

MC48, Gaither, and Killian: Shaping U.S. Concepts of Deterrence During the Cold War

After the USSR successfully detonated an atomic bomb in 1949, the world entered a new so-called “bipolar” era. The following decade was marked by uncertainty about the adversary’s growing capabilities and the need for capacity building in the United States. Upon taking office in 1953, President Dwight Eisenhower devoted significant effort to critically assess both Soviet capabilities and the strengths and weaknesses of the United States. As a result, three major reports were produced: NATO Military Committee Report MC48 (1954), the Killian Report (1955), and the Gaither Report (1957).

All three reports address defence concerns and the technological advancements necessary to secure the U.S. and its allies. They all recognise the Soviet Union's increasing ability to launch a surprise attack, particularly with the development of long-range bombers and intercontinental ballistic missiles. All three agree that the USSR is quickly closing the technological gap with the U.S., making it essential for the U.S. to respond by improving its own nuclear deterrent forces and defensive systems. However, while the reports overlap significantly, distinct differences make each a key document that influenced the vision of future deterrence at the time.

NATO Military Committee report MC48 (1954)

The NATO MC48 Report, published in 1954, was the first in the sequence and was a collaborative document developed by NATO's Military Committee. It is primarily concerned with Europe’s defence, focusing on integrating atomic capabilities within NATO and preparing for immediate retaliation against Soviet aggression. The NATO Commanders were instructed to focus these studies on the possibility of a war occurring as early as in 1957.¹

A hypothetical future NATO war would have likely had two phases. The first phase would see an intense exchange of atomic weapons as both sides aim for superiority, depleting the weaker side's stockpile. The second phase would involve a period of readjustment, with the war's outcome depending on the initial phase's advantage and the ability to resupply forces in the U.K. and Europe.

The problem was that at the time of writing the report, Europe did not have an effective air defence system against a determined air attack. Existing active defences were insufficient and had to be supplemented by passive preparations and coordinated with counter-air operations. The most crucial aspect of air defence was the counter-air offensive, and the only feasible way to prevent atomic attacks was to destroy the enemy’s delivery systems at their source through early atomic counter-attacks.² The greatest destruction would take place within the first few days or weeks, as both sides attempted to use their atomic stockpiles to achieve superiority.³

NATO Military Committee recognised several Soviet advantages: the element of surprise, the power of immediate decision due to the Soviet authoritarian regime, and superiority in land and tactical air forces due to their close proximity to Europe. Therefore, NATO’s primary objective would be to survive and immediately retaliate with atomic weapons.⁴

The Killian Report (1955)

In 1953, President Eisenhower was warned about the U.S. vulnerability to a surprise attack. The idea for the future Directorate of Science and Technology came from the Technological Capabilities Panel (TCP), authorised by Eisenhower in 1954, who was concerned with the size and disposition of the USSR fleet of Myasichev-4 Bison

¹ [NATO Military Committee report MC48, p.3](#)

² [NATO Military Committee report MC48, PROBABLE NATURE AND DURATION OF FUTURE WAR INVOLVING NATO, p.5, para.5](#)

³ [NATO Military Committee report MC48, PROBABLE NATURE AND DURATION OF FUTURE WAR INVOLVING NATO, p.6, para.7](#)

⁴ [NATO Military Committee report MC48, PROBABLE NATURE AND DURATION OF FUTURE WAR INVOLVING NATO, p.8, para.11](#)

bombers. Pushed by the President's Foreign Intelligence Advisory Board (PFIAB), led by MIT's James R. Killian, Jr. and Polaroid's Edwin H. Land, both of whom had advised the Air Force since World War II, the panel was tasked with studying the nation's technological capabilities.⁵

As Bernard Brodie recommended to "prepare for the first blow",⁶ the Killian Report recognised the need for "a research program that would generate a continuous flow of new intelligence tools and techniques."⁷

J.R. Killian Jr. organised scientists into three projects: Project One focused on offensive capabilities, Project Two on continental defense, and Project Three on intelligence, with additional studies on communications and technical manpower.

Project Three, headed by Edwin Land, was set to have a significant impact on the activities of the Central Intelligence Agency, particularly in overhead collection. The Land Panel was not impressed with the capabilities of U.S. intelligence at the time and later promoted the idea of building a high-altitude reconnaissance aircraft. The Project Three Panel is responsible for major initiatives such as the U-2 aircraft and the development of the Polaris-class missile-firing submarine.⁸

The Killian Report, like the NATO MC48 Report, stresses the need for new radar and alert systems, as well as increasing nuclear retaliatory power, to deter or defeat a surprise attack.

The Gaither Report (1957)

If any report rendered an apocalyptic scenario, it is the Gaither Report. Not coincidentally, the report was nicknamed the "unstable equilibrium".⁹ The purpose was to study active and passive defence to protect the civil population in case of a nuclear attack and its aftermath, as well as the deterrent value of retaliatory forces and economic and political consequences. Therefore, active and passive defence measures were examined from two perspectives: their role in deterrence and their ability to protect the civilian population in the event of war, whether by accident or design.¹⁰ Unlike the NATO MC48 Report, the Gaither Report estimates the peak of the crisis to occur in 1959 to early 1960.

Active measures (as in the NATO MC48 and Killian reports) include Strategic Air Command enhancements, early warning systems and missile defence systems. However, the panel goes to great length to emphasise that active defence alone is not sufficient. Passive defence focused on the fallout shelters, civil defence preparations and reinforcing critical infrastructure. For the sake of precision, it is expedient to say that the Gaither Report does mention blast shelters, but it treats them with a degree of caution. While fallout shelters were emphasised as a critical and feasible part of civil defence, the report was more hesitant about the widespread construction of blast shelters, primarily due to concerns over cost-effectiveness. The program of fallout shelters was estimated at \$25 billion and would save approximately 50 millions of lives. The program (presumably the blast shelters) that could potentially reduce the number of casualties by 10% would cost an additional \$20-30 billion.¹¹ Both programs would require additional \$10 billion for the equipment. Considering the defence budget in 1957 was \$38 billion¹², the fallout shelter program was disproportionately expensive.

Interestingly, the Gaither Report touches on the financing of NATO and allied defence efforts, though it does so briefly in the context of broader recommendations on integrating U.S. defence and foreign policy. The report suggests supplying NATO with nuclear weapons, which would remain under U.S. custody during peacetime but could be used under NATO command in wartime. This recommendation reflects a financial and logistical commitment from the U.S.

⁵ [D. Welzenbach, Science and Technology: the origins of a directorate](#)

⁶ Lecture 4 Slides

⁷ TCP Report, p.145

⁸ [D. Welzenbach, Science and Technology: the origins of a directorate](#), p.14

⁹ Lecture 5

¹⁰ [The Gaither Report, Assignment, p.5](#)

¹¹ [The Gaither Report, Assignment, A. Shelters, p.24](#)

¹² [The Gaither Report, Costs and Economic Consequences, A. Costs, p.15](#)

to support NATO's nuclear capabilities.¹³ The report also recommends measures to pool and make more effective use of the economic, technological, and political resources of the United States and its allies.¹⁴ The Gaither Report does align with the NATO MC48 Report in terms of the broader need for coordinated defence efforts and resource sharing among NATO allies. And therefore, it's reasonable to suggest that the Gaither Report reinforces the strategic principles outlined in the NATO MC48 Report, reflecting the U.S. commitment to its allies.

It's worth mentioning that the experts who contributed to both the Killian and Gaither Reports were part of the same defence-intellectual establishment, including members of the scientific and defence communities who frequently advised the U.S. government. J.R. Killian Jr. also served on the ODM SAC subcommittee that contributed to the Gaither Report.¹⁵

Conclusion

Each report offers distinct assumptions about what constitutes credible deterrence. The NATO MC48 Report focuses on immediate retaliation and integrating atomic capabilities into NATO's defence to prevent Soviet aggression, assuming that a robust atomic counter-attack is essential. The Killian Report highlights the importance of technological superiority, including missile development and early-warning systems, to maintain an edge and prevent a surprise attack. The Gaither Report adds a layer of civil defence, emphasising that a credible deterrence requires not only military strength but also the ability to protect civilians through fallout shelters and infrastructure hardening.

¹³ [The Gaither Report, recommendation C. Integration with US Foreign policy, p.11, para. 2](#)

¹⁴ [The Gaither Report, recommendation C. Integration with US Foreign policy, p.11, para. 1](#)

¹⁵ [The Gaither Report, Assignment, Appendix G, p.34](#)