

The book's answer to the first question is a novel classification scheme for the regional powers' nuclear postures, with categories induced from the principal objectives these states appear to have set for their weapons. States with *catalytic* postures intend to use nuclear weapons primarily to precipitate the intervention of a favoring patron in dire emergencies. Those with *assured retaliation* postures seek the ability to threaten nuclear strikes on an adversary's territory even after it has launched an all-out attack against them. Finally, states selecting an *asymmetric escalation* posture aim to use nuclear strikes to overcome an adversary's conventional forces. The different goals of these postures imply different doctrines for employment, kinds of capabilities, and systems of command and control, which Narang carefully elaborates and then uses to assign each regional power to a category.

The result is a clear, well-defined categorization that is a major contribution of the book. Narang's scheme captures differences among these states' postures that are both theoretically paramount and also relatively easy to observe. It thus sidesteps the debates over harder-to-observe characteristics—such as whether China has an existential, minimal, or limited deterrence posture—that might otherwise bog down any attempt to generalize across countries. It also eschews well-defined, but theoretically dubious measures such as the number of weapons in a state's nuclear arsenal. The simplicity of the scheme is its greatest virtue: it renders the task of assigning a given country's posture to a category relatively straightforward, so that Narang's classification of various countries' postures in subsequent chapters is very convincing. This categorization alone renders the book an essential read for nuclear scholars.

To answer the second question, about why regional powers select the posture they do, the book offers a "posture optimization" theory that relies primarily on three nested variables (13). If a state has a strong, reliable patron, such as a superpower, it should select a catalytic posture. If it lacks a patron, but faces a proximate, severe threat, such as a neighboring adversary with superior conventional forces, then it should go for an asymmetric escalation posture. If it does not confront such a threat, but its civil-military relations are assertive, meaning the political leadership doesn't trust the military, it should choose assured retaliation. If instead its civil-military relations are delegative, so that politicians do trust the military, then it should choose asymmetric escalation. Narang emphasizes that the external security environment alone is not sufficient to explain a state's posture—domestic politics, in the form of civil-military relations, also matter (27-30, 35-36).

Narang develops his classification scheme and posture optimization theory with little reference to the vast Cold War literature on the characteristics and origins of the superpowers' postures. This has an important advantage: it avoids the pitfall of imposing a superpower-based scheme on the qualitatively different situations, and therefore nuclear postures, of the regional powers. However, it also has a clear downside: the theory suffers from the lack of engagement with prior thinking on nuclear deterrence. While the theory's predictions mostly match the empirical record, they may be right for the wrong reasons.

Most importantly, his theory does not recognize that the value of an asymmetric escalation posture depends crucially on the conventional balance of power. Let me illustrate this point with the case of Israel's assured retaliation posture after 1991, which Narang admits does not fit his theory (206). In Narang's telling, Israel came to doubt the reliability of its patron, the U.S., after the Gulf War, but faced no proximate, severe threat, and enjoyed delegative civil-military relations (199-201). Thus posture optimization theory predicts it should have gone instead to an asymmetric escalation posture. The reason is that such a posture would have yielded the maximum deterrent benefits and was well within Israel's capability to implement.

But what could Israel possibly gain from an asymmetric escalation posture? After the United States smashed the military power of Iraq in the Gulf War, Israel no longer faced any proximate, severe threat. Israel could deter or defeat its neighbors' relatively weak conventional militaries using only its conventional forces, and would not require nuclear weapons except to deter an adversary's use of weapons of mass destruction. Were Israel to use nuclear weapons early in a conflict to attack the opposing side's forces, it would only invite its opponents to retaliate with their own weapons of mass destruction, eroding Israel's conventional superiority. Asymmetric escalation would thus only leave Israel worse off, while assured retaliation would maximize the deterrent effect of Israel's nuclear weapons.

More generally, in the absence of a proximate, severe threat, there is little deterrence to be gained from an asymmetric escalation posture that could not be had with an assured retaliation posture, and at lower cost. The whole point of asymmetric escalation is to overcome a compelling conventional disadvantage—that was NATO's purpose in adopting such a posture, as well as Pakistan's. Israel faces no such disadvantage and so has not taken up this posture.

Narang's theory can easily be reformulated to account for this fact, but doing so renders domestic politics (in the form of the civil-military relations variable) superfluous. States facing a proximate, severe threat that can rely on a patron will select a catalytic posture; those without a patron will choose asymmetric escalation. States that do not face such a threat will take up an assured retaliation posture. This formulation is more parsimonious than Narang's original theory and generates the same predictions on all cases except that of Israel after 1991, where its prediction is correct but that of Narang's theory is wrong, and France after 1991, where its prediction (assured retaliation) is wrong but that of Narang's theory (asymmetric escalation) is right. Because this formulation relies solely on a state's

external security environment, it suggests that in fact domestic politics do not matter in a state's choice of posture, contrary to Narang's claim.

The bulk of the book consists of case studies of Pakistan, India, China, France, Israel, and South Africa, to which the classification scheme is applied and against which the predictions of Narang's theory and several alternatives are tested. While the assignment of each state's posture to a particular category seems clear, the same cannot always be said for the measurement of the variables of posture optimization theory. For instance, it is quite unclear how a patron is judged reliable or not, and how this is measured in the case studies. Narang assesses Pakistan as having had a reliable patron from 1986 to 1991, and indeed in every crisis Pakistan faced in this period, the U.S. intervened effectively to protect it. However, Israel is also assessed as having had a reliable patron from 1966 to 1990, despite the occasional reluctance of the U.S. to help it, such as early on in the 1973 war, and as *not* having had one from 1991 onward, despite continuing large arms transfers and strong support for Israel's interests from the U.S. Did Israel really feel abandoned after 1991, as Narang claims (202), or did the end of Iraq's military power, which left Israel dominant within the region's balance of conventional power, simply enable Israel to assert greater autonomy from the U.S. and discard its catalytic posture? Finally, South Africa is assessed as having a reliable patron, even though Narang admits that "the probability [of U.S. intervention to protect South Africa] may have been only slightly higher" than zero (216). If the reliability of a patron can range from confidence that it will intervene, to merely placing the probability slightly higher than zero, then this variable has no meaning. Put another way, if South Africa had a reliable third-party patron, then so did China, France, India, and Israel after 1991—upon being severely attacked, each likely would have placed substantial probability on the U.S. intervening to stop the attack, even if this were not certain. The lack of rigor in measuring this and occasionally the other variables undermines somewhat the validity of the case studies as tests of Narang's theory.

That said, the book's case studies are still extremely valuable. Narang presents a detailed, thorough, exhaustively cited, and judicious synthesis of the state of knowledge on each country's nuclear choices. Thus, the book serves as an excellent reference on each case. But it also does much more than that. Because so much of the prior literature focuses on a single case at a time, it is necessarily awash in details that obscure any underlying patterns in states' nuclear postures. Narang's use of his classification scheme to explicate the history of these cases crystallizes the most important differences among them and also reveals their deep similarities. Taken together, these chapters offer a unified understanding of states' nuclear postures that is remarkably clear and concise.

The final part of the book investigates the effects of the different postures on deterrence, using first statistical methods to study general deterrence and then close examination of several crises to study crisis deterrence. In my estimation, the statistical analysis is the book's weakest link. It suffers from several flaws, ironically including every single problem listed in Narang's own essay on statistical methods in nuclear studies, each of which is

sufficient to severely undermine confidence in the results.¹ Though the book admits these problems, little is done to address them. This is all the more frustrating since, for at least some of these problems, there are readily-available solutions.

I will give just one example. One serious problem with Narang's analysis is that there may be omitted variables that influence both a country's choice of nuclear posture and its ability to deter attack and escalation. If such variables exist, then Narang's estimates of how well each posture deters are likely to be incorrect—the real effect could be smaller (possibly even zero) or larger. Narang recognizes this flaw, admitting that his statistical results “do not provide valid causal inferences,” but defends it as “the soundest available approach” (247). In fact, Narang's own posture optimization theory both implies that such variables exist *and identifies them*, making it easy to correct this flaw. For instance, the presence of a proximate, severe threat strongly influences the choice of posture in Narang's theory, and also seems likely to affect whether a state is more likely to be attacked. It is therefore an important omitted variable. This and the other variables of Narang's theory need only have been included in the regressions, so that it would be possible to determine the effect of each nuclear posture independent of the conditions that gave rise to that posture. Since they were not included, we cannot tell whether, for example, a state's inability to deter conflict is due to its choice of the catalytic posture, or due to the fact that it faces a nasty external threat.

Narang's examination of several India-Pakistan and Arab-Israel crises to trace out the apparent effect of one side's nuclear posture on the other side's decision-making is more convincing, and constitutes another important contribution of the book. His narratives of these crises make it quite clear that Pakistan's asymmetric escalation is an important cause of India's hesitation to use serious conventional force on Pakistani territory, and that India's assured retaliation posture and Israel's catalytic posture prior to 1991 were insufficient to deter their enemies from quite serious attacks. All told, this chapter presents a mountain of evidence against the theory that merely having nuclear weapons is enough, so that posture is irrelevant to deterrence.

In sum, this book is an impressive first step in grappling with the causes and consequences of the regional powers' nuclear postures. Its great strengths are its clear classification scheme, its excellent case studies guided by this scheme, and its careful narratives of crises in which postures succeeded or failed in deterring a state's enemies. While its theory, measurement of key variables, and statistical analysis of deterrence have some flaws, these should not distract us from the book's major contributions. Instead, they should be regarded as logical next steps, to be taken up by Narang or other scholars in future work.

¹ Vipin Narang, “The Use and Abuse of Large-n Methods in Nuclear Studies,” *H-Diplo/ISSF Forum*, no. 2 (2014), 91-97, <https://issforum.org/forums/2-what-we-talk-about-when-we-talk-about-nuclear-weapons>

Regional powers have presented important challenges to U.S. non-proliferation policy. In the last few months, the Obama Administration has spent considerable effort trying to counter the proliferation risks in Iran. However, we know relatively little about the potential consequences of nuclearization for regional powers. Is nuclear proliferation likely to escalate tensions in a region? In order to devise an effective non-proliferation policy, it is crucial to understand the role that regional powers will assign to nuclear weapons in their defense posture, and the relative effectiveness of these postures. Professor Vipin Narang's *Nuclear Strategy in the Modern Era* offers an innovative and insightful analysis of the nuclear postures of regional powers, with important implications for research and policy.

In the first part of the book, Narang explains the sources of nuclear postures. According to him, regional powers adopt one of three nuclear postures: a *catalytic* posture, whereby a state threatens to use nuclear weapons to induce a third-party, typically the United States, to intervene in the crisis on its behalf; an *assured retaliation* posture, whereby a state seeks to directly deter nuclear attack and coercion by threatening nuclear retaliation; and an *asymmetric escalation* posture, whereby a state threatens the first use of nuclear weapons to deter conventional attacks (14-21). Narang then offers a theory explaining these choices of nuclear posture (27-42). First and foremost, security conditions matter. A state chooses the catalytic posture if a patron would intervene on its behalf and if not, the state chooses an asymmetric escalation if it faces a conventionally-superior proximate offensive threat.² If the nuclear power does not have a patron and enjoys conventional superiority, the choice of nuclear posture is determined by non-security factors, such as civil-military relations and financial constraints.

In the second part of the book, Narang evaluates the effect of nuclear postures on interstate crises. He concludes that the asymmetric escalation posture brings important security benefits, reducing the risk of conflict of any level of escalation (222-224). The catalytic and assured retaliation postures, by contrast, have little deterrent effect.

The book is an impressive multi-method approach combining careful theoretical work, detailed qualitative evidence of the history of nuclear posture, including operational configurations, and state-of-the-art quantitative techniques.³ Here I offer some comments

¹ I thank the editors for the invitation to submit this piece and Nuno Monteiro and Mira Debs for their comments.

² A threat is a "proximate offensive" threat if it "is usable across geographies and generates a potential existential threat." (35).

³ Readers interested in pieces of the argument can consult Narang's previous work, i.e. Vipin Narang, "Posturing for Peace? Pakistan's Nuclear Postures and South Asian Stability," *International Security*. Vol. 34, No. 3 (Winter 2009/2010): 38-78; Vipin Narang, "What Does it Take to Deter? Regional Power Nuclear Postures and International Conflict," *Journal of Conflict Resolution*. Vol. 57, No. 3 (June 2013): 478-508. In "Posturing for Peace," the author develops a typology of nuclear postures, with an in-depth analysis of the

and thoughts for future research. Let me start with the second part of the book, on the effect of nuclear weapons.

The effect of nuclear weapons on international relations is the subject of intense debates in the literature. Many of the recent contributions, using quantitative analyses, have encountered strong criticism, including in a roundtable on H-Diplo.⁴ Narang, who contributed to that roundtable, is well aware of these shortcomings and offers a significant improvement to existing quantitative studies. In his statistical analysis, he addresses concerns of selection bias by looking not just at the outcome of interstate crises but at their incidence as well. Narang also offers rich and insightful qualitative evidence, illustrating the mechanism through which nuclear weapons affected the outcome of different crises. Ultimately, Narang reaches the following conclusions: nuclear weapons do not have a uniform security benefit, and the asymmetric escalation posture brings important security benefits in that it significantly reduces the frequency and intensity of disputes initiated against the state (222-224).

To begin with, I am sympathetic to the idea that nuclear weapons do not have a uniform security benefit. Traditionally, we think of nuclear weapons as ‘the weapon of the weak.’ States with weaker conventional forces could obtain a large security benefit from acquiring nuclear weapons. During the Cold War, the United States faced a disadvantage in conventional forces on the European continent and relied heavily on the threat of nuclear use to deter a Soviet attack. Since the end of the Cold War, the United States has tried to deter conventionally weaker states from acquiring nuclear weapons. Any analysis of nuclear politics should recognize that nuclear weapons produce different security benefits for different states.⁵

At the same time, I think that it would be dangerous to suggest that states should adopt the asymmetric escalation posture because it is ‘optimally deterrent.’ Since the seminal work of Thomas Schelling, we know that strategies that can deter the incidence of a crisis can

India-Pakistan dyad, showing how Pakistan’s asymmetric escalation posture has had an effective deterrent effect on India. In “What Does it Take to Deter?” the author evaluates the relative effectiveness of these different postures using quantitative tests. Yet these articles are imperfect substitutes for the book, which presents a new theory of the causes of nuclear posture, a careful historical analysis of the nuclear posture of six regional powers, a richer analysis of the India-Pakistan dyad and a new analysis of the enduring rivalry between Israel and the Arab states.

⁴ See <http://issforum.org/ISSF/PDF/ISSF-Forum-2.pdf>, to which Professor Narang contributed, and the ensuing discussion at the Monkey Cage: <http://www.washingtonpost.com/blogs/monkey-cage/wp/2014/07/08/what-new-academic-research-can-teach-us-about-nuclear-weapons>.

⁵ See my work on the causes of nuclear proliferation with my colleague Nuno Monteiro, i.e. Alexandre Debs and Nuno P. Monteiro, “Known Unknowns: Power Shifts, Uncertainty, and War,” *International Organization*, Vol. 68, No. 1 (January 2014): 1-31; Nuno P. Monteiro and Alexandre Debs, “The Strategic Logic of Nuclear Proliferation,” *International Security*, Vol. 39, No. 2 (Fall 2014): 7-51; Alexandre Debs and Nuno P. Monteiro, *The Strategic Logic of Proliferation* (New York: Cambridge University Press, forthcoming).

increase the risk of a catastrophe in the event of crisis.⁶ Burning bridges, threats that leave something to chance, and the rationality of irrationality ... can all deter a crisis by increasing the risk of nuclear use in a conflict. This risk-return trade-off, of which Narang is well aware (251), should remain salient as we draw policy implications from his book.

The asymmetric escalation posture could be sensible for some states. If a country faces a conventionally superior enemy, it may want to rely more heavily on nuclear weapons, and choose an asymmetric escalation posture. Weak states could lose a conventional war relatively quickly, and they may want to prepare for the use of nuclear weapons before it is too late. If a state faces a weaker conventional threat, then it is not clear that an asymmetric escalation posture would be beneficial. Would the threat of nuclear use be credible if the state could prevail with conventional forces? If such a threat were credible, would it be warranted? Successful crisis management involves not just bolstering the credibility of threats, but also improving the credibility of assurances.⁷ An asymmetric escalation posture by a conventionally stronger state could incentivize the conventionally weaker state to threaten an even prompt use of nuclear weapons, ultimately worsening the security outlook of the first state. For conventionally strong states, an assured retaliation posture would appear optimal.

This brings us to a consideration of Narang's theory on the sources of nuclear posture.

Narang makes a path-breaking contribution in his analysis of the sources of nuclear posture for regional powers. Existing scholarship has typically focused on the nuclear postures of the superpowers.⁸ While seminal contributions have shed important light on the strategic implications of a no-first-use doctrine and of secure second-strike capabilities, their implications for the nuclear posture of regional powers are unclear. Regional nuclear powers have the option to induce a superpower to intervene in the conflict. As Narang shows convincingly, Pakistan and Israel on various occasions used their nuclear weapons as a diplomatic tool, not to coerce their enemies but to pressure the United States to intervene in a crisis (Chapters Three and Seven).

Narang offers a novel typology of nuclear postures and presents a powerful theory on the sources of such postures. First and foremost, security imperatives matter. If a regional power could rely on a third-party patron, it prefers to do so and chooses the catalytic posture. If not, and the state faces a conventionally-superior proximate offensive threat, then it chooses asymmetric escalation. If there is no available third-party patron and the

⁶ Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966).

⁷ See, e.g., Robert Jervis, *The Meaning of the Nuclear Revolution* (Ithaca, N.Y.: Cornell University Press, 1989).

⁸ See, e.g., Schelling, *Arms and Influence*; Jervis, *The Meaning of the Nuclear Revolution*; Lawrence Freedman *The Evolution of Nuclear Strategy*, 2nd ed. (London: Macmillan, 1989); Charles L. Glaser, *Analyzing Strategic Nuclear Policy* (Princeton, N.J.: Princeton University Press, 1990); Robert Powell, *Nuclear Deterrence Theory: The Search for Credibility* (New York: Cambridge University Press, 1990).

state does not face a conventionally superior threat, the security environment does not make a definite prediction; civil-military relations and financial constraints matter. Civilian authorities that are assertive towards the military choose assured retaliation. Other civilian authorities choose asymmetric escalation, the most expensive posture, when they can afford it, and assured retaliation when they cannot.

This theory is a welcome contribution to our understanding of nuclear strategy, and as Narang shows, it is a more powerful theory than credible alternatives, explaining eight of the nine cases under consideration.⁹ Here I would like to comment on two features of the theory: the role of non-security factors in explaining nuclear posture and the relative importance of the security factors.

As Narang admits, the security factors explain most of the variation in the choices of nuclear postures. In fact, consider a revised theory that is purely based on security factors: a state chooses a catalytic posture if it has a third-party patron and if it does not, it chooses the asymmetric escalation posture if it is conventionally weak and an assured retaliation posture if it is conventionally strong.¹⁰ Such a theory would explain seven or eight of the nine cases.¹¹ In other words, in Narang's optimization theory, two non-security variables are used to explain one or two outliers. Ultimately it is not clear to me that such additions significantly improve the power of the theory.

⁹ The theory applies to six regional powers, three of which changed their posture in the early 1990s. The outlier for the theory is the case of Israel since 1991. Israel has chosen a posture of assured retaliation, while the theory predicts that it should have chosen a posture of asymmetric escalation. Narang states that the theory only partially predicts South Africa's choice of a catalytic posture, because it relies on the beliefs of South African leaders about potential assistance from the United States. In my view, incorporating beliefs is crucial in understanding policy choices, and I am comfortable granting this case to the theory.

¹⁰ I think that it is important to distinguish whether the state faces a security threat and whether it possesses the advantage in conventional forces. If the state does not face a clear security threat, this revised theory is indeterminate. Only France, from 1991 to the present, falls into that category, due to the fall of the Soviet Union. If a state faces a security threat, opinions can differ on whether it is conventionally strong. I assume that India's posture has been mainly geared toward Pakistan, over which it has maintained the advantage in conventional forces; and that Israel has had the advantage in conventional forces vis-à-vis its enemies since 1991. These coding decisions are in keeping with Narang's (302). As for China, since 1964, I would code it as weak, looking at the balance of conventional forces, which favors its potential enemies (the United States, China, and the Soviet Union). By contrast, Narang codes China as strong, looking at its advantage in manpower and territory which, according to him, offers the possibility of a "defense-in-depth" (139).

¹¹ The theory would correctly predict Israel's choice of a nuclear posture. It would have an indeterminate prediction for the case of France (from 1991 to the present), which has not faced a clear threat since the fall of the Soviet Union. As Narang documents, France has been hedging in maintaining tactical nuclear weapons as well as a sea-based second-strike capability (169-173; because of the presence of tactical nuclear weapons, Narang codes the posture as one of asymmetric escalation). Finally, consider the case of China, which has chosen an assured retaliation posture from 1964 to the present. The theory would make the wrong prediction if we consider the balance of conventional forces, which would favor its enemies. However, the theory would make the right prediction if we use China's advantage in manpower and territory, as Narang does, to code it as conventionally strong.

Finally, I think that the theory should better explain the relative importance of security variables. Narang assumes that regional powers choose the catalytic posture whenever it is available to them. This is puzzling, given Narang's conclusion that the catalytic posture is "deterrence suboptimal" (e.g., 249). In my opinion, this puzzle is due to Narang's measure of success in interstate crises. If we evaluate the effectiveness of a posture by its ability to eliminate existential threats at a lowest possible cost, then a catalytic posture does appear optimal. A catalytic posture can effectively help a state avert an existential threat, as Narang documents in his qualitative evidence. It can do so at a relatively low cost. Assured retaliation would be financially costly, requiring a large arsenal and a survivable second-strike. Asymmetric escalation would present the greatest possible cost of all, by inducing the highest risk of nuclear use. Understanding the various costs of nuclear postures can help account for the choices of regional powers.

Nuclear Strategy in the Modern Era is a path-breaking contribution to our understanding of the sources of nuclear posture of regional powers and the effect of nuclear weapons on international relations. It presents the first typology of nuclear postures for regional powers, provides a powerful theory on the sources of nuclear postures, and offers a careful analysis of the effect of nuclear weapons on interstate relations. While I offer some words of caution about the possible policy implications of the book, I believe that it is one of the most important additions to current conversations on nuclear politics. I look forward to the rich discussion that the book will spur in the pages of H-Diplo and beyond.

Review by Alexander H. Montgomery, Reed College

Vipin Narang's new book, *Nuclear Strategy in the Modern Era: Regional Powers and International Conflict*, breaks important new ground in the study of nuclear strategy by explaining both the causes and consequences of "regional" nuclear power postures. The extant literature on nuclear strategy, as Narang points out, is heavily biased towards analysis of the U.S. and the USSR during the Cold War, and tends to assume that other nuclear powers will attempt to imitate their superpower predecessors. He constructs a typology of three postures (*catalytic*, *assured retaliation*, and *asymmetric escalation*) that vary across four key characteristics (employment, capabilities, management, and transparency). He argues that regional powers will select their posture through a process of "optimization" (8) vis-à-vis their external security environment and their internal threats and constraints, although the latter only matters if the former is not determinative. Perhaps unsurprisingly, he finds that his "Posture Optimization Theory" (POT),¹ predicts not just initial posture selection but also later shifts in almost all of the cases he examines (China, France, Israel, India, Pakistan, and South Africa). Not resting there, he then demonstrates, using both quantitative and qualitative techniques, that only *asymmetric escalation* successfully deters conflict. Here I focus on his qualitative analysis, as Narang himself has pointed out the potential problems of quantitative analyses of nuclear proliferation.²

The book is framed in a quintessential political science fashion, pitting POT against neorealism, strategic culture, and technological determinism. While considering alternate theories often strengthens claims, here it does not serve that function nearly as well as usual, since POT is an argument about a hierarchy of choices that influence nuclear postures. It effectively encompasses some variant of realism (availability of a powerful ally, facing a conventional threat),³ pieces of strategic culture (as it applies to civil-military relations), and part of technological determinism (resource constraints). This is not to say that POT is not a significant contribution, but rather that it is truly a mid-level theory that incorporates a variety of theoretical pieces together, making a comparison with the individual parts a fairly easy fight. Nevertheless, given the external security environment presented by reviewers, editors, and tenure boards in political science, the choice of a theory 'deathmatch' as a frame is probably necessary.

¹ A slang term for marijuana doesn't make for the best acronym, but unlike many in political science, at least it can be pronounced.

² Scott D. Sagan, Francis J. Gavin, Matthew Fuhrmann, Matthew Kroenig, Todd S. Sechser, Hal Brands, Erik Gartzke, and Vipin Narang. *What We Talk about when We Talk about Nuclear Weapons*. H-Diplo/ISSF Forum 2, ISA Security Studies Section, June 15, 2014. Available at: <http://issforum.org/ISSF/PDF/ISSF-Forum-2.pdf>

³ Narang in fact relates his theory to neo-classical realism, a confusing neologism that appears to mostly constitute shoehorning unit-level assumptions back into a structural analysis.

The choice of framework, however, does not in the least detract from the unique and invaluable contributions that Narang makes to the study of nuclear posture. The real gold here is in the careful case studies of each of his subjects, which in some cases include direct interviews with participants in the construction of regional-power postures or management of the crises that have ensued from those choices. In particular, his analysis of interactions between the Pakistani and Indian nuclear programs and crises is an exceedingly careful reconstruction that judiciously weighs the evidence for the particular postures, implicit or explicit threats, and reactions to those threats made by each country. In doing so, he highlights (correctly) the success Pakistan has had in deterring Indian reactions to provocations as well as India's failure to deter them.

However, although his findings regarding deterrence failures and successes through a series of crises from the 1980s through the 2000s are astute, they are not unassailable. Both the 1986–7 Brasstacks and 1990 Kashmir Compound Crises are portrayed as failures, since Pakistan's *catalytic* posture failed to deter India from deploying troops, whereas Pakistan's *asymmetric escalation* posture during the 1999 Kargil War, 2001–2 Operation Parakram, and 2008 Mumbai crises are framed as deterrent successes on Pakistan's part due to India's caution. Conversely, India's *assured retaliation* posture is generally seen as a deterrent failure, since in each of the latter four crises Pakistan provoked India without retaliation.

Although it may have been a deterrent failure when narrowly defined, the *catalytic* strategy was actually a *political* success for Pakistan; it may have failed to deter India from mobilizing within its own territory (which is, really, too much to ask of nuclear weapons), but it did ultimately prevent India from invading. On the flipside, India may have failed to deter Pakistani support for militant organizations or even a furtive land-grab in Kargil throughout these crises, but then again there is widespread consensus that it is difficult or impossible to deter support for such organizations with nuclear threats of any kind. Furthermore, in Kargil Pakistan took significant pains to make very limited incursions using light troops out of their uniforms.⁴ Consequently, even though Pakistan's *catalytic* strategy and India's *assured retaliation* strategy may appear to have failed with respect to deterrence, *politically* these postures achieved their goals.

Similarly, Israel's *catalytic* posture appears to be a deterrence failure; yet it ultimately achieved Israel's *political* goals. Signals to the U.S. were unnecessary in the 1966 Six Day War, succeeded in resupplying conventional munitions in the 1973 Yom Kippur War, and led to the loan of dubiously operational but politically effective Patriot missile defenses in the 1991 Gulf War. A *catalytic* posture cannot be expected to deter conflict; rather, its success or failure must be measured depending on whether the patron intervenes in the conflict. By that measure, it is not clear that "these crises cast serious doubt on the

⁴ Ironically, it is India's concern about Pakistani nuclear weapons that "cost the Indian military lives" (273), which may have been the key factor that ultimately pushed the death total over the symbolic threshold of 1000 battle deaths, thus turning a conflict into a war in Narang's quantitative analysis.

optimality of the catalytic posture to achieve a state's security goals" (295) even if it is clear that they demonstrate failures to deter something.

The depth of Narang's research and the details of the narrative also sometimes push against his coding choices. For example, India is coded as *assured retaliation* from 1974 on despite its complete lack of weaponization until 1988. Although presumably India would have quickly weaponized its stockpile of materials if attacked with nuclear weapons, under this coding, Japan might be considered today to have such a doctrine. However, none of the coding choices ultimately push against his overall thesis of a hierarchy of choices driving nuclear posture choices.

The book as a whole is breathtakingly ambitious, and deserves to be lauded for both its careful case studies across multiple countries as well as its dedication to demonstrating the causes and consequences of nuclear posture.⁵ But in some ways the book could have gone even further. Narang quickly dismisses the postures of the U.S. and the USSR as "largely variations on the same theme involving first-use capabilities and sufficient retaliatory forces" (14) and Britain's as having "forsaking an independent deterrent by placing its forces under de facto NATO control in 1958." (25, paraphrasing Avery Goldstein). Yet like his coding of India's initial posture, the bare capabilities of all three of these actors at the very least in their early years could not possibly have fulfilled the requirements for the ambiguous rump *superpower posture* category. This fourth category could have been fleshed out and thus could have explained not just these regional-power postures but potentially all nuclear postures. He hints at the possibility of applying his framework in the conclusion when speculating about true *existential deterrence*, which would share most attributes (save a patron) with *catalytic* postures. Consequently, I look forward to Narang's future work in the hope that he will flesh out the remaining categories. If every book he writes is this ambitious, careful, and in-depth, I will read all of them.

⁵ In the former regard in particular, it could be compared with Etel Solingen's *Nuclear Logics: Contrasting Paths in East Asia and the Middle East*. Princeton studies in international history and politics. Princeton, NJ: Princeton University Press, 2007.

Author's Response by Vipin Narang, MIT

I thank H-DIPLO/ISSF for hosting this roundtable, and particularly Andrew Coe, Alexandre Debs, and Alexander Montgomery for so thoughtfully and carefully engaging with my book. Their assessment that *Nuclear Strategy in the Modern Era* makes a substantial contribution to the scholarship on nuclear strategy and deterrence is both humbling and exciting. Obviously, no book is completely perfect and mine is certainly no exception. Each contributor raises important issues with various parts of the theory, empirics, or implications that will hopefully provide the basis for future research on this important topic. I am grateful for the opportunity to clarify some of the issues raised and to respond to some of the concerns each commentator highlights. In this response, I will first lay out what I hoped to accomplish in my book and then turn to some of the points raised by the contributors with respect to my theory of nuclear strategies and my empirical work. I close with some comments on the policy implications of my findings.

My aim in writing *Nuclear Strategy in the Modern Era* was to open a larger research agenda on the nuclear postures and strategies of the regional powers. So much of our understanding of nuclear strategy comes from the United States and the Soviet Union during the Cold War. However, there are good reasons to believe, and increasing scholarship to show, that the United States and Soviet Union are outliers in the way they thought about nuclear strategy and certainly in how they developed their nuclear postures.¹ Unlike the superpowers, the regional nuclear powers with independent nuclear forces—France, China, Israel, India, Pakistan, and South Africa—had much smaller force structures and thought about nuclear strategy in very different and more limited ways than the superpowers. The regional powers have been forced to make critical choices about how best to allocate their nuclear deterrent power, choices that the superpowers really never had to face. In the international-relations literature, however, the choices and experiences of the regional powers have been largely overlooked. My aim, therefore, was to provide the first systematic comparative analysis of the pattern of nuclear strategies developed by the regional powers, why each selected the strategy it did, and the consequences of those choices on deterring conflict.

I identify three nuclear postures that can be adopted by regional powers: catalytic, assured retaliation, and asymmetric escalation. I am pleased that all three contributors find value in these analytic distinctions and recognize the power that the classification scheme provides in analyzing regional power nuclear strategy. The second half of the book shows that these nuclear postures deter conflict differently. The conventional wisdom in the academic nuclear deterrence literature is that even the threat of plausible nuclear retaliation ought

¹ I take Montgomery's point that the very early years of each superpower's nuclear experience may have some similarities to those of the regional powers. However, there were also significant differences. For example, the resources the superpowers had at their disposal to rapidly grow their arsenals are not shared by the regional powers. It would be a fruitful subject for future research to assess whether some of the concepts I developed to analyze the nuclear strategies of the regional powers might also shed light on the early behavior of the superpowers.

to be sufficient to deter not only nuclear use but conventional conflict as well. If this is correct, then, as Kenneth Waltz famously wrote, “nuclear weapons eliminate strategy...nuclear weapons make strategy obsolete”—that is, the nuclear strategy choices states make are irrelevant once they acquire even a basic nuclear weapons capability.² I show using both quantitative and qualitative analysis that this conventional wisdom is incorrect: the mere possession of nuclear weapons, or even secure-second strike forces, does not necessarily deter conventional conflict. In order to systematically deter conventional conflict, states must select a strategy—the asymmetric escalation posture—that explicitly attempts to do so. This flies in the face of the existential deterrence school which argues that the mere possession of nuclear weapons is sufficient to deter. I show that nuclear strategy *matters* to conflict outcomes.

If this is the case, why do all nuclear states not adopt an asymmetric escalation posture? In the first half of the book, I show that states may select *deterrent* suboptimal postures—catalytic and assured retaliation—if they can optimally achieve their broader political and security aims with these postures instead, since the management and financial demands of maintaining an asymmetric escalation posture can be severe. This point is important and, as noted by Montgomery, appears to be the source of some confusion. The basic thrust of my theory of nuclear posture choice is that states strategically select their nuclear strategy and would be rational to opt out of the deterrence optimal strategy—*asymmetric escalation*—if their larger political and security aims could be met with a catalytic or assured retaliation posture. That is, states in more permissive security environments, with a reliable patron, or with more centralized and assertive civil-military relations would be wise to forego the asymmetric escalation posture and sacrifice some direct deterrence power for a more *politically* optimal strategy.

Indeed, Montgomery is absolutely correct that states that have selected catalytic strategies at points—such as Israel and Pakistan—were rational to do so because the availability of a reliable third-party patron that might have intervened on their behalf allowed them to achieve their security goals without having to operationalize the costly and intense asymmetric escalation posture. They sacrificed some deterrent power to avoid the cost of explicit nuclear breakout, and gambled that their external patron, the United States, would protect them in the event of crisis. It is a riskier strategy from a deterrence standpoint, but it is indeed politically optimal given these states’ external and internal constraints, as I predict and show with my theory. Likewise, states with permissive security environments but unstable civil-military relations are rational to sacrifice some deterrent power by adopting an assured retaliation posture, which can be more centrally and assertively managed than an asymmetric escalation posture. In ‘posture optimization theory’, the optimization choices states are making are about their broader political considerations beyond simply deterrence. That is, in fact, the fundamental point of my theory. Any confusion on this point is my fault and, hopefully, this helps clarify this issue.

² Kenneth N. Waltz, “Nuclear Myths and Political Realities,” *American Political Science Review*, vol. 84, no. 5 (September 1990), 738.

In exploring the sources and consequences of regional power nuclear strategy, I hope my book will start a research agenda on the nuclear choices and experiences of the bulk of the world's nuclear powers and the ones that will, by definition, populate the future nuclear landscape. Regional nuclear powers have a limited set of nuclear strategies from which to choose because they have to make strategic choices under duress and based on internal and external constraints. Some have no choice because of the severity of their external security environment but to adopt asymmetric escalation postures, which may maximize deterrence power, but which carry real management risks. Most, however, have some security latitude to opt out of the intensity of asymmetric escalation posture and can select catalytic or assured retaliation postures based on their other political considerations. I tried to develop a rigorous theory as to why states select one posture over another and to show that these various choices matter to international conflict patterns. Given the emerging nuclear landscape and the prospect of future regional nuclear powers in the Middle East and East Asia, I hope my book provides a framework for thinking about nuclear strategy and its consequences as the world enters a new nuclear age.

I now turn to clarifying and addressing some of the excellent points raised by each of the contributors to this roundtable. Each of the points raised by the contributors is valid, and I indeed wrestled with many of them as I wrote the book. In a book of this nature, an author is forced to make certain choices along the way and my aim is simply to show that I made defensible choices that I believe were the best ones available given the alternatives. I will begin by addressing some of the key issues raised with respect to the theory of nuclear posture selection before turning to some empirical points and policy implications.

In Chapter 2, I present my theory for why states might adopt one nuclear posture over the others, theorizing that states consider both against external security constraints as well as internal civil-military and resource constraints to optimize for their broader security objectives. This theory argues that security variables are the primary drivers of nuclear strategy choices, but recognizes that where security conditions are more permissive, unit-level variables can exert a powerful effect on determining which nuclear strategy states ultimately adopt. I call this theory posture optimization theory and argue that it is more accurate and determinate than several alternative theories.

Both Coe and Debs raise the possibility that a 'security-only' theory might be sufficient to explain the nuclear strategy choices of most of the regional powers. In particular, they posit that a simple model, in which states with reliable third-party patrons select catalytic postures and the others select either assured retaliation or asymmetric escalation if they are, respectively, conventionally superior or inferior, captures most of the choices regional nuclear powers have made. As a realist at heart, I initially constructed my theory on this assumption. However, as I began testing my initial 'security-only' theory, it became clear to me that it was often right for the wrong reasons, particularly in the critical cases of India and China. In these states, and in my final theoretical framework, conventional superiority is only a *permissive* condition in the selection of assured retaliation postures. The *reason* that India and China have selected and persisted with assured retaliation postures is

because both states privilege assertive control over their nuclear forces due to the nature of their civil-military relations (see Chapters 4 and 5). This is important because not only does it identify the *correct reason* why India and China have selected assured retaliation postures, but it suggests that India and China may shift postures for reasons independent of a change in their security environment: should India or China develop more delegative civil-military structures even under constant security conditions, a shift to an asymmetric escalation posture becomes possible. This would not be true in a ‘security-only’ model.

Coe raises some valid points about the difficulty of operationalizing and measuring some of the variables in the theory, particularly the reliability of a third-party patron. Although there are some clear-cut cases, such as those of Israel³ and Pakistan, where the United States had significant geopolitical goals that would generate *ex ante* expectations that it might intervene on these states’ behalf in a crisis, the case of South Africa is more difficult to assess. Leaders in Pretoria *believed* that the United States would intervene on their behalf in the event of a total communist onslaught. There is abundant documentation of this belief. This led South African leaders to explicitly select a catalytic posture based on the expectation that the United States would ‘come running’ if South Africa were attacked and threatened to test a nuclear weapon. Leaders in the United States were less sure. This admittedly is a difficult case in which to measure this variable, and I acknowledge as much in the book. Indeed, Debs is “comfortable granting this case to the theory,” but in the book I only gave the theory a partially correct score for South Africa in order to acknowledge the difficulty of measuring this variable in this case. This is simply an empirical reality and variables such as reliability of third-party intervention, ultimately, are more complicated to measure than simple heuristics can sometimes account for. That said, it is not the case that this variable is meaningless, as Coe avers. In none of the other cases Coe lists—China, India, and France—did leaders believe they had a reliable third-party patron. In fact, China developed an independent nuclear arsenal once it became clear to Chairman Mao Zedong that the Soviets were about to abandon China; India searched fruitlessly for a third-party patron; and France developed an independent nuclear force precisely because it believed that the United States was unreliable. So I do think this variable, which is admittedly the hardest to consistently measure, is quite powerful.

I am also grateful that all three contributors found value in my treatment of, and data for, each country’s nuclear postures and recognized the power of assessing them from a common analytical framework. These country-cases on nuclear strategy form the bulk of my empirical analysis in the first half of the book. The second half the book offers a separate empirical test of the deterrence power of the various nuclear postures, in which the combination of a quantitative analysis and detailed qualitative examination of crisis cases in South Asia and the Middle East lead me to conclude that the deterrence dividend is unequally distributed across the three postures. I am pleased that Debs, an economist by

³ Although Coe raises a concern about how this variable is measured with respect to Israel, Chapter 7 shows that Israel shifted from a catalytic posture to an assured retaliation posture because it felt abandoned by the United States after the first Gulf War, not because Israel felt more militarily confident due to Iraq’s defeat and wanted to distance itself from the United States.

training, believes I employed “state-of-the-art quantitative techniques” and that I offer “a significant improvement to existing quantitative studies” in this portion of the book. As I have written elsewhere, large-*n* observational analysis in nuclear security faces significant pitfalls, and I attempted to be transparent about the utility and limitations of my analysis. In combination with the subsequent qualitative analysis, the quantitative analysis provides powerful evidence for the differential deterrence benefits of the various nuclear postures. The quantitative analysis on its own, as I would be the first to concede, is not unassailable.

Coe highlights some of the shortcomings of the analysis, many of which I myself note in the book. His primary concern is one of which any and every quantitative analysis is guilty: omitted variable bias. Coe is particularly worried that I did not include a measure of proximate offensive threat that could be related both to the choice of posture and the likelihood that the state might be attacked. First, I do include a measure for the conventional balance of power between a nuclear power and each of its potential adversaries (share of CINC score), which does indeed closely proxy the security environment a nuclear power faces. So it is not omitted, even if the measure I employed is imperfect.⁴ Second, methodologically, while one can think of many additional variables to throw into a regression model, one must balance the concern for omitted variables against the concern of overfitting the model (i.e. the ‘kitchen sink model’) and getting biased estimates for variables of interest. Therefore, with the balance of conventional capability measure already in the regression, the addition of a variable that would be highly collinear—proximate offensive threat—could generate equally significant methodological problems. Third, from a practical standpoint, with over a million dyads in the dataset, coding a new variable for all dyads in the system in every year—especially one that is proxied by other data—would have entailed very high marginal cost with limited marginal value.

Substantively, and perhaps most important, since high levels of preexisting conflict are likely to be associated with choosing an asymmetric escalation posture, if we observe that the asymmetric escalation posture is associated with a reduced risk of being targeted in conflict—as we do—we can be confident that it is attributable to the posture. In other words, if anything, my estimate for the average deterrent power of the asymmetric escalation posture is almost certainly an *underestimate* of its true effect. Finally, as each of the contributors knows from my other work, I never intended the quantitative analysis to be viewed in isolation from the qualitative evidence I present on the India-Pakistan and Arab-Israeli crises.⁵ It is in aggregate, with suggestive evidence from the quantitative evidence that is confirmed in detailed qualitative analysis, from which I derive my

⁴ The fact that this measure is ubiquitous in the quantitative conflict literature allows my results to be compared to other studies of deterrence and conflict in ways that would not be possible if I had generated a new measure.

⁵ See “The Use and Abuse of Large-*n* Methods in Nuclear Studies,” in “What We Talk About When We Talk About Nuclear Weapons,” *H-DIPLO/ISSF Forum*, June 15, 2014, 91-97. Available at: <http://issforum.org/ISSF/PDF/ISSF-Forum-2.pdf>

conclusions about the deterrent power of the various nuclear postures. So while Coe's concerns are well-taken, I believe I made the best choices possible given the alternatives in performing my quantitative analysis.

Debs correctly points out some of the disturbing policy implications of my findings: the fact that the asymmetric escalation posture seems to work and successfully deter conventional conflict may encourage states to adopt this strategy, despite the heightened risks of inadvertent nuclear use. I am in full agreement. This is an issue I discuss in the book, but I am in no way advocating that all states adopt this posture, given the risks it entails of inadvertent nuclear use. Is it understandable why some states in extreme security environments, or those with the luxury to hedge, might select this posture? Yes. Should all states adopt it? Absolutely not. It can be very risky, and I in no way want to understate the risk that, for example, contemporary Pakistan is running in adopting an asymmetric escalation posture.⁶ As a social scientist, I analyzed the data and found that the asymmetric escalation posture does indeed provide more powerful deterrence benefits than other nuclear postures, but I also argue that it certainly comes at a potentially steep price that only some states should be willing to bear.

Indeed, I believe the most important policy implication of the book is understanding the conditions under which states feel that they must adopt asymmetric escalation postures, thereby identifying how and where that pressure might be relieved. For example, Pakistan believes it has no choice but to adopt an asymmetric escalation posture against India due to its significant, and growing, conventional inferiority vis-à-vis that state. As a result, Indian military doctrinal changes that amplify the conventional threat against Pakistan—the so-called Cold Start doctrine, or proactive strategy options—will only further heighten Pakistan's reliance on the dangerous asymmetric escalation posture and magnify the risks of inadvertent nuclear use. A second policy implication is that for states that will likely persist with asymmetric escalation postures, such as Pakistan, it may be wise for the United States (or in this case, perhaps China, since Pakistan may not accept American technology) to provide negative control and safety technologies (e.g. PALs or command and control practices) to help reduce the risks of inadvertent or accidental nuclear use for asymmetric escalators. A final major policy implication is that those states that do not face an existential conventional threat ought to adopt nuclear postures other than asymmetric escalation precisely because of inadvertent use concerns. Those nuclear powers with permissive security environments, including perhaps the United States, should be encouraged to adopt strictly assured retaliation strategies.

By identifying the sources and consequences of regional power nuclear strategies, I hope my book will also help the policy community isolate the drivers of change in nuclear posture—whether they are security environment, the availability of a reliable third-party patron, or civil-military structures. Some of these variables can be manipulated and

⁶ See "Pakistan's Nuclear Posture: Implications for South Asian Stability," Policy Brief, Belfer Center for Science and International Affairs, January 2010. Available at: http://belfercenter.ksg.harvard.edu/publication/19889/pakistans_nuclear_posture.html

therefore push states away from riskier nuclear strategies. It also suggests that states such as China and India will likely have to undergo significant *internal* civil-military reform before they are likely to be in a position to shift away from assured retaliation postures. The book provides a framework to think about the nuclear posture choices and changes that regional powers have made, and will continue to make as the contemporary nuclear age unfolds.⁷

I once again want to thank Coe, Debs, and Montgomery for their thoughtful reviews and contributions to this forum, and I hope this exchange has sparked ideas for future research.

⁷ For example, in a forthcoming article in *The Washington Quarterly*, I apply my theory to explore the possible nuclear postures North Korea and Iran may adopt.