Vertical Proliferation Challenges

The Nuclear Non-proliferation Treaty (NPT) recognises the legal right of five states (the US, Russia, UK, France and China) to possess nuclear weapons. These states are often referred to as the Nuclear Weapons States (NWS) or as the “P5” because they are also the five permanent members of the United Nations Security Council (although the UN Security Council was established before most of these states acquired nuclear weapons). In return, under the terms of Article VI of the NPT (see Chap. 8), these five states are committed to the eventual goal of complete nuclear disarmament. Without this pledge to disarm (albeit with no formal timescale), it is unlikely that the treaty would have been agreed to by the Non-Nuclear Weapons States (NNWS).

However, the NWS have repeatedly been accused by the NNWS of not living up to this central bargain and legal requirement, and instead have continually found ways to justify keeping their nuclear arsenals. While this may have been tacitly accepted during the Cold War, the lack of progress since the 1990s has hardened the belief that perhaps the NWS have no real intention to disarm. The result is that while global nuclear order is undoubtedly challenged by new aspirant nuclear states and potentially by non-state actors (Chaps. 7 and 9), the apparent reluctance of the P5 states to fully address their disarmament commitments remains a constant thorn in the international non-proliferation agenda. Moreover, those nuclear-armed states not recognised by the NPT (India, Pakistan and North Korea) have described this current injustice as one of “nuclear apartheid”—whereby it is legal under the treaty for some states to have nuclear weapons but not for others (i.e. those that developed nuclear weapons after 1968). The aim of this chapter therefore is to give an overview of the disarmament obligation and the debate that
surrounds it, before examining each of the P5 states’ current nuclear thinking and what factors underpin their nuclear strategy, future nuclear policy, and commitment to disarmament.

This chapter proceeds in six sections; it begins by outlining the commitment made by the P5 Nuclear Weapons States to the ultimate goal of nuclear disarmament and explains how the P5 process and the more recent Creating an Environment for Nuclear Disarmament initiative have sought to advance this; section two examines current nuclear thinking in the United States, particularly the impact of the shift from President Obama to President Trump and the return of the idea of nuclear primacy; section three looks at Russia and analyses the important strategic and normative role that nuclear weapons continue to play for Moscow; in four we look at the United Kingdom, focusing on the debate over modernising and replacing the Trident nuclear weapons system; section five considers the case of France and French approaches to nuclear weapons and nuclear disarmament; and in section six, contemporary Chinese nuclear strategy, policy and disarmament is analysed. The chapter finishes with a guide to further reading and resources.

The Legal Commitment to Disarmament

As part of the central bargain of the 1968 Non-Proliferation Treaty (NPT), the five states recognised by the Treaty as Nuclear Weapons States (the US, Russia, UK, France and China)—known as the P5—pledged to work in good faith towards total nuclear disarmament. This pledge is contained in Article VI of the Treaty (see Chap. 8). In return, the Non-Nuclear Weapons States party to the Treaty agree not to seek a nuclear weapons capability for themselves. As a result, and while the treaty recognised and legalised “the division of the world into nuclear haves and nuclear have-not’s”, this was not intended to be permanent. The Treaty, and the NNWS, envisioned that eventually the Nuclear Weapon States would eliminate their nuclear arsenals. Indeed, the legal commitment to work towards total nuclear disarmament was a central part of the agreement, and without this it is highly unlikely that any international regime could have been established. The commitment to eventual disarmament was also seen as the counterbalance for efforts toward preventing further nuclear proliferation. In the words of Sverre Lodgaard, a disarmament quid for the non-proliferation quo.
While a lack of progress toward nuclear disarmament was perhaps reluctantly accepted during the Cold War (the NWS actually increased their total combined nuclear forces after the NPT was signed in 1968, at least until the mid-1980s), pressure has mounted considerably over the past three decades for the NWS to make more of an effort to fulfil their legal commitments under Article VI. For sure, the overall number of nuclear weapons held by the NWS has been cut by over three-quarters since the 1980s, and while the NWS have initiated new mechanisms to show their continued commitment to the NPT regime, concerns have mounted that the Nuclear Weapons States are not taking their obligations under Article VI seriously enough. In particular, the NNWS have charged that the NWS have not pursued disarmament in good faith, especially given the seismic changes to the international system since 1991, and that reductions have been cosmetic and driven by cost savings and restructuring rather than representing a genuine commitment to disarm.\textsuperscript{4} The NNWS also argue that the NWS and the NPT regime more broadly has focussed too much on non-proliferation and not enough on disarmament. As Steven Miller explains:

\begin{quote}
Whatever Article VI may say or mean, it has always coexisted with a reality marked by large nuclear arsenals and unshakable belief in the unique value and importance of nuclear weapons … [and] the NWS have clearly perceived Article VI to be ancillary and subordinate to the principle purposes of the NPT—that is, preventing the spread of nuclear weapons to other states.\textsuperscript{5}
\end{quote}

This seeming imbalance is cited as another aspect of the unequal nature of the NPT regime, and its dominance by the five recognised NWS. A further charge is that the reluctance of the P5 states to meet their disarmament obligations under the NPT is a powerful driver of horizontal nuclear proliferation to others.\textsuperscript{6} For an overview of this see Table 6.1.

Pressure to address the requirements of Article VI has grown over previous decades, and especially since the 2005 NPT Review Conference ended without agreement. This in turn has forced the NWS to adopt new mechanisms to address this perceived disarmament deficit, at least rhetorically. The first move in this direction was the establishment of the P5 Process, which began with discussions between the NWS in 2007 on transparency and confidence-building and was launched formally in 2009.\textsuperscript{7} This was the first time that an attempt had been made to establish a multilateral forum where the NWS could discuss collectively their disarmament obligations under the NPT and how they might fulfil them.\textsuperscript{8} This coincided with moves in France and the US (discussed below), which together helped pave the way for a successful
Non-Proliferation Treaty Review Conference in 2010, which included a renewed commitment by the NWS to,

their unequivocal undertaking to accomplish, in accordance with the principle of irreversibility, the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States parties are committed under article VI of the Treaty.9

While a proposed plan at the 2010 Review Conference for a Nuclear Weapons Convention failed (it was of course successfully reborn a few years later and led to the Nuclear Ban Treaty), the final agreement did commit the P5 states to report on their disarmament activities at the 2014 NPT preparatory committee meeting.10 The P5 Process would continue, and some progress was made in certain areas such as attempting to agree a nuclear terminology, increasing the transparency of nuclear arsenals, and working toward a fissile material production ban.11 In an attempt to further this push, in 2014 the International Partnership for Disarmament Verification was established to bring together states with and without nuclear weapons to identify challenges associated with nuclear disarmament verification, and to find ways to address those challenges.12

However, the 2015 NPT Review Conference failed to produce a consensus document (partly because agreement could not be reached on a Weapons of

| View of the P5/NWS | View of the NNWS |
|--------------------|------------------|
| The NWS are responsible actors that only retain nuclear weapons for deterrence purposes; | The NWS are not taking their commitment to disarm under the NPT seriously, this is undermining the bargain at the heart of the treaty; |
| The nuclear weapons of the NWS help maintain global peace and stability; | The failure to meet the disarmament obligation is driving nuclear proliferation to new actors; |
| The NWS have made significant cuts in their nuclear forces in recent years; | These cuts have not gone far enough; |
| The NWS need to keep nuclear weapons because the world is a dangerous place and the future is uncertain; | The failure to disarm is making it more difficult to deal with nuclear outliers; |
| It is more important to focus on preventing the horizontal spread of nuclear weapons before focussing on nuclear disarmament; | It is more important to focus on nuclear disarmament as a means to preventing horizontal nuclear proliferation |
| As long as nuclear weapons exist the P5 should retain them. | As long as the P5 keep their nuclear weapons more states will seek the same capabilities. |

Table 6.1 The debate over Article VI of the NPT

A. Futter
Mass Destruction-free zone in the Middle East), and this led to a change in approach by both the NNWS and NWS. Disappointed with the outcome of the 2015 review conference, groups of NNWS sought to increase pressure from outside the NPT framework. A key component of this was a ramping up of the Humanitarian Impacts of Nuclear Weapons agenda that had begun in 2013, and which would ultimately help pave the way for the Nuclear Weapons Ban Treaty in September 2017 (addressed in more detail in Chap. 10). This reflected a growing belief by some that progress towards disarmament was more likely through initiatives outside of the formal treaty process.

While the NWS would continue meeting regularly through the P5 process after 2015, the US announced a new multilateral disarmament dialogue initiative called “Creating the Conditions for Nuclear Disarmament” in 2018. The new approach, which was later changed to “Creating an Environment for Nuclear Disarmament” (CEND), manifested in a working paper submitted by the United States to the second preparatory committee meeting for the 2020 NPT Review Conference, held in Geneva in 2018. The first meeting was attended by delegates from 42 states, who agreed to establish two working groups that would analyse how to reduce incentives for states to acquire or increase nuclear stockpiles, how to ensure the continuing functioning and effectiveness of current disarmament mechanisms, and how to bolster current nuclear risk reduction measures. Through both the P5 process and CEND, the NWS appear to remain committed to a “step-by-step” or incremental multilateral approach to nuclear disarmament, but whether this can remain credible and acceptable to the NNWS beyond the NPT Review Conference of April/May 2021 (it was postponed for a year following the Covid-19 pandemic) remains to be seen.

As the following sections show, and notwithstanding the ongoing P5 process and CEND, the ultimate goal of multilateral nuclear disarmament (as opposed to unilateral disarmament, which is even less likely) remains as long way off for the NWS, and this has important broader implications. As Sverre Lodgaard points out, “The bottom line is that as long as some states possess nuclear weapons, others will seek them too. The best way to prevent proliferation is therefore to reduce existing arsenals to zero.” Ultimately therefore, it is difficult to argue against a state seeking to acquire nuclear weapons when those obliged to work towards disarmament are not working in good faith (or at least don’t appear to be working in good faith) to eliminate their own. As the argument goes, if nuclear weapons have no utility then why do the P5 need to keep them, if they do, then why shouldn’t others have them too? The current nuclear thinking of the United States, Russia, the United Kingdom, France and China, and the likelihood of future nuclear reductions and disarmament is examined below.
The United States and Nuclear Primacy

As the first nation to develop nuclear weapons, and the only country ever to have used them, the United States is often seen as bearing a special responsibility in the global nuclear order. While the idea of nuclear disarmament has always been part of the US political debate, the US has striven to maintain a strong and sophisticated nuclear arsenal, and some would argue, a strategic nuclear advantage over its competitors.\textsuperscript{18} Despite making significant reductions in its nuclear weapons stockpile since the Cold War, the United States still retains a large and diverse nuclear weapons capability; continues to view nuclear weapons as fundamental to fulfilling US national and global security commitments; has not ratified the Comprehensive Test Ban Treaty; and appears set to remain the foremost global nuclear power well into the future. Similarly, US moves to augment its nuclear capabilities with advanced non-nuclear weapons, in which the US currently enjoys significant qualitative advantage, is making nuclear cuts by other powers far more difficult.

A decade ago, President Barack Obama put the idea—if not perhaps the material reality—of nuclear disarmament back at the heart of both the US and global political agenda for the first time in a generation. But notwithstanding highly acclaimed speeches in Prague and Berlin, signing the New START treaty with Russia and the Joint Comprehensive Plan of Action (JCPOA) nuclear deal with Iran, there was a feeling that President Obama didn’t really follow through on this early disarmament enthusiasm. Moreover, while Obama strove to place the issue of nuclear disarmament back at the centre of the US political debate, he also made it clear that nuclear weapons remained central to US national security thinking. As he said in 2008, “I have made it clear that America will not disarm unilaterally. Indeed, as long as states retain nuclear weapons, the United States will maintain a nuclear deterrent that is strong, safe, secure, and reliable.”\textsuperscript{19} This in part reflected the fact that there is relatively little domestic political enthusiasm for US nuclear disarmament any time soon.

The election of Donald Trump as President in 2016 appears to mark a move further away from the goal of nuclear disarmament in the United States and instead towards nuclear modernisation and a rejection of international arms control. Under President Trump, the US left the 1987 Intermediate-range Nuclear Forces (INF) treaty with Russia, pulled out of the JCPOA agreement with Iran, cast doubt on the future of the New START treaty signed by President Obama, and outlined plans for a range of new nuclear weapons systems. While the Trump administrations’ 2018 Nuclear Posture...
Review (NPR) reiterated the long-term goal of disarmament, it also appeared to encompass a change in tone from the last NPR released in 2010, re-emphasising the importance of nuclear weapons, great power rivalries, and the broad range of threats that need to be deterred. The NPR also codified the administrations’ push for nuclear modernisation, which while begun under Obama, has been accelerated under Trump. This includes plans for a new low-yield nuclear warhead and possibly new previously banned INF-type weapons. Some have suggested that this marks the beginning of a return to the notion of nuclear superiority, a possible new nuclear arms race with Russia, and even an interest in a posture designed for nuclear warfighting. The Trump administration has also inferred that the global environment is not currently conducive to nuclear disarmament.

Another significant recent trend in US national security thinking has been a gradual move toward greater reliance on advanced non-nuclear military forces to augment the missions and roles assigned to nuclear weapons. This can be traced back to the early 2000s and the move by the then George W. Bush administration to create a “new Triad” of strategic forces, consisting of nuclear and non-nuclear strike options, active and passive defence, and an advanced infrastructure. As David McDonough explains:

The new triad represents a complex and potentially contradictory effort to reduce American self-deterrence by de-emphasising the role of nuclear weapons through an expansion of non-nuclear components in US deterrence calculus, while simultaneously attempting to modify American nuclear forces to play a more tailored deterrent role against potential adversaries.

Essentially, these new capabilities are designed to provide more flexibility when dealing with nuclear issues. This is because they provide: extra assurance in case deterrence should fail, especially by deploying ballistic missile defences; options to get around the problems associated with using nuclear weapons and the so-called taboo (see Chap. 11) because conventional weapons can be used for roles previously reserved for nuclear weapons; and extra capabilities and options to ensure full-spectrum deterrence against all types of adversary. Under the Obama administration a greater role for non-nuclear weapons systems was viewed in part as a possible mechanism to help reduce the reliance on nuclear weapons and perhaps help to facilitate nuclear weapons reductions. But this logic has been transformed under President Trump, and now appears to be closer to the thinking of the George W. Bush administration, in that non-nuclear weapons supplement and reinforce the role played by nuclear forces, and help bolster strategic superiority over other states.
Either way, a move toward a more diverse nuclear and non-nuclear force structure is not without its complications, and it may be that a greater role for missile defence and other non-nuclear weapons programmes by the United States makes nuclear weapons even more valuable to others, and thereby undermines the broader commitment to work towards disarmament. As is discussed below, advances in US non-nuclear forces, particularly missile defence, are a major reason for Russian and Chinese reluctance to reduce their own nuclear forces (especially when now added to the Trump administrations’ renewed interest in revitalising US nuclear forces). In this sense, and while a greater reliance on non-nuclear forces might well help to facilitate small cuts in US nuclear weapons, it will do little to create the conditions for wider nuclear reductions.

There is perhaps no better example of this than in the relationship with Russia. While significant progress on nuclear arms reductions has been made over the past three decades (by the United States, primarily in coordination with Russia, but also unilaterally, such as with the 1991 Presidential Nuclear Initiatives (see Chap. 8)), this process seems destined to slow and even grind to a halt. This is because while previous cuts to nuclear weapons numbers made little impact on overall security, further reductions will begin to have far greater implications. There are two important components to this: politically, further cuts in US nuclear weapons numbers will require reciprocal moves from Russia (and perhaps China) and not include limits of US ballistic missile defence systems for them to be politically acceptable to Congress; and at the same time, Russia appears unwilling to discuss further arms control or nuclear reductions without a legal commitment to limit the deployment of ballistic missile defences and perhaps other non-nuclear systems as well. The net result is that further cuts to nuclear weapons stockpiles beyond the current status quo, and therefore moves toward involving the other Nuclear Weapons States, which have smaller nuclear stockpiles, will arguably need a legally binding agreement on missile defence. However, such an agreement will be very difficult for any US president to achieve politically (this is addressed in more detail in Chap. 8).

The United States is arguably the pivotal player in the quest to work “in good faith” towards the legal requirements of Article VI of the NPT. US actions are intrinsic to Russian and Chinese nuclear policy, and to any notion that the nuclear arms control and nuclear reductions agenda can be truly multilateralised. US actions are also essential in setting the tone for the global nuclear order and the prospects of nuclear disarmament. However, and while the commitment to disarmament was revived, at least rhetorically by the Obama administration, the US appears to remain committed to retaining a
nuclear capability as long as others do, and the actions and policy of the Trump administration may make both cuts to US nuclear weapons and progress on broader disarmament efforts less likely in the near future.

Russia and Great Power Status

Although the Cold War ended thirty years ago, nuclear weapons arguably remain as important to Russian security and identity today as they did in 1949 when the first Soviet atomic bomb test took place. Indeed, there is a wide range of evidence that suggests that nuclear weapons are becoming more important to Russian national security thinking and national identity rather than less. Nuclear weapons have a high profile in Russian security strategy, and it is difficult to see how Russia would or could agree to significant further cuts in its nuclear weapons stockpile any time soon. In fact, Russian nuclear weapons have been given additional roles in the past three decades, such as deterring and “de-escalating” conventional warfare and balancing the perceived weaknesses of Russia’s conventional armed forces. In addition to deterring a nuclear (or non-nuclear) attack on Russia, and the growing concerns about US nuclear policy and modernisation, nuclear weapons also play an important role for Russia in other ways, such as through a belief that they enhance international status and are a key symbol of national prestige. The nuclear issue is also often used as a mechanism to rally domestic support behind the Russian leadership. Given these strategic, normative and political dynamics, the prospect for significant Russian moves towards nuclear disarmament in the near future seem slim.

In recent years the trend in Russian nuclear thinking has been to modernize its nuclear forces and to expand the roles that they might play in Russian national security policy, albeit at the same time as reducing the overall number of nuclear weapons and delivery vehicles. In 1993, for example, Russia abandoned its “no first nuclear use” pledge and announced that it would consider using nuclear weapons first in a crisis. In 1998, it was announced that all three legs of the Russian nuclear triad would be modernised, and that the roles of nuclear forces would be expanded. As the 2010 Russian Military Doctrine made clear:

The Russian Federation will reserve the right to use nuclear weapons in a situation when nuclear weapons and other kinds of weapons of mass-destruction are being used against it and (or) its allies, and also against a large scale aggression with conventional weapons in a crisis situation where the national security of The Russian Federation is at stake.
In March 2018, President Vladimir Putin announced that Russia intended to build a new suite of nuclear weapons systems, including a new heavy ICBM, a hypersonic glide vehicle, an underwater vehicle and a nuclear-powered cruise missile. These plans are believed to have been driven by concerns about US nuclear and advanced non-nuclear weapons and doctrine, but also perhaps due to concerns that the current nuclear weapons systems had deteriorated and needed replacement. The security rationale for Russian nuclear weapons therefore remains strong.

Another fundamental driver of Russian nuclear thinking is a perception that nuclear weapons are key to “great power” status, and are symbolic of Russia’s global influence. There is also a belief that Russian policymakers remain nostalgic for the strategic balance based on nuclear weapons and nuclear deterrence that characterised that Cold War relationship with the US and NATO. As Vladimir Dvokin points out:

The growing importance of this factor has, first and foremost, got to do with the fact that of all the main characteristics of the USSR as a superpower; compared to the US; that is to say the military strength, influence on world development, a developed military industrial complex and other characteristics, the only one that is left is the nuclear parity (in addition to the size of the country).

The desire for an international system based around the concept of MAD also reflects another key driver of current Russian nuclear thinking, that is the growing weaknesses of Russian conventional forces and at the same time the growth in advanced US/NATO conventional forces, especially the development and deployment of ballistic missile defences and precision strike capabilities. While once it was US and NATO nuclear weapons programmes being driven by overwhelming Soviet superiority in conventional military forces, roles have now been reversed, particularly in Europe. The superiority of US and NATO non-nuclear forces prevents Russia from de-emphasising nuclear weapons for its security. Equally, this means that Russia is unlikely to agree to any further US-Russian nuclear cuts without some type of agreement on missile defence and perhaps on the conventional NATO-Russia military force balance. As Alexei Arbatov explained in 2011:

Russia is reluctant to commit itself to much deeper reductions after the New START in view of US/NATO advantages in BMD technology and conventional weapon systems and forces, the potential threat from other nuclear weapon states (all eight of which have weapons that can reach Russian territory)
and American space support and potential strike capabilities, as embodied in the Prompt Global Strike concept and systems.\textsuperscript{38}

Without further US-Russian cuts, it is difficult to see how other nuclear powers, and particularly China, can be brought into the international arms control and disarmament process.

In 2019, Vladimir Putin made it clear that Russia desired an extension to the New START Treaty that Russia signed with the US in 2010, and which will expire in February 2021.\textsuperscript{39} But at the time of writing, Russia has not reached agreement with the Trump administration that could extend the Treaty until 2026. With the end of the INF Treaty in 2018, New START remains the only legal restriction on US and Russian nuclear weapons building, and its demise could signal the beginning of a period of more rather than less Russian nuclear weapons.

\textbf{The United Kingdom, Trident and the Letter of Last Resort}

The United Kingdom was the third nation to join the nuclear club after it tested its first nuclear device in 1952, and since this time the UK has remained committed to deploying only a limited or “minimum” nuclear deterrent capability. Since 1958 the UK has relied on the United States for part of its nuclear forces under the Mutual Defence Agreement, and since the 1990s the UK only deploys nuclear weapons on ballistic missile submarines. With less than 200 useable nuclear warheads, and with an ongoing and heated political debate about the desirability and necessity of remaining a nuclear-armed state, the UK is often seen as being the closest of the NWS toward nuclear disarmament. As Nick Ritchie wrote in 2012:

\begin{quote}
The UK’s determination to acquire a nuclear capability was born out of the strategic context of the Cold War and post-war pretensions to great power status … but the context has changed, and changed dramatically. Today, there is deep disquiet within Westminster and amongst the general public about the necessity and wisdom of investing heavily in reproducing a strategic nuclear weapons capability.\textsuperscript{40}
\end{quote}

Nevertheless, in 2016 the UK Parliament voted to continue to push ahead with the replacement of the submarines needed for the Trident nuclear deterrent system, and therefore to remain a nuclear weapons-capable state well into
the middle of this century. This decision arguably reflects a particular mixture of political, technical, normative and industrial pressures, and the inertia they create, as much as it does any current or future security requirements. This means that the UK nuclear weapons program is often seen as being firmly entrenched, notwithstanding periodic political interest in disarmament.41 However, the future of the UK’s nuclear weapons could be decided by whether Scotland achieves independence at some point in the future and orders the closure of the facility in western Scotland where the submarines and nuclear warheads are kept.

UK nuclear policy rests on five central pillars. First, the commitment to a minimum nuclear deterrent capability, in this case nuclear-armed ballistic missiles fired from a nuclear-powered submarine, and the maintenance of a minimum credible stockpile of nuclear warheads. In 1998 for example, the Strategic Defence Review reduced operationally deployable warheads to no more than 200; this was reduced to 160 in 2006 and is due to be reduced further to 120 by the mid-2020s.42 The minimum nuclear force is calculated as that sufficient to threaten and inflict “unacceptable damage” on any opponent. Second, the policy of continuous-at-sea-deterrence whereby one nuclear-armed submarine (the UK currently has a fleet of four SSBNs) will always be on patrol under the sea and ready to fire if and when it is required. Third, the UK maintains a strong link with the United States to provide the Trident ballistic missiles required for the deterrent (and a site where they can be tested). The UK submarine and warhead designs are independent, but they do share many similarities with their US counterparts. The UK government has always been explicit that the UK (and not the US) retains ultimate control over its nuclear weapons.43 Fourth, UK nuclear forces are formally committed to NATO for the common defence of the Alliance. Fifth, the UK is legally committed to the goal of nuclear disarmament and has ratified the CTBT and ceased the production of fissile material.44 The combined result is what the UK perceives to be the minimum credible force structure for deterrence purposes, although the number of nuclear weapons deployed could possibly be reduced further. As then Chief Secretary to the UK Treasury, Danny Alexander pointed out during the Trident Alternatives Review in July 2013:

Britain has the smallest nuclear arsenal of any of the declared nuclear powers. Some would argue that Britain has done its bit for disarmament and we have reached the minimum level possible for nuclear deterrence to be credible before stepping off the ladder altogether. This argument has been deployed at every point we’ve scaled down over the last 20 years—but each time it has proven not to be true. The same argument will be made for maintaining continuous nuclear
deterrence. But we seem to find we have the ability to step down the nuclear ladder when we find the political will to do so.45

However, and while Britain is seen as the model of minimum nuclear deterrence by many, the United Kingdom does retain a policy of first nuclear use should the British state ever face extinction. It also operates a secret system known as the Letter of Last Resort. This is a series of four identical letters written by each new Prime Minister upon entering office, placed in a safe aboard each of the nuclear-armed submarines, instructing the captain what to do should the UK be destroyed, and the Prime Minister is killed. This ensures that UK nuclear weapons can always be threatened and used even if the country is destroyed (albeit the letter doesn’t have to order nuclear retaliation to be effective because it is secret—all that matters is any would-be attacker thinks it might).46

Over the last decade, the UK nuclear weapons debate has taken two forms. The first is whether or not the UK should retain nuclear weapons or unilaterally disarm; the second, assuming the UK wishes to retain nuclear weapons, is what type of force structure is required (while retaining the ultimate goal of multilateral disarmament). These questions are intrinsically linked, because it is believed that anything less than four SSBNs carrying submarine launched ballistic missiles, operating a policy of continuous-at-sea-deterrence, would not be compatible with a credible nuclear deterrent. This was the debate at the heart of the 2013 Trident Alternatives Review, where the UK government decided that if it was to retain a credible nuclear deterrent then it must replace the current system “like-for-like”.47 Consequently, the debate in the UK is between retaining “business as usual” or disarming entirely. A summary of this debate can be found in Table 6.2 below.

In July 2016, the U.K. House of Commons voted 472–117 to replace the current submarine force needed to deliver nuclear weapons with a “like-for-like” system.48 While the new submarines won’t be deployed until the end of the 2020s at the earliest, this makes it very likely that the UK will retain a nuclear weapons capability well into the second half of this century.

The political conversation about trident renewal and Britain’s continued status as a Nuclear Weapons State has been complicated by the debate over Scottish Independence. While Scotland voted against independence in the 2014 referendum (55%–44%), the UK decision to leave the European Union (which Scotland voted against)49 in 2016 has reignited interest in a second independence vote driven by the majority party in Scotland, the Scottish Nationalist Party. Given the Brexit decision, and the dominance of the SNP in Scottish politics, it is possible that a future referendum may see Scotland
vote to leave the UK. A future “yes” vote could force the UK government to make a difficult decision about its nuclear weapons, as the SNP has declared that it would order nuclear weapons removed from Scottish territory (all 54 Scottish National Party members of the UK Parliament also voted against Trident renewal in 2016). Given the particular requirements for a nuclear submarine base and the enormous resources (and cost) that would likely be required to relocate to a different part of the country (if indeed, this proved possible), an independent Scotland would significantly complicate the UK nuclear debate and may spell the death knell for UK nuclear weapons.

### France and the Force de Dissuasion

After becoming the fourth nation to test a nuclear device in 1960, French nuclear thinking developed in a slightly different manner to the three other states that preceded it. France essentially built nuclear weapons because they provided three important perceived benefits: the ultimate national security guarantee against the threat from the Soviet Union; independence from the United States, both politically and militarily in case of a crisis (i.e. France wouldn’t have to rely on the US to come to its aid if Europe was threatened);

| Keep nuclear weapons                                                                 | Disarmament                                                                 |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Nuclear weapons protect the UK against an uncertain future.                          | It is not clear who exactly the UK is trying to deter with these weapons, or who the UK might use them against. |
| The ultimate security offered by nuclear weapons is worth the financial cost.        | UK nuclear weapons cost a lot of money and resources that could be used on other things. |
| A UK decision to unilaterally disarm would have little impact on others and might even encourage nuclear acquisition. | Unilateral UK disarmament would provide a much need boost to the NPT regime and send a strong message about disarmament. |
| Nuclear weapons are central to UK national identity and world role.                  | Nuclear weapons are not central to the UK’s global role, economics, information technology, culture, education are more important assets globally. |
| Nuclear weapons provide a lot of high-skilled jobs and add to the UK’s hi-tech and knowledge infrastructure. | Other conventional military options to fulfil military and deterrence requirements are available to the UK. |
| Why give up what the UK already has, and may need in the future?                     | Why keep something that costs lots of money and doesn’t appear to address current security requirements? |

Table 6.2 The debate over UK nuclear weapons

| Keep nuclear weapons                                                                 | Disarmament                                                                 |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Nuclear weapons protect the UK against an uncertain future.                          | It is not clear who exactly the UK is trying to deter with these weapons, or who the UK might use them against. |
| The ultimate security offered by nuclear weapons is worth the financial cost.        | UK nuclear weapons cost a lot of money and resources that could be used on other things. |
| A UK decision to unilaterally disarm would have little impact on others and might even encourage nuclear acquisition. | Unilateral UK disarmament would provide a much need boost to the NPT regime and send a strong message about disarmament. |
| Nuclear weapons are central to UK national identity and world role.                  | Nuclear weapons are not central to the UK’s global role, economics, information technology, culture, education are more important assets globally. |
| Nuclear weapons provide a lot of high-skilled jobs and add to the UK’s hi-tech and knowledge infrastructure. | Other conventional military options to fulfil military and deterrence requirements are available to the UK. |
| Why give up what the UK already has, and may need in the future?                     | Why keep something that costs lots of money and doesn’t appear to address current security requirements? |
and an indigenous nuclear weapons programme offered equality with the United Kingdom, and was a source of broader national prestige. Sixty years later, and despite seismic changes in the international system, France continues to believe that nuclear weapons are as indispensable to its security and defence policies in today’s world as they were in 1960. Both President Francois Hollande who described French nuclear weapons as “essential” in 2013 and President Emmanuel Macron in early 2020 have reiterated the importance of nuclear weapons for French (and European) security and for France’s role in the world.

For France, nuclear weapons are seen as essential insurance should a new major threat to Europe emerge, or to prevent blackmail or coercion by another state with Weapons of Mass Destruction. Strategic threats have not disappeared the logic goes, and France still doesn’t see the US extended nuclear deterrence guarantee through NATO as fully credible (a continuation of President Charles de Gaulle’s belief from the early 1960s that the US would not risk Chicago to defend Paris). In this sense, the rationales for the nuclear program remain similar today as they were when France first joined the nuclear club. Equally, although less publicly admitted, nuclear weapons remain central to French prestige and its conception of itself as a great or world power. As Matthew Moran and Matthew Cottee point out, “France’s position as a nuclear weapon state fulfilled the desire for prestige and status that is deeply ingrained in the French national narrative.”

Over the past three decades, France has embarked on a dual policy of modernisation and rationalisation, which has seen a reduction in the size and composition of French nuclear forces. In January 1996, all land-based nuclear missiles were deactivated, and in 2008 President Nicolas Sarkozy announced reductions to the number of nuclear weapons that could be delivered by aircraft. Today, France still retains a dyad of nuclear delivery systems (missiles fired from submarines and aircraft) and a stockpile of around 300 deployable warheads. In addition to this, there is very little internal political debate about nuclear abolition in France. Indeed, unlike in the UK, the nuclear issue remains almost taboo in France and is rarely discussed publicly. French officials were notably silent over the Global Zero Agenda and perhaps unsurprisingly, the then government of Nicolas Sarkozy reacted very cautiously to President Obama’s Prague speech on nuclear abolition. As Venance Journe points out, “The French authorities response to the push for nuclear zero is that the nuclear deterrent is the best way to respond to nuclear proliferation and it will remain at the core of France’s security for the foreseeable future.”

In 2017, a spokesperson for the French Ministry for Europe and Foreign Affairs described the Nuclear Ban Treaty as “unsuited to the international
security context” and that nuclear deterrence remains the bedrock of French security policy. Consequently, it appears that any recent moves to reduce nuclear force levels have been to increase efficiency and financial savings rather than to move closer to abolition. As a result, as Bruno Tertrais suggested in 2007, “French nuclear policy is most likely to remain on a path of prudence, conservatism, and restraint for the next 20–25 years.” There is no reason to suggest this has changed.

The apparent internal French political consensus on the nuclear issue and general scepticism toward nuclear disarmament (at least in the near future) has led analysts to portray the country as “the most conservative of the three Western nuclear weapon states.” As a result, it is difficult to envision a set of circumstances in the short term that might lead France towards nuclear disarmament, if anything nuclear weapons remain as central to French thinking as they did in 1960, and this seems unlikely to change any time soon.

China and Minimum Deterrence

China was the fifth state to join the nuclear club in 1964, and the last to do so before the 1968 Non-proliferation Treaty was agreed. Since this time, China has appeared content with maintaining a small but effective nuclear arsenal, a commitment not to use nuclear weapons first, and at the same time general support for the goal of total nuclear disarmament. The result is that Chinese nuclear force levels have not risen to the heights of the United States and Russia, and have remained fairly consistent over time (and are now roughly equal in terms of numbers, to the UK and France). That said, China is modernising its nuclear weapons delivery systems, primarily as a response to moves being made by the United States, and particularly the deployment of ballistic missile defences. Such moves are making the Chinese leadership increasingly reluctant to reduce its nuclear weapons for fear that their deterrent capability might be undermined or that US superiority might leave them open to nuclear coercion. In part because of this, Chinese officials believe that further and deeper nuclear arms reductions need to be made by the United States and Russia before China can become involved in nuclear disarmament discussions. However, the current nuclear weapons modernisation plan started in the 1980s continues, and at the time of writing China is the only Nuclear Weapon State party to the NPT that is believed to be increasing the size of its nuclear arsenal.

China has adopted a rather different nuclear philosophy to the other NWS states and has never, at least not publicly, described nuclear weapons as
weapons of war. Through a no-first use declaration and the de-alerted status of its nuclear forces, China has maintained what it perceives to be the absolute minimum required for nuclear deterrence. As the 2010 Ministry of Defense White Paper explains: “By giving up the first use option, China has limited nuclear weapons to retaliatory strikes only … pre-emptive nuclear use has never been a possibility.”

China is thought to store most of its nuclear warheads in a central warhead facility, and not mated to delivery vehicles, and it is unclear if Chinese nuclear-powered ballistic missile submarines have sailed with nuclear warheads, as this would constitute a considerable change in doctrine.

Ultimately, Chinese nuclear force composition has and continues to be determined predominantly by what is required to ensure deterrence through a retaliatory second nuclear strike should China ever be attacked with nuclear weapons, that is, enough nuclear warheads and delivery vehicles survive to retaliate against an adversary’s major cities.

China also remains publicly committed to the ultimate goal of nuclear disarmament, which can be traced back to its first nuclear test in 1964. However, Chinese views on nuclear abolition are increasingly being clouded by international developments. The first main challenge is the fact that China’s two main rivals, the United States and Russia, retain significantly bigger and more capable nuclear forces than does China. Consequently, considerable further nuclear cuts must be made before China can credibly enter any nuclear disarmament dialogue. As Hui Zhang explains:

Given the huge qualitative and quantitative gap between the Chinese arsenal and those of the United States and Russia … Beijing cannot be expected to involve itself directly in the reduction of its nuclear weapons until the United States and Russia have made deeper cuts in their arsenals.

In addition to these far larger nuclear capabilities of its strategic competitors, China is also concerned about developments in conventional weaponry (primarily by the United States), particularly the growing deployment of US ballistic missile defences. In the words of Taylor Fravel and Evan Medeiros:

the PLA’s main concerns about maintaining a credible second strike [nuclear] force are driven by the US military’s development of a trifecta of nonnuclear strategic capabilities: (1) missile defenses, (2) long-range conventional strike, and (3) sophisticated command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) assets to locate and target China’s nuclear forces. The combination of these three capabilities, in the eyes of the Chinese, provides the United States with the ability to eliminate China’s
deterrent in a crisis without crossing the nuclear threshold, reopening the door to US coercion of China.\textsuperscript{73}

Essentially, the fear is that, during a crisis the US could use its advanced monitoring and sensor technologies to locate Chinese nuclear assets, attack these systems with long-range precision strike weapons, and then use ballistic missile defences to nullify any weapons that survived.\textsuperscript{74} The result is that the perceived utility of a US non-nuclear first strike capability is driving the requirement for an enhanced Chinese second-strike nuclear capability. As a result, China has responded by both qualitatively and quantitatively modernising its strategic nuclear forces.\textsuperscript{75} Chinese officials have also begun thinking about whether China’s nuclear forces need to maintained at a higher state of alert (and with warheads mated to delivery vehicles) in case they cannot survive a surprise disarming first strike.\textsuperscript{76}

These dynamics have two broader implications for global nuclear order and the prospects for disarmament. First, as long as China feels threatened by the United States, or at least open to coercion, and while the US and Russia retain much larger nuclear forces, China will not entertain the idea of nuclear disarmament. Instead, it may continue to increase its nuclear capabilities both qualitatively and quantitatively. Second, current Chinese nuclear modernisation plans and concurrent expansion of the nuclear weapons stockpile, ostensibly in response to concerns about the US and to a lesser extent Russia, will have implications for other states, most notably India, but also potentially for Japan, South Korea and Taiwan.\textsuperscript{77} Consequently, and while China remains publicly committed to its obligations under Article VI of the NPT, the prospects for near term movement toward nuclear disarmament appears bleak.

### Key Points and Guide to Further Reading and Resources

This chapter has provided the reader with an overview and assessment of the current nuclear thinking of the P5 group of nuclear-armed states. A summary of these points is provided below:

- Under the terms of the Non-Proliferation Treaty the five recognised Nuclear Weapons States (NWS) are committed to work in good faith towards nuclear disarmament. However, there is a growing feeling that the so-called P5 states are not living up to this obligation. The P5 Process and the CEND are recent diplomatic initiatives by the NWS to counter this.
- Under the Trump administration, the United States has placed more emphasis on nuclear weapons, is continuing to modernise its nuclear forces and has

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appeared to change the US approach to international nuclear arms control. At the same time, the US is developing a suite of non-nuclear weaponry that might be used for strategic purposes, which will make future nuclear cuts by other states more difficult.

- Nuclear weapons remain central to Russian strategic and security thinking, and this is unlikely to change any time soon. In fact, a number of dynamics, but particularly, US missile defence plans, weak Russian conventional forces, prestige, domestic politics and the rise of China, are probably making nuclear weapons more attractive to Moscow rather than less.

- The United Kingdom is perhaps the closest of the P5 powers to disarming or at least the closest to acting “in good faith” to meet its disarmament commitments, although Parliament has voted to replace the submarines needed for the Trident nuclear weapon system at the end of the 2020s. A number of internal political and normative dynamics will make it very difficult for Britain to disarm unilaterally, but an independent Scotland could make disarmament inevitable.

- France remains staunchly committed to possessing nuclear weapons for deterrence and perhaps national prestige and is arguably the most conservative of the current P5 group of nuclear-armed states. Unlike in other states, nuclear weapons remain a taboo subject in France and are rarely publicly debated.

- China has a complicated relationship with nuclear weapons involving a commitment to a small nuclear force and disarmament but at the same time a set of genuine security concerns that are driving nuclear modernisation. Chinese nuclear thinking appears to be highly contingent on US and Russian actions regarding nuclear and conventional military forces.

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