



INFORMATION SERIES

HON. DAVID J. TRACHTENBERG, *Editor*
DR. MICHAELA DODGE, *Assistant Editor*
AMY JOSEPH, *Managing Editor*

Issue No. 461

June 17, 2020

On Deterrence, Defense and Arm Control: In Honor of Colin S. Gray

Dr. Keith B. Payne

Dr. Keith B. Payne is a co-founder of the National Institute for Public Policy, professor emeritus of the Graduate School of Defense and Strategic Studies at Missouri State University and a former deputy assistant secretary of defense.

Introduction

For five decades Professor Colin Gray's scholarly writings contributed tremendously to our understanding of strategy and his wise counsel benefited U.S. security policies enormously. His intellectual depth, rigor, curiosity and wit were unparalleled, as was the time, energy and stamina he devoted to writing and lecturing. To say that Colin was prolific is a profound understatement. His scholarly published canon includes more than 30 books and 300 articles. He also authored or contributed to scores of unpublished reports for various U.S. government offices. To achieve such a record, Colin often would work on multiple texts simultaneously. As a consequence, two substantial books he authored occasionally would be published in the same year – once I believe in the roughly the same month.¹

Equally important, colleagues and students of all views and backgrounds greatly enjoyed and appreciated Colin's unassuming affability and easy charm. While frequently involved in the back and forth of strategic policy debates, he typically remained a gentleman – reflecting a genuine civility that seems rare today. In one extended press interview Colin referred to a



INFORMATION SERIES

Issue No. 461 | June 17, 2020

prominent Washington politician in a mildly unflattering way. When the article was subsequently published and Colin saw his comment in print, he mailed a personal apology to the politician. The latter responded to Colin that he had been called much worse but had never before received an apology.

The scope and breadth of Colin's curiosity and writing far transcended any single topic. This brief discussion focuses only on a single enduring area of his scholarly interest: deterrence theory, policy and associated strategic force considerations, including arms control. To summarize the scope and nuance of Colin's views on strategic deterrence and related issues would require a sizeable book, which undoubtedly will be written. The much more modest goal here, however, is to provide a readable and select synopsis of his basic points and positions, which were driven by his philosophic realism and a relentless dedication to logic and evidence – wherever that led.

The Innovative Realist

Colin's work typically was highly innovative and inevitably provided added value. It may be helpful to offer a few select examples of the unique creativity and insight he brought to the field of strategic studies. In a 1981 article appearing in the journal *International Security*, Colin essentially introduced the now-thriving study of strategic culture as a critical sub-field of strategic studies.² He re-introduced the study of geopolitics in a 1977 book, *The Geopolitics of the Nuclear Era*, and subsequently authored several innovative texts on the subject, including *Maritime Strategy, Geopolitics, and the Defense of the West* (1986), and *The Geopolitics of Superpower* (1988).

Colin coined the title "Second Nuclear Age" for the post-Cold War era – nomenclature that was subsequently adopted internationally. More than just a new name, this descriptor reflected his countercultural view that nuclear weapons would *not* lose their salience post-Cold War, i.e., the emerging era would be different, but nuclear weapons would continue to cast a long shadow over international security concerns. Recent history demonstrates that Colin was, of course, correct in this regard.

Colin's books entitled, *The Second Nuclear Age* (1999) and *Another Bloody Century* (2005) presented the harsh realities he deemed more likely than the prevalent, near-utopian expectations of great power comity and a cooperative "new world order." In 1999, for example, Colin dissented from the accepted wisdom of the day that terrorism was the only remaining threat and pointed to "the strong possibility that world politics two to three decades hence will be increasingly organized around the rival poles of U.S. and Chinese power," and that China "would menace Japan." He also then observed that the return of Russia as a politico-military challenge to the West (which he fully expected) "immediately would threaten independent Ukraine [and] the Baltics."³ Colin expected that the immediate post-Cold War period was a



INFORMATION SERIES

Issue No. 461 | June 17, 2020

(likely brief) interlude before another cycle of sharp great power competition and potential conflict. History demonstrates that Colin was again prescient.

Colin's contrarian expectations, of course, did not reflect his preferences. They followed from his observations and realist philosophical roots, and his corresponding view that history provides the best guide for our expectations of the future. As noted, his expectations were far removed from the accepted wisdom of the day, i.e., that the arising new world order would see the dwindling salience of nuclear weapons, and great power cooperation and amity would replace cycles of crises and conflict. Colin did not believe that the exhaustion of the Soviet Union and rise of China meant the dawn of a peaceful new age – to the contrary, he expected new security challenges to arise and old challenges to return. Again, recent history has shown that Colin's projections were correct, if unfashionable.

I do not know the role that Colin's work played in his native Britain's Defence Ministry. What is clear is that beginning in the 1970s, he played an increasingly significant role in the evolution of U.S. thinking, particularly in the Department of Defense. Very few scholars inside or outside of government have so directly affected U.S. policies. When Secretary of Defense James Mattis introduced the 2018 *National Defense Strategy*, he quoted Colin and referred to him as "the most near-faultless strategist alive today,"⁴ and Colin is the only academic quoted in both the 2018 *Nuclear Posture Review* and 2019 *Missile Defense Review*.

Thinking About the Unthinkable

An overarching theme and goal of Colin's writing and lecturing was devoted to identifying the most effective approach to deterring war, particularly nuclear war, i.e., war prevention. He also recognized the possibility that deterrence could fail and nuclear war could ensue despite best efforts to prevent it. Correspondingly, he reasoned that because nuclear war is possible, the U.S. should prudently think through "what to do" in the event. He considered an officially declared U.S. response of the 1960s and early 1970s – including a large-scale nuclear strike against Soviet society – to be complete immoral folly and a faulty guide for measuring the adequacy of U.S. nuclear forces. His basic proposition was simple but not simplistic: The West must unceasingly seek to deter war, but if deterrence fails nevertheless and war ensues, U.S. actions should not be impromptu by default or a spasmodic nuclear response that consciously abandoned any purposeful goal beyond revenge and societal destruction. Rather, they should be guided by thoughtful planning to deter further nuclear escalation and to minimize societal destruction to the extent feasible – with full recognition that while neither goal was assured, to not try to limit the destruction would be grossly irresponsible. That is hardly a radical proposition.⁵

But openly discussing "what to do" if deterrence fails was outside the norms of policy and academic discourse. Doing so was then and continues to be criticized as reflecting a sympathy



INFORMATION SERIES

Issue No. 461 | June 17, 2020

for “nuclear war fighting” as opposed to deterrence. Colin ran afoul of the fact that considering what to do if deterrence fails was largely unacceptable because reigning wisdom was that the “stable” balance of terror, properly tended, would *not* fail short of irrationality, and nuclear war was “unthinkable” –and certainly not to be discussed publicly other than by some occasionally as a political tool used to rouse popular opposition to U.S. nuclear arms. But that was not Colin’s purpose.

Because Colin pointed to the need to plan as prudently as possible for deterrence failure and his publications occasionally included the word “victory” (in one case in an article’s provocative title created *absent* Colin’s permission or even knowledge), some critics asserted that his goal was not deterrence, but planning to fight and win a nuclear war. This is a wholly mistaken interpretation of his work and intent, including his use of the word “victory.” He was highly skeptical of any notion that the employment of nuclear weapons would likely remain limited and thus could serve a political goal.⁶ Indeed, he viewed nuclear war as a potentially unparalleled horror to be prevented if possible through diplomacy and deterrence. These were the goals of his scholarship on the subject. In at least some cases the mischaracterization of his work as sympathetic to “nuclear war-fighting” obviously was contrived for the purpose of creating a provocative nuclear strawman.

In short, Colin’s highest scholarly priority was to understand how best to prevent nuclear war, and he was convinced that seeking to think through the question of what-to-do in the event of deterrence failure was both prudent and could improve the prospects for deterring war. There was no tradeoff.

Arms Control: A “House of Cards”

A prominent academic argument of the 1960s and 1970s was that the U.S.-Soviet nuclear arms race of the time was a result of an “action-reaction” dynamic initiated by the United States. Critics of U.S. nuclear forces typically argued that it was the United States that instigated and propelled the U.S.-Soviet arms race because U.S. deployment of nuclear arms (the initial “action”) compelled the Soviet Union to respond with a nuclear buildup (the inevitable “reaction”). This U.S.-led action-reaction dynamic supposedly explained the U.S.-Soviet arms race.⁷

The policy argument that accompanied this action-reaction thesis, of course, was that if only the United States would cease or curtail its nuclear weapons programs, the Soviet Union could and would do likewise. Consequently, ending the arms race was a U.S. opportunity and responsibility: if the United States curtailed its nuclear armaments the action-reaction arms race dynamic would be replaced by a U.S.-led inaction-inaction dynamic –bringing the arms race to a close. However, if the United States continued to pursue nuclear programs, it would also continue to propel the arms race. This prevalent argument posited an arms race



INFORMATION SERIES

Issue No. 461 | June 17, 2020

continually led by the United States and its first moves – opponents being reactive and largely benign cogs in this mechanistic process. The same action-reaction argument, with U.S. culpability, remains popular in contemporary public arguments against U.S. nuclear arms.

One of the earliest targets of Colin's demand for logic and evidence was this fashionable U.S.-led action-reaction thesis. His 1976 book, *The Soviet-American Arms Race*,⁸ demolished this reductionist explanation of the arms race, and the corresponding assertion that U.S. inaction would produce Soviet inaction, i.e., a "peace race." He argued instead from evidence that a variety of interactive and non-interactive behaviors and motivations – not the action-reaction dynamic – explained U.S. and Soviet nuclear arms programs. The "bottom line" of Colin's work was that policies derived from the politically powerful action-reaction thesis – that U.S. actions drove the arms race and U.S. inaction would lead to Soviet inaction and an end to the arms race – were sure to be mistaken because Soviet motives for its nuclear arms were far more complex than the reductionist action-reaction thesis. Multiple later serious studies came to the same conclusion,⁹ and in 1979 the Carter Administration's Secretary of Defense, Harold Brown, very publicly recognized that the action-reaction thesis could not explain Soviet behavior, noting that the Soviet Union "has shown no restraint – when we build, they build, when we cut, they build."¹⁰

Colin continued to challenge pervasive, fawning academic and government expressions regarding nuclear arms control. The title of his most comprehensive book on the subject, *House of Cards: Why Arms Control Must Fail* (1992), clearly signaled his conclusion, as do the titles of Chapters 1 and 7, "The Magical Kingdom of Arms Control," and "To Bury Arms Control, Not to Praise it." Based on nearly a century of arms control history, (e.g., the extensive arms control record of the 1920s and 1930s, and the U.S.-Soviet SALT/START experience), he challenged the central, widely-accepted claims for the sacrosanct U.S.-Soviet strategic arms control process, i.e., that it could move the superpowers' strategic doctrines and force postures in mutually benign directions and that the dialogue on nuclear arms itself could be a dynamic for the transformation of U.S.-Soviet relations away from hostility.

In stark contrast, Colin essentially explained that the character of political relations between countries and their respective "strategic cultures" drive their armament programs and correspondingly the possibilities of arms control, and that those political relations and cultures typically reflect centuries of historical experience and contemporary issues. They ultimately govern countries' armaments incentives and goals and set the boundaries for arms control: "The political antagonism that generates the objective need for alleviation via arms control – always assuming, again fallaciously, that arms control could control – is the very reason why arms control must fail..."¹¹ The fundamental resolution of hostile political relations could lead naturally to significant relaxation of military requirements and arms control, but the reverse is not true. And, of course, if previously hostile relations have become truly cordial, arms control agreements lose much of their significance.



INFORMATION SERIES

Issue No. 461 | June 17, 2020

Colin's conclusion—that despite all the fanfare and attention, the arms control process is incapable of transformative effects amongst hostile states because it is limited by their hostility—again was wholly contrarian. However, given the Cold War history of actual arms control practice, his general conclusion became increasingly more mainstream. President Carter's Defense Secretary, Harold Brown, recognized the same nexus: "The [US-Soviet] political relationship drove the success or failure of arms control much more than the other way around."¹²

From this foundation, Colin concluded that arms control "is either impossible or unimportant." He referred to this as the "arms control paradox" and, calling on historical evidence, demonstrated how it was reflected in "virtually all twentieth-century experience with arms control or its absence."¹³ Indeed, the U.S. strategic arms control aspiration to move Russian nuclear arms towards "stability" (as understood in the West) was largely frustrated,¹⁴ until political relations improved dramatically with the collapse of the Soviet Union—which had little or nothing to do with the arms control process.¹⁵ It has since, once again, been frustrated with the return of stridently hostile U.S.-Russian political relations.

On Deterrence

In 1960, Herman Kahn observed about U.S. deterrence, "In spite of our reliance on the idea that deterrence will work, we usually do not analyze carefully the basic concepts behind such a policy."¹⁶ Colin did just that and methodically identified the logical contradictions and lack of evidence behind accepted wisdom and fashionable thinking about U.S. nuclear policies. When he began publishing on strategic deterrence and nuclear policy in the early 1970s, he was highly critical of most U.S. government expressions and academic commentary on the subject. By the 1980s, however, U.S. policies on a bipartisan basis had come to reflect much of Colin's earlier thought.

Many of Colin's basic points about strategic deterrence and missile defense built on Herman Kahn's writings from the 1960s, particularly the latter's *On Thermonuclear War* and *Thinking About the Unthinkable*. These two remarkable scholars often reached the same conclusions, but their routes differed. Whereas Herman Kahn's work manifestly was that of a physicist addressing issues of international politics and power, Colin's approach to the same subjects came from political science, military history and anthropology. Indeed, he focused on how the unique history, culture and political context of nations could drive considerable variation in different leaderships' decision making pertinent to the functioning of deterrence. And, perhaps because of his British origins, he focused on the U.S. extended deterrence relationship with allies.



INFORMATION SERIES

Issue No. 461 | June 17, 2020

Colin's views on deterrence challenged conventional wisdom. He dismissed notions widely accepted in the West that a reliably "stable balance of terror" could be expected given the Soviet adoption of U.S. views regarding nuclear weapons, i.e., "convergence." Because Soviet calculations were generally believed to mirror those of U.S. leaders, Soviet behavior was expected to follow familiar patterns and deterrence therefore was expected to play out predictably and reliably. This assumption regarding the predictability of Soviet behavior led some senior figures in U.S. national security to conclude that mutual nuclear deterrence was so stable that it functioned near automatically, i.e., "existential deterrence": "The terrible and unavoidable uncertainties in any recourse to nuclear war create what could be called 'existential' deterrence, where the function of the adjective is to distinguish this phenomenon from anything based on strategic theories or declared policies...As long as each side has thermonuclear weapons that could be used against the opponent, even after the strongest possible preemptive attack [a "second-strike capability"], existential deterrence is strong..."¹⁷

Colin considered such notions of a balance of terror built on "mirror-imaging" to be a lamentable reflection of enduring aspects of the American elite's strategic culture, i.e., tenacious group-think and a "trait of machine-mindedness" that reduces "the difficulties created by politics and opposed national policies to problems of administration, management, and engineering."¹⁸ He expanded on Herman Kahn's and Albert Wohlstetter's general contention that deterrence should *not* be expected to function easily, reliably and predictably. In 1958, the latter famously described the balance of terror as "fragile."¹⁹ Colin concurred and emphasized that an assumption of much Western Cold War thinking about deterrence "stability" – that Soviet and U.S. leaders perceived and calculated deterrence and the "balance of terror" similarly – was very likely to be dangerously mistaken.

Based on Colin's reading of available historical evidence, he rejected this key presumption of similar U.S. and Soviet deterrence perceptions and calculations. He concluded instead that "assessments of deterrence stability err because they do not take into account" differences in political will.²⁰ For example, the great differences in U.S. and Soviet strategic cultures would render Soviet decision making and the functioning of deterrence unpredictable: "Sensitivity to human loss has not been a prominent feature of Soviet (or Russian) political culture. Anyone who believes that nuclear war should mean the same to Americans and to Great Russians should reflect deeply on the contrasting histories of the two societies." Thus, "there is massive uncertainty over 'what deters' (who? on what issue? when?)."²¹

In short, given the potential for variation often witnessed in military history, Colin rejected the comforting and convenient mirror-imaging that undergirded expectations of a reliably stable balance of terror and "existential deterrence." He insisted that there is no relevant universal definition of rational behavior, no nondescript countries A and B, and no *homo strategicus* leadership making predictably sensible decisions. Rather, leaderships with a wide range of strategic cultures, perceptions, beliefs, goals, and passions can arrive at very different



INFORMATION SERIES

Issue No. 461 | June 17, 2020

conclusions about what constitutes the most sensible deterrence-related decision making and behavior. Consequently, Colin emphasized decades before it became widely-accepted as pertinent to U.S. policy that the great possible variation in national histories, perceptions, cultures, goals, values, etc. will likely impact decision making and behavior in unexpected ways and render the functioning of deterrence inherently uncertain, whether involving the party issuing a deterrence threat, the party reacting to that threat, or both.

Some U.S. leaders during the Cold War expected the strategic arms control process to provide the opportunity to bring Soviet thinking in line with U.S. balance of terror thought, i.e., into the “real world” of nuclear weapons and the inevitable logic of a stable balance of terror.²² American tutorials on deterrence could, if necessary, “educate” the Soviet political and military leadership into “convergence” with U.S. thinking. Colin dismissed this notion as ethnocentric folly given the enormity of the differences in the American and Russian histories, perceptions, goals, and strategic cultures.²³

Colin rebelled against the comforting notions that the balance of terror could be made predictably stable and that strategic forces could be neatly delineated as “stabilizing” or “destabilizing” according to formula. His willingness to express this view along with considering “what to do” if deterrence fails was viewed as heretical by most of the nuclear deterrence “priesthood” of the time, as indeed it was. Doing so challenged the most cherished presumptions regarding the dominant balance of terror deterrence formula, i.e., that it would be predictably stable as long as the contenders played according to the rules of “stability” – which they ultimately would do by definition because they were presumed to be comparably sensible.

Colin’s conclusion that this fundamental presumption of reigning deterrence theory and policy was dangerously wrong shaped his views about deterrence policy and strategic defenses significantly. For example, he insisted that deterrence efforts must be adjusted to take into account the variability in an opponent’s perceptions, tolerances, values and goals, i.e., deterrence planning must be done “with reference to the unique details of the case in hand.”²⁴ Correspondingly, he often explained that no such thing as “the deterrent” exists because no single approach or narrowly-defined force structure can be expected to deter. Rather, Colin concluded that U.S. deterrence planning and forces must be flexible and diverse to deter as effectively as possible given the great variations possible among opponents and contexts. His iconoclast views in this regard preceded by decades their wholesale, bipartisan acceptance – as is reflected in numerous contemporary open U.S. policy documents and the now-ubiquitous observation by civilian and military leaders that deterrence must be “tailored” to opponents because no “one size fits all.”

I should add here that Colin was not iconoclastic by nature; it was not a role to which he aspired or seemed to enjoy. Rather, the inadequacies he saw in the dominant strategic thinking of the



INFORMATION SERIES

Issue No. 461 | June 17, 2020

mid-Cold War period left him little choice but to accept the role. By 1980, however, the general outlines of U.S. strategic policy were moving considerably closer to the positions he had articulated – particularly including President Carter’s “Countervailing Strategy.”

Finally, Colin did not prefer that the United States and the West rely on nuclear deterrence for its security. He fully recognized the dangers. In fact, he believed this reliance to be “foolish” *if there were a realistic alternative.*²⁵ However, in line with realism, he foresaw no plausible alternative: “There is no alternative, benign international political system....Any rational person, one might think, should be able to design a very much more reasonable and safer global security system than we have today. I suspect that this is true but alas, entirely beside the historical point. Our current security and insecurity context is the unplanned, certainly unintended, product of centuries of political history.”²⁶

On Strategic Missile Defense

Colin’s conclusion that the functioning of deterrence is inherently uncertain and unpredictable was also key to his position regarding U.S. strategic defensive capabilities, i.e., homeland defense: “Nuclear war is possible, and the U.S. government owes it to generations of Americans – past, present, and future – to make prudent defense preparations to limit damage to domestic American values to the extent feasible in the event of nuclear war.”²⁷ He was well aware that limiting damage might not be feasible in many possible nuclear scenarios, but believed that it could be in others. Correspondingly, in contrast to basic balance of terror desiderata, he considered irresponsible a policy by which the U.S. government would consciously choose to forego the protection of society where possible because such a policy would contribute to the potential for unmitigated destruction should deterrence fail.

Consequently, Colin emphasized that missile defense to limit the potential for societal destruction should be a priority, not anathema. This emphasis went fully against the grain of reigning Western deterrence thinking that unmitigated mutual vulnerability is “stabilizing” and should be preserved and codified. From the American perspective, the 1972 U.S. -Soviet Anti-Ballistic Missile (ABM) Treaty served precisely this purpose by significantly limiting strategic missile defense development and deployment.

Colin’s support for strategic missile defense, however, was a logical extension of his basic points that: 1) given the variability in decision making, deterrence is uncertain and can fail; 2) the United States should fully consider “what to do” in the event of deterrence failure; and 3) in the event of war, society should be defended to the extent feasible.

Colin’s support for strategic missile defense also fit well with his attention to U.S. extended deterrence for allies. He contended that U.S. societal vulnerability to attack undermined the credibility of the U.S. extended deterrent threat on behalf of allies. In fact, he believed that the



INFORMATION SERIES

Issue No. 461 | June 17, 2020

credibility of U.S. extended deterrent for allies “is very low so long as the United States makes no noteworthy provision for the protection of its homeland against inevitable Soviet retaliation.”²⁸ His logic was clear: the Soviet Union would not likely believe the U.S. extended deterrent threat to employ nuclear weapons on behalf of allies if it could not survive the certain Soviet retaliation. He feared that an unbelievable deterrent provided little or no protection and might instead encourage provocation.

Consequently, Colin advanced two basic reasons for U.S. strategic missile defense, to protect American society in the event deterrence fails and to provide credibility for U.S. extended deterrent commitments to allies. He did not believe that strategic defense was likely to provide flawless protection against nuclear attack, but that even plausible partial defense capabilities could strengthen the credibility of extended deterrence and save lives that otherwise would be lost in the event of deterrence failure. He consistently endorsed U.S. strategic missile defense for these reasons.²⁹

For a time, Colin was fairly isolated in his views on strategic missile defense. They were wholly contrary to the intent and purpose of the ABM Treaty – which received overwhelming support in the U.S. Senate and in general. However, once again, U.S. policy eventually caught up with much of Colin’s thinking *on a bipartisan basis*. In 2002, the United States withdrew from the ABM Treaty for the purpose of deploying strategic missile defense to protect the U.S. homeland against limited strategic missile threats posed by rogue states.³⁰ U.S. policy had come to recognize that less than perfect societal defenses could have great value. Similarly, in 2010 the Obama Administration listed as first priority defending “the homeland against the threat of limited ballistic missile attack.”³¹ This policy priority attributed to strategic missile defense by the Obama Administration was repeated in the Department of Defense’s 2019 *Missile Defense Review*, along with a discussion of its value for deterrence purposes.³² The *Missile Defense Review* also includes the following quote from Colin: “U.S. missile defence can critically reduce an attacker’s confidence in the prospects for success in its offensive strike planning. Given the inherent and irreducible uncertainties of war that should fuel doubt in such plans, the additional uncertainty imposed by U.S. missile defence should prove decisively deterring in the attacker’s calculations.”³³ Colin’s thoughts on strategic missile defense remained consistent over five decades, and U.S. policy has largely, if not entirely, caught up on a bipartisan basis.

Conclusion

A review of Colin Gray’s work reveals how easily he moved simultaneously in the two very different and often mutually exclusive worlds of academia and government policy. His scholarship, over time, led to the betterment of U.S. policy in a number of areas, but no more so than in the seemingly arcane and incredibly consequential arenas of deterrence, defense and arms control. His scholarly work was the basis for his unparalleled contribution to the evolution of U.S. arms control policy away from its reductionist “action-reaction” roots and



INFORMATION SERIES

Issue No. 461 | June 17, 2020

U.S. deterrence policy away from its mechanical mirror-imaging, and to U.S. recognition of value in strategic defense. Colin's ideas and writings were his currency for these developments. He was an advisor who spoke "truth to power" with great effect, despite the harsh criticism he often received for doing so at the time – criticism he typically endured with humor and good grace. It is no overstatement to conclude that the West is a safer place for his remarkable scholarship.

1. Colin S. Gray, *Strategic Studies and Public Policy* (Lexington, Kentucky: University Press of Kentucky, 1982) and Colin S. Gray, *Strategic Studies: A Critical Assessment* (Westport, Conn.: Greenwood Press, 1982).
2. Colin S. Gray, "National Style in Strategy: The American Example," *International Security*, Vol. 6, Number 2 (Fall 1981), pp. 21-47. Colin's book, *Nuclear Strategy and National Style* (Lanham, Maryland: Hamilton Press, 1986) is a comprehensive treatment of the subject. He attributed "landmark status in this regard" to Ken Booth, *Strategy and Ethnocentrism* (London: Croom, Helm, 1979).
3. Colin S. Gray, *The Second Nuclear Age* (London: Lynn Reiner Press, 1999), pp. 39-41.
4. Department of Defense, Transcript: Remarks by Secretary Mattis on the National Defense Strategy, January 2018, at <https://www.defense.gov/Newsroom/Transcripts/Transcript/Article/1420042/remarks-by-secretary-mattis-on-the-national-defense-strategy/>.
5. As Stanford University's Scott Sagan observes, "Few would disagree that there is a need to plan for what to do if deterrence fails. Scott Sagan, "Review of Robert Dallek: *The American Style of Foreign Policy: Cultural Politics and Foreign Affairs*," *Survival*, Vol. 25, No. 4 (July-August 1983), p. 192.
6. See Colin S. Gray, *Theory of Strategy* (Oxford: Oxford University Press, 2018), p. 122-123.
7. See for example, Jeremy Stone, *Containing the Arms Race: Some Specific Proposals* (Cambridge, Mass.: MIT Press, 1966), pp. 16-17, 22-23. George Rathjens, "The Dynamics of the Arms Race," in *Arms Control: Readings From Scientific American* (San Francisco: W.H. Freeman and Co, 1973), pp. 177-187; Herbert York, *Race to Oblivion* (New York: Simon and Schuster, 1970), p. 234; Robert McNamara, *The Essence of Security: Reflections in Office* (New York: Harper and Row, 1968), pp. 58-67.
8. Colin S. Gray, *The Soviet-American Arms Race* (Lexington Books: Lexington, Mass, 1976). See also Gray, *Weapons Don't Make War* (Lawrence Kansas: University Press of Kansas, 1993), pp. 50-51, 64.
9. See Ernest R. May, John D. Steinbruner, Thomas W. Wolfe, and Alfred Goldberg (editor), *History of the Strategic Arms Competition 1945-1972*, Part II, Office of the Secretary of Defense, Historical Office, March 1981, pp. 810-811, available at <http://documents.theblackvault.com/documents/dod/readingroom/10/227.pdf>.
10. Secretary of Defense Harold Brown, Statement on February 27, 1979, in *Outlook and Budget Levels for Fiscal Years 1979 and 1980*, Hearings Before the Committee on the Budget, House of Representatives, 96th Congress, 1st Session (Washington, D.C.: USGPO, 1979), p. 492. See also, Arms Control and



INFORMATION SERIES

Issue No. 461 | June 17, 2020

Disarmament Agency, *The Soviet Propaganda Campaign Against the U.S. Strategic Defense Initiative* (Washington, D.C.: Arms Control and Disarmament Agency, 1986), p. 8.

11. Gray, *Weapons Don't Make War*, op. cit., p. 174.
12. See "SALT II and the Growth of Mistrust," Transcript of the Proceedings of the Musgrove Conference of the Carter-Brezhnev Project, Musgrove Plantation, St. Simon's Island, GA, May 7-9, 1994 p. 131, available at <https://nsarchive2.gwu.edu/carterbrezhnev/C-B%20-%20SALT%20II%20-%20Musgrove%20master%20transcript.pdf>.
13. Colin S. Gray, *House of Cards: Why Arms Control Must Fail* (Ithaca, New York: Cornell University Press, 1992), pp. X, 16-19.
14. See Brent Scowcroft, John Deutch, and R. James Woolsey, "A Small, Survivable, Mobile ICBM," *Washington Post*, December 26, 1986, p. A23.
15. As observed by Kenneth Waltz in, "Structural Realism after the Cold War," *International Security*, Vol. 25, No. 1 (Summer 2000), p. 39.
16. Herman Kahn, *On Thermonuclear War* (Princeton, NJ: Princeton University Press, 1960), p. 556.
17. McGeorge Bundy, "Bishops and the Bomb," *New York Review of Books*, Vol. 30, No. 10 (June 16, 1983), pp. 3-4. See also, Bernard Brodie, *War and Politics* (New York: Macmillan Publishing, 1973), p. 412.
18. Colin S. Gray, *Weapons Don't Make War* (Lawrence, Kansas: University Press of Kansas), pp. 174.
19. Albert Wohlstetter, *The Delicate Balance of Terror*, Document P-1472, The RAND Corporation, 1958, at <https://www.rand.org/pubs/papers/P1472.html>.
20. Colin S. Gray, *Nuclear Strategy and Strategic Planning* (Philadelphia: Foreign Policy Research Institute, 1984), pp. 46.
21. *Ibid.*, pp. 64, 47.
22. See for example the interview of Paul Warnke in, "The Real Paul Warnke," *New Republic*, March 26, 1977, pp. 22-23.
23. Gray, *Nuclear Strategy and National Style*, op. cit., pp. 137-139.
24. Colin S. Gray, *Maintaining Effective Deterrence* (Carlisle, PA: Strategic Studies Institute, U.S. Army War College, August 2003), p. 15.
25. Gray, *Nuclear Strategy and Strategic Planning*, op. cit., pp. 88, 92;
26. Colin S. Gray, "Foreword," in Keith Payne, *Shadows on the Wall: Deterrence and Disarmament* (Fairfax, VA: National Institute Press, 2020), pp. xi-xii.
27. Gray, *Nuclear Strategy and Strategic Planning*, op. cit., p. 8.
28. *Ibid.*, pp. 82-83.
29. See for example, Colin S. Gray, "A New Debate on Ballistic Missile Defense," *Survival*, Vol. 23, No. 2 (March-April 1981), pp. 60-71.
30. See, President George W. Bush, *Text of President Bush's Speech at the National Defense University*, May 1, 2002, *The New York Times on the Web*, Associated Press, available at <http://www.nytimes.com/aponline/national/01WIRE-BUSH-TEXT.html?pagewanted+print>. See also, Department of Defense, *Nuclear Posture Review: Report to the Congress in Response to Sections 1041*



INFORMATION SERIES

Issue No. 461 | June 17, 2020

(as Amended) and 1042 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001, PL 106-398, December 2001, pp. iii, 7. (Declassified).

31. Department of Defense, Office of Public Affairs, *2010 Ballistic Missile Defense Review (BMDR) Fact Sheet*, March 3, 2010, p. 2.
32. Department of Defense, Office of the Secretary of Defense, *2019 Missile Defense Review* (January 19, 2019), pp. 26-32.
33. *Ibid.*, p. 25. (Emphasis in original).

The views in this *Information Series* are those of the author and should not be construed as official U.S. Government policy, the official policy of the National Institute for Public Policy or any of its sponsors. For additional information about this publication or other publications by the National Institute Press, contact: Editor, National Institute Press, 9302 Lee Highway, Suite 750 | Fairfax, VA 22031 | (703) 293-9181 | www.nipp.org. For access to previous issues of the National Institute Press Information Series, please visit <https://www.nipp.org/information-series-2/>.

The National Institute for Public Policy's *Information Series* is a periodic publication focusing on contemporary strategic issues affecting U.S. foreign and defense policy. It is a forum for promoting critical thinking on the evolving international security environment and how the dynamic geostrategic landscape affects U.S. national security. Contributors are recognized experts in the field of national security.

© National Institute Press, 2020