DETERRENCE: THE STATE OF THE FIELD

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I. INTRODUCTION

Following decades of development in the Cold War context, the study of deterrence entered a new and less well-defined era in 1991. During the Cold War, the focus of deterrence studies in the West was overwhelmingly along the Central Front in Europe and, by extension, the nuclear conflict that could erupt from a confrontation between the United States and the Soviet Union. The questions raised by this central challenge were extraordinarily difficult, but the outlines of how to answer them became clearer over the course of the Cold War.

After the Cold War ended, deterrence theory faced new problems. First, the interest generated in deterrence by the threat of World War III receded to some degree. Particularly in the 1990s, it seemed that intervention had replaced deterrence as the central question for strategists as the United States sought to use its military power more expansively. With Russia struggling to emerge from the Soviet wreckage, and with China only barely beginning its rapid economic development, there simply seemed to be no "peer competitors" to deter.[1]

Second, it was unclear how deterrence theory fit non-Cold War contexts. While few believed deterrence was entirely irrelevant to different contexts, such as the post-Cold War Middle

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1. This is not to say the U.S. government did not worry at all about the emergence of a new peer competitor. *See* THOMAS SZAYNA ET AL., THE EMERGENCE OF PEER COMPETITORS: A FRAMEWORK FOR ANALYSIS (2001).

East or South Asia, it was also not clear how well concepts developed along the Central Front applied to confrontations along the India-Pakistan border, much less along the Israel-Lebanon border. These contexts deviated greatly from the Cold War, with much greater levels of low-level conflict and more direct geographic proximity.

Third, new technologies and techniques of warfare emerged which complicated the assessment of capabilities for deterrence. Advances in many areas, particularly computers, intelligence, and precision guidance, have produced qualitative changes that had to be accounted for in deterrence theory. Similarly, new actors, particularly non-state actors such as terrorist groups, became increasingly important subjects for deterrence theory.

Fourth, with the United States occupying a hegemonic role after the collapse of its Soviet rival, the emphasis in the study of deterrence has shifted from deterrence by punishment to deterrence by denial. Rather than threatening unacceptably painful retaliation to deter, the United States and its allies could make even attempting to change the status quo by force impossible, or at least prohibitively expensive. This was a significant shift in how many strategists thought about deterrence along the Central Front, where denying a Soviet conventional military advance seemed unlikely.

The result of the foregoing has been a proliferation of new deterrence theories and concepts in the post-Cold War period. In contrast to what was viewed as the relatively straightforward problem of deterrence during the Cold War (sometimes referred to as "classical deterrence," making it sound charming but perhaps outdated), the post-Cold War challenge of deterrence has been viewed as baroque and difficult. Deterrence is thus alleged to need revitalization and evolution to address the challenges of the post-Cold War context.

Yet the shift of attention away from Cold War deterrence, though understandable, has been unfortunate, as it has led to widespread acceptance of a highly stylized narrative as fact. Deterrence during the Cold War was substantially more complicated than many post-Cold War accounts suggest. This loss of focus on Cold War deterrence is doubly unfortunate as, during the past two decades, vast quantities of new evidence have become available through declassification. Similarly, more is now

available about Cold War era deterrence outside of the U.S.-Soviet rivalry. While some historians have made fruitful use of this material, relatively little of it has made its way into thinking about deterrence by political scientists and policy analysts.[2]

This Article does three things. First, it critiques two of the problems of the stylized narrative of the Cold War: the nature of the Soviet threat and the nuclear balance. Second, it critiques two of the post-Cold War concepts and developments in the field of deterrence—tailored deterrence and cross-domain deterrence—while at the same time highlighting the Cold War antecedents to these concepts. It does so in order to highlight that there has been a great deal of continuity in the problems of deterrence despite some significant changes. Third, it highlights two areas that neither Cold War nor post-Cold War deterrence thinking has grappled with successfully that might be fruitful areas for further research and analysis. In particular, it focuses on two issues: the importance (or lack thereof) of credibility and the use of clandestine capabilities for deterrence.

II. The Importance of Getting Cold War History Right

The stylized narrative of Cold War deterrence in the early 21st century is relatively simple and straightforward. The Soviet Union is characterized as having been "status quo" and "risk averse," and the military balance between the two is characterized as one of "mutually assured destruction" that was accepted by both sides.[3] The central challenge for the United States, as one example of this stylized narrative describes, "was deterrence of an attack on the United States through the

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2. There are exceptions that have made excellent use of historical material. *See, e.g.*, Elbridge Colby et al., The Israeli "Nuclear Alert" of 1973: Deterrence and Signaling in Crisis (2013); Michael Gerson, The Sino-Soviet Border Conflict: Deterrence, Escalation, and the Threat of Nuclear War in 1969 (2010); Avery Goldstein, Deterrence and Security in the 21st Century: China, Britain, France, and the Enduring Legacy of the Nuclear Revolution (2000).

3. *See* Lawrence Freedman, The Evolution of Nuclear Strategy (3d ed. 2003); *see also* Robert Jervis, The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon (1989); Richard Ned Lebow & Janice Gross Stein, We All Lost the Cold War (1995).

threat of unacceptable retaliatory damage."[4] This stylized narrative is then typically contrasted with the complexity of the post-Cold War world and the need for new ways of thinking about deterrence.

The problem with the stylized narrative of Cold War deterrence is that it is at best a gross oversimplification and at worse factually inaccurate. While a full account of Cold War deterrence is far beyond the scope of this Article, it is nonetheless worthwhile to highlight two major flaws in the stylized narrative that are of relevance to understanding the current state of the field of deterrence. These are the nature of the Soviet Union and the nature of nuclear deterrence.

First, the widespread characterization of the Soviet Union, reflected in the 2002 U.S. National Security Strategy, as "especially following the Cuban missile crisis . . . a generally status quo, risk-averse adversary," is not necessarily wrong but glosses over important details.[5] The intentions of the Soviet Union during the Cold War, which may appear obvious in hindsight, were hotly contested at the time. It is only after the fact that the status quo, risk-averse nature of the Soviets can be diagnosed.

Yet for policymakers at the time, Soviet intentions were not so clearly risk averse or status quo oriented. Indeed, as March Trachtenberg has described, the very nature of the status quo between the United States and the Soviet Union had to be carefully negotiated.[6] U.S. policy for deterrence was fundamentally driven by a very different perception of the Soviet Union than the one portrayed in the stylized narrative.

For example, in a National Intelligence Estimate from the end of 1960, the U.S. intelligence community characterized the Soviet Union as having "fundamental hostility toward the West" and "high confidence in the growth of the USSR's

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4. James Scouras, *Post-Cold War Nuclear Scenarios: Implications for a New Strategic Calculus*, *in* DETERRENCE AND NUCLEAR PROLIFERATION IN THE TWENTY-FIRST CENTURY 39, 40 (Stephen J. Cimbala ed., 2000).

5. The White House, National Security Strategy of the United States (2002).

6. MARC TRACHTENBERG, A CONSTRUCTED PEACE: THE MAKING OF THE EUROPEAN SETTLEMENT 1945-1963 (1999).

power and influence."[7] While the estimate concluded that the Soviet Union was not reckless, it predicted that Soviet policy would be one of "persistent activism and opportunism."[8] Five years later, following both the Cuban crisis and the ouster of Soviet leader Nikita Khrushchev, a Special National Intelligence Estimate found that the new Soviet leadership was more confrontational towards the United States than Khrushchev had been, though again not absurdly so.[9]

The same may prove true of rogue states (or states of concern) in the early 21st century. For example, the allegedly implacably revolutionary nature of the Iranian regime in 2014 may one day seem as dated as similar characterizations of the Soviet Union. This implies that deterring Iran may be possible using tools similar to those developed during the Cold War.

More importantly, recent historiography of the Cold War argues that the Soviet Union did not become status quo and risk averse simply because of some insight derived from the Cuban missile crisis. Instead, it is now apparent that in the aftermath of the crisis, the United States and the Soviet Union were able to agree on a mutually acceptable status quo regarding the division of Germany specifically and the political order in Europe generally. Germany would remain divided, with the anomalous status of Berlin preserved, and would be rearmed solely with conventional weapons. This agreed upon status quo actually relied upon both superpowers to collude against their erstwhile allies in East and West Germany to thwart reunification and nuclear ambitions.[10]

This second point, that a mutually acceptable status quo may be possible, is critically important as it suggests that viewing post-Cold War adversaries as fundamentally different and more risk acceptant and/or revisionist than the Soviet Union is potentially wrongheaded. While this may seem naively optimistic, the corollary is that such a status quo may require similar collusion against the interests of allies.

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7. DIR. OF CENT. INTELLIGENCE, NUMBER 11-4-60, NATIONAL INTELLIGENCE ESTIMATE, MAIN TRENDS IN SOVIET CAPABILITIES AND POLICIES, 1960-1965 1 (1960).

8. *Id.* at 2.

9. DIR. OF CENT. INTELLIGENCE, NUMBER 11-11-65, SPECIAL NATIONAL INTELLIGENCE ESTIMATE, SOVIET ATTITUDES TOWARDS THE US (1965).

10. *See* FRANCIS J. GAVIN, NUCLEAR STATECRAFT: HISTORY AND STRATEGY IN AMERICA'S ATOMIC AGE 57–74 (2012).

A potential example of this is the negotiation over the Iranian nuclear program. The United States may be able to live with a level of Iranian nuclear capability that some allies (e.g., Israel and/or the Gulf States) find unacceptable. This opens the door for a possible compromise with Iran that would establish a status quo acceptable to the United States (assuming Iran, like the Soviet Union before it, is willing to compromise).

This sort of collusion may be less acceptable than it was in the 1960s, and so a mutually agreed status quo may be impossible in some cases. Yet the lack of an agreed upon status quo is fundamentally and conceptually a different reason for deterrence failure than inherent risk acceptance or revisionism in an adversary. Indeed, an adversary cannot truly be revisionist if there is not an agreed upon status quo to revise.

The second major flaw in the stylized Cold War narrative is that mutually assured destruction was accepted by both sides and formed the basis for deterrence. First, it is very clear based on declassified evidence that the United States never accepted mutually assured destruction as a desired status quo and instead planned and invested heavily in options for nuclear first use. In other words, the United States planned that in a war with the Soviet Union, presumably one that began with a conventional military conflict between the U.S.-led NATO and the Soviet-led Warsaw Pact, the United States would be prepared and likely required to be the first to use nuclear weapons.

For example, it is clear in the now-declassified Nuclear Weapons Employment Policy from 1974 that through at least the mid-1970s there were only two planning assumptions for strategic nuclear war. The first was the worst-case scenario where the United States had to retaliate against a massive "bolt from the blue" attack against U.S. nuclear forces on day-to-day alert with minimal warning. Yet this scenario was extraordinarily unlikely, so much of the planning emphasis was on the second planning assumption, which was U.S. nuclear forces that had "generated" (i.e., were at full crisis readiness) would be launched without being damaged by a Soviet attack. In other words, in any crisis where the United States had sufficient time to ready its forces, it planned to use nuclear weapons before a Soviet attack.[11]

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11. *See* Office of the Sec'y of Def., Policy Guidance for the Employment of Nuclear Weapons (1974).

Moreover, this first strike would heavily emphasize targeting Soviet nuclear forces in order to limit damage to the United States from Soviet retaliation. Combined with massive investment in intelligence capabilities to track Soviet ballistic missile submarines and mobile land-based missiles, this strike had the possibility of eliminating much of the Soviet Union's long-range nuclear arsenal.[12] According to Soviet assessments near the end of the Cold War, only a relative handful of Soviet warheads might survive a U.S. first strike. A memorandum from the files of a senior Soviet defense expert noted that, after the United States modernized its nuclear forces, "[e]xisting Strategic Rocket Forces are capable of hitting 80 enemy rear area targets in retaliation . . . below the calculated level of retaliation required- 200 targets."[13] Some in the Soviet Union worried that even these few surviving weapons might not be usable due to the destruction of command and control systems.[14]

The reason the United States planned for nuclear first use was the belief that Soviet/Warsaw Pact forces would overwhelm NATO in a conventional conflict. While the accuracy of this contention was debated during the Cold War, it was nonetheless conventional wisdom. Further, for reasons of both politics and economics, NATO and especially the United States were highly unlikely to engage in a sufficiently robust arms build-up to overturn this conventional wisdom.[15]

NATO thus always relied on nuclear weapons to deter conventional aggression (an early example of what is now re-

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12. Austin Long & Brendan Green, *Stalking the Secure Second Strike: Intelligence, Counterforce, and U.S. Nuclear Strategy*, J. OF STRATEGIC STUD. (forthcoming).

13. Memorandum from the archive of Vitalii Leonidovich Kataev (on file with the Hoover Institution Archive, Stanford University) (the memorandum is undated but based on context is from the mid-1980s).

14. *See* JOHN HINES ET AL., SOVIET INTENTIONS 1965-1985, VOLUME II: SOVIET POST-COLD WAR TESTIMONIAL EVIDENCE 90 (1995) (interview with Alexei Kalashnikov); *see also id.* at 134–35 (interview with Viktor Surikov).

15. *See generally* GAVIN, NUCLEAR STATECRAFT, *supra* note 10; FRANCIS J. **R** GAVIN, GOLD, DOLLARS, AND POWER: THE POLITICS OF INTERNATIONAL MONETARY RELATIONS, 1958-1971 (2004); AARON FRIEDBERG, IN THE SHADOW OF THE GARRISON STATE: AMERICA'S ANTI-STATISM AND ITS COLD WAR GRAND STRATEGY (2000); Brendan Rittenhouse Green, *Two Concepts of Liberty: U.S. Cold War Grand Strategies and the Liberal Tradition*, 37 INT'L SECURITY 2 (Fall 2012).

ferred to as "cross-domain deterrence"). Yet the credibility of U.S. strategic nuclear use on behalf of NATO weakened as the Soviet Union developed the ability to retaliate against the U.S. homeland. If the United States accepted mutually assured destruction as a reality, then nuclear weapons would essentially cancel each other out, making the world safe for conventional war (the so-called "stability-instability" paradox).[16] This led to a variety of efforts to bolster the "coupling" of the U.S. strategic arsenal to Europe, including the extensive counterforce effort noted above.

One implication of the foregoing is that deterrence during the Cold War was, for the United States at least, much more about deterrence by denial than the stylized narrative would indicate. The threat of punishment through the destruction of Soviet industry and urban areas clearly was important, but the emphasis of U.S. nuclear planning and force structure was on denying the Soviet Union the ability to retaliate effectively against nuclear use on military forces. Thus, the current emphasis on deterrence by denial rather than deterrence by punishment is less stark a difference from Cold War policy than it might seem.

However, U.S. efforts to deny Soviet retaliation came at a price. It created incentives for the Soviet Union to adopt command and control systems and policies that increased the risk of accidental war or inadvertent escalation. One example is a "launch on warning" policy, where Soviet missiles were to be launched when early warning systems detected a U.S. attack. While apparently never fully implemented by the Soviets, the same incentives would apply to post-Cold War adversaries and might be true in non-nuclear contexts as well.[17] In the post-Cold War environment, the balance between a nuclear-armed Iran and Israel might be subject to similar concerns as the pos-

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16. *See* Glenn H. Snyder, *The Balance of Power and the Balance of Terror, in* THE BALANCE OF POWER 184–219 (Paul Seabury ed., 1965).

17. There is debate about the extent to which the Soviet Union adopted particularly dangerous command and control systems and practices. *See generally* DAVID HOFFMAN, THE DEAD HAND: THE UNTOLD STORY OF THE COLD WAR ARMS RACE AND ITS DANGEROUS LEGACY (2010) (arguing that systems designed to make Soviet retaliation semi-automatic were deployed). *But see* JOHN G. HINES, ELLIS M. MISHULOVICH & JOHN F. SHULL, SOVIET INTENTIONS 1965-1985: SOVIET POST-COLD WAR TESTIMONIAL EVIDENCE 134–35 (1995) (arguing that the systems were never fully deployed).

sibility of Israeli preemption combined with missile defense might convince Iranian leaders that in a crisis they might need to adopt a similar posture.[18]

Paul Davis termed this trade-off between the needs of extended deterrence and the need to create stability in first-strike incentives the "devil's dilemma." If first-strike stability was too high, then the stability-instability paradox would come into play and conventional aggression might be possible. If first-strike stability was too low, then accidental war, escalation spirals, and arms races were possible.[19]

Glenn Kent and David Thaler extended this line of argument by noting that

> [t]he most important conflict [arises] between the objectives of enhancing first-strike stability, on one hand, and extending deterrence and limiting damage on the other; i.e. the more robust the Soviets believe first-strike stability to be, the less they might hesitate to precipitate a deep crisis by engaging in serious aggression, for example, in Western Europe. Balancing between first-strike stability and extended deterrence presents a problem in the planning of strategic forces. . . . Indeed, one might argue that an optimal amount of first-strike instability is possible: that is, enough to deter the Soviets from generating a major crisis, say by invading Western Europe, but not enough to allow a major crisis to spiral out of control. Whether or not such an optimum actually exists, the concept provides the proper intellectual framework in which to think about the trade-off between first-strike stability and extended deterrence.[20]

U.S. conventional superiority at present has dampened the devil's dilemma, so there is little need for the development of an optimal amount of first-strike instability. Yet U.S. conventional superiority is not a divinely fixed constant—in some contexts, it may recede significantly in the coming decades.

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18. For a longer discussion of this possibility, see Austin Long, *Proliferation and Strategic Stability in the Middle East, in* Strategic Stability 400–12 (Elbridge A. Colby & Michael S. Gerson eds., 2013).

19. *See* Paul K. Davis, Studying First-Strike Stability with Knowledge-Based Models of Human Decisionmaking 33–36 (1989).

20. Glenn A. Kent & David E. Thaler, First-Strike Stability 5 (1989).

Indeed, some efforts to extend U.S. conventional military capabilities against potential adversaries intent on countering the United States may ultimately have effects on stability and deterrence. There are concerns, for example, that Air-Sea Battle, the U.S. Navy and Air Force concept for projecting power into the western Pacific against significant potential resistance from China (or others), may decrease nuclear stability.[21]

Moreover, as Daryl Press and Keir Lieber, among others, have noted, potential adversaries of the United States may seek to use nuclear weapons to offset U.S. conventional superiority, leading to a new version of the devil's dilemma.[22] For example, in a counterfactual analysis of the 1990-1991 Persian Gulf War, Barry Posen describes a scenario in which Saddam Hussein could have tried to use nuclear weapons to defend his gains following the invasion of Kuwait.[23] Similar scenarios are possible for other potential adversaries such as Iran or North Korea.

III. Post-Cold War Deterrence: Something Old, Something New

Post-Cold War deterrence has spawned a variety of new concepts. However, as suggested above, there is more rather than less continuity between Cold War and post-Cold War deterrence. This does not mean that these new concepts are not useful. Rather, it means that there may be additional evidence with which to evaluate them, since more is known (particularly in terms of access to primary sources) about Cold War deterrence than post-Cold War efforts. This section briefly addresses two such concepts: "cross-domain deterrence" and "tailored deterrence."

"Cross-domain deterrence" is, according to one leading definition, "the problem of countering threats in one arena (such as space or cyberspace) by relying on different types of capabilities (such as sea power or nuclear weapons, or even

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21. For a good overview of debates surrounding Air-Sea Battle, see generally Aaron Friedberg, Beyond Air-Sea Battle: The Debate over U.S. Military Strategy in Asia (2014).

22. *See* Keir A. Lieber & Daryl G. Press, *The New Era of Nuclear Weapons, Deterrence, and Conflict*, 7 Strategic Stud. Q. 3, 5–7 (2013).

23. Barry R. Posen, *U.S. Security Policy in a Nuclear-Armed World or: What if Iraq Had Had Nuclear Weapons?*, 6 Security Stud. 1, 2 (1997).

non-military tools such as market access) where deterrence may be more effective."[24] While most authors writing on cross-domain deterrence acknowledge that it is not entirely new, they argue that the increasing complexity of cross-domain interactions, particularly those involving cyber tools, merits a new focus.[25] The final section of this paper concurs in part with this assessment and highlights some ways in which new technologies require new thinking in deterrence.

Yet while the renewed focus on cross-domain deterrence should be welcomed, more can be mined from earlier—but hardly uncomplicated—experience. There has already been some significant effort in this realm, most notably Vipin Narang's efforts to explore the effect of nuclear posture on cross-domain deterrence of conventional war by examining past cases.[26] However, more can and should be done, particularly in terms of exploring deterrence escalation by invoking multiple cross-domain interactions.

For example, during the Cold War, the United States invested massively in conventional strategic anti-submarine warfare (ASW) capabilities to hunt Soviet ballistic missile submarines. This conventional threat to strategic nuclear forces was part of the overall effort to make extended nuclear deterrence of conventional attack plausible by holding Soviet nuclear forces at risk.[27] Thus, a conventional threat was directed at nuclear forces in order to make a nuclear threat to deter a con-

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24. *Deterring Complex Threats: The Effects of Asymmetry, Interdependence, and Multi-polarity on International Strategy*, UNIVERSITY OF CALIFORNIA INSTITUTE ON GLOBAL CONFLICT AND COOPERATION, http://www-igcc.ucsd.edu/research/technology-and-security/cross-domain-deterrence/ (last visited Oct. 31, 2014).

25. *See, e.g.*, James Scouras, Edward Smyth & Thomas Mahnken, CROSS-DOMAIN DETERRENCE IN U.S.-CHINA STRATEGY: A WORKSHOP REPORT (Johns Hopkins University Applied Physics Laboratory) (2014).

26. *See* Vipin Narang, *What Does It Take to Deter? Regional Power Nuclear Postures and International Conflict*, 57(3) J. OF CONFLICT RESOL. 478 (2013); *see also* Vipin Narang, *Posturing for Peace? Pakistan's Nuclear Postures and South Asian Stability*, 34(3) INT'L SECURITY 38 (2010).

27. The efficacy of these efforts has only been publicly understood since the end of the Cold War. A brief summary is available in Long & Green, *supra* note 12. For more detailed discussion, see OWEN COTE, THE THIRD   **R**
BATTLE: INNOVATION IN THE U.S. NAVY'S SILENT COLD WAR STRUGGLE WITH SOVIET SUBMARINES (2003); CHRISTOPHER FORD & DAVID ROSENBERG, THE ADMIRAL'S ADVANTAGE: U.S. NAVY OPERATIONAL INTELLIGENCE IN WORLD WAR II AND THE COLD WAR (2005); SHERRY SONTAG & CHRISTOPHER DREW, BLIND

ventional threat more plausible—certainly a complex set of cross-domain interactions.

Yet some scholars, most notably Barry Posen, argued that such an effort would undermine rather than bolster deterrence, as it would force the Soviets into a "use or lose" scenario with their submarine-launched weapons, thus yielding inadvertent escalation to nuclear war.[28] It was entirely plausible that both perspectives were true. Cross-domain interaction might have promoted pre-war deterrence, but at the same time it might have weakened intra-war deterrence. Unfortunately, interest in these issues all but died out when the Cold War ended. There is thus tremendous opportunity to use newly available sources and interviews to explore these cross-domain deterrence phenomena.

"Tailored deterrence" as a concept emerged in the post-Cold War period as an attempt to rectify the perceived failure of Cold War deterrence theories to develop a mechanism for evaluating the specific capabilities needed to deter particular adversaries. Beginning with the 2006 U.S. Quadrennial Defense Review, the term tailored deterrence entered the lexicon as an alternative to what was characterized as "one-size-fits-all" deterrence. This one-size-fits-all description is presumably based on the stylized narrative of Cold War deterrence with the Soviet Union.[29]

However, "tailoring" deterrence to the Soviet Union's specific concerns was a major component of Cold War deterrence, particularly in the era of nuclear parity. During the 1970s, first the Nixon/Ford and then Carter administrations sought to improve nuclear targeting policy by generating options that were both more discriminate (and therefore more plausibly used) and more tailored to specific Soviet concerns (or, more accurately, hypothesized Soviet concerns) such as

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MAN'S BLUFF: THE UNTOLD STORY OF AMERICAN SUBMARINE ESPIONAGE (1998).

28. *See generally* BARRY POSEN, INADVERTENT ESCALATION: CONVENTIONAL WAR AND NUCLEAR RISKS (1992).

29. U.S. Dep't of Def., QUADRENNIAL DEFENSE REVIEW REPORT 49 (2006); *see also* Elaine Bunn, *Can Deterrence Be Tailored?*, 225 STRATEGIC FORUM 1, 1 (2007); NATO DEF. COLL., NATO AND 21ST CENTURY DETERRENCE 11 (Karl-Heinz Kamp & David Yost, eds., 2009).

military forces, leadership, and command and control.[30] While the actual efficacy of these targeting changes remains unclear (there is evidence that the Soviets were more rather than less concerned about the possibility of nuclear war after they were implemented), it nonetheless underscores that Cold War deterrence was hardly "one-size-fits-all."[31]

Indeed, the United States dedicated extensive effort both inside and outside government to developing an understanding of how to tailor deterrence to the Soviet Union. In the 1970s, for example, the RAND Corporation conducted a lengthy set of analyses for the U.S. Air Force to create models that would allow different combinations of military forces to be evaluated for their impact on deterring the Soviet Union. Moreover, it did so by specifying multiple models of Soviet decisionmaking criteria, enabling a variety of plausible Soviet motives and values to be included in modeling deterrence.[32]

Yet, despite the vast effort expended to develop an understanding of the Soviet Union, it is not clear that efforts to tailor deterrence were particularly successful. The actual character of Soviet motives and values remained contested in the West throughout the Cold War.[33] This led to uncertainty about the

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30. William Burr, *The Nixon Administration, the 'Horror Strategy,' and the Search for Limited Nuclear Options, 1969-1972: Prelude to the Schlesinger Doctrine*, 7 J. COLD WAR STUD. 34, 36–37 (2005); William Odom, *The Origins and Design of Presidential Decision-59: A Memoir, in* GETTING MAD: NUCLEAR MUTUAL ASSURED DESTRUCTION, ITS ORIGINS AND PRACTICE 175, 176–77 (Henry D. Sokolski ed., 2004).

31. *See* BEN B. FISCHER, A COLD WAR CONUNDRUM: THE 1983 SOVIET WAR SCARE 5 (1997) (discussing the early 1980s KGB search for strategic warning of nuclear attack); MARKUS WOLF, NOTE REGARDING THE RESULTS OF THE CONSULTATIONS WITH COMRADE MAJOR GENERAL SHAPKIN, DEPUTY HEAD OF THE KGB'S 1ST MAIN DIRECTORATE, AND TWO EXPERTS ON THE RYAN PROBLEM FROM 14 TO 18 AUGUST IN BERLIN 2 (Bernd Schaefer trans., 1984), *available at* http://www.wilsoncenter.org/publication/kgbstasi-cooperation. Wolf headed foreign intelligence for East Germany.

32. *See* DONALD EMERSON, CONTRIBUTIONS OF FORCE TO DETERRENCE: A PROGRESS REPORT (1971); *see also* WILLIAM M. JONES, MODELING SOVIET BEHAVIOR AND DETERRENCE: A PROCEDURE FOR EVALUATING MILITARY FORCES (1974).

33. *See* JOSHUA ROVNER, FIXING THE FACTS: NATIONAL SECURITY AND THE POLITICS OF INTELLIGENCE (2011); *see also* RICHARD K. BETTS, ENEMIES OF INTELLIGENCE: KNOWLEDGE & POWER IN AMERICAN NATIONAL SECURITY (2007) (discussing the Team B controversy on Soviet intentions).

effect of targeting Soviet military forces and leadership on de-
terrence.

Newly available evidence, including post-Cold War inter-
views with Soviet leaders and archival evidence, suggests the
effect was mixed. For example, the improvements in U.S. abil-
ity to target Soviet nuclear forces described earlier were noted
by Soviet leaders as posing a serious risk to the Soviet Union's
ability to launch a significant retaliatory second strike. As the
logic of the devil's dilemma suggests, this may have produced
caution about initiating crises, as the possibility of escalation
seemed more plausible. On the other hand, it created (or at
least amplified) fears about the possibility of U.S. preventive or
preemptive war, particularly in the early 1980s, which exacer-
bated tensions.[34]

IV.   The Perennial Question of Credibility

One of the central questions in deterrence both during
and after the Cold War has been the credibility of threats, par-
ticularly for extended deterrence. The first generations of de-
terrence theorists as well as policymakers strongly believed that
commitments for deterrence were strongly interdependent,
and therefore that reputation mattered. If one did not fight
for every commitment then the credibility of all commitments
would be weakened. The shadow of Munich and its alleged
lessons weighed heavily on this generation of theorists and
practitioners alike.[35] Some have even characterized the Ameri-
can view of credibility and reputation during the Cold War as
almost an obsession.[36]

Yet over the past several decades the scholarly consensus
from both quantitative and qualitative research has shifted sig-
nificantly. The consensus is now much more firmly in favor of
the view that commitments are at least mostly independent
and reputation is of much less significance. Instead, targets of
deterrent threats apparently tend to evaluate the specifics of

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34. Hines et al., *supra* note 14; *see also* Vojtech Mastny, *How Able Was
"Able Archer"? Nuclear Trigger and Intelligence in Perspective*, 11 J. Cold War
Stud. 1, 108 (2009).

35. Yuen Foong Khong, Analogies at War: Korea, Munich, Dien Bien
Phu, and the Vietnam Decisions of 1965 (1992).

36. *See* Patrick Morgan, *Saving Face for the Sake of Deterrence, in* Psychology
and Deterrence 125 (Robert Jervis et al. eds., 1986).

the situation, particularly focusing on the capability to carry out the threat and the stakes for both parties in the crisis.[37]

However, the consensus in the academy has not migrated to policymakers. Many in the policy world are already proclaiming linkage between the failure of the United States to punish Syria for violating a "red line" on chemical weapons use in 2013 and the Russian intervention in the Crimea in 2014.[38] Even in the Syria crisis, U.S. National Security Adviser Tony Blinken was alleged to have told President Obama that "superpowers don't bluff," presumably because it would indeed undermine credibility in other instances.[39]

What explains this disconnect between scholarly and policymaker consensus? It could be a simple case of the widely bemoaned failure of political scientists and other scholars to leave the ivory tower and communicate with policymakers. While plausible, there is likely to be more at work than a simple failure to communicate.

One possible explanation is that the focus of recent research on credibility and deterrence has been focusing on the wrong elements of the historical record. Much of the scholarship has examined records of decisionmaking in crisis situations, where both sides have some significant commitment to the resolution of the dispute. In these instances, typically referred to as situations of immediate deterrence, reputation may matter little as both sides have already factored reputation into their decisionmaking to initiate crisis (either explicitly or implicitly).[40]

However, reputation may matter much more in pre-crisis periods. An adversary's reputation may affect decisionmaking

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37. *See, e.g.*, JONATHAN MERCER, REPUTATION AND INTERNATIONAL POLITICS (1996); DARYL PRESS, CALCULATING CREDIBILITY: HOW LEADERS ASSESS MILITARY THREATS (2007); Vesna Danilovic, *The Sources of Threat Credibility in Extended Deterrence*, 45.(3) J. CONFLICT RESOL. 341 (2001).

38. Matt Spetalnick, *Obama's Syria 'Red Line' has Echoes in his Warning to Ukraine*, REUTERS (Feb. 20, 2014), www.reuters.com/article/2014/02/20/us-ukraine-crisis-obama-idUSBREA1J2C920140220.

39. Jon Swaine, *How President Barack Obama became Convinced of Need to Arm Syrian Rebels*, TELEGRAPH (UK) (June 15, 2013), www.telegraph.co.uk/news/worldnews/middleeast/syria/10122567/How-President-Barack-Obama-became-convinced-of-need-to-arm-Syrian-rebels.html.

40. On the concept of immediate deterrence, see generally PATRICK MORGAN, DETERRENCE: A CONCEPTUAL ANALYSIS (1983).

to initiate crisis. Keren Yarhi-Milo and Alex Weisiger have argued that reputation contributes to so-called general deterrence before crisis as well as the perception of interests on both sides of a deterrence relationship. They highlight several examples where reputation for resolve either increased or decreased the effectiveness of general deterrence.[41]

Reputation may also matter for reassurance of the targets of deterrence by punishment. In order for deterrence to be effective, the target must have some confidence that if it does not seek to alter the status quo, then punishment will be withheld. A reputation for aggression may make deterrence more difficult, as the target may think punishment will be forthcoming regardless of the target's action.

Another way in which research on reputation may be misplaced is the focus on deterrence effects with regard to adversaries. Yet there are other audiences that reputation may affect. Two that matter significantly in the context of extended deterrence are allies and domestic publics, so it is worth exploring how these concerns affect policymaker decisions.

While it has been widely appreciated that extended deterrence must not only deter potential adversaries, but also assure allies, there has been substantially less systematic evaluation of the role of reputation in assurance guarantees.[42] Assurance and deterrence are parallel but may not be equivalent, as an adversary may be deterred but an ally not reassured. Reputation and prior actions may therefore not matter much for deterrence, but it does not follow that reputation does not matter for reassuring allies.[43]

The second audience is the domestic public. Here there has been a substantial body of literature on "audience costs,"

41. Keren Yarhi-Milo & Alex Wesiger, *Revisiting Reputation: How Do Past Actions Matter in International Politics*, Int'l Org. (forthcoming) (paper at 2-3, 11-28, *available at* https://wws.princeton.edu/faculty-research/research/item/revisiting-reputation-how-past-actions-matter-international-politics).

42. *See, e.g.*, Jervis, *supra* note 3; Glenn H. Snyder, Alliance Politics **R** (Robert J. Art et al. eds., 1997) (discussing alliances in a multipolar international system before 1914).

43. There is emerging scholarship on this topic and more should be encouraged. For example, at the 2013 Nuclear Scholars Research Initiative meeting, Gene Gerzhoy presented work on the role of assurance in West German renunciation of nuclear weapons while Mira Rapp-Hooper presented work on the role of assurance in nuclear alliance guarantees.

following James Fearon's seminal 1994 article arguing that democratic leaders who fail to carry out threats will be punished by their electorate.[44] Yet a recent empirical analysis calls into question the role of audience costs in punishing empty threats.[45] However, there may be more subtle or general ways in which leaders pay audience costs that are not related to specific threats, particularly if domestic opponents are able to generate a narrative about the leader and/or his party's weakness.

The classic example is the narrative constructed around the 1949 victory of the Chinese Communist Party over the Nationalists. Republicans portrayed this "loss of China" as fundamentally the fault of President Harry Truman and the Democratic Party. This narrative was then exploited to show the weakness of Democrats on national security generally in the 1952 presidential election, which was won by Republican (and retired general) Dwight Eisenhower.[46]

Alliance and domestic audience concerns may also be mutually supporting. According to Fredrik Logevall, concerns about reputation, particularly domestically but also with allies, were the major driver behind President Johnson's decision to escalate in Vietnam. While the Munich analogy lurked in the background, Johnson was at least as concerned about his personal reputation and the reputation of the Democratic Party, which had been punished by the narrative that blamed Democratic weakness for the loss of China.[47] Policymakers may therefore be right to worry about reputation, but for the "wrong" reasons. Additionally, alliance and domestic political concerns about reputation may combine to make threats more credible to adversaries (at least in some contexts). More research needs to be done to confirm or deny these hypotheses, making it a fruitful area for research.

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44. James D. Fearon, *Domestic Political Audiences and the Escalation of International Disputes*, 88 Am. Pol. Sci. Rev. 577 (1994).

45. Jack Snyder & Erica D. Borghard, *The Cost of Empty Threats: A Penny, Not a Pound*, 105 Am. Pol. Sci. Rev. 437 (2011).

46. *See* Robert Dallek, Harry S. Truman (Arthur M. Schlesinger, Jr. & Sean Wilentz eds., 2008).

47. Fredrik Logevall, Choosing War: The Lost Chance for Peace and the Escalation of War in Vietnam (1999).

V.   CLANDESTINE CAPABILITIES AND DETERRENCE

In one of the best scenes in Cold War classic *Dr. Strangelove*, the titular scientist berates the Soviet ambassador to the United States for keeping secret the existence of a "Doomsday Machine." He concludes that "the whole point of the doomsday machine is lost if you keep it a secret!" Sadly, in the film the Soviet General Secretary had planned to reveal the capability later (he was said to love surprises), but too late to deter a rogue U.S. Air Force general.

Decades later, James Fearon came to a related conclusion that emphasized the role of "private information" (such as secret war plans or other capabilities) in causing war. If only both sides in a potential conflict had full knowledge of each other's relative strength, war would be less likely. Yet certain capabilities might lose efficacy if revealed, so there are incentives either to deceive or simply not to reveal these capabilities.[48]

However, there has been little work done to bridge these two related insights. How can one incorporate clandestine capabilities into deterrence strategies if the revelation of those capabilities will attenuate them? The revelation of conventional or nuclear force structure in general terms posed no real risk to their efficacy, so this problem was not widely considered during the Cold War. In contrast, during the post-Cold War era, at least two sets of capabilities that might be important for deterrence would be weakened if revealed in all but the most abstract way. These are offensive cyber capabilities and persistent intelligence, surveillance, and reconnaissance (ISR) capabilities.

Cyber offensive capabilities can be powerful tools for deterrence in terms of potential countervalue and especially counterforce operations. There are already indications that cyber offensive capabilities can, for example, cripple industrial control systems, as in the Stuxnet attack on Iran's nuclear program, and air defense systems, as in the Israeli strike on a Syrian nuclear reactor in 2007.[49] If an enemy knew about such a

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48. James Fearon, *Rationalist Explanations for War*, 49 INT. ORG. 393 (Summer 1995).

49. For evaluation of these efforts, see Richard Gasparre, *The Israeli 'E-tack' on Syria – Part I and Part II*, AIR FORCE TECHNOLOGY, Mar. 2008; Jon Lindsay, *Stuxnet and the Limits of Cyber Warfare*, 22 SECURITY STUD. 365 (2013).

capability and was convinced it would be effective, it would reduce confidence in the ability to deny air attacks. Yet if an enemy knew about the capability in all but the most abstract way, the enemy could begin taking steps to neutralize whatever security flaws it exploited.

Similarly, ISR capabilities can be critical in supporting deterrence. U.S. strategic ASW capabilities, noted above, depended heavily on a variety of intelligence sources that, if compromised, would be lost. One critical example is the alleged tapping of Soviet undersea naval communications, which was lost when revealed by a Soviet spy who had worked for the National Security Agency.[50] Another is the capability that the United States allegedly developed at one point in the late Cold War to interfere with Soviet nuclear command and control due to vulnerability in the Soviet strategic communications system. The Soviets eventually discovered and fixed this vulnerability—highlighting the inability to communicate such capabilities for deterrent purposes without compromising them.[51]

In the post-Cold War environment the opportunities for persistent ISR have grown, making them potentially even more important for deterrence, yet they are just as vulnerable if revealed. For example, modern tagging, tracking, and locating devices would allow real time tracking of Iranian mobile missiles if placed inside the missile or transporter. This would require a penetration of the Iranian missile complex, but, as Stuxnet has demonstrated, this is a possibility that cannot be dismissed. If the United States had such a capability it could significantly affect the survivability of an important component of the Iranian deterrent, yet this could not be revealed without jeopardizing it. The same would be true for a cyber capability to target these missiles (for example by corrupting guidance or launch control software).

Further, the inability to reveal these capabilities would likely include many if not all allies. This would mean that such capabilities could not be used to provide assurance to allies. In the Iranian example above, the United States might share such

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50. *See* SHERRY SONTAG & CHRISTOPHER DREW, BLIND MAN'S BLUFF: THE UNTOLD STORY OF AMERICAN SUBMARINE ESPIONAGE (2000).

51. Benjamin B. Fischer, *CANOPY WING: The U.S. War Plan That Gave the East Germans Goose Bumps*, 27 INT. J. OF INTELLIGENCE & COUNTERINTELLIGENCE 431 (2014).

capabilities with the Israelis and its critical Five Eyes intelligence partners, but could it share with the Gulf States or even the broader NATO community? Even many parts of the U.S. government are unlikely to understand fully these capabilities because they are so closely held.

Finally, while the previous examples have all centered on high technology, clandestine capabilities can be less technologically sophisticated. Perhaps the best post-Cold War example is Hamas' massive development of tunnels in Gaza. While the Israelis were cognizant of the existence of tunnels, they were unaware of the full scope and the potential for offensive use of the tunnels in a conflict. Hamas was able to inflict nontrivial losses using these tunnels due to the surprise factor—had they fully revealed this capability to the Israelis for deterrence purposes it would likewise have been much less effective.[52]

The role of clandestine capabilities in deterrence is thus one of the major lacunae in post-Cold War deterrence. While a significant amount has been written on cyber deterrence, very little of it has addressed these specific issues, which are frequently cross-domain (such as cyber v. conventional air defense, or ISR v. nuclear or conventional mobile missile).[53] Substantially more research is needed, though of course studying clandestine capabilities is obviously difficult for scholars. From a policy perspective, this underscores the need for systematic evaluation of such capabilities within the military and intelligence community, which do have access to information about these capabilities. From a scholarly perspective, this underscores again the utility of the Cold War as more is known about clandestine capabilities from this period thanks to declassification.

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52. *See, e.g.*, Isabel Kershner, *In Tunnel War, Israeli Playbook Offers Few Ideas*, N.Y. Times (Aug. 1, 2014), http://www.nytimes.com/2014/08/02/world/middleeast/an-old-playbook-leaves-israel-unready-for-hamass-tunnel-war-.html.

53. An exception is Charles Glaser, Deterrence of Cyber Attacks and U.S. National Security (2011). Yet Glaser devotes only a few paragraphs to these questions.

VI. Conclusion

Deterrence studies should be on the threshold of a new golden age, as there is both broad recognition of the importance of deterrence in the 21st century and a wealth of newly available information from the 20th century. The key to the future of deterrence lies in combining these two broad trends in order to use the newly illuminated past to understand the present and future. This requires scholars and analysts to move beyond stylized narratives about the Cold War while also acknowledging that some categories of capabilities, particularly those that must remain clandestine to be effective, are genuinely novel.