

**Working Paper**

SWP Working Papers are online publications within the purview of the respective Research Division, Thematic Working Groups or the Executive Board. Unlike SWP Research Papers and SWP Comments they are not reviewed by the Institute.

WP NR. 01, JANUARY 2025

**Mapping the Realm of the Unknown**

**How to harness nuclear deterrence in a perilous world**

*Eckhard Lübke*

## Contents

<b>Summary</b>	<b>3</b>
Issue	3
Approach	3
Findings	3
<i>Zusammenfassung</i>	5
<b>Prologue</b>	<b>9</b>
<b>I. The Strategic Landscape: A World in Perilous Flux</b>	<b>11</b>
<b>II. Nuclear Deterrence: Principles</b>	<b>13</b>
1 Mapping the Realm of the Unknown	14
2 The Nuclear Revolution: old, but not aging	16
3 A New Nuclear Era	18
4 Deterrence	18
5 Homeland and Extended Deterrence	21
6 The Triangle of Extended Deterrence	22
7 Deterrence by Escalation	25
8 Against all odds: Terminating a nuclearized war	27
9 Ukraine: Warfare in the shadow of nuclear weapons	29
<b>III. Nuclear Deterrence: Policies</b>	<b>31</b>
1 Deterrence in a new nuclear era	32
2 NATO: Extended Deterrence for Europe	37
3 Extended Deterrence for Europe by Europe?	40
<b>IV. Conclusion</b>	<b>46</b>

# Summary

## Issue

On January 3, 2022, the leaders of nuclear-armed China, France, Russia, the United Kingdom and United States of America issued a statement “On Preventing Nuclear War and Avoiding Nuclear Arms Races”. The statement is at once reassuring and disconcerting: while the five leaders reaffirmed their common interest in preventing a nuclear war that “cannot be won and must not be fought”, a deteriorating security environment had prompted them to do so. The Russian war on Ukraine and hybrid attacks elsewhere in Europe, a tension-laden U.S.-Chinese rivalry, a more autocratic and less democratic world, disruptive developments such as climate change and a shift in the geopolitical distribution of power are fuelling “strategic competition, pervasive instability and recurrent shocks”. (NATO Strategic Concept 2022)

A world in perilous flux does not lend itself to the marginalisation, let alone the elimination, of nuclear weapons. Instead, the task is to harness nuclear weapons for deterrence and defence in a way that takes account of their unique destructiveness and keeps the horse before the cart by acting on the Clausewitzian precept of subordinating military means to political ends.

## Approach

The paper’s contribution to this task consists of two major parts, interrelated like means to an end. Following an outline of the strategic landscape (“A World in Perilous Flux”), Part One (**Nuclear Deterrence: Principles**) lays the conceptual groundwork for Part Two (**Nuclear Deterrence: Policies**). It is divided into three chapters: “Deterrence in a New Nuclear Era”, “NATO: Extended Deterrence for Europe”, and “Extended Deterrence for Europe and by Europe?”.

## Findings

### Nuclear Deterrence: Principles

Nuclear deterrence is hazardous, but legitimate and indispensable to ward off existential threats. A nuclear-free world is a Fata Morgana: nuclear weapons cannot be dis-invented. There might, however, be a nuclear deterrence-free world. But that requires nothing less than abolishing the institution of war as a means of settling conflicts. Thus, as long as war has a future, so does nuclear deterrence. The imperative is to harness it in a way that it remains what thinking about and practicing nuclear deterrence has been since Hiroshima and Nagasaki: groping in the realm of the unknown. For “a nuclear war cannot be won and must never be fought.”(P5 Statement, 3 January 2022)

Harnessing nuclear weapons for deterrence and defence involves planning for the realm of the unknown since “no one has ever experienced the reality of a modern nuclear

war.” To preserve the almost eighty-year tradition of non-use, the challenge is to navigate between the Scylla of undershooting (neglecting conventional military preparedness) and the Charybdis of overshooting by succumbing to worst-case imaginations.

The imperative of war prevention, imposed by the nuclear revolution, has not lost its potency between nuclear-armed opponents. Technological developments are unlikely to sever the bond of Mutual Assured Destruction (MAD) based on survivable forces capable of inflicting devastating retaliatory damage.

While a new nuclear age transcending MAD is not on the horizon, China’s continuing nuclear build-up has ushered in a new nuclear era. Moreover, U.S.-Russian bipolarity is not being replaced by a tripolarity of equidistant entities, as the authoritarian regimes of China and Moscow both see the United States as their global antagonist.

The new nuclear era will not be spared the central paradox of nuclear deterrence: nuclear threats derive their potency from war resulting in collective annihilation, which they only do if war could erupt regardless. However, risk is the product of the probability of something occurring and the potential damage it might wreak. In the case of nuclear war, the destructiveness of nuclear weapons means that even a minuscule probability of such a war would entail a suicidal risk. Thus, minimising the risk of war through political accommodation, arms control, and military restraint retains its imperative nature without undermining the potency of nuclear deterrence.

There are two types of nuclear deterrence: homeland deterrence is reserved for protecting a state’s citizens, national territory and integrity, extended deterrence involves employing a state’s nuclear arsenal to protect allies and assets from attack by nuclear-armed antagonists. As homeland deterrence must take precedence, allies and partners are given a nuclear commitment rather than a nuclear guarantee.

The triangle of extended deterrence has three constituent parties: the state issuing a nuclear commitment to protect a partner (protégé) and the potential adversary. For extended deterrence to be effective, the nuclear commitment must be credible in the eyes of the adversary, tolerable to the issuer and reassuring to the partner. On the one hand, NATO history is a reminder that balancing reassurance and tolerability can be more demanding than ensuring the credibility of an extended deterrent threat. On the other hand, it also shows that intra-Alliance conflicts over burden-sharing notwithstanding, extended deterrence has been effective for more than 75 years.

The modus operandi of nuclear threats is usually defined as deterrence by denial or punishment. Yet in conceptual and practical terms, there exists a third employment mode: deterrence by escalation. It focuses neither on degrading an opponent’s military capabilities nor on hitting civilian targets; instead, the primary purpose is to drastically raise the opponent’s expectations about the potential *future* costs and risks of continued combat, thereby inducing him to retreat. Deterrence by escalation involves the demonstrative or selective use of nuclear weapons in an attempt to achieve cooperative war termination, primarily by signalling resolve rather than inflicting heavy damage. Presumably, such limited nuclear use remains an ingredient of NATO strategy as reflected in modernization of its nuclear posture.

And it should be, because if pre-war deterrence fails and nuclear weapons were employed, against all odds an attempt would have to be made to restore deterrence by terminating the war swiftly and on mutually acceptable terms. If at all, nuclear weapons should then be used in an escalatory mode.

The war in Ukraine has been fought in the restraining shadow of nuclear weapons. While the United States has helped Ukraine fend off a nuclear-armed aggressor, both Russia and the United States have been keen to avert a direct confrontation between them.

## **Nuclear Deterrence: Policies**

Nuclear deterrence is hazardous but indispensable. Therefore, it must be guided by a security policy that employs a range of political, economic, and military instruments to contain and defuse the underlying conflict.

Such harnessing of nuclear weapons requires recognition that “practicing strategic empathy and providing reassurance are not acts of charity—they are calculating and pragmatic measures to reduce the risk of uncontrolled escalation.”

Arms control and disarmament must be integral parts of nuclear harnessing. While they are most effective when based on reciprocal bi- and multilateral agreements, strategic stability can benefit from reassurance through unilateral restraint.

In the new nuclear era, strategic stability requires Chinese stakeholdership. To this end, its nuclear build-up should be embedded in a tripartite U.S.-Russian-Chinese understanding that recognizes China’s build-up to nuclear peer status and explores ways to maintain stability.

Democratic leaders must assume political ownership by defending the legitimacy and explaining the necessity of nuclear deterrence for security and defence in a world in perilous flux.

As NATO’s lead nation, the United States has successfully provided extended deterrence for Europe. America will retain a strategic interest in Europe, but its polarised politics, protectionist tendencies and geopolitical reorientation are widening the Atlantic. A major rebalancing is needed: To keep the Americans in, Europeans must shoulder a far greater share of the common defence burden. Even then, sustaining mutual trust, the sine qua non of a viable nuclear commitment, requires a revitalisation of transatlantic cooperation and cohesion.

NATO’s asymmetry persists: the U.S. has defence autonomy, Europe does not. If they mustered the political will, Europeans would have the means to stand on their own feet. There are three prerequisites for European self-defence: a solid foundation of unity, sufficient military capabilities, and determined leadership.

The Franco-German tandem would have to be the motor and precursor of defence autonomy. Europe’s Union of nation-states stands in the way of a collective nuclear deterrent. In addition to France, as the second leg of Europe’s nuclear backbone, the participation of nuclear-armed Britain would be desirable.

## ***Zusammenfassung***

### **Fragestellung**

Am 3. Januar 2022 veröffentlichten die Staats- und Regierungschefs von China, Frankreich, Russland, des Vereinigten Königreichs und der Vereinigten Staaten von Amerika eine Erklärung „Zur Verhütung eines Atomkriegs und zur Vermeidung eines nuklearen Wett-rüstens“. Die Erklärung ist zugleich beruhigend und beunruhigend: Einerseits bekräftigten die fünf Staats- und Regierungschefs ihr gemeinsames Interesse an der Verhinderung eines Atomkriegs, der „nicht gewonnen werden kann und nicht geführt werden darf“, andererseits reagierten sie damit auf eine sich verschlechternde Sicherheitslage. Der russische Krieg gegen die Ukraine und hybride Angriffe anderswo in Europa, eine spannungsgeladene Rivalität zwischen den USA und China, eine autokratischer gewordene Welt, Entwicklungen wie der Klimawandel und eine Verschiebung der geopolitischen Machtverteilung schüren „strategischen Wettbewerb, tiefgreifende Instabilität und wiederkehrende Schocks“ (Strategisches Konzept der NATO 2022).

Eine Welt im konflikträchtigen Umbruch eignet sich nicht für die Marginalisierung, geschweige denn die Abschaffung von Kernwaffen. Die Aufgabe besteht vielmehr darin, Kernwaffen zur Abschreckung und Verteidigung in einer Weise zu nutzen, die ihrer einzigartigen Zerstörungskraft Rechnung trägt und dabei dem Clausewitzschen Gebot folgt, militärische Mittel den politischen Zielen unterzuordnen.

## Vorgehen

Der Beitrag dieser Abhandlung zu dieser Aufgabe besteht aus zwei Hauptteilen. Nach einem Aufriss des strategischen Umfelds („**A World in Perilous Flux**“) werden in Teil I (**Nuclear Deterrence: Principles**) die konzeptionellen Grundlagen für Teil II (**Nuclear Deterrence: Policies**) gelegt. Teil II hat drei Kapitel: „Deterrence in a New Nuclear Era“, „NATO: Extended Deterrence for Europe“ und „Extended Deterrence for Europe?“.

## Ergebnisse

### Nukleare Abschreckung: Grundsätze

Nukleare Abschreckung ist risikobehaftet, aber legitim und unverzichtbar, um existenziellen Bedrohungen zu begegnen. Eine atomwaffenfreie Welt ist eine Fata Morgana: Nuklearwaffen lassen sich nicht ent-erfinden. Es könnte jedoch eine Welt ohne nukleare Abschreckung geben. Aber das erfordert nichts weniger als die Abschaffung der Institution des Krieges. Solange der Krieg eine Zukunft hat, hat auch die nukleare Abschreckung eine Zukunft. Es gilt, sie so zu nutzen, dass sie bleibt, was das Nachdenken über und die Praxis der nuklearen Abschreckung seit Hiroshima und Nagasaki gewesen ist: ein Tappen im Reich des Unbekannten. Denn „ein Atomkrieg kann nicht gewonnen werden und darf nicht geführt werden“ (P5-Erklärung, 3. Januar 2022).

Nuklearwaffen zur Abschreckung und Verteidigung zu nutzen bedeutet, für das Reich des Unbekannten zu planen, da „niemand jemals die Realität eines modernen Atomkriegs erlebt hat“. Um die fast achtzigjährige Tradition des Nichtgebrauchs zu bewahren, besteht die Herausforderung darin, zwischen der Skylla der Unterschreitung (Vernachlässigung der konventionellen militärischen Verteidigung) und der Charybdis der Überschreitung (Worst case-Fiktionen) zu navigieren.

Der Imperativ der Kriegsverhütung, auferlegt von der nuklearen Revolution, hat zwischen nuklear bewaffneten Gegnern nichts von seiner Kraft verloren. Es ist unwahrscheinlich, dass die Klammer der wechselseitig gesicherten Zerstörung (Mutual Assured Destruction, MAD) durch technologische Entwicklungen gekappt werden kann.

Chinas nukleare Aufrüstung hat ein neues nukleares Zeitalter eingeläutet. Zudem wird die amerikanisch-russische Bipolarität nicht durch eine nukleare Tripolarität mit gleichmäßigem Abstand zwischen ihren Polen ersetzt werden, da sowohl Peking als auch Moskau die Vereinigten Staaten als ihren globalen Gegenspieler betrachten.

Auch die neue nukleare Ära wird von dem Paradoxon der nuklearen Abschreckung geprägt sein: Nukleare Drohungen beziehen ihre kriegsverhindernde Wirkung gerade daraus, dass ein Krieg trotzdem ausbrechen könnte. Risiko ist das Produkt aus der Wahrscheinlichkeit, dass etwas eintritt, und dem potenziellen Schaden, der eintreten könnte. Angesichts der Zerstörungskraft von Nuklearwaffen birgt selbst die marginale Wahrscheinlichkeit eines Nuklearkrieges noch ein hohes Risiko. Die Minimierung des Kriegsrisikos durch politisches Entgegenkommen, Rüstungskontrolle und militärische Zurückhaltung bleibt also zwingend, ohne die Wirksamkeit nuklearer Abschreckung zu beeinträchtigen.

Es gibt zwei Arten nuklearer Abschreckung: Nationale Abschreckung („Homeland Deterrence“) ist dem Eigenschutz der Bürger, des Staatsgebiets und der Integrität eines Staates vorbehalten, erweiterte Abschreckung („Extended Deterrence“) bedeutet, das Nukleararsenal eines Staates zum Schutz von Verbündeten zu nutzen. Da Eigenschutz vorrangig ist, haben Verbündete ein nukleares Beistandsversprechen, aber keine Nukleargarantie.

Das Dreieck der erweiterten Abschreckung besteht aus drei Parteien: dem Staat („protector“), der eine nukleare Beistandsverpflichtung zum Schutz eines Partners („protégé“) eingeht, und dem abzuschreckenden Gegner („adversary“). Damit erweiterte Abschreckung wirkt, muss das nukleare Beistandsversprechen für den Gegner glaubwürdig, für den Geber erträglich und den Nehmer verlässlich sein. Einerseits bezeugt die Geschichte der NATO, dass die Herausforderung, ein Nuklearversprechen für den Gegner glaubwürdig zu halten, geringer sein kann als jene, es für den Geber (USA) erträglich und den Nehmer (Europa) verlässlich zu gestalten. Andererseits zeigt die NATO-Geschichte aber auch, dass erweiterte Abschreckung ungeachtet bündnisinterner Konflikte seit mehr als 75 Jahren funktioniert.

Der Modus Operandi nuklearer Drohungen wird gewöhnlich als Abschreckung durch Verwehren („Deterrence by Denial“) oder Bestrafen („Deterrence by Punishment“) definiert. Es gibt jedoch noch einen dritten Modus: Abschreckung durch Eskalation. Dabei geht es weder darum, die militärischen Fähigkeiten des Gegners zu schwächen noch zivile Ziele zu treffen; im Vordergrund steht vielmehr, die Erwartungen des Gegners in Bezug auf die künftigen Kosten und Risiken eines fortgesetzten Kampfes zu erhöhen und ihn so zum Rückzug zu bewegen. Abschreckung durch Eskalation beinhaltet die Androhung oder den demonstrativen oder selektiven Einsatz von Kernwaffen mit dem Ziel einer kooperativen Kriegsbeendigung. Vermutlich ist ein solcher Einsatz nach wie vor ein Bestandteil der NATO-Strategie, was auch die Modernisierung ihres nuklearen Streitkräftedispositivs widerspiegelt.

Falls Abschreckung versagt und Kernwaffen eingesetzt würden, müsste, gegen alle Wahrscheinlichkeit, versucht werden, Abschreckung durch eine rasche Beendigung des Krieges zu für beide Seiten akzeptablen Bedingungen wiederherzustellen. Wenn überhaupt, sollten Nuklearwaffen dafür im Eskalationsmodus eingesetzt werden.

Der Krieg in der Ukraine wird im Schatten von Atomwaffen geführt. Während die Vereinigten Staaten der Ukraine geholfen haben, einen nuklear bewaffneten Aggressor abzuwehren, sind sowohl Russland als auch die Vereinigten Staaten darauf bedacht, eine direkte Konfrontation zwischen ihnen zu vermeiden.

### **Nukleare Abschreckung: Strategie und Politik**

Nukleare Abschreckung ist risikobehaftet, aber unverzichtbar. Daher muss sie von einer Sicherheitspolitik angeleitet sein, die eine Reihe von politischen, wirtschaftlichen und militärischen Instrumenten einsetzt, um den zugrundeliegenden Konflikt einzudämmen und zu entschärfen.

Verantwortungsvolle Abschreckungspolitik muss beachten, dass strategische Empathie und Zurückhaltung in MAD-Konstellationen im wohlkalkulierten Eigeninteresse sein können, um die Eskalationsrisiken vor und in Kriegen zu verringern.

Rüstungskontrolle und Abrüstung müssen integrale Bestandteile nukleargestützter Abschreckungspolitik sein. Sie sind zwar am wirksamsten, wenn sie auf bi- und multilateralen Vereinbarungen beruhen, doch kann die strategische Stabilität auch von einseitiger Zurückhaltung profitieren.

Das neue Nuklearzeitalter erfordert die Beteiligung Chinas. Zu diesem Zweck sollte versucht werden, die nukleare Aufrüstung Chinas in eine Vereinbarung zwischen den USA, Russland und China einzubetten, die China nukleare Parität zugesteht *und* die strategische Stabilität nuklearer Tripolarität stärkt.

Politische Entscheidungsträger müssen die Legitimität nuklearer Abschreckung verteidigen und erklären, warum sie für die Sicherheit und Verteidigung in einer konfliktträchtigen Welt notwendig ist.

Als Führungsnation der NATO haben die Vereinigten Staaten erfolgreich für eine erweiterte Abschreckung in Europa gesorgt. Amerika hat weiterhin ein strategisches Interesse an Europa, aber seine polarisierte Innenpolitik, seine protektionistischen Tendenzen und seine geopolitische Neuausrichtung verbreitern den Atlantik. Eine grundlegende Neuausrichtung der NATO erfordert, dass die Europäer einen weitaus größeren Teil der gemeinsamen Verteidigungslast übernehmen. Darüber hinaus ist eine Neubelebung der transatlantischen Zusammenarbeit und Verbindung vonnöten, um das gegenseitige Vertrauen zu bewahren, das die Basis eines tragfähigen Nuklearversprechens ist.

Die Asymmetrie der NATO besteht fort: Die USA haben Verteidigungsautonomie, Europa nicht. Wenn sie den politischen Willen aufbrächten, hätten die Europäer die kollektiven Mittel, auf eigenen Beinen zu stehen. Eine europäische Selbstverteidigung hat drei Voraussetzungen: ein solides Fundament der Einheit, ausreichende militärische Fähigkeiten und entschlossene Führung.

Das deutsch-französische Tandem müsste der Motor und Vorläufer europäischer Selbstverteidigung im NATO-Rahmen sein. Solange Europa eine Union von Nationalstaaten bleibt, wird es kollektiv organisierte und kontrollierte Nuklearstreitkräfte nicht geben. Neben Frankreich wäre eine Beteiligung des nuklear bewaffneten Großbritanniens an erweiterter Abschreckung für Europa durch nationale europäische Potentiale wünschenswert.

# Prologue

On January 3, 2022, the leaders of China, France, Russia, the United Kingdom and United States of America, the nuclear-armed permanent members of the UN Security Council, issued a joint statement “On Preventing Nuclear War and Avoiding Nuclear Arms Races”.

For a number of reasons, there is no better point of departure for exploring this paper’s topic. First, by affirming “that a nuclear war cannot be won and must never be fought”, the statement is a reminder of what is at stake: the instant and utter destructiveness of all-out nuclear war amounts to collective suicide. Second, its potentially apocalyptic nature does not render nuclear war impossible. Otherwise, the statement would be unwarranted. Strikingly, it does not call for the prevention of *any* war between nuclear-armed states. For one, if not the most likely, precursor to a nuclear war is a war initially fought with non-nuclear weapons. Thus, the statement exposes the distinct challenge of the nuclear age: nuclear war must be prevented because it is possible. Third, however remote that possibility may be, it has become less because of a conflict-ridden global landscape and strained relations between major powers. Otherwise, the five leaders would not have felt the need to issue such a statement in what turned out to be the run-up to Russia’s attempted invasion of Ukraine.

Fourth, the signatories also reaffirmed their belief “that the further spread of such weapons must be prevented.” While it is imperative to curb nuclear proliferation, for nuclear haves to urge nuclear abstinence from have-nots carries an undertone: nuclear weapons are acceptable so long as they remain in our hands. Lastly, the signatories underline their “desire to work with all states to create a security environment more conducive to progress on disarmament with the ultimate goal of a world without nuclear weapons with undiminished security for all.” Doubtless, by expressing such a desire the nuclear-haves try to make the exclusivity of their “club” more palatable to have-nots. Yet it should not be dismissed as a mere ploy. Nuclear weapons are neither a boon nor a curse; rather, they are a double-edged sword: their monstrosity inspires an existential fear that suppresses aggressive impulses, thus stabilising non-war or imposing boundaries in war, but there is no guarantee that these salutary effects will always and forever be strong enough to forestall nuclear escalation. The pursuit of a world rid of the nuclear spectre is therefore a political priority of the highest order.

Yet care must be taken not to throw out the baby with the bathwater. The joint statement is at once reassuring and disconcerting: the five nuclear-weapon states have reaffirmed their common interest in preventing nuclear war because a deteriorating security environment has prompted them to do so. Such conditions are not conducive to major progress towards a world without nuclear weapons. Instead, they require an approach informed by ambitious realism: The nuclear genie is out of the bottle for good, the daunting task is to tame and exploit it for averting and limiting violent conflict so as to enable progress toward a more cooperative and peaceful world.

This paper’s contribution to this task has two major parts, related to each other like means to end. Following an outline of the strategic landscape (“A World in Perilous Flux”), the first part (“Nuclear Deterrence: Principles”) lays the conceptual groundwork for addressing the “Policies” of nuclear deterrence. This is done in three chapters: “Deterrence

in a New Nuclear Era”, “NATO: Extended Deterrence for Europe”, and “Extended Deterrence for Europe and by Europe?”.

But before exploring these issues, their political relevance has to be established. Why write or read such a paper *now*? Devising an effective policy requires a sober assessment of the state of affairs to begin with. Thus, the first section sets out the security environment. Its title indicates the timeliness of the paper: Harnessing nuclear deterrence is crucial for navigating a world in perilous flux.

# I. The Strategic Landscape: A World in Perilous Flux

In their “2010 Strategic Concept”, NATO member states noted: “Today, the Euro-Atlantic area is at peace and the threat of a conventional attack against NATO territory is low.” In stark contrast, their “2022 Strategic Concept” declares: “The Euro-Atlantic area is not at peace. The Russian Federation has violated the norms and principles that contributed to a stable and predictable European security order. We cannot discount the possibility of an attack against Allies’ sovereignty and territorial integrity.” (para 6)

The 2022 Concept identifies Russia as “the most significant and direct threat to Allies’ security”. Yet besides an aggressive and revisionist Russia under President Putin’s leadership, there are other forces fuelling “strategic competition, pervasive instability and recurrent shocks” (Strategic Concept 2022). Their breeding ground consists of three ingredients. First, “the world is undergoing long-term structural transformations: the rise of AI, climate change, a shift in the geopolitical distribution of power, and demographic transitions.”<sup>1</sup> Historically, disruption has been a driver of economic, technological, political, and intellectual progress. Yet whether it is power, property or prestige, major change can produce winners and losers—a source of friction and conflict within and between states.

Second, at the inter-state level, this is compounded by “anarchy”. In contrast to the intra-state level, there is no de jure or de facto supranational authority wielding a monopoly of violence. Moreover, the international level is far more heterogeneous than comparatively homogenous nation-states. Thus, the international system is inherently more conflict-prone, and more powerful or aggressive actors are not restrained by a supranational authority. “Anarchy” is a systemic obstacle, but no insurmountable barrier to cooperation. Even antagonists can converge on interest such as common survival and mutually beneficial economic exchange. Yet when aggressive behaviour and distrust increase, let alone prevail, the cooperative space can shrink drastically. A militaristic Russia that attacks a neighbour also presents a threat to a rules-based international order. When the United States and China, the only powers with global reach, perceive each other as competitors rather than partners, global cooperation to cope with “long-term structural transformations” is critically compromised.

This leads to the third ingredient: The world has become more autocratic and less democratic. According to the Swedish V-Dem Institute, “71% of the world’s population—5.7 billion people—live in autocracies, an increase from 48% ten years ago.”<sup>2</sup> Repression at home, often accompanied by nationalism, encourages confrontational behaviour abroad. In addition, the rise of populism and polarised politics is destabilising Western democracies and undermining their cohesion vis-à-vis autocratic opponents.

<sup>1</sup> World Economic Forum, *The Global Risks Report 2024* (Geneva, 2024), p. 92.

<sup>2</sup> *Democracy Report 2024*, p. 6, <https://v-dem.net/publications/democracy-reports/>.

In their interplay, these three factors lead to a world in dangerous flux. There are countervailing forces that exert cooperative pressures, such as preventing catastrophic climate change, all-out nuclear war or proliferation, and international trade and investment that drive growth and prosperity. But they have not been strong enough to halt or reverse the slide into fragmentation and polarisation, both within and between states. Exactly how perilous this trend has been and could become is indeterminable. Since it is man-made, it is not governed by natural law, and to accept the slide as inevitable is to make it inevitable. It would be equally irresponsible, however, to ignore it and fail to act.

Such action must consist of a willingness to cooperate and de-escalate, coupled with firmness and hedging. In this way, diplomacy and defence are not at opposite ends of the spectrum, but overlap and reinforce each other. Being firm when necessary and accommodating when possible is the recipe for effective diplomacy, with a robust defence posture as its backbone. Conversely, while military capabilities are indispensable, their composition and application must be guided by a strategy that links civilian and military means to the political end of preventing and terminating war.

This is the essence of Clausewitz' most famous dictum that war is the continuation of political intercourse by other means. In its descriptive form, the idea merely states the obvious: When all other means of settling conflicts have been exhausted, war becomes the ultimate arbiter.<sup>3</sup> Yet it also has a prescriptive element: "Policy is the guiding intelligence and war only the instrument. Therefore, no one starts a war—or rather, no one in his senses ought to do so—without being first clear in his mind what he intends to achieve by that war and how he intends to conduct it."<sup>4</sup>

As the recurrence of wars demonstrates, this admonition has been ignored time and again to this very day. However, this tragic fact does not render it obsolete. Had Clausewitz lived to see the development of nuclear weapons, he might well have emphasised the prescriptive part of his dictum even more forcefully. How to heed Clausewitz' precept through harnessing nuclear weapons for deterrence and defence in a world in perilous flux is the focus of the following chapters.

<sup>3</sup> In his words: "War is a clash between major interests, which is resolved by bloodshed—that is the only way in which it differs from other conflicts." (Carl von Clausewitz, *On War*, ed. and translated by Michael Howard and Peter Paret [Princeton: Princeton University Press, 1976], p. 149).

<sup>4</sup> *Ibid.*, p. 607 and p. 579, respectively.

# II. Nuclear Deterrence: Principles

In 2019, Lawrence Freedman and Jeffrey Michaels noted that proponents of nuclear disarmament had been regular winners of the Nobel Peace Prize.<sup>5</sup> By then, there had been eight, and in October 2024 the Japanese organisation “Nihon Hidankyo” became the ninth winner. “This grassroots movement of atomic bomb survivors from Hiroshima and Nagasaki, also known as Hibakusha, is receiving the Peace Prize for its efforts to achieve a world free of nuclear weapons and for demonstrating through witness testimony that nuclear weapons must never be used again.”<sup>6</sup> In contrast, the “only prize for an advocate of deterrence was to Thomas Schelling in 2005, and that was for economics and not peace.”<sup>7</sup>

Tellingly, but unsurprisingly. The images that “the bomb” invariably conjures up are of the victims and the wastelands of Hiroshima and Nagasaki, and the emotions the pictures evoke are horror and fear. There must be no more noble cause than to rid the land of the nuclear curse.

Fortunately, mankind is not condemned to live forever under a nuclear sword of Damocles. The sword can be removed but the task is far more arduous than nuclear abolitionists would have it. What is required is not just the prevention of nuclear war but any war, which requires nothing less than abolishing the institution of war as the bloody arbiter of conflict.

It has been done. In 2012, the Nobel Peace Prize went to the European Union. In its press release, the Committee stated: “The dreadful suffering in World War II demonstrated the need for a new Europe. Over a seventy-year period, Germany and France had fought three wars. Today war between Germany and France is unthinkable.”<sup>8</sup> The key word is “unthinkable”. War between Germany and France is still physically possible as both have armies, and France even has nuclear weapons capable of obliterating Germany. Yet they, like all other members of the European Union, have full and firm confidence in each other to settle their conflicts without the use or threat of force. If it weren’t for external threats, EU members could disarm completely.

Banning war cannot rest on good will and memories of wars alone. Europe’s peaceful unity has political, economic and cultural roots: It is a union of democracies, nurtured by prosperous and interdependent economies, and underpinned by ‘Europeanness’, a shared sense of belonging to a common cultural and civilisational space. There is no guarantee that these conditions will persist or that they will suffice indefinitely. So far, however, the European peace community has stood the test of time and recurrent crises.

<sup>5</sup> *The Evolution of Nuclear Strategy* (London: Palgrave Macmillan 2019), p. ix.

<sup>6</sup> The Norwegian Nobel Committee, Press Release, 11 October 2024, <https://www.nobelprize.org/prizes/peace/2024/press-release/>.

<sup>7</sup> Freedman and Michaels, *The Evolution*, p. ix.

<sup>8</sup> The Norwegian Nobel Committee, Press Release, 12 October 2012, <https://www.nobelprize.org/prizes/peace/2012/press-release/>.

The case of the European Union underscores that “peace is not simply the absence of war; for war, as Hobbes said, ‘consisteth not in actual fighting but in the known disposition thereto. All other time is PEACE.’”<sup>9</sup> Except for rare “islands of peace”, the “disposition to fighting” is widespread in a world in perilous flux, as Russia’s attack on Ukraine blatantly demonstrates. Hence the need for a protective deterrence and defence posture. With the nuclear genie out of the bottle, a nuclear component must be an integral part of such a posture.

In addition to a nuclear-weapons capability, this “requires sustained leadership focus and institutional excellence for the nuclear deterrence mission and planning guidance aligned with 21st century requirements.” Quoting this passage from the 2016 NATO summit communiqué, Bunn notes: “Nuclear deterrence knowledge and culture in NATO has been lost over the previous twenty-five years, during which NATO thought little about nuclear deterrence issues.”<sup>10</sup> Nuclear ‘absenteeism’ has been particularly prevalent in Germany. Since the turn of the millennium, there have been only two government White Papers on Defence (2006 and 2016), and the coverage of nuclear issues in the context of deterrence rather than non-proliferation, arms control and disarmament, was trivial (2006) or scant (2016). This reflects a post-Cold War security environment which not only in Germany was perceived as no longer posing an existential threat, and which was reinforced by a German nuclear allergy that led to the termination of the civilian use of nuclear energy.

Meanwhile, nuclear absenteeism has given way to a renewed salience of harnessing nuclear weapons for deterrence and defence. The term “harnessing” denotes the dual aspect of the task: utilizing nuclear weapons for war prevention and termination in a way that takes account of their uniqueness and keeps the horse before the cart, i.e., the (Clausewitzian) subordination of military means to political ends.

## 1 Mapping the Realm of the Unknown

Deterrence means employing a threat to dissuade its addressee from committing an undesired act. It does not end there. If the addressee acts regardless, carrying out the threat serves the dual purpose of inducing him to desist as well as reinforcing the specific or general credibility of the deterrer, i.e., of a follow-on threat or threats unrelated to the specific contest.<sup>11</sup> Deterrence has a conjectural trait. There is no way of *knowing* the motivation and risk calculus of the addressee or how to influence them effectively. Similarly, it is impossible to precisely determine the efficacy of deterrence: The addressee may never

<sup>9</sup> Michael Howard, *The Causes of Wars and Other Essays* (Cambridge, Mass: Harvard University Press, 1984), p. 266.

<sup>10</sup> M. Elaine Bunn, “Extending Nuclear Deterrence and Assuring U.S. Allies,” in *Managing U.S. Nuclear Operations in the 21<sup>st</sup> Century*, ed. Charles L. Glaser, Austin Long, Brian Radzinsky (Washington, D.C.: Brookings Institution Press, 2022), p. 206.

<sup>11</sup> Thomas C. Schelling distinguishes between deterrent and compellent threats, the latter being “a threat intended to make an adversary do something” rather than keeping him from starting something. (*Arms and Influence* [New Haven and London: Yale University Press, 1966], p. 69.) While acknowledging the difference, it is not adopted here. In his 2005 Nobel Prize Lecture Schelling rightly extolled the non-use of nuclear weapons after Hiroshima and Nagasaki as “an asset to be treasured.” (<https://www.nobelprize.org/prizes/economic-sciences/2005/schelling/lecture/>). He emphatically lent his support to preserving the “taboo” of non-use to deter any war and nuclear war in particular. As will be argued below, nuclear use cannot be excluded, and if and when it becomes necessary, its purpose would be to make an adversary desist from continuing his aggression. Nevertheless, the imperative is to deter war in the first place, and even in war nuclear weapons would have to be employed to restore deterrence to avert mutual annihilation.

have intended to commit the undesired action, he may have bluffed or refrained from acting due to reasons unrelated to the deterrent threat.

In deterrence relationships involving nuclear weapons this conjectural element is particularly relevant. “The thankful lack of experience of nuclear warfare, since 1945, has rendered highly speculative all thoughts on the likely causes of nuclear war, its course and its finale.”<sup>12</sup> This is still the case. Nuclear weapons have not been used since 1945, and they have never been used in a war between nuclear-armed adversaries.

In this sense, harnessing nuclear weapons for deterrence and defence involves planning for the realm of the unknown since “no one has ever experienced the reality of a modern nuclear war.”<sup>13</sup> Moreover, the foremost objective is to keep it that way and preserve the almost eighty-year tradition of non-use.

There is no way of knowing exactly how and to what extent nuclear-backed deterrent threats contributed to reinforcing the non-use tradition. It may even be the case, as nuclear abolitionists might argue, that having nuclear weapons and threatening their use poses a greater security threat than not having them. Yet evidence and plausibility suggest the opposite. Since the introduction of nuclear weapons into military arsenals, there have been recurrent and intense conflicts between nuclear-armed states, but they have not erupted into major wars, let alone nuclear warfare. It stretches credulity to believe that nuclear deterrent threats have made no or only a marginal contribution to keeping such conflicts in check. Moreover, forgoing nuclear protection in a conflict-prone relationship marred by distrust would expose to nuclear blackmail. The adversary may never resort to it, but the possibility that he might be tempted could not be ruled out.

Thus, political prudence, corroborated by evidence and plausibility, counsels against eschewing nuclear deterrent threats. However, it must not be overlooked that their efficacy cannot be precisely determined. When planning for the unknown, therefore, the challenge is to avoid two missteps.

One is to undershoot. While threatening nuclear use is the most powerful deterrent, that does not make it a one-size-fits-all instrument. When the opponent is also capable of waging nuclear war, nuclear threats carry a self-deterrent effect that impairs their credibility. They must therefore be bolstered by reducing and, if possible, obviating the need for nuclear use through deploying robust conventional forces and by limited nuclear employment options.

The other, and arguably more common, temptation is to overshoot. Nuclear deterrence is an existential business: if it fails, one’s survival is at stake. Therefore, making deterrence as fail-safe as possible is a policy imperative. In the process, worst-case thinking can fuel the pursuit of a deterrent posture that promises near-absolute protection. Resisting such temptations is particularly relevant when planning for the realm of the unknown. Because of the “thankful lack of experience of nuclear warfare”, there is no empirical evidence to curtail worst-case imaginations. Brodie warns “basing far-reaching policy decisions on contingencies which can be called conceivable only because someone has conceived of them.”<sup>14</sup> Heeding this admonition offers no blueprint for devising a specific deterrent pos-

<sup>12</sup> Lawrence Freedman, *The Evolution of Nuclear Strategy* (London and Basingstoke: The Macmillan Press, 1983), p. xiv.

<sup>13</sup> C. Robert Kehler, “Commanding Nuclear Forces”, in Glaser et al., *Managing U.S. Nuclear Operations*, p. 148–9 (in his last assignment, Gehler commanded the United States Strategic Command).

<sup>14</sup> Bernard Brodie, *Escalation and the Nuclear Option* (Princeton: Princeton University Press, 1966), p. 61–2. Also note this outburst of former Defense Secretary James Schlesinger regarding war-fighting ideas: “In the first place, all of this is speculation and hypotheses. Who the hell has ever tested these things? You wouldn’t sell a toaster to the American public without exposing it to continued testing, and yet here we talk loosely about what nuclear weapons can do or not do on the basis of no data at all.” (Quoted in Gregg Herken, *Councils of War* [New York: Alfred A. Knopf, 1985], p. 306).

ture. It is, however, a useful reminder that absolute protection is unattainable and that a deterrent posture is but one instrument of security policy.

The challenge, therefore, is to navigate successfully between the Scylla of undershooting and the Charybdis of overshooting. The starting point for such an exercise is the nuclear revolution.

## 2 The Nuclear Revolution: old, but not aging

At the dawn of the nuclear weapons age, Brodie was among the first to detect its revolutionary character. “Thus, the first and most vital step in any American security program for the age of atomic bombs is to take measures to guarantee to ourselves in case of attack the possibility of retaliation in kind. The writer in making that statement is not for the moment concerned about who will *win* the next war in which atomic bombs are used. Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other useful purpose.”<sup>15</sup>

This observation, made in 1946, was prescient on three accounts. First, it established the imperative of preventing war (“avert them”) and thus the deterrent rather than warfighting value of “our military establishment”. Secondly, Brodie specified what an effective deterrent required: “the possibility of retaliation in kind”. Moreover, the observation was made at a time when the United States enjoyed a nuclear monopoly and would continue to do so for some years to come.

Brodie had realized early on that “the atomic bomb seems so far to overshadow any military invention of the past as to render comparisons ridiculous.”<sup>16</sup> This was and remains the case not only because of the uniquely destructive power of a nuclear weapon. As the World War II bombing raids on cities such as Dresden or Tokyo had demonstrated, incendiary bombs could wreak havoc on a gigantic scale. Yet it took several hundred bombers to achieve it but just one bomber dropping an atomic bomb on Hiroshima or Nagasaki to cause a comparable death toll. Therefore, “the essential change introduced by the atomic bomb is not primarily that it will make war more violent—a city can be as effectively destroyed with TNT and incendiaries—but that it will concentrate the violence in time.”<sup>17</sup>

Nuclear weapons do not dictate war prevention *per se*. It only becomes imperative when opponents are nuclear-armed *and* incapable of rendering the other’s arsenal ineffective. In principle, nuclear immunisation could be achieved defensively through a protective shield or an offensive sword capable of disarming an opponent or a combination of the two. Although not being a monopolist, the side enjoying nuclear immunity would be able to shed its MAD bonds. Conversely, if the attacker cannot count on escaping a devastating retaliation by the opponent, they share the existential risk of *mutual assured destruction* (MAD) if deterrence fails.

In this sense, “MAD is a condition of very high mutual vulnerability, not a strategy.”<sup>18</sup> It prevails when both sides have survivable nuclear forces capable of inflicting intolerable retaliatory damage.

<sup>15</sup> Bernard Brodie, “Implications for Military Policy”, in: *The Absolute Weapon: Atomic Power and World Order*, eds. Frederick S. Dunn et al. (New York: Harcourt, Brace and Company, 1946), p. 76.

<sup>16</sup> Brodie, “War in the Atomic Age”, in *The Absolute Weapon*, p. 34.

<sup>17</sup> Brodie, “Implications”, p. 71. Or, as Schelling bluntly notes: nuclear weapons can compress a catastrophic war within the span of time that a man can stay awake.” (Schelling, *Arms and Influence*, p. 20).

<sup>18</sup> Charles L. Glaser and Brian Radzinsky, “Basics of Deterrence and U.S. Nuclear Doctrine and Forces”, in: *Managing U.S. Nuclear Operations*, p. 20.

MAD places one's fate in the hands of an antagonist and limits one's room for manoeuvre vis-à-vis a nuclear-armed rival. As a result, states have strong incentives to sever their MAD bonds. Failing that, they must ensure that MAD endures through retaliatory reciprocity.

Such motives fuelled a Cold War arms race which, at its bizarre climax, resulted in combined American and Soviet arsenals of 70,000 to 80,000 nuclear warheads. In the 1980s, President Reagan launched the "Strategic Defense Initiative", a grandiose scheme to develop and deploy a ground- and space-based shield immunising the United States against nuclear attacks. Similar motives continue to propel the on-going modernisation of American, Russian and Chinese nuclear forces.<sup>19</sup>

To date, the MAD condition has proven inescapable. Are its foundations (survivable nuclear forces capable of inflicting catastrophic retaliatory damage) about to erode? Lieber and Press claim: "Today, however, survivability is eroding, and it will continue to do so in the foreseeable future." As evidence, they adduce technological trends such as remote sensing, conventional strike capabilities, ASW, and cyberattack techniques that "will continue to improve and increasingly threaten strategic forces whether or not the United States seeks to maximize its counterforce capabilities."<sup>20</sup> Perhaps they will eventually, but even that would not validate their argument. Lieber and Press assert that the benefit of nuclear weapons "stems from the *certainty* they can create in the minds of aggressors that victory is impossible".<sup>21</sup> However, initiating war against a nuclear-armed rival can be suicidal. Therefore, the *uncertainty* of being able to disarm him is a potent (self-)deterrent.<sup>22</sup> Neutralising it requires more than "increasingly" threatened retaliatory forces -- an assessment based on not more than "good reasons to expect that the net result of these efforts will leave nuclear-delivery systems more vulnerable than they have been in the recent past."<sup>23</sup> Even so, "more vulnerable" would not eradicate the risk of a devastating response, an aggressor contemplating a first strike would run. Moreover, Clary's analysis leads him to conclude that "the consequence of this new technological era is likely to be arms jogging and occasional arms racing that fails to erode the foundations of nuclear deterrence, even in asymmetric nuclear relationships."<sup>24</sup>

<sup>19</sup> Thus, the "nuclear puzzle" Keir and Lieber construct to debunk the "myth of the nuclear revolution" misses the point. As they rightly note, nuclear weapons "have not eliminated the incentives for countries to compete intensely with each other for greater security, power, and strategic advantage". Nor have they, as described, eliminated the incentives to reduce or possibly cut MAD interdependence. Moreover, they correctly assert "that peace among nuclear powers can be significantly attributed to the success of nuclear deterrence." This success, however, can be significantly attributed to a MAD-type deterrence relationship. (Keir A. Lieber and Daryl G. Press, *The Myth of the Nuclear Revolution. Power Politics in the Atomic Age* (Ithaca and London: Cornell University Press, 2020), p. 2 and p. 3, respectively.)

<sup>20</sup> *Ibid.*, p. 93.

<sup>21</sup> *Ibid.*, p. 130.

<sup>22</sup> "In a conventional world, a country can sensibly attack if it believes that success is probable. In a nuclear world, a country cannot sensibly attack unless it believes that success is assured. Uncertainty of response, not certainty is required for deterrence because, if retaliation occurs, one risks losing all." (Kenneth N. Waltz, *The Spread of Nuclear Weapons: More May Be Better* (London: The International Institute for Strategic Studies, 1982), p. 18).

<sup>23</sup> Lieber and Press, p. 90.

<sup>24</sup> Christopher Clary, "Survivability in the New Era of Counterforce", in *The Fragile Balance of Terror: Deterrence in the New Nuclear Age*, ed. Vipin Narang and Scott D. Sagan (Ithaca and London: Cornell University Press, 2022), p. 155.

### 3 A New Nuclear Era

Some forty years ago, in concluding his seminal book on *The Evolution of Nuclear Strategy*, Lawrence Freedman observed: “The Emperor Deterrence may have no clothes, but he is still the Emperor.”<sup>25</sup> That was and still is only “half true”. The Emperor has not vanished, but he has never been naked and he still isn’t because the nuclear revolution that has spawned the Emperor is not withering away.

By contrast, sceptics have “no doubt that we should have reduced confidence in deterrence, preventing the first use of nuclear weapons in this new age.”<sup>26</sup> They may be right—or they may not. As shown in the previous section, the “new era of counterforce” is unlikely to undo the nuclear revolution any time soon. There may well be more than today’s nine nuclear weapon states. Iran is close to the threshold; should Tehran cross it, Riyadh could follow. But it is misleading, as Narang and Sagan do, to lump South Korea, Japan and Germany together with Iran, Turkey and Saudi Arabia in a group of countries potentially affected by nuclear contagion. South Korea, Japan and Germany are very different cases, and the likelihood of them acquiring nuclear weapons status is still low, in the case of Germany almost nil.

But this offers no ground for complacency. Nuclear technology is readily available, the incentives to weaponise it will not disappear, and nuclear weapons in the hands of unstable or dictatorial regimes are a menacing combination. Still, whether the group of nuclear-armed states will expand, and by whom, is an open question.

Whatever the answer, a new nuclear era has already arrived. During the past twenty years, China has catapulted itself to a global economic and increasingly political power. It has the technological and financial means, as well as the ambition, to become a world-class military power, including conventional and nuclear forces. In the process, the U.S.-Soviet/Russian duopoly will be replaced by a nuclear trio. As a consequence, “by the 2030s the United States will, for the first time in its history, face two major nuclear powers as strategic competitors and potential adversaries.”<sup>27</sup> Furthermore, U.S.-Russian bipolarity will not be replaced by a tripolarity of equidistant entities. The authoritarian regimes of China and Russia see the United States and “the West” as their global antagonists. Beijing is far more powerful, with Moscow being a junior partner, and while their interests partly converge, they are not identical. As the Ukraine war demonstrates, however, the Chinese leadership is unwilling to restrain Putin and lend its unreserved support to an early war termination.

Thus, the world is in a perilous flux just as a new nuclear era is dawning. Meeting this dual challenge requires the continued harnessing of nuclear weapons for deterrence and defence. To this end, the next section dissects the concept of deterrence and its implications for deterrence policies and politics.

### 4 Deterrence

Deterrence is a universal phenomenon in situations in which two or more actors have conflicting interests. As previously noted, in its most generic form, it means dissuading an actor from an undesired course of action “by posing for him a prospect of cost and risk

<sup>25</sup> *The Evolution*, 1983, p. 399.

<sup>26</sup> Vipin Narang and Scott D. Sagan, “The Fragile Balance of Terror”, in: *The Fragile Balance of Terror*, p. 3.

<sup>27</sup> U.S. Department of Defense, *2022 Nuclear Posture Review*, October 2022, p. 4.

outweighing his prospective gains.”<sup>28</sup> In the inter-state arena, deterrence involves an attempt by one state or group of state to prevent another state or group of states from starting or continuing an undesired course of action by threatening to impose unacceptable costs and risks in the event the action is taken or carried on.

As such, deterrent threats are regularly employed to protect and advance national or collective interests, and they encompass a range of economic, financial, political, diplomatic as well as military instruments. In the context of this paper’s focus on the military dimension, deterrence aims to prevent an adversary from using its military potential in a hostile manner through the threat or use of military force.

It is common to define the effectiveness of such an attempt as a function of three factors: military power, the will to use it, and the assessment of these two factors. “Moreover, deterrence is a product of those factors and not a sum. If any one of them is zero, deterrence fails. Strength, no matter how overwhelming, is useless without the willingness to resort to it. Power combined with the willingness will be ineffective if the aggressor does not believe in it or if the risks of war do not appear sufficiently unattractive to him.”<sup>29</sup>

There is, however, another factor: the assessment of the adversary’s power and will to use it. It has a major bearing on devising a deterrent posture and its lead question: “How much of what is enough for what?” What type and number of military capabilities are needed to accomplish what missions cannot be determined in the abstract; instead, it requires assessing an adversary’s capabilities and intentions. Threat assessment is no exact science, but an inevitably judgmental business. There is no certain way of knowing an adversary’s risk calculus and how to influence it, both in pre-war and, even more so, in fluid and unprecedented intra-war contingencies. This is compounded by the difficulty of correctly assessing his military capabilities. While quantifying them may be possible, how they would perform in warfare cannot be reliably anticipated.

Deterrence relationships are thus shaped by the interplay of two components: the balance of force and the balance of resolve. Both have a substantive and perceptual dimension. The balance of force consists of the military capabilities of potential contestants and how they assess the quantity and quality of their own forces and those of the adversary. The balance of resolve revolves around what is at stake. Deterrent threats are employed to advance and protect an actor’s interests and ambitions. Together, they constitute the value the conflicting parties attach to what is at stake and thus determine their readiness to incur risks and costs in pursuit of their objectives. Complementing this substantive underpinning of the balance of resolve is its perceptual dimension, i.e., each actor’s attempt to evaluate what is at stake from the other’s point of view.

To some extent, the balance of force and the balance of resolve are interchangeable. Deterrence parity can still prevail if an actor can convincingly demonstrate his willingness to compensate inferior capabilities with a greater willingness to incur risks and bear costs, either because he genuinely attaches greater importance to the issue at stake or because he succeeds in bluffing. Moreover, neither balance is static. Interests and ambitions can be scaled back or raised in the wake of losses incurred or gains made, and a changing balance of force in peacetime as well as in wartime can prompt a recalculation of risks and cost.

Notwithstanding some interchangeability, a deterrent threat requires both: a military arsenal capable of imposing unacceptable costs and a readiness to use force generated by what is at stake. While these are its requisite ingredients, how credible and effective a

<sup>28</sup> Glenn H. Snyder, *Deterrence and Defense: Toward a Theory of National Security* (Westport: Greenwood Press, 1975), p. 3.

<sup>29</sup> Henry A. Kissinger, *The Necessity for Choice: Prospects of American Foreign Policy* (New York: Doubleday & Company, 1962), p. 12.

deterrent threat is still lies in the eye of the beholder: the addressee must take the threat seriously to deter him from acting in an undesired way.

Deterrent threats have been employed throughout war-torn history. The advent of the nuclear revolution ushered in a paradigm shift: As in MAD-type relationships a single failure of deterrence could be one too many, devising a credible deterrent posture has become an existential necessity. Accordingly, since their invention, how to harness nuclear weapons for deterrence and defence has been the paramount strategic issue for policymakers as well as analysts.

The vast literature on nuclear deterrence reflects the conjectural nature of operational planning for and academic mapping of the realm of the unknown. Nuclear wars have not been fought, and as the joint statement quoted at the outset postulates: they must never be fought.<sup>30</sup> The lack of experience fosters both best- and worst-case thinking, and in the absence of counter-evidence almost anything may appear plausible, thereby encouraging undershooting as well as overshooting.

Thus, devising an effective deterrent posture is neither a simple nor a purely logical exercise, based as it must be on subjective assessments of the balances of force and resolve, as well as untestable assumptions about action-reaction dynamics. But if anything, it serves to underline Wieseltier's admonition: "If there is anything as foolish as not thinking about nuclear weapons, it is not thinking about them enough."<sup>31</sup>

Any such exercise has to start with the central paradox of nuclear deterrence: its effectiveness is linked to its potential failure. Nuclear threats are employed to raise the spectre of a war resulting in collective annihilation. They derive their potency from the fear such a prospect inspires, which they do only if war could erupt regardless.<sup>32</sup>

Risk is the product of the probability of something occurring and the potential damage it might wreak. The destructiveness of nuclear weapons implies that for nuclear deterrence to be risk-free, the probability of war would have to be zero. That is unattainable in a structurally conflict-prone international system and in today's world in perilous flux.

Then there is Murphy's law: what can go wrong, will go wrong. As nuclear deterrence is human-operated and relies on weapon systems and technology that cannot be made fail-safe, it will never be immune to human miscalculation and errors or technical accidents and failures. In addition, there are operational trade-offs such as the always/never dilemma. Nuclear weapons must never be used unless authorized by the leadership entrusted with the authority to release them, but they must always be available should such a decision be made. However, "various elements of the command-and-control system could be too inflexible or vulnerable to meet these two requirements simultaneously. This generates the requirement for delegation [of launch authority—E.L.], which, in turn, places these two goals in tension."<sup>33</sup>

It is unsettling to realise that what must not go wrong cannot be made fail-safe. In the case of nuclear deterrence, the notion that the possibility of failure reinforces its effectiveness may intensify rather than alleviate this anxiety.

But flimsy assertions do not support justified concern and disquiet. "Deterrence doctrine is an unproved theory based on the naïve assumption that political leaders will act rationally 100% of the time. It assumes each side always has accurate information about

<sup>30</sup> In the apt words of a former U.S. commander responsible for planning nuclear warfare: "In essence, serving in the nuclear deterrent forces of the United States is the mental and emotional equivalent of playing on an elite, world-class sports team that prepares with great intensity every day for a game it hopes never to play and indeed seeks to prevent". (Kehler, in Glaser, *Managing U.S. Nuclear Operations*, p. 133).

<sup>31</sup> Leon Wieseltier, *Nuclear War, Nuclear Peace* (New York: Holt, Rinehart and Winston, 1983), p. 2.

<sup>32</sup> Note that this applies to situations in which both (or more) contestants have nuclear weapons capable of inflicting retaliatory devastation (MAD-type relationships).

<sup>33</sup> Glaser and Radzinsky, "Basics of Deterrence", p. 32.

its opponent's intentions. It fails to consider the possibility of accidents, miscalculations, terrorist groups, cyber-attacks or simple mistakes."<sup>34</sup> Such claims are unfounded. Neither practitioners nor analysts would claim that deterrence is immune to accidents, miscalculations or simple mistakes. Instead, they would readily admit that information about an opponent's intentions may never be fully accurate, if only because intentions are not set in stone and reading them is not an exact science.

Most importantly, nuclear deterrence is not based on "the naïve assumption that political leaders will act rationally 100% of the time." Surely, leaders in dire straits or hell-bent on aggression may be undeterrable. As Brodie put it: "But what if another Hitler comes along? How mad was Hitler, and what would have caused him to stop? Would he have dared to behave as he did if the nations around him (as well as himself) had been armed with nuclear weapons? Even if we had the answers, they would only tell us what could have happened on that one special occasion. There is as yet no final answer guaranteed to be happy."<sup>35</sup> There still is not, and there never will be. People unafraid of suicide cannot be deterred by the prospect of losing their lives.

For nuclear deterrence to be effective, however, leaders need not be so "rational" as to avoid the slightest risk of a confrontation triggering nuclear use. What it does take, at minimum, are leaders who still care about their personal or regime survival. As long as this rudimentary "rationality" prevails, nuclear deterrent threats retain their potency.

## 5 Homeland and Extended Deterrence

Nuclear deterrent threats are employed to protect and advance a state's interests. This paper focuses on threats employed in the context of national and collective (NATO) defence. Accordingly, nuclear deterrence is classified as either homeland or extended deterrence.

Homeland deterrence is reserved for national protection. Thus, the primary mission of the U.S. military, including its nuclear arsenal, is to deter a devastating attack on the U.S. nation-state or to enable the country to defend itself should deterrence fail.

Extended deterrence involves extending the protective perimeter of nuclear forces beyond homeland defence. Its most demanding variant is extended nuclear deterrence: the attempt to credibly threaten the use of nuclear weapons against a nuclear-armed adversary in contingencies other than homeland defence. Thus, the extended deterrence mission of US nuclear forces is to protect allies and partners from potential attacks by nuclear-armed adversaries while sparing the US homeland, at least initially.

Homeland deterrence takes precedence over extended deterrence. In a confrontation with an adversary capable of threatening the U.S. with assured nuclear destruction, the supreme American interest must be the survival of the nation. The U.S. president is the country's commander in chief, and the oath of office for the presidency obliges him to "preserve, protect and defend the Constitution of the United States." Protecting allies and partners is not part of the Constitution.

An example illustrates the hierarchy. As enshrined in Art. 5 of the NATO treaty, European NATO members benefit from U.S. extended deterrence. Like Hawaii, NATO Europe is an ocean away from the U.S. mainland. Yet, Washington does not have to issue a formal nuclear commitment to deter an attack on Hawaii. As a constituent part of the American national entity, it is protected by homeland deterrence. NATO Europe, on the other hand,

<sup>34</sup> Melissa Parke, Executive director, International Campaign to Abolish Nuclear Weapons (ICAN), letter to the editor, *The Economist*, 20 April 2024, p. 12. (ICAN received the 2017 Nobel Peace Prize).

<sup>35</sup> Bernard Brodie, *War and Politics* (New York: Macmillan, 1973), p. 430.

is not an overseas territory of the United States. Therefore, an explicit nuclear pledge is needed to integrate it into the deterrent perimeter of U.S. nuclear forces.<sup>36</sup>

This difference in status between Hawaii and NATO Europe explains the difference between a nuclear guarantee and a nuclear commitment. Hawaii, like every other state of the American Union, enjoys a guarantee: Hawaiians know, and potential aggressors know, that the U.S. government would consider an attack on Hawaii an attack on America proper. Because NATO Europe lacks Hawaii's sanctuary status, it does not have the same intrinsic value to the U.S. president as the preservation of Hawaii's and thus American sovereignty, territorial integrity, and physical well-being.

Therefore, a nuclear commitment is conditional: whether and how it will be honoured is subject to U.S. security interests, including the imperative of national survival. What, then, renders an extended deterrent threat effective? After all, it involves risking a potentially suicidal war even though the attacker's target would be a third state rather than the U.S. homeland.

## 6 The Triangle of Extended Deterrence

Since states are not altruists, what underpins extended deterrent threats are the strategic interests of the protector, i.e., the state making a nuclear commitment. They determine the importance the protector attaches to the issues at stake.<sup>37</sup> It has two components: intrinsic and symbolic value.

The recipient of a nuclear commitment is the protector's protégé. Thus, the intrinsic component is the value of a particular protégé to the protector. Its material dimension consists of the protégé's economic (as a trading partner, investment market, supplier of critical resources) and military importance of the protégé (for the military balance between protector and adversary, i.e., the addressee of the extended deterrent threat). The intangible elements are political, cultural, historical, and human ties between protector and protégé and, in the case of NATO, shared values such as individual liberty and rule of law, and congruent systems such as democracy and market capitalism.

The NATO case also points to a third ingredient of a protégé's intrinsic value that intersects with his symbolic value to the protector. In their joint statement of January 2022, the five nuclear-armed signatories reaffirmed their belief "that the further spread of such weapons must be prevented." At a time when relations between the U.S., France and Britain on the one hand and Russia and China on the other are marred by conflicts and distrust, there is still a significant degree of consensus on this issue. In addition to the prominent status that nuclear weapons confer, they share an interest in preventing their proliferation, because the higher the number of nuclear weapon states, the greater the risk that they might be used. Thus, Gavin contends: "The strategies of inhibition were developed to stem the power-equalizing effects of nuclear weapons and have been motivat-

<sup>36</sup> Schelling called it the "California principle": "There is no way to let California go to the Soviets and make them believe nevertheless that Oregon and Washington, Florida and Maine, and eventually Chevy Chase and Cambridge cannot be had under the same principle." (*Arms and Influence*, p. 56).

<sup>37</sup> "Perceived U.S. interests in what is to be defended and the 'balance of stakes' vis-à-vis the potential aggressor are particularly important to adversary perceptions of U.S. intent to defend against aggression on allied territory." (Center for Strategic & International Studies, *Exploring the Nuclear Posture Implications of Extended Deterrence and Assurance*, November 2009, p. 1–2, <https://www.csis.org/analysis/exploring-nuclear-posture-implications-extended-deterrence-and-assurance>.)

ed by the desire of the United States to safeguard its security and preserve its dominant position.”<sup>38</sup>

One way of containing nuclear proliferation is extended deterrence. Its purpose is to protect a protégé against an existential threat posed by a third state. Without such protection, a protégé may want to acquire his own nuclear deterrent. A nuclear commitment is thus a means of curbing proliferation.

Any ally or partner that remains a non-nuclear state has both intrinsic and symbolic value for the protector: intrinsically, it enhances his leverage over the ally or partner; symbolically, the individual case demonstrates to other client states the protector’s readiness to incur the risk of a nuclear commitment in return for nuclear abstinence.<sup>39</sup>

The second ingredient of a protégé’s symbolic value is the interdependence of extended deterrence commitments. The United States is the explicit nuclear protector of NATO Europe as well as Japan, South Korea and Australia. In addition, the nuclear arsenal bolsters its ability to deter China from attacking Taiwan,<sup>40</sup> and it is the ultimate backbone of American global engagements and military pre-eminence. Defaulting on a commitment could tarnish America’s reputation for standing firm when challenged, thereby impairing the efficacy of deterrent threats. Measuring this effect is difficult because nuclear deterrence involves mapping the realm of the unknown; for the same reason, however, policymakers cannot ignore the reputational consequences of an unredeemed nuclear pledge.

The fallout may be more damaging on the inside than on the outside. In extended deterrence settings, the exterior party is the addressee of the deterrent threat. For the threat to be effective, the adversary must take it seriously enough to dissuade him from attacking or blackmailing the protégé. Thus, in the exterior dimension of extended deterrence, the credibility of a nuclear commitment is the crucial criterion.

As with homeland deterrence, credibility is in the eye of the beholder: it depends on the adversary’s perception of the balance of capabilities and of resolve. The latter derives from the intrinsic and symbolic value of the protégé to the protector. As regards military capabilities, conventional forces play a key role in shoring up the credibility of extended nuclear deterrence. In circumstances other than a massive nuclear attack on a protégé--where a response in kind would be an act of revenge that could not resurrect the victim of the attack--conventional forces have three essential functions:

- enable territorial defence and deny the opponent the possibility of a *fait accompli* to decelerate the escalatory momentum of a war between nuclear-armed combatants,
- sustain a process of violent interactions that could become uncontrollable, thus generating an increasing risk of nuclear use,<sup>41</sup>

<sup>38</sup> Francis J. Garvin, “Strategies of Inhibition. U.S. Grand Strategy, the Nuclear Revolution, and Nonproliferation”, *International Security* 40, No.1 (Summer 2015), p. 20. Gibbons concurs: “In sum, the nuclear non-proliferation regime is best considered an element of the post-World War II, US-led order. It was a project created by the United States and the Soviet Union to meet their strategic interests in maintaining their positions of power.” (Rebecca Davis Gibbons, *The Hegemon’s Tool Kit: US leadership and the Politics of the Nuclear Nonproliferation Regime* (Ithaca and London: Cornell University Press, 2022), p. 8.)

<sup>39</sup> “Extended nuclear deterrence contributes to U.S. non-proliferation goals by giving Allies and partners confidence that they can resist strategic threats and remain secure without acquiring nuclear weapons of their own.” (U.S. Department of Defense, *2022 Nuclear Posture Review*, p. 8.)

<sup>40</sup> The Taiwan Relations Act “creates ‘strategic ambiguity’ by not specifying whether the United States would defend Taiwan in the event of a PRC attack. Since 2021, President Biden has four times stated that the United States would defend Taiwan; White House officials said U.S. policy was unchanged.” (Congressional Research Service, *Taiwan: Background and U.S. Relations*, May 23, 2024 (<https://crsreports.congress.gov/product/pdf/IF/IF10275>).

<sup>41</sup> Put bluntly: “the more robust the conventional defense, the greater the risk that a conventional war might get out of hand.” (Leon V. Sigal, “No First Use and NATO’s Nuclear Posture”, in: *Alliance Security: NATO and the No-First-Use Question*, eds. John D. Steinbruner and Leon V. Sigal (Washington, D.C.: The Brookings Institution,

- buttress a nuclear pledge by partially transferring the sanctuary status of the protector's homeland to the protégé: when a protector's troops take part in the fighting, at stake is not "only" upholding a pledge given to foreigners but to fellow countrymen.

The size and structure of conventional forces deemed necessary to fulfil these functions depends on a several factors, an opponent's capabilities being only one of them. Threat assessments are based on subjective assumptions, force structures and procurements decisions are influenced by economic and political considerations as well as inter-service rivalries. Above all, in extended deterrence relationships protector and protégé have convergent, but not identical interests. In the case of the United States and NATO Europe, for example, their strategic positions are very different: the U.S. homeland is two oceans away from conventional battlegrounds, whereas Europe could be the theatre of a highly destructive conventional war. Limiting war to foreign territories and shielding the homeland against nuclear conflagration while safeguarding global interests are American priorities that may differ fundamentally from European deterrence and defence preferences.

This interior dimension, i.e., the relationship between protector and protégé, is shaped by reassurance and tolerability. Together with the credibility criterion, they mark the three corners of the extended deterrence triangle. NATO history demonstrates that managing the interior dimension by balancing reassurance and tolerability can be more demanding than ensuring the credibility of an extended deterrent threat. As British Defence Minister Denis Healey put it pointedly in what has become known as the 'Healey Theorem': "It takes only five percent credibility of American retaliation to deter the Russians, but ninety-five percent credibility to reassure the Europeans."<sup>42</sup>

The root cause of this discrepancy is the hierarchy between homeland and extended deterrence: when the chips are down, protecting the homeland takes precedence over bailing out an ally or partner. As noted above, extending deterrence is not an altruistic favour; it is the protégé's intrinsic and symbolic value to the protector that renders it credible and induces him to assume the risk of a nuclear guardianship. Yet for the risk to be tolerable, it must be mitigated by options other than surrender or survival. Hence the need for conventional *defence* forces that raise the nuclear threshold and shift the burden of escalation to the adversary. If nuclear escalation does occur, the protector must have flexible employment options. For however remote the chances of limiting a nuclearized war may be, in the absence of such options a protector would face an agonising dilemma: redeem a nuclear pledge by massive nuclear use and thus risk national suicide, or default on the commitment and lose the war. A protector will also insist on unfettered release authority. The ally may be consulted, but has neither veto power nor "nuclear drawing rights", i.e., the protector could employ nuclear weapons in defiance of an ally's request not to use them or to use them in an alternative way;<sup>43</sup> conversely, the protector reserves the right to reject an ally's request to resort to nuclear use.

1983), p. 108). In essence, this is Schelling's notion of "the threat that leaves something to chance". (Thomas C. Schelling, *The Strategy of Conflict* [Cambridge and London: Harvard University Press, eighth printing, 1981], p. 187–203). "But the problem with the threat that leaves something to chance is ... that it leaves something to chance." (Scott D. Sagan, "Just and Unjust Nuclear Deterrence", *Ethics & International Affairs* 37, no. 1 (2023), p. 27). While Schelling is right to stress that engaging in violence is inevitably a face-off that "neither we nor the party we threaten can entirely control" (p. 188), his clinical dissection of the phenomenon tends to under-rate the extreme hazards associated with a "competition in risk-taking" between nuclear adversaries.

<sup>42</sup> Quoted in Brad Roberts, *The Case for U.S. Nuclear Weapons in the 21<sup>st</sup> Century* (Stanford: Stanford University Press, 2016), p. 178–79.

<sup>43</sup> "Interestingly, the United States appears to have developed its own parallel plans for graduated escalation and tactical nuclear employment in the theater, separate from NATO's options, though the details of the U.S. options (called POODLE BLANKET) remain classified. Those plans may have provided a way for the United States to conduct theater nuclear attacks even if NATO did not authorize NATO nuclear operations, but such

Thus, making a nuclear commitment tolerable to the protector may conflict with an ally's strategic position and preferences.<sup>44</sup> This creates the need to reassure a protégé against two kinds of fear: nuclear abandonment and conventional or nuclear entrapment.

A protégé benefits from an extended deterrence *commitment* but does not enjoy a homeland deterrence *guarantee*. Therefore, he cannot rule out that the primacy of homeland protection might dictate abandoning an ally by defaulting on a nuclear commitment. In contrast, entrapment describes the fear of becoming the victim of a war both protector and adversary would keep within boundaries tolerable to them. In extremis, nuclear entrapment would involve a nuclear exchange that spares the homelands of both the protector and the adversary, but is devastatingly unlimited from a protégé's perspective. Conventional entrapment occurs when the protégé provides the battleground of a conventional encounter entailing a heavy human toll and crippling damage to his physical resources. A third form of entrapment cuts across the basic nuclear and conventional variants. Extra-regional entrapment is a protégé's concern that an extra-regional conflict involving his protector might spill over into his region or lead the protector to solicit his political, economic or even military support.

Credibility, tolerability, and reassurance form an interdependent triad. For extended deterrence to be effective, all three requirements must be met. For instance, if protector and protégé believed that a nuclear commitment lacked credibility in the eyes of their opponent, it would be neither tolerable nor reassuring. Similarly, the credibility of a nuclear pledge is affected by the opponent's perception of how tolerable and reassuring it is to protector and protégé, since this determines their resolve to execute deterrent threats.

But for all its inherent conflicts and frictions, extended deterrence is not rocket science. It has been successfully implemented within NATO for more than 75 years. In this regard, NATO history holds two paramount lessons. First, balancing the requirements of tolerability and reassurance can be more difficult than sustaining the credibility of a nuclear commitment, and while the underlying conflict between them cannot be resolved, it can be managed. This underscores the crucial importance of the non-military dimension of extended deterrence. Which leads to the second lesson: Military means are indispensable to render a nuclear commitment credible, tolerable, and reassuring, but how effective they are in advancing these objectives is primarily a political rather than military challenge.

This issue will be dealt with below ("Nuclear Deterrence: Policies"). It requires, however, that this chapter's exposition of deterrence principles be complemented by a typology of deterrent threats and by addressing the vexed problem of intra-war deterrence and war termination.

## 7 Deterrence by Escalation

The pre-war purpose of nuclear deterrent threats is to dissuade an adversary from using or threatening to use force, their intra-war purpose is to terminate the violent part of the conflict quickly and on acceptable terms. The modus operandi of such threats is usually

conclusions must await eventual declassification." (Lieber and Press, *The Myth*, p. 148). It would be unsurprising if this were still the case.

<sup>44</sup> As Howard wryly comments: "Limited nuclear options do not look very attractive if we are likely to be one of them ourselves." (*The Causes*, p. 257). Similarly, when in the 1960s the Kennedy administration called into question the assumption of an overwhelming superiority of Soviet and Warsaw Pact conventional forces and argued in favour of bolstering NATO's conventional deterrent to obviate an early first use of nuclear weapons, this "touched upon the most sensitive nerve-endings of the Europeans: what was limited to the Americans might be total for them." (Freedman and Michaels, *The Evolution*, p. 297). Fundamentally, this difference endures.

defined as deterrence by denial or punishment.<sup>45</sup> Yet there is a third mode of employing nuclear weapons for pre- and intra-war purposes: deterrence by escalation. This is best explained from a wartime perspective, i.e., by examining the purposes of the use of force in war.

In denial operations, force is directed at the adversary's military forces and his war-supporting infrastructure and industry. The aim is to tip the balance of military capabilities in one's favour. The objective of punishment operations is to inflict massive, instant damage on an enemy's population and economic resources, in extremis for no other motive than revenge in retaliation for a devastating nuclear attack. In contrast, deterrence by escalation focuses neither on degrading an opponent's military capabilities nor on hitting civilian targets; instead, their primary objective is to drastically raise the opponent's expectations about the potential *future* costs and risks of continued combat, thereby inducing him to retreat.

The three *modi operandi* overlap. Like deterrence by escalation, denial operations to degrade an opponent's military capabilities and punitive nuclear use other than unbounded vengeance also aim to undermine an adversary's will to fight by increasing the costs and risks of continuing the war.

Nevertheless, deterrence by escalation fills a conceptual gap left by the denial-punishment dichotomy. More importantly, it remains an integral part of NATO's strategy: "commensurate with the threats we face, we will ensure that our deterrence and defence posture remains credible, flexible, tailored and sustainable". Flexible and tailored deterrence and defence require limited nuclear options that signal resolve while refraining from massive denial or punitive strikes in order to preserve the chance of cooperative war termination.

During the Cold War, NATO's strategy of "flexible response", enshrined in MC 14/3 of 16 January 1968, was based on "three types of military response":

- "Direct Defence seeks to defeat the aggression on the level at which the enemy chooses to fight. It rests upon *physically* preventing the enemy from taking what he wants. [emphasis added]
- Deliberate Escalation seeks to defend the aggression by deliberately raising but where possible controlling, the scope and intensity of combat, making the cost and the risk disproportionate to the aggressor's objective and the threat of nuclear response progressively more imminent. *It does not solely depend on the ability to defeat the enemy's aggression as such; rather, it weakens his will to continue the conflict.* [emphasis added]
- General Nuclear Response contemplates *massive* nuclear strikes against the total nuclear threat, other military targets, and urban-industrial targets as required."<sup>46</sup> [emphasis added]

They paradigmatically embody the three-pronged deterrence typology of denial ("Direct Defence"), escalation ("Deliberate Escalation"), and punishment ("General Nuclear Response"). Among the "escalatory steps" envisaged were "demonstrative use of nuclear weapons" and "selective nuclear strikes on interdiction targets". Such "steps" were especially relevant in the context of nuclear *first* use. As a means of compensating for what was assumed to be a conventionally superior opponent, NATO employed the deterrent threat of "deliberate" first use of nuclear weapons. To date, the alliance has not retracted this first-use threat, and even if it did, prudent planning would suggest that an escalatory first use should not be ruled out.

<sup>45</sup> Glenn Snyder pioneered this dichotomy in *Deterrence and Defense*, p. 14–16.

<sup>46</sup> North Atlantic Military Committee, "Overall Strategic Concept for the Defense of the North Atlantic Treaty Organization Area", in: *NATO Strategy Documents 1949–1969*, <https://www.nato.int/archives/strategy.htm>.

## 8 Against all odds: Terminating a nuclearized war

It is the paradox of the nuclear age that the potency of nuclear deterrence to prevent war is enhanced by the possibility of deterrence failure. Acknowledging this connection is not tantamount to making a virtue out of necessity. A world free of war-prone conflicts and rivalries is not in sight. In such circumstances, safeguarding national and collective security dictates anticipating the failure of pre-war deterrence and having to wage war.

Engaging in nuclear war planning can be intensely irritating. To begin with, nuclear war can be seen as an oxymoron. Using nuclear weapons to inflict maximum damage and casualties on an opponent capable of retaliating in kind would be an invitation to mutual suicide rather than “the continuation of political intercourse by other means”. Thus, only limited nuclear use would reasonably satisfy Clausewitz’ criterion. The strategic objective would be to restore deterrence as quickly as possible by terminating the war at the lowest level of damage possible and on terms acceptable to all sides.<sup>47</sup> After all, “it takes only one to start a total war, but it takes two to keep a war limited.”<sup>48</sup>

Thus, a nuclearized war would have to be jointly managed to keep it within mutually acceptable bounds.<sup>49</sup> The challenge would be enormous: What reason is there to believe that it might be possible to re-establish in war what had been impossible to preserve in peacetime, namely the parties’ willingness to settle the conflict in a cooperative manner?<sup>50</sup> And to achieve all this when the use of nuclear weapons against an adversary risks destroying his readiness to terminate the violent interaction?

The challenge is compounded by technical and operational problems. There is the “always/never dilemma” involving a potential trade-off between positive and negative control of nuclear weapons that could entail their inadvertent employment.<sup>51</sup> Waging limited nuclear war requires an intact nuclear command-and-control (NC2) system, “the critical link between U.S. nuclear forces and the sole executive authority of the president to execute those forces.” However, cyber and anti-satellite capabilities as well as conventional long-range precision weapons may critically degrade NC2 systems during a protracted conflict.<sup>52</sup>

And yet, however futile it may turn out to be, an attempt would have to be made to control and limit a nuclearized war. Whether nuclear first or follow-on use, the strategic ob-

<sup>47</sup> In its 2022 *Nuclear Posture Review* the Biden administration stated that in case of deterrence failure, “the United States would seek to end any conflict at the lowest level of damage possible on the best achievable terms for the United States and its Allies and partners.” (p. 8). Apparently, in order to strengthen pre-war deterrence and to pre-empt domestic criticism, the administration insists on this autonomous definition of “best achievable terms”. In the event of war against a nuclear-armed opponent, the enemy’s perspective would have to be a major determinant of securing mutual survival on “best achievable terms”.

<sup>48</sup> Bernard Brodie, *Strategy in the Missile Age* (Princeton: Princeton University Press, 1959), p. 334.

<sup>49</sup> “Yet this [unconditional surrender—E.L.] is precisely what can no longer be done except in a war of annihilation. The alternative is to define the minimum political objective that we would find acceptable, and the enemy tolerable, and create the military and other conditions that will make them acceptable to him as well.” (William W. Kaufmann, “Force and Foreign Policy,” in: *Military Policy and National Security*, ed. William W. Kaufmann [Princeton: Princeton University Press, 1954], p. 244). Formulated seventy years ago, this tenet of the “nuclear revolution” retains its unaltered validity.

<sup>50</sup> Ball exposes this political Achilles heel of limited nuclear war strategies: “Moreover, if both adversaries are going to be sufficiently rational to agree at some point in a nuclear exchange that a fair and acceptable impasse had been reached, then it is difficult to see why they would have initiated the exchange at the outset.” (Desmond Ball, “U.S. Strategic Forces: How Would They Be Used?” *International Security* 7, no. 3 (Winter 1982/1983), p. 46).

<sup>51</sup> See above, p. 17.

<sup>52</sup> John R. Harvey and John K. Warden, “Command and Control of U.S. Nuclear Forces”, in Glaser, *Managing U.S. Nuclear Operations*, p. 167–200 (quote on p. 167).

jective would be to restore deterrence by terminating the war swiftly and on mutually acceptable terms. Any attempt to “square this circle” should include:

- Keeping war aims limited so as not to lose an adversary’s cooperation for limiting and ending the war. This excludes the pursuit of regime change or damage-maximising strikes.<sup>53</sup>
- Deterrence by escalation, rather than denial or punishment, should be the primary focus of limited nuclear use, in particular when using nuclear weapons first or in response to limited use by an adversary. Deterrence by escalation increases the intensity or scope of war, vertically by employing forces, weapons, and capabilities not previously used or used against minor targets, horizontally by expanding the geographic scope of the conflict.
- Deterrence by escalation involves a delicate balancing act: nuclear first or retaliatory use should be strong enough to signal resolve without being unduly provocative. It does not require “escalation dominance”, defined as “a capacity, other things being equal, to enable the side possessing it to enjoy marked advantage in a given region of the escalation ladder.”<sup>54</sup> In the first place, its attainability is questionable as long as an adversary retains escalatory options, including the ultimate one of massive retaliation, and refuses to agree on what would constitute “a marked advantage” on an escalation spectrum. More importantly, attempting to acquire a capability to “dominate” an adversary would be detrimental to pre-war stability and be inconsistent with cooperative war termination.
- In addition to a deliberate move, escalation can happen inadvertently through miscalculation of an adversary’s red lines or accidentally through mistaken or unauthorized actions. Such risks are all the more reason to carefully calibrate limited nuclear use and to cushion it with de-escalating political and military moves.<sup>55</sup>
- Above all, it is essential to keep in mind that one is planning for and operating in the realm of the unknown. There has never been a war fought with nuclear weapons. Combined with what would be at stake, the absence of any historical analogy to draw on offers a stark “reminder of the importance of humility, prudence, and discipline when confronted with uncertainty.”<sup>56</sup>

<sup>53</sup> “The vital ingredient for limited wars in the nuclear era is establishing limited political objectives.” (Jacob L. Heim, Zachary Burdette, Nathan Beauchamp-Mustafaga, *U.S. Military Theories of Victory for a War with the People’s Republic of China* (Santa Monica: Rand Corporation, February 2024), p. 3, <https://www.rand.org/pubs/perspectives/PEA1743-1.html>). The scenario underlying the paper is a conventional war over Taiwan and how to keep it below the nuclear threshold. Heeding the admonition would be even more important after crossing the threshold. Similarly, in their analysis of “Pathways to Russian Escalation Against NATO from the Ukraine War”, Rand experts recommend that U.S. policymakers “maintain the message discipline that NATO’s goal is the cessation of conflict, not the end of the Putin regime.” (Bryan Frederick et al., <https://www.rand.org/pubs/perspectives/PEA1971-1.html>, July 2022, p. 9). Again, this would apply a fortiori in the event of a war fought with, rather than in the mere shadow of, nuclear weapons.

<sup>54</sup> Herman Kahn, *On Escalation* (New York: Frederick A. Praeger, 1965), p. 290.

<sup>55</sup> “Practicing strategic empathy and providing reassurance are not acts of charity—they are calculating and pragmatic measures to reduce the risk of uncontrolled escalation.” (Heim et al., *U.S. Military Theories of Victory*, p. 22.)

<sup>56</sup> Alexandra T. Evans et al., *Managing Escalation. Lessons and Challenges from Three Historical Crises Between Nuclear-Armed Powers* (Santa Monica: Rand Corporation, February 2024), p. 5, [https://www.rand.org/pubs/research\\_reports/RRA1743-2.html](https://www.rand.org/pubs/research_reports/RRA1743-2.html).

## 9 Ukraine: Warfare in the shadow of nuclear weapons

In early 2022, the nuclear-armed permanent members of the UN Security Council issued a statement “On Preventing Nuclear War and Avoiding Nuclear Arms Races”. The timing was no coincidence: Barely two months later, Russia launched its full-scale attack on Ukraine. President Putin may not have made the final decision, but by the turn of the year 2021–2022, Russian aggression against its Ukrainian neighbour could no longer be ruled out. This would be a nuclear state attacking a non-nuclear state, most likely backed by an alliance of supporters, some of whom would also have nuclear weapons. The statement was thus both a recognition that the war, if it came to pass, would be fought in the shadow of nuclear weapons, and a call that they remain in the shadow rather than be used.

And so it has been—at least for now. From a deterrence perspective, the war holds both unsettling and reassuring lessons. Putin was undeterred by Western threats to inflict heavy costs, driven as he apparently was by nationalist hubris and imperialist ambitions, and fuelled by what he interpreted as Western acquiescence to the annexation of the Crimea and his hybrid intervention in parts of Ukraine. Moreover, he assumed (correctly) that Western military assistance for Ukraine would stop short of intervention on Ukraine’s side. On the other hand, Putin miscalculated the Ukrainians will and capacity to fight, sustained by Western political, financial, economic, and military aid. This is evidenced by his repeated threats to resort to nuclear use to intimidate Western supporters and counter the perception of a faltering Russian campaign.

To date, Putin has not dared to cross the nuclear threshold. It would, however, be reckless to dismiss his first-use threats as mere bluff.<sup>57</sup> The political reality is that “Putin has more at stake in the war than Ukraine’s nuclear-armed supporters outside the country do, and he could bet that in a pinch, Washington would be less willing to play Russian roulette than he is.”<sup>58</sup> From Moscow’s point of view, the antipode is the United States, a nuclear peer and by far the militarily most powerful of Ukraine’s supporters. Faced with a humiliating defeat that would endanger their regime and thus their political survival, Putin and his coterie might no longer shy away from nuclear use. For an American president, by contrast, regime survival would never be at stake. This creates an asymmetry in the balance of resolve that American policy has taken into account: “We do not seek a war between NATO and Russia. As much as I disagree with Mr. Putin, and find his actions an outrage, the United States will not try to bring about his ouster in Moscow. So long as the United States or our allies are not attacked, we will not be directly engaged in this conflict, either by sending American troops to fight in Ukraine or by attacking Russian forces.”<sup>59</sup>

At the same time, Putin was left in no doubt that his aggression would go unchallenged. With the help of the United States and its European allies, Ukraine was able to repel Russia’s initial onslaught and force it into a stalemate. Equally important, in an effort to counter Russian nuclear threats Washington has consistently warned Moscow that “any use of nuclear weapons in this conflict on any scale would entail severe consequences.”<sup>60</sup>

Arguably, the West could and should have done more and faster to enable Ukraine to defend itself. But in a war fought in the shadow of nuclear weapons, their deterrent effect imposes restraints on both the aggressor and the defending side to forestall a catastrophic

<sup>57</sup> “During one especially fraught period in October 2022, U.S. President Joe Biden and his team worried there was a 50 percent chance that Putin would employ his nuclear arsenal.” (Mara Karlin, “The Return of Total War,” *Foreign Affairs* 103, no. 6 [November/December 2024].)

<sup>58</sup> Richard K. Betts, “Thinking About the Unthinkable in Ukraine,” in: *Foreign Affairs*, 4 July 2022.

<sup>59</sup> President Joseph R. Biden, Jr., “What America Will and Will Not Do in Ukraine,” in: *The New York Times*, 1 June 2022.

<sup>60</sup> *Ibid.*

escalation.<sup>61</sup> As with nuclear deterrence in general, striking the right balance between firmness and prudence is an art of strategy in the midst of the highest of stakes.

<sup>61</sup> For examples, see Austin Carson, "The Missing Escalation in Ukraine," in: *Foreign Affairs*, 14 September 2023.

# III. Nuclear Deterrence: Policies

The upshot of the conceptual analysis carried out in the preceding chapter can be condensed into two sentences: Nuclear deterrence is hazardous but indispensable. Therefore, it has to be harnessed for successfully navigating an interdependent world in perilous flux.

Nuclear deterrence is hazardous because:

- it is plagued by the central paradox of the nuclear age: deterrent threats derive their unique potency to avert war or its calamitous escalation from the possibility that they might fail regardless;
- it cannot be made immune to human miscalculation and errors or technical accident and failure.

Nuclear deterrence is indispensable because:

- a nuclear-free world is a *Fata Morgana*: the genie is out of the bottle for good, nuclear weapons cannot be dis-invented;
- banishing the spectre of nuclear annihilation requires nothing less than abolishing the institution of war as a means of settling conflicts. Such a stable peace is possible, as the post-World War II process of European integration has shown; alas, it is the exception rather than the rule;
- today's world is in a conflict-ridden flux: power rivalries have intensified amid the arrival of a new nuclear era that does not annul the "nuclear revolution" but weakens its war-preventing efficacy, as Russia's attack on Ukraine, which triggered a war fought in the shadow of American and Russian nuclear weapons, has shown.

The notion of "harnessing" nuclear deterrence reflects its duality: hazardous but indispensable. Nuclear deterrence must therefore be integrated into and guided by a security policy that employs a range of multiple political, economic, and military instruments for cooperative or coercive purposes.

Harnessing the nuclear backstop of such a comprehensive strategy requires policies that encompass nuclear capabilities and strategies for their pre- and intra-war employment, together with reducing and containing the possibility of deterrence failure through arms control, disarmament and non-proliferation. Policies depend on politics that enable and sustain them. This dimension of nuclear harnessing touches upon the moral legitimacy of nuclear weapons as well as the political and public support for deterrent strategies, capabilities and arrangements such as extended deterrence.

This chapter's discussion of these issues proceeds in three stages: from the general ("Deterrence in a New Nuclear Era") to the specific ("NATO: Extended Deterrence for Europe") to the speculative ("Extended Deterrence for Europe by Europe?"). Yet, deterrence policies and politics do not take place in the abstract. Therefore, their context will be outlined first.

The backdrop to harnessing nuclear deterrence is an interdependent world in perilous flux. In the past, particularly in European countries such as Germany, interdependency had long been seen as an unalloyed positive, fostering a mutual interest in stable and co-

operative relations. Russia's attack on Ukraine has shattered this assumption, as Putin wittingly took the risk of losing a major customer of Russian oil and gas. Similarly, Germany and other European states, prodded and spurred on by the COVID pandemic as well as an assertive China, have experienced the downside of dependence on Chinese suppliers and consumers.

The lesson is sobering: Even long-standing and mutually beneficial dependencies carry significant risks when the economic partner is a repressive and expansionist autocracy. In a different but nonetheless consequential way, this may also apply to interdependencies between partners with overlapping political and value systems, such as the United States and the European Union. As transatlantic tariff and regulatory disputes demonstrate, perceptions of allegedly discriminatory rules and practices undermine the political sustainability of interdependencies. More broadly, so does the political and populist backlash on both sides of the Atlantic against globalisation and the unfettered flow of trade, capital, technology and people.

Yet the argument should not be taken too far. There are interdependencies of choice and those that are unavoidable.<sup>62</sup> Economic ties, for example, are based on the reasoning that foregoing trade and investment opportunities would come at a cost to prosperity. By contrast, climate change or transnational threats such as terrorism, civil nuclear accidents or nuclear wars create inescapable interdependencies. Both types can exert salutary effects.

The United States and China are the only two powers of global stature and ambition. During the Cold War, the United States and the Soviet Union formed a similar duopoly, but with little economic interaction. In stark contrast, U.S-China trade and investment links are extensive, making economic decoupling costly for both sides. So far, this has muted their rivalry. Similarly, for all their extraordinary power, neither the U.S. nor China can insulate themselves from climate change or the potentially devastating consequences of nuclear war.

## 1 Deterrence in a new nuclear era

The inescapable interdependency created by the "Nuclear Revolution" brings out the Janus-faced nature of nuclear deterrent threats: they are employed to protect *against* an opponent while staving off collective annihilation can only be achieved *together with* him.<sup>63</sup> Under these circumstances, reciprocal restraint is the sine qua non for joint survival.

Unless, of course, it was possible to shed the MAD bond--offensively through a disarming first-strike capability, defensively through an impenetrable shield, or a combination of both. Such active or passive immunisation is not on the horizon.<sup>64</sup>

Similarly, nuclear deterrence will remain robust enough to withstand the allegedly corrosive effects of two paradoxes advanced by strategic scholars. The first is the "usability paradox": "Nuclear weapons can only deter aggression if there is a possibility that they

<sup>62</sup> In reality, the distinction is less sharp than suggested here. Obviously, the cost-benefit calculus influences whether something is seen as dispensable or essential. The balance of power plays a role, too: if one side is more powerful and/or much less dependent on the other than vice versa, the inferior side may have little or no choice.

<sup>63</sup> Raymond Aron aptly speaks of "enemy partners" linked by "the horror of nuclear arms". (*The Great Debate. Theories of Nuclear Strategy*, New York: Doubleday & Company, 1965, p. 219.)

<sup>64</sup> See above "Nuclear Deterrence Principles: The Nuclear Revolution".

will be used, but we do not want to make them so usable that anyone will be tempted to use them”.<sup>65</sup>

Deterrent threats can only be effective if nuclear weapons are seen as usable by both sides: the one threatening nuclear use and the one addressee of the threat. This requires deployment options other than a single massive strike inviting a devastating response in kind, in particular deterrence by escalation—pre-war and intra-war options. But as long as the MAD bond cannot be broken, escalation dominance is unattainable and any use of nuclear weapons carries a risk of fateful proportions.<sup>66</sup> Moreover, some measure of employment flexibility can enhance both pre-war and intra-war stability by sparing decision-makers the paralyzing dilemma of surrender or suicidal massive use.<sup>67</sup>

The stability-instability paradox postulates that mutual assured deterrence can sow its own seeds of destabilisation. It is argued that states protected by a strategic retaliatory capability could be tempted to probe an opponent’s resolve at lower levels of provocation. Thus, there exists a built-in tension between strategic nuclear stability and potential instability at sub-strategic, especially conventional, levels, with the former feeding the latter. Curiously, even proponents of the stability-instability paradox are careful not to overstate it. According to Glenn Snyder, for example, “one *could* argue precisely the opposite—that the greater likelihood of gradual escalation due to a stable strategic equilibrium tends to deter both conventional provocation and tactical nuclear strikes—thus stabilising the overall balance.”<sup>68</sup>

Certainly, the risk of nuclear war has not inhibited militarised conflicts between nuclear-armed powers,<sup>69</sup> and both the United States and the then Soviet Union waged wars against each other’s clients (e.g., the U.S. against Soviet-backed North Vietnam, the USSR against Afghan rebel forces supplied by the U.S.). More recently, Russia’s attack on Ukraine has been interpreted “as the post-Cold War era’s most notable example of the stability-instability paradox”.<sup>70</sup> But what the Ukraine war demonstrates above all is that, as in the past, Washington and Moscow have taken pains to prevent it from escalating into a direct military confrontation between them.<sup>71</sup> Similarly, a Rand study positing an American-Chinese conventional war over Taiwan pours cold water on what the authors call the “wartime cousin of the ‘Stability-Instability Paradox’”: “It is doubtful that the PRC would

<sup>65</sup> The Harvard Nuclear Study Group, *Living with Nuclear Weapons* (New York: Bantam Books, 1983), p. 34. For a member of the group, “the heart of the nuclear dilemma remains the usability paradox.” (Joseph S. Nye Jr., “Nuclear Ethics Revisited,” in: *Ethics & International Affairs* 37, no. 1 (2023), p. 6).

<sup>66</sup> As Schelling has argued: “Making it [nuclear war –E.L.] somewhat less fearsome would hardly invite efforts to test just how bad the war would be.” (*Arms and Influence*, p. 198).

<sup>67</sup> This should not be construed as an argument in favour of warfighting strategies based on erroneous notions such as the controllability of nuclear exchanges or prevailing in a nuclear war. The Achilles’ heels of such strategies have been exposed above (see “Nuclear Deterrence Principles: Against all odds”). The objective here is to stress that employment flexibility and pre- and intra-war deterrence stability are not antithetical concepts per se.

<sup>68</sup> Glenn H. Snyder, “The Balance of Power and the Balance of Terror,” in: *Balance of Power*, ed. Paul Seabury (San Francisco: Chandler, 1965), p. 198–99. Jervis is plainly inconsistent. Referencing Snyder he asserts that “to the extent that all-out war is unthinkable, states have greater opportunities to push as hard as they can.” Later on, he claims that Western “proponents of conventional defense” [in Europe during the Cold War—E.L.] “exaggerate the freedom created by the stability of the strategic nuclear balance, neglect the role of threats that leave something to chance, and so underestimate the potency of NATO’s nuclear deterrent.” (Robert Jervis, *The Illogic of American Nuclear Strategy* (Ithaca and London: Cornell University Press, 1984), p. 31 and p. 150, respectively).

<sup>69</sup> For an analysis of three such cases, see Rand, *Managing Escalation* (fn. 56).

<sup>70</sup> Cynthia Roberts, “Foreword”, in: *Nuclear Strategy in the 21st century: Continuity or Change?* ed. Andrea Gilli and Pierre de Dreuzy, NDC Research Paper (December 2022), p. xvi, <https://www.ndc.nato.int/news/news.php?icode=1782>.

<sup>71</sup> See above “Nuclear Deterrence Principles: Ukraine: Warfare in the shadow of nuclear weapons”.

be risk-acceptant enough to start a war with the United States but so risk-averse that it would unequivocally rule out nuclear use even if its vital interest were at stake.”<sup>72</sup>

### **A Canon of harnessing nuclear deterrence**

Nuclear deterrence is hazardous but indispensable. What does this imply for deterrence policy and politics in a new nuclear era? Hardly anything new, as far as their guiding principles are concerned. That should come as no surprise: The MAD bond imposed by the nuclear revolution has proved to be inescapable. The most consequential novelty is the China factor and the Beijing-Moscow alignment in the wake of the Ukraine war. With this in mind, some of the key precepts and guideposts of harnessing nuclear deterrence can be identified as follows:

#### ***Deterrence is a consequence, not a cause***

Clausewitz aptly defined war as a continuation of the political intercourse with other means. Deterrence, both in its pre- and intra-war application, is an integral part of such intercourse. It is not a closed “system” feeding on itself; rather, it is generated and sustained by conflicts of interests, ideologies, and values. Arms in general, and nuclear weapons in particular, can exacerbate such conflicts, but they neither create them nor do they present insurmountable obstacles to defusing them. Where there is a political will, there is a way. Military capabilities are not threatening in and of themselves; what makes them threatening is distrust of their possessor-- the fear that he might use them in a hostile way.

#### ***Deterrence is an expedient***

In MAD relationships, nuclear deterrence carries the risk of collective suicide should it ever fail to prevent war or its escalation into massive use. Consequently, it must be seen and conceived as an expedient whose stabilising effect must be harnessed to overcome the circumstances that give rise to it.

#### ***Weapons matter, but policy matters more***

A nuclear deterrent is needed so long as other means are unavailable to counter an existential threat. Yet being a hazardous expedient, it must be integrated into and subordinated to a policy of containing and defusing the underlying conflict.

#### ***Security is a common good buttressed by ...***

This principle is the corollary to the Janus-faced nature of nuclear deterrent threats: they are employed against an adversary whose cooperation is essential for averting mutual annihilation—in peacetime as in warfare. “But to seek security entirely through physical domination is to menace all other countries. For absolute security for one country must mean absolute insecurity for all the others. Where to strike the balance cannot be determined in the abstract; it is what makes diplomacy an art and not a science.”<sup>73</sup>

#### ***... Deterrence and Defence***

Such diplomacy requires recognition that “practicing strategic empathy and providing reassurance are not acts of charity—they are calculating and pragmatic measures to reduce the risk of uncontrolled escalation.”<sup>74</sup> But providing reassurance is only possible on

<sup>72</sup> Rand, *U.S. Military Theories of Victory*, p. 30.

<sup>73</sup> Kissinger, *The Necessity for Choice*, p. 153.

<sup>74</sup> Rand, *U.S. Military Theories of Victory*, p. 22.

the back of a robust deterrence and defence posture. Otherwise, one would be at the mercy of an antagonist's charity.<sup>75</sup>

### ***Thinking beyond the imperative of war prevention***

Deterrence and defence policy must take account of the paradox of the nuclear age: the possibility of deterrence failure underpins the potency of pre-war deterrent threat. There is, however, a grave downside: if war does break out, the chances of halting its "remorseless advance to mutual annihilation"<sup>76</sup> may be slim. And yet, against all odds, an effort would have to be made. The objective would have to be to achieve an early war termination on mutually acceptable terms, based on pre-planned nuclear options for intra-war deterrence by escalation.

### ***Chinese stakeholdership***

At a time when the world is in perilous flux, a new nuclear era has arrived that "is more complex, both politically and technically, and seems likely to be less constrained by treaty, and therefore less transparent and less predictable, than any time in the past half-century."<sup>77</sup> That judgment, passed almost five years ago, still holds true. If anything, global instability and power rivalries, fuelled by nationalist zero-sum thinking, have intensified since then.

While mitigating conflicts, planetary threats such as unfettered climate change or cataclysmic nuclear war have been unable to reverse the trend. For the time being, managing global disorder is the order of the day. That requires coordination and cooperation of many states and non-state actors. Yet some are more equal than others, notably the United States and China. They are the only powers of global stature and ambition. Managing global disorder requires their active participation.

In less than two decades, China has catapulted itself into a pillar of the global economy. Whether or not it ever reaches American levels of productivity and technology, China has the means and the will to substantially upgrade the quantity and quality of its nuclear forces.<sup>78</sup>

The ensuing challenge is twofold. First, as noted earlier, the United States will face two nuclear peers and politico-strategic rivals. Russia is a second-tier power in economic and technological terms, but likely to maintain world-class conventional and nuclear forces. Moreover, the challenge is compounded by the China-Russia alignment as an aftermath of

<sup>75</sup> "Besides, it scarcely requires weak nerves to fear nuclear weapons when they are possessed only by an adversary. All that is required is a sane respect for the most destructive force man has yet been able to extract from nature." (Robert W. Tucker, "Morality and Deterrence," in: *Nuclear Deterrence: Ethics and Strategy*, ed. Russell Hardin et al. (Chicago and London: The University of Chicago Press, 1985), p. 70). Or, crisp and concise: "The renunciation of the protection of nuclear weapons is therefore an act of surrender." (Hedley Bull, *The Control of the Arms Race* (London: Weidenfeld Nicholson, 1961), p. 85.)

<sup>76</sup> Leon Wieseltier, "When Deterrence Fails," *Foreign Affairs* 63, no. 4 (Spring 1985), p. 829.

<sup>77</sup> Christopher F. Chyba & Robert Legvold, "Conclusion: Strategic Stability & Nuclear War," in: *Daedalus* 149, no. 2 (Spring 2020), p. 233.

<sup>78</sup> According to the 2024 *Annual Threat of the U.S. Intelligence Community*, "China remains intent on orienting its nuclear posture for strategic rivalry with the United States because its leaders have concluded their current capabilities are insufficient." (p. 9, <https://www.dni.gov/index.php/newsroom/reports-publications/reports-publications-2024/3787-2024-annual-threat-assessment-of-the-u-s-intelligence-community>). SIPRI reports that "China is in the middle of a significant modernization and expansion of its nuclear arsenal." (SIPRI Yearbook 2024, Chapter on "World Nuclear Forces", p. 271, <https://www.sipri.org/yearbook/2024>). A bipartisan Congressional Commission "concludes that at China's current pace, it will reach rough quantitative parity with the United States in deployed nuclear warheads by the mid-2030s." (*America's Strategic Posture*, The Final Report of the Congressional Commission on the Strategic Posture of the United States, October 2023, p. 91, <https://www.ida.org/research-and-publications/publications/all/a/am/americas-strategic-posture>).

the Ukraine war. In February 2022, Putin and Xi Jinping declared that the friendship between their two nations had “no limits”. There are limits, the most important of which is that Moscow must be wary of becoming relegated to Beijing’s junior partner. But rather than having a tripolar structure of equidistant poles, the nascent nuclear era may witness a United States confronted with two nuclear peers that share an animosity towards it. Coping with such a situation will be a major determinant of America’s future nuclear posture.

The task would be made easier if China’s nuclear build-up were cushioned by a reduction in U.S.-China tensions and a revitalisation of arms control and disarmament. The security environment appears hardly conducive to such a development. And yet, even slim chances must be explored. For this is the second part of the challenge: China must assume stakeholder status of the new nuclear age. The U.S.-Russian New START agreement limiting their strategic arsenals will expire in 2026. Without Beijing, there will be no successor regime, and China will only participate as a nuclear peer—if not de facto, then at least de jure. Such a tripartite arrangement would amount to “arms control through rearmament” on Beijing’s part, but promoting Chinese nuclear stakeholder status would be worth it.<sup>79</sup>

### **Political Ownership**

In democratic societies, security policy and its instruments require public legitimacy and electoral support. In this respect, nuclear deterrence can be a liability in two ways. First, its morality will always be controversial. It is a fundamental moral principle that the end does not justify every means. The threat of instant mass killing, even when it serves the legitimate end of national security, is bound to meet with qualms and revulsion that can undermine its public and political acceptability.<sup>80</sup>

Second, the decision to release nuclear weapons would be taken by a tiny group of executives, with the U.S. president wielding the ultimate authority. Thus, at the very moment when the nation would be confronted with an imminent threat to its survival, the people and their parliamentary representatives might have no opportunity to voice their opinion.<sup>81</sup>

Defending the legitimacy and explaining the necessity of nuclear deterrence is a litmus test of political leadership. Except for Stanley Kubrick’s “Dr. Strangelove,” the “bomb” will never be an object of affection. Because nuclear deterrence is hazardous, it requires scrupulous harnessing on the part of a guiding political “intelligence”. Yet it is neither a curse nor a boon. Political ownership means making a consistent case for nuclear deterrence as a hazardous but indispensable instrument for security and defence in a world in perilous flux.<sup>82</sup>

<sup>79</sup> As for Beijing’s motives, Litwak argues that “Beijing may see that participating in trilateral arms control serves its interest by preserving the New START ceiling on strategic nuclear systems and thereby locking in its emergent parity status.” (Robert S. Litwak, *Tripolar Instability: Nuclear Competition Among the United States, Russia, and China*, p. 106; <https://www.wilsoncenter.org/book/tripolar-instability-nuclear-competition-among-united-states-russia-and-china>).

<sup>80</sup> “Nevertheless, it is perhaps the central tension in deterrence, especially as practiced by a democracy, that its ultimate threat is to engage in a senseless act of total destruction. It is bizarre for a state to maintain its security by making its adversary believe that it is prepared to bring about the end of civilization.” (Robert Jervis, “Deterrence Theory Revisited,” in: *World Politics* 31, no. 2 (January 1979), p. 300).

<sup>81</sup> Richard H. Ullman, “Denuclearizing International Politics,” *Ethics* 95, no. 3 (April 1985), p. 587.

<sup>82</sup> “Perhaps most important, national leadership must have political ownership of nuclear deterrence policy and strategy and must exhibit the necessary focus on a sustained basis.” (Roberts, *The Case for U.S. Nuclear Weapons*, p. 251). In this vein, Nolan deplores that “few politicians are ever willing to state publicly that they believe that nuclear weapons preserve peace or that a war-fighting strategy is the cornerstone of credible nuclear deterrence.” (Janne E. Nolan, *Guardians of the Arsenal: The Politics of Nuclear Strategy* (New York: Basic Books, 1989), p. 282.)

## 2 NATO: Extended Deterrence for Europe

“Deterrence is intuitive: don’t nuke me, because if you do I will nuke you back. Extended deterrence is perverse: attack my ally and I might nuke you, exposing myself to nuclear retaliation that I would not otherwise have faced.”<sup>83</sup> The dictum is fallacious. Extended deterrence would be perverse if it relied on altruism. It does not—a nuclear guardianship is motivated by national interests, derived from the intrinsic and symbolic value of a protégé to the protector. Extended deterrence rests on solid ground that renders it credible, tolerable, and reassuring.<sup>84</sup> Otherwise, NATO would not have lasted for more than seventy-five years.

But extended deterrence is not rock-solid: “a nation cannot be counted on to commit suicide in defence of a foreign territory.”<sup>85</sup> In this sense, “America First” has always been the supreme maxim—and it has to be when the stakes are highest. Consequently, extended deterrence is subordinate to homeland deterrence: America’s allies benefit from a nuclear commitment, but they have no guarantee because they do not belong to the U.S. sanctuary.

As the “Healey Theorem” suggests, ensuring the credibility of a commitment in the eyes of an adversary may be less demanding than keeping it tolerable to the guardian and reassuring to the protégé.<sup>86</sup> NATO history would seem to bear him out. It is marked by recurring frictions over the proper balance of transatlantic risk- and burden-sharing as well as the number and type of military forces needed to underpin the U.S. nuclear commitment.

NATO allies have weathered them all. Few would have dared to predict such enduring transatlantic cohesion. But this reassuring observation should not lead to complacency. “History tells us nothing about the future except that it will surprise us.”<sup>87</sup> Coming from a historian, the dictum is probably meant to be less rigid than it sounds, but it is a useful reminder that taking something for granted can trigger its progressive erosion.

It would be reckless to take NATO’s future for granted. A proper measure of the vitality of an arrangement is to pose a simple question: Would it be created if it did not exist? In 2013, Lawrence Freedman maintained that “if the Atlantic Alliance did not exist it would now be extremely difficult to invent it.”<sup>88</sup> Today, it would be much less so, especially in the wake of Russia’s annexation of the Crimean peninsula and its full-scale attack on Ukraine.

Yet creating NATO afresh could still be difficult. Perhaps even no one would after Donald Trump’s re-election in November 2024. But whatever its immediate repercussions, his victory is a manifestation of structural forces that widen the Atlantic: a divided American society and polarised politics, demographic changes, de-globalisation, and Washington’s geostrategic reorientation.

The socio-political complexion of the United States is changing, marked by a steadily shrinking proportion of Americans with a European migration background. Politico-cultural polarisation is straining allegiance to democratic institutions and undermining the bipartisan consensus on America’s role in the world. The heyday of American-led

<sup>83</sup> “The balancing act gets harder,” *The Economist*, 6 April 2024, p. 17.

<sup>84</sup> For conceptual background, see “Nuclear Deterrence Principles: The Triangle of Extended Deterrence”.

<sup>85</sup> “The defense of Europe, therefore, cannot be conducted solely from North America, because the aggressor can pose threats which will not seem to warrant total retaliation and because, however firm allied unity may be, a nation cannot be counted on to commit suicide in defense of a foreign territory.” (Kissinger, *The Necessity for Choice*, p. 109).

<sup>86</sup> See above “Nuclear Deterrence Principles: The Triangle of Extended Deterrence”.

<sup>87</sup> Stephen Kotkin, “Realist World,” in: *Foreign Affairs*, 14 June 2018.

<sup>88</sup> Lawrence Freedman, *The Primacy of Alliance: Deterrence and European Security*, IFRI Proliferation Papers, no. 46, 23 (Paris: IFRI, March–April 2013), [https://www.ifri.org/sites/default/files/migrated\\_files/documents/atoms/files/pp46freedman.pdf](https://www.ifri.org/sites/default/files/migrated_files/documents/atoms/files/pp46freedman.pdf).

globalisation is over, the downsides of interdependencies have come to the fore, fuelling an inward orientation of politics and policies. Then there is the “pivot to Asia”, an irrevocable shift in Washington’s geostrategic focus, sustained by the rise of China to the sole power capable of challenging U.S. global pre-eminence.

Even under an “America First” president, Europe will retain considerable intrinsic and symbolic value to the United States. Indeed, its symbolic value may even increase because of Sino-American rivalry and the Russian aggression against Ukraine, since Washington will not want to embolden Beijing by giving the impression that it shrinks from reigning in an expansionist power.

And yet, it is apt to recall the most famous line from Lampedusa’s novel “The Leopard”: “If we want things to stay as they are, things will have to change.” Applied to NATO, this means: To survive as a vigorous alliance, NATO will have to change--and for that matter, change radically. Even then, there is no guarantee that it will, but it is prudent to assume that without such change, the alliance could wither away.

And with it the backbone of European security, the American nuclear commitment enshrined in Article 5 of the NATO Treaty. It is worth recalling that the commitment is not an act of charity. For extended deterrence to be effective, it has to meet the triple criterion of credibility, tolerability, and reassurance. To this end, all parties of the extended deterrence triangle must perceive the commitment as based on vital national interests. Surely, “in extending a nuclear umbrella to its allies, the United States has necessarily created additional requirements for its nuclear forces.”<sup>89</sup> But it does not develop and deploy these additional requirements merely as a favour to its allies.

Nevertheless, America’s strategic interest in Europe does not alter the glaring asymmetry at the heart of NATO: the U.S. can defend itself on its own, Europe cannot. Europe’s dependency on American protection has been exposed by the Ukraine war: America’s massive support, backed up by its nuclear arsenal, was crucial for thwarting a Russian invasion of the country. Europe could not have done it alone.

To neutralise the asymmetry and establish transatlantic status parity, Europe would have to be able to defend itself. Whether it could and should aspire to such self-sufficiency is discussed in the next section. At this point, a less revolutionary but still major rebalancing of the Alliance is advocated.

Lord Ismay, NATO’s first Secretary General, famously stated that the Alliance was created to “keep the Soviet Union out, the Americans in, and the Germans down.”<sup>90</sup> In the present circumstances, this could be paraphrased as follows: The purpose of NATO is to keep the Russians out, the Americans in, and the Europeans assured.

For reasons spelled out above, keeping the Americans in has become more challenging. Therefore, keeping themselves assured is a task first and foremost for the Europeans: To keep the Americans in, they must shoulder a far greater share of the common defence burden. Intra-Alliance disputes about risk- and burden-sharing are almost as old as NATO itself, and President-elect Trump can be expected to press the Europeans even harder than during his first term.<sup>91</sup> With good reason: The United States spends almost 3.5 % of its GDP on Defence, NATO Europe just over 2 %. Such an imbalance is bound to erode transatlantic cohesion.<sup>92</sup>

<sup>89</sup> Charles L. Glaser and Brian Radzinsky, “Introduction,” in: *Managing U.S. Nuclear Operations*, p. 9.

<sup>90</sup> North Atlantic Treaty Organization, [https://www.nato.int/cps/en/natohq/declassified\\_137930.htm](https://www.nato.int/cps/en/natohq/declassified_137930.htm).

<sup>91</sup> Indeed, he was not the first to complain about European “free-riders”. See, for example, “Remarks by Secretary Gates at the Security and Defence Agenda, Brussels, Belgium, 10 June 2011”, <https://archive.defense.gov/Transcripts/Transcript.aspx?TranscriptID=4839>, and President Barack Obama, in: *The Atlantic*, April 2016, <http://www.theatlantic.com/magazine/archive/2016/04/the-obama-doctrine/471525/>.

<sup>92</sup> North Atlantic Treaty Organization, Defence expenditures and NATO’s 2 % guideline, 18 June 2024, [https://www.nato.int/cps/en/natohq/topics\\_49198.htm](https://www.nato.int/cps/en/natohq/topics_49198.htm).

Yet spending more is only one part of the solution, spending better is the other one. There is a connection: Spending more together could save money. Europe suffers from military underinsurance due to segregated armed forces, defence spending, and armaments markets. If European NATO members were to “de-nationalise” their military establishments in favour of inter- or even supranational forces, joint development and procurement, a Europe-wide defence market with a European defence industrial base, each euro spent on defence would generate a considerably higher return on investment.<sup>93</sup>

How far could and should NATO’s re-balancing go? The worst case would be an abrupt American withdrawal in anger. Europe would be left in the lurch, with no NATO to re-balance. Whether and how Europe would be able to rise to the challenge would depend on its military capabilities and the security environment. If America pulled back despite Russia posing a threat, a poorly prepared Europe would struggle to fend off a Russian aggression.

If Europe based a conventional build-up on this worst-case assumption, it would risk triggering a self-fulfilling prophecy, as the United States could rightly interpret it as European distrust of America’s commitment to NATO. Therefore, Europeanising NATO should be presented as a deliberate and sustained European effort to enable America to shift valuable military resources to Asia.

By this measure, the more Europe is able to defend itself, the better its chances of keeping America in NATO. It has been argued that the eventual outcome should be a revamped NATO through “the gradual substitution of European for American capabilities, with one exception: the United States would continue to extend its nuclear umbrella to Europe.”<sup>94</sup> Europe might have to accept this if it were what Washington demanded to keep its Article 5 commitment tolerable. But it could hardly be Europe’s preferred outcome. America cannot provide Europe with a nuclear guarantee, which is reserved for the U.S. homeland. It can, however, reinforce the reassuring value of its nuclear commitment by deploying American troops in Europe. A European conventional build-up, however large, could never compensate for the “flesh- and-blood commitment” embodied by American service personnel.

Does extended deterrence require American nuclear forces based in Europe and allied participation in their use? At its peak during the Cold War, the United States had about 6,000 nuclear warheads deployed in Europe for a range of delivery vehicles. After a drastic post-Cold War drawdown, there are now about 100 gravity bombs for potential use by U.S. and allied aircraft, deployed at six bases in five European countries (Belgium, Germany, Italy, The Netherlands, and Turkey).<sup>95</sup> All bombs are controlled by the U.S. Air Force, their delivery by allied aircraft would be subject to prior release by the U.S. president.

<sup>93</sup> The European Defence Agency notes in its *2022 Coordinated Annual Review on Defence Report*: “Member States implement their plans to a large extent nationally, with only 18% of all investment in defence programmes conducted in cooperation.” (p. 6, [https://eda.europa.eu/what-we-do/EU-defence-initiatives/coordinated-annual-review-on-defence-\(card\)](https://eda.europa.eu/what-we-do/EU-defence-initiatives/coordinated-annual-review-on-defence-(card))). For the outline of a plan to enable Europe to defend itself with less America, based on a joint conventional build-up, see Camille Grand, “Defending Europe with less America,” *European Council on Foreign Relations*, 3 July 2024, <https://ecfr.eu/publication/defending-europe-with-less-america/>. For the first time, the next European Commission will have a “Commissioner for Defence and Space”. In her “Mission Letter” to Commissioner-designate Andrius Kubilius, Commission President von der Leyen charges him with, i.a., creating a true Single Market for Defence products and services, enhancing production capacity and fostering joint procurement of European equipment; working with the Member States and NATO to pursue the further standardisation and harmonisation of defence equipment; promote and incentivising common procurement of European equipment. ([https://commission.europa.eu/document/1f8ec030-d018-41a2-9759-c694d4d56d6c\\_en](https://commission.europa.eu/document/1f8ec030-d018-41a2-9759-c694d4d56d6c_en)).

<sup>94</sup> Thomas Graham, “From the Ukraine Conflict to a Secure Europe,” September 2024, p. 5, <https://www.cfr.org/report/ukraine-conflict-secure-europe>.

<sup>95</sup> *SIPRI Yearbook 2024*, p. 281.

The issue exemplifies the inner workings of an extended deterrence triangle: establishing the credibility of a nuclear commitment in the eyes of an opponent may be less demanding than keeping it tolerable to the protector and reassuring to the protégé. To hold down the risk of nuclear use in contingencies other than an attack on its homeland, the United States maintains non-strategic nuclear forces and employment options.<sup>96</sup> But they must not be deployed on a protégé's soil to undergird the credibility of a nuclear commitment, based as it is on the intrinsic and symbolic value the protector places on an ally or partner. Thus, "to deter theater attacks and resist nuclear coercion", the 2022 NPR lists, in addition to Dual Capable Aircraft fielded in Europe, capabilities such as "the W76-2 low-yield submarine-launched ballistic missile warhead, the AGM-86 air-launched cruise missile, and the Long-Range Standoff weapon."<sup>97</sup> There are no U.S. nuclear weapons stored on the territory of Asian allies: "In Asia, U.S. nuclear forces based at sea and in the continental United States provide the nuclear deterrent to attacks on Australia, Japan, and the Republic of Korea."<sup>98</sup>

U.S. nuclear weapons in Europe and the nuclear sharing arrangements with European host countries have been an integral part of balancing the tolerability and reassurance requirements of extended deterrence for Europe. At various times, they have been a bone of contention—between the United States and European allies as well as within Europe and European societies. In the wake of Russia's attack on Ukraine this has given way to widespread support, most notably in Germany, for keeping present arrangements.

If anything, this demonstrates the profoundly political nature of extended deterrence. Weapons matter, but politics is crucial. This is especially true of nuclear weapons. A nuclear commitment is a commitment—no more, no less. Ultimately, its credibility, tolerability, and reassurance value hinge on interests and trust. States extend nuclear commitments and rely on them because it serves their vital interests and because their extended deterrence bond is underpinned by interdependencies and cooperation that sustain mutual trust. If this foundation erodes, extended deterrence is in trouble.

Therefore, transatlantic strife over trade and tariffs, market access and regulatory standards, energy and climate policies, arms control and non-proliferation policies, or how to deal with China could severely damage the viability of NATO and the U.S. extended deterrence commitment. In this regard, the Ukraine war and its aftermath will be a major determinant, too. If NATO allies fall out over how to end the war, the post-war support to Ukraine, or future relations with Russia, the blow to NATO cohesion could be significant.

### **3 Extended Deterrence for Europe by Europe?**

"But the day may come when it can no longer be seriously believed that an American President would threaten the destruction of his own cities in order to protect some distant outpost; and then Western Europe, which still relies chiefly on the strategic power of the United States to defend its own existence, could find itself in serious danger—unless by that time it has developed a great nuclear arsenal of its own, or more effective means of

<sup>96</sup> In addition to the modernization of the U.S. Nuclear Triad, the 2022 Nuclear Posture Review identifies such "regional capabilities" as "fundamental elements of U.S. extended deterrence commitments". (<https://media.defense.gov/2022/Oct/27/2003103923/-1/-1/1/NUCLEAR-STRATEGY-AND-POLICY-NPR-FACTSHEET.PDF>).

<sup>97</sup> *Ibid.*

<sup>98</sup> Congressional Commission, *America's Strategic Posture*, p. 27.

local defence.”<sup>99</sup> More than sixty years later, that day has still not arrived. Europe remains unable to defend itself without American protection.

The good news is that extended deterrence has worked, and worked rather well considering recurrent transatlantic disputes, the demise of the Cold War confrontation, and the Russian assault on Ukraine. But that might not last. It did not take the re-election of Donald Trump’s to worry about the sustainability of an American nuclear commitment that is tolerable for the United States and reassuring to its European recipients.<sup>100</sup> Hence the argument for a ‘Europeanised’ NATO presented in the previous section.

Yet, the argument stopped short of advocating complete symmetry, i.e., a NATO in which not only the U.S. could defend itself on its own, but Europeans, too, would stand on their own feet. As the opening quotation shows, the issue is almost as old as NATO itself.<sup>101</sup> Its two main facets are the feasibility and desirability of European self-defence.<sup>102</sup> They are, of course, interrelated. If something is unattainable, desiring it remains a pipedream not worth spending effort and money on. Nevertheless, the desirability issue will be addressed first because it takes a driving force to pursue a goal.

There are two main reasons why European self-defence is back on the agenda. Europe’s security environment has become more threatening at a time when the Atlantic has widened and the U.S. nuclear commitment has become less reassuring. Structurally, the primacy of homeland defence means that when push comes to shove, Europeans have never had an ironclad guarantee that the United States will honour its Article 5 commitment. Unilateral dependencies, even among friends, entail vulnerability and come at a price that can extend beyond defence and armaments. From Washington’s point of view, for example, the European beneficiaries of its Article 5 commitment can be expected to support America’s premier objective of counterbalancing an assertive China. Then there is the issue of sovereignty, a leitmotif of the European Union’s “Strategic agenda 2024–2029”.<sup>103</sup> In the international arena, de jure sovereignty is overridden by de facto sovereignty, defined as a state’s ability to advance its interests and to protect itself against adverse vulnerabilities. Together with vulnerability and policy effectiveness, power is the main determinant of de facto sovereignty: the more powerful a state is, the greater its sovereignty.<sup>104</sup> The ability to protect oneself against the threat or use of force is a sign of

<sup>99</sup> *Arms and Stability in Europe: A British-French-German Enquiry*, A Report by Alastair Buchan and Philip Windsor (London: Chatto & Windus for The Institute for Strategic Studies, 1963), p. 8.

<sup>100</sup> “Europe therefore faces the re-emergence of an old security threat on its borders at the same time that its security guarantor of the past 80 years is threatening either to disappear or at least to diminish.” (Benjamin Rhode, “Europe Without America,” <https://www.iiss.org/online-analysis/survival-online/2024/04/europe-without-america/>.)

<sup>101</sup> In 1962, President Kennedy offered to a united Europe a partnership “on a basis of full equality”. While he did not mention NATO, the implication was that “full equality” would also extend to the transatlantic defence relationship. (John F. Kennedy, “Address at Independence Hall Philadelphia”, 4 July 1962, <https://www.jfklibrary.org/archives/other-resources/john-f-kennedy-speeches/philadelphia-pa-196207049>.)

<sup>102</sup> This author has discussed them in detail in Eckhard Lübke, *Standing on Our Own Feet? Opportunities and Risks of European Self-Defence*, SWP Research Paper 1/2021 (Berlin: Stiftung Wissenschaft und Politik, February 2021), <https://www.swp-berlin.org/en/publication/standing-on-our-own-feet-opportunities-and-risks-of-european-self-defence/>.

<sup>103</sup> “The European Union was founded on the imperative of securing peace in Europe, building on cooperation, solidarity and common economic prosperity. This original promise still guides us and serves as the basis for our priorities for a strong and sovereign Europe.” (<https://www.consilium.europa.eu/en/european-council/strategic-agenda-2024-2029/>.)

<sup>104</sup> On the meaning of the term and for an attempt to map Europe’s sovereignty, see Eckhard Lübke, “Die Vermessung europäischer Souveränität: Analyse und Agenda” (“Mapping European Sovereignty: Analysis and Agenda”), SWP-Studie 5/2024 (Berlin: Stiftung Wissenschaft und Politik, February 2024), doi: 10.18449/2024S05.

sovereignty. Consequently, European self-defence is a sine qua non for a “strong and sovereign Europe”.

There are compelling grounds for wanting European self-defence.<sup>105</sup> But would it be feasible? There are three essential requirements for a European self-defence posture: a solid foundation of European unity, sufficient military capabilities, and determined political leadership.<sup>106</sup>

A fourth one is the easiest to fulfil. In Europe’s present and prospective security environment, substituting for America’s engagement in and for Europe would necessitate a major expansion of military capabilities. To keep the Americans in, NATO Europe will have to do this anyway, but standing on one’s own feet would be even more costly. However, its alleged unaffordability is a specious objection: If it had to, affluent Europe would be financially and technologically capable of collective self-defence.

The crux of the matter lies in the realm of politics. A thought experiment may help illustrate the critical importance of this requirement. The U.S. forms the backbone of NATO. Could Europe defend itself if there were a similarly powerful European state? The answer is: not necessarily, because on their own even the most formidable military capabilities would not suffice. A potential adversary as well as the members of a defence alliance must be confident that, if need be, the political will to use military means will be forthcoming. Crucially, this must be done in such a way that an attacker would run an unacceptable risk, whereas for the supplier and recipient of a defence commitment, the risk must be bearable if and when the pledge is honoured.

This would be the case if Europe were a federal state with sub-state political entities sharing a common identity and an unwavering sense of solidarity. But the “United States of Europe” is nowhere in sight; for quite some time to come, Europe will remain a union of nation-states.

Conceptualizing a Europe able to defend itself must start with this reality. This does not render it elusive, however. The EU is a political entity with no historical analogy: a hybrid of inter- and supranational elements in which nation-states have transferred a substantial part of their sovereignty to the European level.<sup>107</sup> This “de-nationalisation” in favour of collective sovereignty was made possible because EU members share a common European identity. Since there is no single European people, but only peoples of Europe, this sense of belonging (“Europeanness”) is weaker than national identities. Hence, European cohesion necessitates a second component: the national interests of EU Member States. From a nation-state point of view, Europe’s added value lies in its collective power: together, EU members can more effectively and efficiently pursue their core national interests of peace and security, prosperity, and self-assertion in the international arena.

Nevertheless, the combined strength of European identity and national interests has so far been insufficient to generate the will and the capabilities needed for European self-defence. On the one hand, the costs and risks of American protection have been deemed

<sup>105</sup> Then Federal Chancellor Angela Merkel declared in 2018: “And it is no longer the case that the United States will simply protect us; Europe must take its fate into its own hands.” However, she did not make a determined effort to achieve this goal. (“Speech by Federal Chancellor Merkel in Aachen on 10 May 2018”, <https://www.bundesregierung.de/breg-de/aktuelles/rede-von-bundeskanzlerin-angela-merkel-anlaesslich-der-verleihung-des-karlspreises-am-10-mai-in-aachen-1008452%3e—my translation>).

<sup>106</sup> In this context, “Europe” is understood to be the European Union at its core—minus Non-NATO member states (Ireland and Austria). Participation of non-EU NATO members such as the UK and Norway would significantly enhance the viability of European self-defence, but may be unachievable.

<sup>107</sup> This is illustrated by, among others, the single market, a common currency, the Schengen area, supranational institutions such as the Commission, the European Parliament, and the European Court of Justice, as well as qualified majority voting.

lower than those of defence autonomy. On the other hand, one essential resource has been lacking: Member States' confidence in their mutual reliability. The demands placed on this resource are much higher in the field of defence than in the case of a common currency. Then-Chancellor Merkel's warning, "If the euro fails, Europe fails", emphasised what is at stake in this area. Yet there would be much more at stake if European self-defence were to fail: If member states were to renege on their mutual assistance pledge when challenged by an attacker, the survival of those being attacked would be in jeopardy.

The reference to monetary union is also revealing in another way. Given what is at stake, greater convergence than in the case of the single currency would be needed. Despite insufficient alignment of national economies and "economic cultures", the euro was launched in the hope that the functional necessities of a currency union would force a catch-up convergence. But this did not happen. The same mistake must not be repeated when embarking on a European self-defence union.

Therefore, a prior alignment of strategic cultures is essential. After all, in a union of nation-states the readiness of a country to entrust its survival in the solidarity of others is never a given but must be constantly renewed. In this way, self-defence is linked to overall European integration: whenever a united Europe provides its member states and citizens with tangible added value, European identity and solidarity, and thus the underpinnings of European self-defence, is strengthened.

But deepening European integration is not a self-sustaining process. It also requires determined and steady leadership by a "critical mass" of participating states. While Germany and France alone would not be sufficient in this regard, they are indispensable due to their political, economic, and military weight and because France is the only nuclear-armed EU member state since the United Kingdom's withdrawal.

The Franco-German tandem would be the 'natural' motor and precursor of European self-defence. France is a nuclear weapon state, Germany is not. Nor should it become one, as a German "bomb" would call into question the viability of NATO, the EU, and the Non-Proliferation Treaty.<sup>108</sup> Therefore, France would be the nuclear protector, Germany the protégé.

This raises two questions. First, why should France (and, for that matter, Great Britain) be willing to provide nuclear protection for Europe? After all, they have national deterrents because they doubt the reliability of the U.S. nuclear commitment. Yet the question might also be put the other way round: Could they afford not to under certain circumstances? The answer provides a bridge to the second question: If they were willing, would their commitment be able to meet the extended deterrence criteria of credibility, tolerability, and reassurance?

Unlike the U.S., the security, prosperity, and de facto sovereignty of France and Great Britain are bound up with their European partners. If the U.S. scaled back its Article Five commitment or retracted it completely, these interdependencies, reinforced as they are by geography, would become even stronger.

This is all the more true for France because of its commitment to European integration. Unlike NATO, the EU is not an international organisation, but a hybrid of supranational and international strands, less than a federalised state but more than an international association. The U.S. is a protective power *for* Europe, but not *of* Europe.

That makes a crucial difference. A French nuclear commitment to its European neighbours would still be an extended deterrence commitment. The authority to decide on nuclear use could not be shared among Europeans but would remain with the French presi-

<sup>108</sup> For good reason, "never say never" is a cardinal political maxim. If Germany were to lose its external nuclear protection, it would have to seriously consider the possibility of a national nuclear deterrent. But almost everyone, including Germany itself, would want to be spared such a situation.

dent, and since his primary loyalty must be to the French citizens who elect him, France's European partners would still not be guaranteed the same measure of nuclear protection as France proper. But the ensuing uncertainty would be significantly smaller than in the context of NATO. This is due not to any ill will on the part of the U.S. but to geography and the distinctive nature of the EU.

Strategic analysts tend to underrate or even ignore this difference.<sup>109</sup> Indeed, the standard model of extended deterrence between nation-states corresponds to transatlantic reality: the U.S. extends its nuclear umbrella to its NATO allies but not to a collective entity such as the European Union. If the U.S. were a European neighbour and a member of the EU, NATO allies would have been spared some of the bitter controversies about transatlantic burden-sharing and the requirements for a credible U.S. nuclear commitment.<sup>110</sup>

In terms of scale and sophistication of the deterrent posture, extended deterrence à la française might therefore be less exacting, so that the French arsenal would not have to mirror America's. Still, its size and capabilities, in particular regarding their survivability and selective employability, may be insufficient. British participation could significantly alleviate the problem, but without it, some French nuclear build-up may be necessary. France's European neighbours would have to contribute financially, and preferably such a build-up would be embedded in an arms-control framework. At present, this seems unrealistic, at least until the war in Ukraine ends and a lasting settlement is reached. But in the new nuclear era, any revival of nuclear arms control would have to include China and take account of the fact that it will be characterised by new alignments: While Washington will see China and Russia as a tandem it will have to deter simultaneously, Moscow and Beijing are likely to insist that French and British arsenals be counted alongside American forces against a combined Western total.

Whether the new nuclear era will see a European self-defence capability backed by an indigenous nuclear deterrent is still doubtful. And it will remain so unless a European coalition of the willing makes a sustained effort to bring it about. Germany and France must lead by example and intensify their bilateral integration in the political, economic, and military spheres.<sup>111</sup> A Franco-German community of fate could be the nucleus and serve as a catalyst for a European (self-) defence union.

But even if this ultimate goal were unattainable, a Franco-German underpinning of the European Union serves Germany's main interest in a strong and united Europe. Moreover, it would offer Germany a nuclear back-up that would make it less dependent on Washington.<sup>112</sup> In February 2020, President Macron called on his European partners to engage in a

<sup>109</sup> This is not surprising since the bulk of treatises on deterrence have been written by American scholars. What is more surprising is that European scholars also fail to appreciate this difference.

<sup>110</sup> In such hypothetical circumstances it would, for example, have been virtually impossible to differentiate between strategic and non-strategic nuclear weapons as Washington and Moscow have done. This distinction served as a trigger for the transatlantic debate in the late 1970s about a deterrence gap allegedly caused by Soviet deployment of intermediate-range and thus "sub-strategic" SS-20 missiles.

<sup>111</sup> In the "Treaty of Aachen" of 22 January 2019, France and Germany vowed "to take their bilateral relations to the next level" through, inter alia, "defining common positions on all important decisions affecting common interests and acting jointly whenever possible", and deepening "the integration of their economies towards a Franco-German economic area with common rules." To this end, they identified 15 priority projects, including enhanced cooperation on energy and climate, creation of a research and innovation network, cooperation within the EU in the field of financial services and markets, in particular concerning capital markets union, and increased cooperation within the United Nations Security Council (<https://www.diplomatie.gouv.fr/en/country-files/germany/france-and-germany/franco-german-treaty-of-aachen/article/the-treaty-of-aachen-on-franco-german-cooperation-and-integration>). Since then, they have fallen far short of this agenda.

<sup>112</sup> The Treaty of Aachen obliges them to "afford one another any means of assistance or aid within their power, including military force, in the event of an armed attack on their territories." Taking Germany within the deterrent perimeter of the Force de Frappe could be made explicit by specifying that "military force" also en-

strategic dialogue on the role of nuclear deterrence for their common security.<sup>113</sup> He should at last be taken at his word, especially by his German neighbour.

compasses French nuclear forces. This declaratory affirmation could then be underpinned by concrete steps such as the establishment of a nuclear consultative body of the Franco-German Defence and Security Council, German liaison officers with the Force de Frappe, and, ultimately, the deployment of French nuclear forces on German soil.

<sup>113</sup> “In this spirit, I would like strategic dialogue to develop with our European partners, which are ready for it, on the role played by France’s nuclear deterrence in our collective security. European partners which are willing to walk that road can be associated with the exercises of French deterrence forces. This strategic dialogue and these exchanges will naturally contribute to developing a true strategic culture among Europeans.” (<https://www.elysee.fr/emmanuel-macron/2020/02/07/speech-of-the-president-of-the-republic-on-the-defense-and-deterrence-strategy.en>.)

# IV. Conclusion

Ambassador (ret.) Dr. Eckhard  
Lübke-meier is a Visiting  
Fellow with the Executive  
Board of SWP

© Stiftung Wissenschaft  
und Politik, 2025  
**All rights reserved**

This Working Paper reflects  
the author's views.

**SWP**  
Stiftung Wissenschaft und  
Politik  
German Institute for  
International and  
Security Affairs

Ludwigkirchplatz 3-4  
10719 Berlin  
Telephone +49 30 880 07-0  
Fax +49 30 880 07-100  
www.swp-berlin.org  
swp@swp-berlin.org

Thinking about nuclear deterrence and planning for the non-use *and* the use of “the most destructive force man has yet been able to extract from nature”<sup>114</sup> brings to mind Nietzsche: “Who fights with the Dragons shall himself become a Dragon.” Yet, as Michael Howard observes: “he who does not fight with Dragons may be devoured by them.”<sup>115</sup>

The dragon is the central paradox of the nuclear age: nuclear deterrent threats derive their unique potency to avert war from the possibility that they might fail regardless. Nuclear deterrence is hazardous, and its morality will always be controversial. It is a fundamental moral principle that the end does not justify every means. The threat of instant mass killing, even when it serves the legitimate end of national security, is bound to meet with qualms and revulsion.

And yet, not taking up the fight would also be morally dubious and downright irresponsible. Nuclear deterrence is hazardous, but legitimate and indispensable to ward off existential threats. A nuclear-free world is a *Fata Morgana*: the genie is out of the bottle for good, nuclear weapons cannot be dis-invented. There might, however, be a nuclear deterrence-free world. But one should be under no illusion that removing the nuclear sword of Damocles requires nothing less than abolishing the institution of war as a means of settling conflicts. Such a stable peace is possible, as the post-World War II process of European integration has shown; alas, it has remained the exception rather than becoming the rule.

Today, the security environment is in perilous flux. Power rivalries have intensified amid the advent of a new nuclear era. While not annulling the “nuclear revolution”, its war-preventing effect is weakening, as Russia’s attack on Ukraine, which triggered a war fought in the shadow of American and Russian nuclear weapons, has shown.

As long as war has a future, so does nuclear deterrence. The imperative is to harness it in a way that keeps the dragon at bay so that it remains what thinking about and practicing nuclear deterrence has been for the past eighty years: groping in the realm of the unknown.<sup>116</sup> For “a nuclear war cannot be won and must never be fought.”

<sup>114</sup> Tucker, “Morality and Deterrence” (fn. 75).

<sup>115</sup> Howard, *The Causes of War*, p. 47.

<sup>116</sup> For a “Canon of harnessing nuclear deterrence”, see above “Nuclear Deterrence Policies: Deterrence in a New Nuclear Era”.