



Ministry
of Defence

Joint Doctrine Note 1/19

Deterrence: the Defence Contribution



Joint Doctrine Note 1/19

Deterrence: the Defence Contribution

Joint Doctrine Note (JDN) 1/19, dated February 2019,
is promulgated as directed by the Chiefs of Staff

A handwritten signature in black ink, appearing to read 'Hans', is positioned above a solid horizontal line.

Head Doctrine

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Preface

Purpose

1. Joint Doctrine Note (JDN) 1/19, *Deterrence: the Defence Contribution*, outlines how Defence contributes to deterrence carried out by the UK government. This deterrence takes place both routinely and when facing a specific crisis, and should be part of an integrated and cross-government approach to deterrence – one in which Defence has a large part to play. Crucially, it should be noted that deterrence itself is not a modern philosophy, but this document outlines deterrence with specific reference to the application of deterrence in the contemporary context. Deterrence is not, and never has been, a ‘silver bullet’, an algorithm by which all security issues can be solved.

Context

2. JDN 1/19 reflects the return to prominence of deterrence in national and international thinking. This publication focuses on the following areas.
- a. The concept of deterrence, the general principles and theory of deterrence. This publication also looks at how technological developments in the 21st Century, along with the effects of globalisation and the associated complex interdependencies have created a contemporary context in which the concept of deterrence must be contextualised and postures constructed.
 - b. JDN 1/19 uses the *National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom*¹ as its base. It has also been developed in parallel with the 2018 *National Security and Capability Review*.
 - c. This publication recognises the importance and correlation of deterrence alongside security and resilience, as outlined in *Defence Strategic Direction 2016*. Resilience is inherently part of deterrence by denial; a key pillar of any deterrence strategy.

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1 [National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom](#) can be found on the Gov.uk website.

d. JDN 1/19 stresses the importance of a cross-government approach to deterrence activity. It also recognises and addresses the pivotal role of alliances in deterrence.

3. Deterrence is not a brand-new way of doing business that solves all problems. This JDN seeks to explain how deterrence works in the 21st Century context, as opposed to that of the bipolar Cold War. Technology, the rise of non-state actors, increasing globalisation, competition and the speed with which information can be exchanged has brought changes that were not present in the late 1980s.

4. This publication explains the context for deterrence activity, against which Defence contributes to national security and deterrence as part of an integrated and cross-government approach. It covers a significant number of deterrence factors and considerations and seeks to explain their complex interrelationships. Some factors appear on more than one occasion to show their relationship in another context.

Scope

5. In the *National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom*, the Prime Minister noted that 'our ultimate insurance policy as a nation [is] our Continuous At Sea Nuclear Deterrent'. Only the Prime Minister can authorise the launch of nuclear weapons, which ensures that political control is maintained at all times, and therefore this JDN will not consider the nuclear deterrent dimension as this is undertaken outside the pure military sphere. However, when deterring a nuclear-armed adversary, military planning should include nuclear deterrent experts, from inside and outside the Ministry of Defence (MOD), from the start.

6. In producing this JDN, we have consulted with the UK government, overseas governments, academia, the North Atlantic Treaty Organization (NATO) and other allied nations' militaries. We have also consulted the Cabinet Office; the Foreign and Commonwealth Office; and the MOD, including Joint Forces Command and the three single-Service commands.

7. Noting that there is a clear distinction in control and classification in the UK between nuclear deterrence and other (conventional) deterrence, this publication addresses unclassified and open-source nuclear aspects only. The principles of nuclear deterrence remain entirely valid in the context of the 21st Century.

8. JDN 1/19 is, for the most part, theoretical. However, it contains some practical steps that the reader may take when introducing deterrence into any planning or operations cycles. JDN 1/19 seeks to supplement existing doctrine, not supplant it. Allied Joint Publication (AJP)-5, *Allied Joint Doctrine for the Planning of Operations* remains the authoritative document for all planning and Joint Doctrine Publication (JDP) 3-00, *Campaign Execution* for all operations; all processes described therein remain extant.

Audience

9. This JDN informs a broad civil and military readership. It provides guidance to those in Defence responsible for planning, developing, deploying, and commanding and controlling deterrence activity or those who aim to create deterrent effects within other operations. It also aims to provide other government departments with a broad understanding of Defence's contribution to deterrence as part of a fused, integrated/multi-agency approach to deterrence.

Structure

10. JDN 1/19 comprises four chapters. The publication begins by providing context and then, adopting an ends, ways and means method, the subsequent chapters cover policy, process and delivery.

- a. **Chapter 1 – The concept of deterrence in the contemporary context.** This chapter explains the 21st Century context of deterrence. It looks at the deterrence approach in general, and then the government, deterrence partners and alliances' approaches. It examines threats, uncertainty in deterrence and the limitations, as well as various types of deterrence.
- b. **Chapter 2 – How deterrence works.** This chapter outlines how deterrence works and looks at the component parts of any deterrence

strategy. It examines how deterrence is created and looks in detail at a number of considerations that should be taken into account when creating deterrence strategies.

c. **Chapter 3 – The Defence contribution to deterrence.** This chapter outlines how Defence contributes to the UK government’s deterrence strategies and looks at command and control considerations, as well as the elements and components of the military contribution. It examines some implications for Defence including the law relating to deterrence and training and education.

d. **Chapter 4 – Integrating and delivering deterrence.** This chapter gives guidance on how a commander and staff might integrate deterrence planning into their planning process. It also offers guidance on maintenance of deterrence operations and the deterrent effects that might be created.

Linkages

11. JDN 1/19 is linked to several policy documents. These include:

- *National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom;*
- *Defence Strategic Direction 2016;* and
- *National Security and Capability Review.*

12. JDN 1/19 is also linked to several other doctrine publications. It sits below JDP 0-01, *UK Defence Doctrine* and sits alongside other doctrine publications, namely:

- JDP 01, *UK Joint Operations Doctrine;*
- JDP 02, *UK Operations: the Defence Contribution to Resilience and Security;*
- JDP 04, *Understanding and Decision-making;* and
- JDP 05, *Shaping a Stable World: the Military Contribution.*

13. The processes described in this publication remain fundamentally subordinate to those in keystone functional doctrine, although they do seek to complement them in a deterrence context. These keystone functional doctrines are:

- JDP 2-00, *Understanding and Intelligence Support to Operations*;
- AJP-3, *Allied Joint Doctrine for the Conduct of Operations*; and
- AJP-5, *Allied Joint Doctrine for the Planning of Operations*.

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Chapter 1

Chapter 1 explains the idea of deterrence and the context in which it operates. It looks at the threats with which deterrence is concerned and the types of deterrence, as well as the limitations of deterrence. It examines the structures and ways in which the UK considers and delivers its deterrence.

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Deterrence can be a **technique**,
doctrine and a **state of mind**.
In all cases it is about **setting**
boundaries for actions and
establishing risks associated
with crossing these boundaries.

”

Sir Lawrence Freedman
Deterrence, 2004

Chapter 1 – The concept of deterrence in the contemporary context

1.1. **Definition.** The current North Atlantic Treaty Organization (NATO) definition of deterrence is used in this publication, to enable common understanding and integration. However, it should be noted that the context of deterrence has changed significantly since this was agreed in 1996;¹ this will be explored further in this publication.

deterrence

The convincing of a potential aggressor that the consequences of coercion or armed conflict would outweigh the potential gains. This requires the maintenance of a credible military capability and strategy with the clear political will to act. (NATOTerm)

Section 1 – 21st Century context of deterrence

Strategic background

1.2. Joint Doctrine Publication (JDP) 0-01, *UK Defence Doctrine*, makes it clear that deterrence and coercion are treated as separate entities by the UK government. Deterrence aims to dissuade a course of action, while coercion aims to encourage a course of action,² but they are two perspectives or approaches on a related theme of changing the behaviour of an adversary. In military terms, this is closely linked to the centrality of influence as part of joint action.³

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1 NATOTerm.

2 Joint Doctrine Publication (JDP), *UK Defence Doctrine*, 5th Edition, page 62.

3 Joint Concept Note (JCN) 1/17, *Future Force Concept*.

1.3. *National Security Strategy and Strategic Defence and Security Review 2015/Defence Strategic Direction 2016.* The *National Security Strategy and Strategic Defence and Security Review 2015* placed an increased emphasis on deterrence, particularly non-nuclear deterrence (also known as conventional deterrence). This was echoed in the *Defence Strategic Direction 2016* and is now enshrined in the 2018 *National Security Capability Review*. This Joint Doctrine Note (JDN) seeks to address the current gap in deterrence doctrine as it relates to wider deterrence in the 21st Century.

1.4. **National deterrence.** Deterrence is fundamentally a UK government undertaking, in partnership with allies and international partners, achieved at a cross-government level with the UK Armed Forces playing a role when required.⁴ The 2018 *National Security Capability Review* found that the UK needed a more systematic approach to deterrence across government to tackle the growing number and diversity of today's threats.

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Deterrence is fundamentally a UK government undertaking, in partnership with allies and partners

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4 'The chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them.' Bernard Brodie, *Absolute Weapon*, 1946.

1.5. **The new paradigm: persistent competition and defence.** Whilst the nature of deterrence remains unchanged through the ages, the character of deterrence has changed significantly since the end of the Cold War. The key difference stems from the evolving character of warfare (and politics) based on the pervasiveness of information, combined with rapid, technology-driven change. With the current availability of global interconnectivity, our adversaries now have access to an array of new tools and techniques they can use to exploit the normal processes of interstate competition that exist; that below the threshold of armed conflict. Deterrence is therefore no longer a defensive or semi-passive theory based on conveying intent and capability; instead, it now has to involve active measures as part of a constant conflict below the traditional threshold of what used to be called war. This means that the UK has to carefully consider how to integrate a range of ideas and activities to hold our opponent's 'Crown Jewels' to ransom. Therefore, a cross-government (even pan-state) approach is required, and Defence is simply a contributor.

1.6. **Deterrence in the 21st Century.** This new approach should aim to make the UK an unappealing target in general, and help deter specific actions. It requires an updated, integrated and codified approach to deterrence. This is not intended to be a new theory of practice through which we will be able to solve all defence and security challenges; instead it is a comprehensive codification of the theory and practice of deterrence, set in the current context. Some of the more significant developments in the world today include the following.

- The move from a bipolar world to a multipolar world bringing with it a rise in interstate competition outside normal rules and law, including the use of Defence capabilities short of armed conflict, which will require a nuanced approach for deterring adversaries.
- The reality that we will seek to deter, cooperate and indeed confront adversaries at the same time, under different conditions and in different locations to achieve strategic outcomes.
- The increase in numbers and capabilities of non-state actors.

- The increased pre-eminence and sophistication of technology along with the reduced cost of technology and the ease of access to such technologies by adversaries increases their capabilities by orders of magnitude.
- A risk-based philosophy of Western nations that seeks to minimise risk by applying one of four measures to risk: treat, tolerate, terminate or transfer.
- The development of cyber capabilities and increasing access to space, with increased dependencies and vulnerabilities in both domains.

1.7. **Absolute deterrence versus restrictive deterrence.** The importance of any desired 'deterrence' succeeding against any given threat has a significant bearing on the time and resources that will be applied by the UK to achieve it. Whilst deterrence can never be guaranteed, if an outcome is sufficiently undesirable then this will influence the cost-benefit analysis of the actor seeking to deter others.

- a. **Absolute deterrence** is about deterring something so completely unacceptable that it cannot be allowed to happen under any circumstances. A prime example of this would be a nuclear attack against the UK. Nuclear weapons provide a unique and irreplaceable deterrent against state-backed nuclear threats.
- b. **Restrictive deterrence** takes place against acts that are undesirable; the UK wishes to deter them, but they are sufficiently small in impact, or so vast in options to deliver them, that deterring them would be prohibitively expensive or be disruptive to everyday life in the UK. These actions may have significant consequences for the UK but they can also create small effects, well below a threshold, that have a low but cumulative impact that are not enough to set off a tripwire.⁵ Examples of these could be encroachment of airspace, military espionage or cyberattacks.

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⁵ A tripwire may be described as a threshold of tolerance for adversary activity. Over and above that threshold, a response of some description towards that adversary becomes inevitable.

Examples of absolute deterrence and restrictive deterrence



Absolute deterrence

During the Cold War, it was deemed that a Soviet use of nuclear weapons would be so costly it required (as close to as possible) absolute deterrence. Consequently, the UK put vast resources into developing an effective deterrence, first by the British nuclear programme and later by the bilateral alliance with the United States to use Polaris and then Trident missiles on nuclear submarines. This was reinforced by the UK government's messaging that they would not commit to a 'no first use' policy and they maintained many channels of communication and demonstrations of capability to the Soviets reinforcing this. This was backed up through large-scale exercises showing national and NATO resolve to 'fight through' and defeat Soviet aggression.

Restrictive deterrence

Hamas has conducted rocket attacks against Israel so frequently, and the rockets are so readily available, that it has been prohibitive in terms of cost to stop them when the damage they do is relatively small. However, the psychological impact of the attacks on the Israeli population is such that the rocket attacks must be seen to be addressed by the Israeli authorities. Furthermore, to do nothing would allow free rein to Hamas to use rockets with impunity. Therefore, a restrictive deterrence approach is taken by the Israeli authorities, with a combination of deterrence by denial-of-benefit (the Iron Dome⁶ rocket system), deterrence by-resilience (warning sirens and shelters for the civilian population) and imposition-of-costs (responsive strikes with precision at range against key Hamas targets if the rocket attacks become too much (cross an ambiguous threshold) or hit a significant target).

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⁶ The Israeli Iron Dome missile system detects rockets fired into Israel and computes their impact zone. Rockets calculated to land in areas of high population density are fired upon automatically by the system, whereas those missiles calculated to impact in rural areas are ignored by the system.

1.8. **Limitations of deterrence.** Deterrence is not a panacea for all threats. There is no 'one size fits all' model for deterrence and it may not always work; this is one key difference between the Cold War understanding of deterrence and the one we have today. At the top end of the scale are those actions that risk complete destruction of the country and, therefore, high levels of resources are committed to deterring such threats (for example, in this case the nuclear deterrent itself). Other threats may have impacts that do not require or deserve such high resource costs; a single deterrence failure – no matter how undesirable – can be accepted and managed. There may also be a case for addressing threats by coercion, but that is not within the scope of this publication. The UK can only allow deterrence to fail in circumstances where we can treat, tolerate, terminate or transfer the risk of such deterrence failing. These concepts are explored in detail later in this chapter. The more unacceptable the risk, the greater the impact on resources for deterring such a threat or for the denial-of-benefits against such a threat.

1.9. **The role of understanding in deterrence.** Understanding⁷ is such a pivotal aspect to deterrence as an activity that it deserves special consideration. When conducting step 1 of the operational estimate, all military commanders include, amongst other things, an actor's objectives and rationale. The understanding in deterrence must attempt to get deeper into the psyche of an adversary decision-maker. Because deterrence often involves two sides not doing anything, another question may well be 'what might the adversary do and why?' and, potentially more importantly, 'how might the adversary interpret my actions and why?'. Cultural understanding is crucial, as well as a sound analysis of the political, economic and societal pressures involved. It is essential to understand others' values and motivations and not simply assume mirror-images of our own. Consequently, it has become difficult to establish linkages and accountability when non-state actors are involved. Chapter 4 provides more detail on the importance of understanding.

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7 Covered in detail in JDP 04, *Understanding and Decision-making*, 2nd Edition and in principle in *The Good Operation*, 2017, pages 21-27.

Section 2 – The deterrence approach and the government

The deterrence approach

1.10. Deterrence is essentially psychological in nature. It is based upon game theory, which in turn is based upon our understanding of our adversaries' risk calculus. It involves three essential pillars on a foundation that combine to create a deterrent effect on an adversary. These three pillars may be likened to the legs of a stool – if one is missing, deterrence will almost certainly fall over. The pillars are capability, credibility and communication. Likewise, the foundation must always be present, and it is comprehension (understanding).

- a. **Capability.** The UK must be perceived by adversaries to have the capability to deter. This can be either by threat of imposition-of-costs or by denial-of-benefits.⁸
- b. **Credibility.** The UK must be perceived by adversaries as having the will to carry out any threats, underpinned by the capability to do so. Reputation, testing and exercising plays a key role in this.
- c. **Communication.** The capability and credibility will only be successful if these messages are received and fully understood by our adversaries. This communication is psychological, based upon national interest and whilst it must reflect the conceptual, physical and moral components, most crucially it must reflect the credibility, the 'observed narrative' of the UK. Assumptions by any party about aims and messaging invite misunderstanding, although there is also a role for ambiguity.⁹
- d. **Comprehension.** Comprehension is another term for the 'understand' function.¹⁰ Although it is not considered a 'core principle' of deterrence, it is the essential foundation upon which the other three

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8 See Chapter 2 for more detail.

9 Covered in more detail in Chapter 3. See also Joint Doctrine Note (JDN) 1/12, *Strategic Communication: The Defence Contribution*.

10 For details, see JDP 04, *Understanding and Decision-making*, 2nd Edition.

are built. It is fundamental that the UK understands its adversaries, the full complexity of their perceptions and decision-making calculus, as well as their underpinning culture, beliefs, societal and economic pressures. Understanding how the UK itself is perceived by such adversaries is also critical to formulating a successful deterrence posture and, consequently, the military contribution to that posture.

1.11. **Measurement of effectiveness.** Measuring the effect of deterrence empirically has proven elusive since deterrence was first codified. Aside from the difficulty of proving a negative, there are so many variable factors in deterrence, it is impossible to say that deterrence alone has caused an adversary to avoid a course of action. It can be shown (in hindsight) when deterrence has not worked, but again, this has never been measured quantitatively. Deterrence is an exercise in game theory and is psychological in nature. Although the ability to measure effect is difficult, this should not necessarily prevent it from being attempted.

1.12. **UK national interest.** The desired end-state is that an adversary is deterred from taking actions that are contrary to the UK's national interest. These interests may be wide-ranging and at any number of levels. They may impact on allies, the economy, the environment or society at large; they do not necessarily need to impact on the territorial integrity of the UK or on our UK Armed Forces directly. The ways of attaining the desired end-state are fundamentally threefold, they are: encouragement-of-restraint, imposition-of-costs and denial-of-benefit. These are all explored in more detail in Chapter 2.

1.13. **Cross-government cooperation.** Deterrence is a pivotal role of the UK government. Cross-government cooperation involves drawing upon all levers and devices from all government departments and applying them to deter an adversary from action, whether as part of imposition-of-costs or denial-of-benefits. In most cases it is likely that ministers, the Cabinet Office, National Security Council and the Foreign and Commonwealth Office (FCO) will take the lead for imposition-of-costs in terms of overseas deterrence, with the Cabinet Office, National Security Council and Home Office usually in the lead for deterrence by denial-of-benefit resilience of the UK homeland, but this is not always the case. Her Majesty's (HM) Treasury and the intelligence agencies are likely to be involved in both undertakings.



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Cross-government cooperation draws on all levers and devices from all government departments

1.14. **Tailoring cross-government cooperation.** Cross-governmental cooperation works best when tailored to contribute to specific deterrence objectives. This involves a clear focus and goal for deterring. It is not constrained by the short-notice, high-pressure environment of crises that forces action within tight timelines and limits opportunities for considered actions. To successfully deliver deterrence, the diplomatic, information and economic activities and messaging must be carefully blended with the military capabilities and actions to create a full effect across the diplomatic, information, military and economic (DIME) framework. If done correctly, all actors can be quite clear in each other's intentions and the stage may be set for mutual deterrence, even if animosity is high. An example of this may be the ongoing confrontations between India and Pakistan as well as North Korea and South Korea. In both cases, both sides message their intent and capabilities in strong, if belligerent, ways. These communications are backed up by decisions and actions which contribute towards a state of mutual deterrence, despite the high tensions.¹¹

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11 A carefully woven blend of alliances, political and economic factors are key in maintaining this mutual tailored deterrence.

1.15. **National resilience.** Many of the levers the UK government holds to deter threat actors on UK territory will also fall under the Civil Contingencies Act (CCA) 2004. This may range from UK policing or local government through to the CCA 2004, Part 2 Emergency Powers. The Home Office and Cabinet Office will have the lead in these instances but the military may be called upon to support as required.¹² In particular, the military may be asked to 'restore' deterrence after it has failed by other means. If an adversary miscalculates our intention and/or capability, the UK government's leadership may want to impress upon that adversary the severity of the miscalculation without unleashing a broader conflict.

Government departments involved in deterrence

1.16. **National Security Council.** Chaired by the Prime Minister, the National Security Council is supported by the Cabinet Office and consists of senior security ministers, the Cabinet Secretary, the Joint Intelligence Committee Chair and Heads of the Intelligence Agencies and Chief of the Defence Staff, when requested. Its task is to integrate governmental departments with specific reference to national security.

1.17. **Cabinet Office.** The Cabinet Office is the lead organisation that coordinates government departments to deliver government objectives by a cross-government approach. This broad remit mainly involves government policy (such as election manifesto pledges) but it can also include that which contributes to deterrence, especially the Civil Contingencies Secretariat that deals with emergency planning, a pivotal aspect of resilience. If there is a situation that threatens national security, the Prime Minister or Cabinet Office may convene a meeting of the National Security Council or the Cabinet Office Briefing Room (COBR) depending on response time and the nature of the crisis response.

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¹² JDP 02, *UK Operations: The Defence Contribution to Resilience and Security*, 3rd Edition, illustrates the linkages between resilience and deterrence. 'The NSS/SDSR 15 reflects the UK Government's strategic intent. It is a responsibility of the MOD to 'defend and contribute to the security and resilience of the UK and its Overseas Territories'. Specifically, this includes 'deterring attacks; defending our airspace, territorial waters and cyber space; countering terrorism at home and abroad; supporting UK civil authorities in strengthening resilience.'

1.18. **Foreign and Commonwealth Office.** The FCO is responsible for protecting and promoting the UK's interests worldwide. It is the lead government department for interaction with foreign states as well as supranational organisations such as the United Nations (UN) and NATO. The FCO coordinates other government departments' engagement with foreign states to ensure coherence of message and commitments. As such, the FCO leads on international elements of deterrence, including understanding our adversaries and how they perceive the UK.

1.19. **Her Majesty's Treasury.** As part of the cross-government approach to deterrence, HM Treasury is a central element that provides funding to government departments that enable deterrence activity, especially with regard to sub-conflict threshold activity. HM Treasury deals with economic sanctions, funding decisions and prioritisations as well as seizing UK-based assets of adversaries as part of a coordinated government response.

1.20. **Home Office.** UK resilience is a critical part of deterrence and the Home Office is the lead department for many of the functions that contribute to this resilience. In addition, the Home Secretary has a key constitutional role in authorising actions, particularly regarding the CCA 2004; a key pillar of resilience. The CCA 2004 gives provision for resilience by responding to the following (or a threat to cause the following):

- human illness or injury;
- homelessness;
- damage to property;
- disruption of a supply of money, food, water, energy or fuel;
- disruption of a communication system;
- disruption of transport facilities; or
- disruption of health services.

Measures that could be taken include travel bans on individuals, seizure of properties (for example, those owned by adversaries within the UK), or any other actions the Home Secretary deems necessary to prevent these services being disrupted. This has applicability to deterrence of hybrid operations where armed conflict has not occurred but there nonetheless remains a threat to the UK.



Specialist government agencies are essential to deterrence

1.21. **Other government departments and agencies.** The centrality of a full governmental approach to deterrence means that a cross-government approach is essential. Combined with the resilience element already discussed, some other government departments may well have key roles to play in establishing and maintaining this resilience, particularly regarding the CCA 2004 listed above. Examples might include the following actions and whilst this list is not exhaustive, nor prescriptive, it is intended to be illustrative of the wide variety of cross-governmental authorities and actions that can contribute to deterrence, either by imposition-of-costs or denial-of-benefits.

- a. **The Department for Environment, Food and Rural Affairs** ensuring enough food and water are available as part of denial-of-benefits (or resilience).
- b. **The Department for International Trade** applying or relaxing tariffs to other states as part of imposition-of-costs or encouragement-of-restraint.

- c. **The Department of Health and Social Care** making preparation or provision for casualties, major incidents, pandemics or inoculations. Exercises contribute to this, as do efficient and timely responses to real-life events.
- d. **The Government Communications Service** ensuring cross-government messages are joined-up and easily accessible.
- e. **The Centre for the Protection of National Infrastructure** is essential for the resilience that leads to deterrence by denial-of-benefits. The Centre for the Protection of National Infrastructure protects national security by providing advice to the organisations that make up the UK's national infrastructure covering physical, personnel and cyber security.
- f. **Intelligence agencies.** The UK has a number of intelligence agencies¹³ that carry out a wide variety of intelligence gathering and analysis on behalf of the UK government. They operate under a variety of governance structures including the Cabinet Office, the FCO and the Home Office and they have particularly strong roles in the context of hybrid operations that fall short of the threshold for armed conflict. They also have the majority input into the 'understand' function for the UK government. Our Armed Forces contribute some personnel to these organisations and also benefit from their intelligence outputs.

Deterrence and partners

1.22. **International deterrence (alliances).** NATO is the key UK alliance for deterrence and any UK deterrent effect is likely to place its military element in the NATO context, but there are many other alliances and bilateral agreements to which the UK is also party. Despite fault lines, NATO and other international alliances usually enhance deterrence through the ability to bring greater forces to bear in the event of crisis. Any alliance may have internal fault lines that may

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13 These include the Security Service (MI5), Secret Intelligence Service (MI6), Government Communications Headquarters, Joint Intelligence Organisation, National Domestic Extremism and Disorder Intelligence Unit, National Crime Agency, National Ballistics Intelligence Service, National Fraud Intelligence Bureau and Defence Intelligence.

be vulnerable to exploitation for deterrence purposes. A good understanding of these seams between member states and differing priorities and principles should be sought and understood by a commander and staff as this will inform the decision-making process for planning deterrence operations that can then ensure they are properly mitigated. Examples of fault lines and different perceptions of threats might include:

- gaining common agreement on the broader strategic response;
- understanding the transatlantic and intra-European relationship between the political level and military implementation; and
- the perception of the global alliance relationship from non-NATO members.

1.23. **Alliance communications.** To ensure a cohesive message, and therefore deterrent credibility, strategic communications are crucial from any alliance perspective. Because of varying national priorities and caveats, commanders and staff at all levels will need to constantly strive for this coherence. This places a new burden on the intelligence community to go beyond threat anticipation and towards understanding 'shaping operations', which also places a burden on cross-governmental strategic communications. This must become an integral part of any alliance headquarters function; the importance of coherent messaging to alliance cohesion cannot be overstated.¹⁴

1.24. **Extended deterrence.** Extended deterrence is usually taken to mean a more capable actor conducting deterrence on the part of a (usually allied) actor who lacks capability or capacity. Extended deterrence is adversary focused, stating a commitment to punish the adversary for attacks on the ally. For example, NATO's operations and forward presence on its eastern periphery can be viewed as a policy of extended deterrence against external threats to the national integrity of the Baltic states.

1.25. **Assurance.** Assurance is ally focused and more broadly seeks to strengthen the relationship between the ally and security guarantor, a

14 Covered in detail in Allied Joint Publication-3.10, *Allied Joint Doctrine for Information Operations*.

relationship that can involve non-defence features. However, there is an intrinsic relationship between extended deterrence and allied assurance because by doing one, it strengthens the other. Assurance and deterrence can therefore be undertaken by the same forces at the same time, but strategic communications will be subtly different.

1.26. **Assurance in the planning phase.** If operational commanders are deployed in deterrence and/or assurance roles, they will need to factor this into their planning and understand the desired effect on the ‘target’. Assurance is as much about perception as deterrence and, therefore, cultural and political sensitivities and expectations should be considered. For example, a regional actor may perceive an increased likelihood of a developing threat to the homeland/home base if NATO or the UK intervenes in a theatre near them.

Section 3 – Threats

Deterring threats and acts of aggression

1.27. Threats to the UK can come in many forms and may be addressed by many means. The National Risk Register¹⁵ lists 21 major risks facing the UK, six of which involve an ‘attack’ of some description, mostly terrorist or cyber. Some of these major risks cannot be addressed by deterrence because there is no actor whose decision can be influenced (for example, pandemic flu or coastal flooding). These threats may still have a military response to help cope with the consequences of these events but those actions are explored in JDP 02, *UK Operations: The Defence Contribution to Resilience and Security*, and are therefore not considered further by this publication.

1.28. Other threats that are related to the UK Armed Forces include, but are not limited to, conventional attack on UK soil or UK Overseas Territories, intrusion into UK territorial waters or airspace, high-end terrorism, UK citizens being kidnapped overseas or attacks on ships in international waters. It may

15 For more information see the *National Risk Register 2017*, produced by the Cabinet Office.

also include attacks on the UK's economic or political interests, either overseas or on UK soil. These may not be limited to physical attacks but may well be hybrid in nature; 'attacks' are not always obvious and can occur by hybrid methods that fall short of the Law of Armed Conflict. While deterrence remains a cross-government undertaking, the UK Armed Forces have a role to play in deterring these threats.

1.29. **Recognising threats.** Recognising a threat and its source is pivotal to understanding that threat and, crucially, the rationale behind it. Only when this understanding is well-developed can a deterrence strategy be devised to counter it. In an increasingly integrated world with threats originating in one domain potentially generating second and third order effects in other domains. These threats to UK security may come in any form, from any sector and may impact on an entirely different sector. They may be economic, political, societal or military in nature; they may originate from the cyber or space domains and they may involve the competition for information superiority. Two examples could be:

- a threat that impacts on global positioning systems (GPS) or communications satellites would have a major effect across the whole globe; or
- in the UK, a threat to the energy industry (for example, electricity supply) would impact on all aspects of society.

'Defence and protection start with deterrence, which has long been, and remains, at the heart of the UK's national security policy. Deterrence means that any potential aggressors know that any benefits they may seek to gain by attacking the UK will be outweighed by the consequences for them.'

*The National Security Strategy and
Strategic Defence and Security Review 2015*

1.30. **Attribution of threats.** It is essential that the UK has the capability to accurately attribute actions conducted by adversaries to respond to them appropriately, or to sufficiently understand the risk to be able to calculate responses where attribution is not completely assured. This is particularly important when the adversary employs hybrid tactics meant to complicate attribution and create a dilemma for response.

1.31. **Unconscious threats.** Some actors may threaten the stability and security of the UK by their actions without intending to threaten the UK.¹⁶ These are known as unconscious threats and will usually be actions carried out for that actor's benefit without them having considered the impact on the UK. The UK government may wish to deter these actions and the responses are more likely to come from the FCO, Department for International Trade, the Department for Business, Energy and Industrial Strategy, the Department for International Development (DFID) or HM Treasury in these instances.

Section 4 – The spectrum of threat actors

State actors

1.32. The majority of state actors are those entities that are members of the UN. They have the responsibilities, privileges and legal protections of a state but there is a wide disparity in how they function, especially with failed or failing states. Additionally, a number of entities that are not technically part of the UN but that control land and run services as a state does (such as Taiwan, Palestine and Northern Cyprus) or subsets of states or autonomous elements (such as the Falkland Islands and Hong Kong) should also be considered as state actors. In a world where interstate competition is expanding through the application of new technologies, our approach to deterrence will need to be specific to any given adversary. We will continue to use deterrence as a Defence framework strategy but specific deterrence strategies will be required.

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16 An example could be the proliferation of nuclear technology from Pakistan to North Korea. At the time there was no intention to threaten the security of the UK but with the development of the Hwaesong 14 missile, such a threat may yet come to pass. Likewise, the March 2017 Wannacry ransomware attack affected the National Health Service information technology system, although that was not its intended target.

Pseudo-state actors

1.33. Pseudo-state actors are not state actors and do not have the legitimacy of state actors. However, they are usually characterised by having some or all of the following:

- significant numbers of individuals;
- significant financial assets;
- significant political influence;¹⁷
- limited territorial control; and/or
- significant global reach.

They usually have a known and accessible leadership and headquarters but notably, unlike non-state actors, they have a known and broadly accessible 'return address' (to which could be delivered either legal papers or a kinetic strike). They may not work consistently or overtly against the interests of the UK, but they could cause us significant damage, either indirectly by their actions or directly if they choose to do so and should therefore be deterred against doing so.

1.34. Pseudo-state actors do not have the legal protections or responsibilities of a state, but may possess many of the other characteristics, including providing services and facilities to a populace or owning land. They may be legal or illegal in their existence but are usually characterised by 'having something to lose'. Possible examples include:

- significant non-governmental organisations (such as the International Committee of the Red Cross or World Vision);
- large multinational corporations (such as Microsoft, Gazprom or Facebook), entities such as Mexican and South American drug cartels, large religious or quasi-religious groupings¹⁸ with a set headquarters and hierarchy; and
- some ethno-political entities (such as Kurdistan).

.....
17 For example, Hamas in the Gaza Strip.

18 An example of a quasi-religious group would be Heaven's Gate.

Non-state actors

1.35. The 21st Century has seen the rise of non-state actors who may have considerable influence across the world or they may have particularly contagious ideologies. They may have no shortage of resources or influential backers but they are unlikely to have the ability to offer existential threats to sovereign states. They may vary from sophisticated (but small) terrorist organisations through to 'lone actor' terrorists acting either for a personal agenda or in support of an ideology, albeit one that has given no material support. Non-state actor groups may not possess targets that are readily accessible to the UK and they may be willing to sacrifice themselves for their cause. Deterrence against those whose 'rationality' runs counter to convention (for example, those who believe they are on a 'divine quest') may need to be based more on denial-of-benefits than imposition-of-costs.

1.36. Non-state actors may work in concert with, or at the behest of, state actors. In such cases, deterrent actions against the state actor may be warranted. This gives non-state actors complex resistance to the more recognised retaliatory measures that work against state actors or even pseudo-state actors, but 'hard power' still has a role to play. Instead, a mix of measures may offer deterrence against non-state actors.

- First, the strong resilience of the UK; knowing that their attack will not create the desired effect either by failing to succeed at all or by a successful attack not impacting as intended.
- Second, the prospect of a 'well-publicised failure' that demeans their group and cause.
- Third, legal and military action against those who are planning attacks before their plans can come to fruition.¹⁹

.....
19 Daesh operatives do not perceive much glory or advancement of their cause in being arrested in their beds or killed by an air strike in transit between locations.

Rational actors

1.37. A frequent misconception exists regarding deterrence, one in which adversary actors are dismissed as 'irrational actors'. These may be heads of state or leaders of major departments within potential adversary states. They may be leaders of terrorist groups or financiers of such actors. It is essential when understanding an adversary's decision-calculus to know that no actor considers themselves to be an 'irrational actor'. They may appear to be irrational in the view of the UK, but to their own mind, their own values and in their own situation, all humans behave in such a way as to consider themselves 'rational'. It is less about an adversary 'thinking' of themselves as rational, and more about separating their decision-making process from understanding the adversary value structure – what informs their calculations of what behaviours are reasonable to them? Having understood this, it is also important to remember that deterrence is a relational activity; if the rationality of actors is inconsistent with each other, the comprehension, and therefore appropriate communication, must take account of this. Therefore, there must be the possibility of a relationship based upon empathy, not sympathy, for deterrence to work.

1



General deterrence is generated over time by a posture that portrays an image of credibility

Section 5 – Types of deterrence

General deterrence

1.38. General deterrence may be broadly described as being derived from the overall reputation of an actor and the perception of that actor's reputation as such by all, particularly potential adversaries. General deterrence is a function of grand or national strategy. It is a general reputation, generated over time by a posture (and visible actions) that portrays an image of credibility and resilience regarding any hostile intent. This reputation is built by how adversaries interpret that posture. It is essential to understand that posture is not the same as reputation. Any actor may choose its posture, but cannot choose their reputation; that is for other actors to decide based upon their perception and interpretation of that posture.²⁰

1.39. In many ways it is a stereotype that causes an adversary to make predictions and/or assumptions about how the UK might respond to a threat or be affected by an action. General deterrence is usually applied to state actors and includes a subjective assessment of their capabilities, credibility and communications over time. It may well include detailed assessments by an adversary as to how the UK perceives its interests. These will affect how the adversary perceives the UK will respond to a specific action (rather than a generic action). Also, in general deterrence, actions taken against one actor may have an unintended effect on another; for example, a third party may interpret actions taken by the UK against an adversary as threatening to that third party.

1.40. In designing and communicating the overall UK posture, decisions of international and national politics will play the greater part, but the effectiveness, capabilities and credibility of use of our Armed Forces will be significant factors.

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20 Posture is a combination of many factors including policy, actions, resource allocation and, crucially, decisions made. Adversaries will look carefully at historic decisions to predict future decision-making. Repeated decisions to use, or not to use, force will have a significant impact on the general deterrence reputation of an actor, as will the outcomes when force has been used.

All of this combines to create a UK deterrent effect against a number of threat types and actors. The greater the reputation that an actor has portraying an image of credibility, capability and resilience regarding any hostile intent, the greater the general deterrence. At the strategic level, general deterrence is usually derived from the posture adopted by a nation state. The UK has identified seven attributes that contribute to general deterrence, namely the UK's: capabilities, resolve, coherence, solidarity, agility, attribution and resilience.²¹ At the operational level (especially in an expeditionary context), the general deterrence reputation of the deployed force is both an extension of the strategic credibility of the UK Armed Forces, as well as the ways and means employed by any forces.

1.41. General deterrence operates in peacetime just as much as in crisis and war. This ever-present reputation influences potential challengers to not initiate aggression. One of the dilemmas of this form of deterrence is that observers may never be able to 'see' its success because it was not known that the issue was in discussion by an adversary. Hence, it is very hard to prove a negative and that general deterrence has had a pre-emptive effect.²² It is important to recognise how central posture management is to the foundation of general deterrence. The UK manages its posture by adjusting the balance of the seven attributes outlined above to seek to change how adversaries perceive the UK's strengths and weaknesses; this perception forms the UK reputation.

Tailored deterrence

1.42. Tailored deterrence is the deterrence posture adopted against Actor A (an adversary) regarding a specific perceived threat. It is likely to be the product of a positional strategy (see JDP 0-01, *UK Defence Doctrine*). Actor B (for example, the UK) will make a judgement on the precise nature of the threat from Actor A. The threat may be moral, physical or conceptual in nature and may be directed against the UK's interests or assets. The UK will develop a particular

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21 These seven attributes are explored further in Annex 1A.

22 'Analytical approaches may not work well in situations that are poorly understood, where there is ambiguity and uncertainty and with no common agreement about the nature of the problem or the desired outcome. Such approaches can give a false sense of progress while the reassuring process of analysis is underway.' JDP 04, *Understanding and Decision-making*, 2nd Edition, paragraph 2.23.

approach to deter the perceived actions of Actor A, even though the threat may not be imminent. An example of tailored deterrence is the UK's current approach to the Falkland Islands and deterring Argentina. Because tailored deterrence is more targeted, its efficacy can be more readily determined by examination of results,²³ for example, the UK might judge that this approach has, thus far, deterred Argentina from attempting another military attack with armed force against the Falkland Islands. Tailored deterrence may also be likened to the concept of 'containment' in many cases such as the Cold War strategy to stop the spread of communism under the influence of the Soviet Union.

1.43. Tailored deterrence is the term used to describe specific deterrence messages and responses for specific audiences and adversaries. Since effective deterrence is based on an understanding of an adversary's perceived costs and benefits of pursuing a course of action, as well as their perception of the consequences of continued restraint, tailoring our actions to achieve the greatest influence over these perceptions is essential. In practical terms, tailoring deterrence activities and messaging represents the 'fine tuning' of deterrence, as there is a significant degree of commonality of UK attributes in what will deter most adversaries.

1.44. **Relevance to general deterrence.** An essential step in developing tailored deterrence courses of action is to anticipate and assess the likely second and third order effects of any action. Whilst not a perfect science, considering the consequences of our actions beyond a situation can help mitigate other conflict and escalation elsewhere; in short, tailored deterrence actions contribute to the UK's general deterrence posture. In the current global information environment, almost all the UK's words and actions will be observed through a prism by a worldwide audience and interpreted, manipulated or presented to suit preconceptions.

.....
23 Empirical 'measurement of deterrence' has so far proved elusive to all and probably remains so in the near future. Therefore 'judgement' of deterrent effect is also difficult; it is perhaps better to 'examine' the results.

Immediate deterrence

'Immediate deterrence is used in situations when indications are that at least one actor is seriously considering an imminent attack while the other is mounting a threat of retaliation in order to prevent it.'

Patrick M. Morgan,
Deterrence: A Conceptual Analysis, 1983

1

1.45. Immediate deterrence is a response to an imminent and readily defined threat. It may or may not involve escalatory measures.²⁴ It may be a crisis developing relatively quickly or an existing dispute flaring up unexpectedly. Examples include the India-Pakistan confrontation across the border or even the Cuban Missile Crisis of 1962. Immediate deterrence may often be an extension of tailored deterrence, where tailored deterrence has failed causing a situation of increased stakes that demands more resources, attention and possibly a new approach.

1.46. Immediate deterrence can also include actions to enhance denial capabilities, as well as making them more credible. In this type of deterrence activity, imposition-of-costs is the principal means of influence. Denial-of-benefits may also work, but their provisions will usually have to be in place already. Immediate deterrence is specific in that it attempts to forestall an anticipated challenge to a well-defined and publicised commitment and is conducted when general deterrence or tailored deterrence is thought to be failing. Because of this, cases of immediate deterrence successes and failures are somewhat easier to identify.²⁵

.....
24 It may involve encouragement-of-restraint, not an escalatory measure.

25 For example, Belize in 1972 when the UK despatched HMS Ark Royal and Buccaneer aircraft to deter an (assessed) imminent Guatemalan invasion.

Section 6 – Deterrence in the current context

1.47. **Intra-conflict deterrence.** Deterrence is not just for a pre-conflict situation. It is still relevant in preventing escalation once a conflict has started. For example, such escalation may involve widening the geographical spread of the conflict, increasing the types and lethality of the capabilities employed or changing the scope of the assets targeted by an adversary. The same principles apply to intra-conflict deterrence as they do to any deterrence in the pre-conflict period (the most usual period for deterrence). Historically, however, intra-conflict deterrence has proven extremely difficult to achieve and has usually required military intervention to deliver it.

1.48. **Deterrence and globalisation.** Technology-enabled globalisation has caused supply chains, communications networks and social awareness to become highly complex. Second and third order effects may be magnified, even if they are not immediately apparent or understood. Stakeholders are more numerous, feel a greater sense of empowerment and are not necessarily bound by traditional (and predictable) conventions of statehood. Because of this, commanders and staff at all levels will need to spend an increased amount of time on these three key, related challenges of deterrence.

‘We will use the full spectrum of our capabilities – armed force including, ultimately, our nuclear deterrent, diplomacy, law enforcement, economic policy, offensive cyber, and covert means – to deter adversaries and to deny them opportunities to attack us.’

*The National Security Strategy and
Strategic Defence and Security Review 2015*



Mis-intended messages and miscalculations

Falklands Conflict 1982

Although the UK government's policy was to retain the Falkland Islands, from the willingness of certain ministers to discuss sovereignty may have contributed to Argentine perceptions that the reality did not align with the strategic communications. The possibility that the UK was seeking to 'offload' the islands led Argentina to conclude that the UK would not have the political will for a military confrontation over the Falkland Islands. This led the internally threatened Argentine junta to plan for and execute an armed invasion of the Falkland Islands.

Kuwait 1990

Saddam Hussein miscalculated in 1990 when he invaded and annexed Kuwait. His miscalculation was based on misinterpreted messaging from the United States ('Ambassador April Glaspie...was perfectly clear that the United States had invested too much in building good relations with Iraq over the preceding decade to sacrifice them for Kuwait'), a misperception that the United States had no stomach for war following Vietnam and a misunderstanding of the strength of feeling that his actions would engender in the other Arab nations. Combined with his own historical views on Kuwait as a province of Iraq, these factors contributed to Saddam Hussein's conviction that a military invasion of Kuwait could be carried out without significant consequence to him.

Key points

- Deterrence aims to dissuade a course of action, while coercion aims to encourage a course of action, but they are two perspectives or approaches on a related theme of changing the behaviour of an adversary.
- It is fundamental that the UK understands its adversaries, the full complexity of their perceptions and decision-making calculus, as well as their underpinning culture, beliefs, societal and economic pressures.
- Deterrence is fundamentally a UK government undertaking, in partnership with allies and international partners, achieved at a cross-government level with the UK Armed Forces playing a role when required.
- Deterrence is no longer a defensive or semi-passive theory based on conveying intent and capability; it now has to involve active measures as part of a constant conflict below the traditional threshold of what used to be called war.
- Deterrence is based upon three essential pillars on a foundation that combine to create a deterrent effect on an adversary; the pillars are capability, credibility and communication and the foundation is comprehension (understanding).
- NATO is the key UK alliance for deterrence and any UK deterrent effect is likely to place its military element in the NATO context, but there are many other alliances and bilateral agreements to which the UK is also party.
- General deterrence is the overall reputation of an actor. Any actor may choose its posture, but cannot choose their reputation; that is for other actors to decide based upon their perception and interpretation of that posture.
- Tailored deterrence is the deterrence posture adopted against an adversary regarding a specific perceived threat and is likely to be the product of a positional strategy.

Annex 1A – General deterrence: an explanation

1A

1A.1. An analogy of general deterrence may be drawn with general intellect. You cannot measure it directly. What you can measure are things like how quickly someone processes numbers or how well they can manipulate shapes or spot patterns in letters. What is called general intellect, or IQ, is how those things correlate with each other. Someone who is good at all those specific tasks is also likely to be good at an unspecified mental task, not yet chosen. And IQ is a quality that can be immediately recognised. General deterrence also works like that.

1A.2. General deterrence is hard to define, but vital. Israel, for example, 'has something' that gives any would-be adversary pause for thought. No matter who the adversary is, and no matter how they are considering attacking, they know Israel is well-informed about its enemies, and has capable and powerful means to defend itself and can draw on powerful allies in Washington if it needs to. Any would-be adversary can see how Israel has responded to specific attacks and threats, and can recognise an underlying quality, which means that they perceive an attack on Israel as more risky and costly than an attack on a country without that quality. So we can say that Israel does not just deter named types of attack or attacks from named groups; Israel also has a quality that is 'generally deterring'. Russia and the United States also have a similar quality, a reputation that you would not take them on lightly or without good cause. In many parts of the Middle East, the UK has the same quality. When the UK is not sure how or from where we may be attacked, this quality of 'general deterrence' is especially valuable.

1A.3. There is no checklist for what will add to or subtract from general deterrence. But you nearly always know it when you see it. When the UK liberated the Falkland Islands or uncovered the Heathrow bomb plot or rescued all the hostages in the Iranian Embassy, these events added to the UK's general deterrence. Parliament voting not to allow air strikes against Syria subtracted from our general deterrence. Article 5 adds. Military equipment failures

subtract. Leaders in-fighting subtracts. The UK leadership saying they would use nuclear weapons adds, and so on...

1A.4. The UK's approach to managing the UK's general deterrence posture is by taking stock regularly, looking for activities that benefit general deterrence and resisting activities that subtract. Cross-government work since 2015 has identified seven attributes that contribute to general deterrence. They are the UK's:

- capabilities – whether military, intelligence, diplomatic or domestic;
- resolve – our will to confront those who do us harm;
- coherence – whether all parts of government and society act together;
- solidarity – the extent to which we can rely on allies and partners;
- agility – our ability to address new threats;
- attribution – our ability to recognise an attack and identify the attacker; and
- resilience – our awareness of our vulnerabilities and ability to recover from attack.

1A

A simple rule of thumb for managing general deterrence is to pursue activities that strengthen the UK in those areas, address any weaknesses, and communicate the UK's strength.



Chapter 2

Chapter 2 introduces the theory of deterrence. It examines the basic calculus involved in deterrence and explores some of the factors that influence this calculus. It also considers some of the theoretical dilemmas involved in balancing deterrence.

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Whom do you wish to deter –
from doing **what** –
and under which **conditions**?

Chapter 2 – How deterrence works

Section 1 – Deterrence calculus

2

2.1. Deterrence is fundamentally a dynamic activity and is as much about psychology as it is about the ‘art’ of design and application. If the perceived benefit for an adversary is more than the perceived cost, it is likely that deterrence will not be achieved. This is the essential, if basic, cost-benefit analysis of deterrence. As with many deductions there are sub-clauses that influence the overall equation to produce a result (that is specifically, deterred or not deterred).

2.2. The nature of deterrence (as opposed to the character of deterrence) is enduring. The character of deterrence today is a reflection of expanding competition and more diverse means to create effect. No matter the circumstances, the simplest basis for deterrence works by a deterrence calculus for any given adversary operating as a rational actor: if the perceived cost of an action is more than the perceived benefit of the action, then it will achieve deterrence.

Perceived cost of an action > Perceived benefit of an action = Deterred

2.3. The basic calculus can be expanded by adding other factors into it. Fundamentally, deterrence is about **perception and informed, psychological-based, decision-making**. Therefore, when considering the perceived cost of restraint for an adversary, an operational commander and staff can address this in one of four ways.

- a. **Increase the adversary’s perceived benefit of restraint.** If the adversary can be shown that restraint of action will be beneficial to them, they will be incentivised not to act. These benefits do not have to be directly aligned with the threat of their action however. For example,

if an adversary was threatening a territorial land grab, the incentive of an improved trade deal (but with the proviso of good international behaviour) might encourage their restraint regarding territorial expansion.

b. **Decrease the adversary's perceived cost of restraint.** The cost of restraint deals with the idea that an actor is forced to conduct the action that the nation wishes to deter by some 'cost' external to that nation. It is therefore in a nation's interest to reduce this 'cost', whether in perception or reality. It is a crucial aspect of any deterrence calculus and has been frequently overlooked in history. It is rare that armed forces will be the principal contributor to reducing an adversary's perceived cost of restraint. It will frequently require a political, societal or economic solution involving a cross-government approach. However, these solutions to the situation will often mean that armed forces may have to act in a way that allows the cross-government approach to reduce the adversary's perceived cost of restraint, often by offering a means to de-escalate the situation.



De-escalation

De-escalation occurs when deterrence is achieved mainly by increasing the adversary's perceived benefit of restraint. However, it can also be achieved by reducing the adversary's perceived cost of restraint. It can be an example of a way in which confrontation is avoided without military action, although the threat of military action may have been a factor in 'buying time' for de-escalation to take place in the political arena. Some observers may describe it as appeasement or 'giving in' to an adversary's demands, however, 'de-escalation' may often be an important part of deterrence operations. Examples include authoritarian regimes that fear for their survival without external military 'adventurism' to distract a restless population or a state that views itself as threatened and is seeking to redress the balance (such as the Cuban Missile Crisis, outlined later in this chapter). In this context, the armed forces contribution to deterrence operations is usually through increasing the adversary's perception of imposition-of-costs.

c. **Decrease the adversary's perceived benefit of action.** This is usually achieved through deterrence by denial-of-benefits; preventing the adversary from creating the hoped-for effects. This denial-of-benefits can also include increasing the defensive capabilities arrayed against the adversary, possibly including allies.

d. **Increase the adversary's perception of cost of action.** This can be done in several ways, from clear messaging that an adversary will face consequences to an increase in the capability that may be deployed against the adversary. It can also include mobilising international opinion.

2.4. **Deterrence calculus.** Having explored some of the wider factors, the basic deterrence algorithm can therefore be elaborated further. This is shown below.

(Perceived benefit of action – perceived cost of action) > (Perceived benefit of restraint – perceived cost of restraint) = Not deterred

(Perceived benefit of action – perceived cost of action) < (Perceived benefit of restraint – perceived cost of restraint) = Deterred

2.5. **The challenge of perception.** As can be seen from these equations, **perception**, as opposed to **reality**, is a vital part of the deterrence equation. This can, of course, be an opportunity to shape an adversary's perception to our advantage. However, it also presents a challenge on two counts. First, if the adversary perceives the UK's credibility or capability to be less than it is, then they may not be deterred when they should be.²⁶ Secondly, the challenge remains for the UK to understand what the adversary perceives to be important to them, although their perceptions may not be accurate. Understanding the perceptions of an adversary decision-maker is generally difficult, particularly if the decision-maker is part of a closed state or authoritarian regime.²⁷

26 The Falkland Islands conflict in 1982 is one such example where the military junta did not believe that the UK would attempt to recapture the islands, nor that they had the capabilities to do so. This miscalculation was the eventual undoing of the junta; following their defeat in 1982 they were overthrown within days and democracy returned the following year.

27 The Democratic People's Republic of Korea under Kim Jong-un would be one such example of a closed and authoritarian regime.

2.6. **Perceived benefit of an action.** The following elements will be considered by an adversary when conducting the cost-benefit analysis of a course of action against UK interests.

a. **Perceived likelihood of achieving the aims of the action.** The extent to which the adversary thinks their aims will be accomplished by carrying out their intended actions. These benefits may be highly asymmetric to the actions carried out by the adversary.

b. **Perceived recovery from that action by the victim.** The extent to which the adversary thinks the UK will be damaged by their actions for a duration that is enough to meet the adversaries' aims. It may be that action against the UK needs to be long-term in nature but actions will only achieve short-term aims.

c. **Perceived balance of short-term aims *versus* long-term aims met by conducting that action.** The adversary may judge that short-term aims may be achieved by their actions but long-term aims may be damaged or *vice versa*. This can be a powerful but rarely considered area of leverage when planning deterrence activity. An example could include an adversary attracting international disapproval by conducting unlawful kinetic operations.

Restraint

2.7. **Vulnerability of regimes.** Some adversaries, particularly if unstable or totalitarian in nature, may seek to distract from an ongoing unrest in their own state by providing an outlet for their citizenry against the UK itself or the UK's interests. The leadership may calculate that the cost of **not** acting against the UK could result in them being overthrown or weakened in their position.²⁸

2.8. **Cost of restraint.** The cost of restraint is the cost to an actor if they exercise restraint. Therefore, if an actor (state or non-state) perceives that their very existence or position of power is dependent on their carrying out an action,

²⁸ An example of this is the Argentine military junta in 1982 when they feared a revolt due to internal politics and economics. The junta considered that the cost of not invading the Falkland Islands would be an internal revolution that would see them deposed.

their cost of restraint is very high; this would require considerable leverage on the part of the UK to achieve deterrence. It may be described colloquially as an actor being ‘backed into a corner’ but it is also important that UK decision-makers consider UK self-deterrence in these instances.

2.9. **Benefits of restraint.** Benefits of restraint occur when the adversary can be convinced that **not** carrying out an intended course of action will still result in an acceptable outcome for them. This may involve ‘sweeteners’ given in other areas (for example, trade access or particular technology assistance), which may give the perception of bribing the adversary. However, if this results in the adversary **not** conducting an unwelcome course of action, this is still a valid part of deterrence. A benefit of restraint can include the restoration of something lost to try to incentivise adversary restraint. For example, sanctions against Libya were lifted in 2003 as part of incentives for them to restrain from pursuing further weapons of mass effect and eliminating existing programs. The Iran nuclear deal is a similar encouragement. Most encouragement of restraint instances are likely to be governmental in nature; financial or diplomatic, but there may be occasions when there may be a military incentive, for example, providing training teams in return for a discontinued objective or threat of action.

2

Deterrence by encouragement-of-restraint

2.10. Encouragement-of-restraint is often the least considered way of achieving deterrence and can be described as convincing, persuading or demonstrating to an adversary that restraint (in their actions) will result in a better, acceptable or least bad outcome for them. Encouragement-of-restraint can also include a ‘reduction in costs imposed’ against an adversary. For example, limiting the scope of an action may only incur a limited military response by the UK or allies. However, in the military context, deterrence by encouragement-of-restraint is often not considered for two principal reasons.

- a. It may be perceived as giving an adversary what they wish for; in colloquial terms, that of ‘paying the *Danegeld*’.²⁹ This may be perceived by some as giving in to blackmail. In some cases it might be just that, but

.....
 29 The *Danegeld* was a payment in the 9th-11th Centuries of Europe, used to pay off prospective Viking raiders in return for their peace. Somewhat inevitably they returned year after year demanding more *Danegeld* as payment.

it should be considered in as logical and clinical manner as possible for it may just be that the adversary has been backed into a corner (possibly inadvertently) by the UK's actions that had unforeseen and unfair consequences.

b. Because encouragement-of-restraint incentivises an adversary not to act by giving the adversary something (else) or by reducing the imperative for the adversary to act, it is sometimes more readily associated with pacification than deterrence. However, de-escalation is a pivotal aspect of deterrence and must be considered in the context of averting undesirable adversary action. It is important to note that de-escalatory measures are often non-military in nature and will usually require a cross-government approach by the Foreign and Commonwealth Office (FCO) and other government departments.

Deterrence by denial-of-benefits

2.11. Denial-of-benefits can be described as preventing an actor from achieving the anticipated or hoped for results of any action. It consists of four subsets – resistance, removal, replacement or redundancy. These subsets may be useful when analysing why an actor or adversary has **not** carried out an action. The advantage of deterrence by denial-of-benefits is that politicians and other decision-makers do not need to actively decide to conduct imposition-of-cost actions against an adversary. Their 'action' has already been taken in that they have prepared the ground as described below. Proving a negative is always difficult but these four subsets offer an insight into how denial-of-benefits might work and therefore how to overcome this.

a. **Resistance.** A straightforward defeat by preventing an adversary from achieving their aim by thwarting their actions. If an adversary becomes convinced by communication that a (military) course of action will be defeated by superior force of arms, they may be deterred from acting in that way. Likewise, physically demonstrating the ability to defeat any given military action³⁰ is likely to have a deterrent effect on that adversary from employing such assets or taking such actions.

.....
30 An example might be the United States Terminal High Altitude Area Defence system, designed to defeat ballistic missile attacks.

b. **Removal.** By removing the benefits the adversary seeks, the action cannot be completed as intended. If an adversary is attempting to capture or destroy tangible assets or equipment that will impact on the UK's ability to make decisions, then removing them to an unknown place or somewhere out of range to the adversary (as well as communicating this to them) may deter them from attempting to act. This may be something as simple as moving a target out of range (for example, the Soviet Union moving factories to east of the Ural Mountains during World War 2). It may also be protecting or hiding such a target (for example, the Iranian nuclear programme being conducted at great depth underground to deter an 'Osirak'³¹ style raid). However, this is not always possible, particularly in cases where a geographical presence is required.

c. **Replacement.** If an adversary perceives that the UK has the capacity to replace or rebuild anything they target in a timely and effective manner, this may have a deterrent effect. The adversary may perceive that, whilst removing certain UK assets is desirable, such action is ultimately futile because the repair or replacement of those assets would be so fast it would render the energy expended on attacking them as wasted. If this is the case, the adversary may be deterred because the cost of action (for example, munition expenditure, risking of assets or international criticism) is simply not worth it.³²

d. **Redundancy.** If there is an inbuilt redundancy to any targets, (for example, there are so many targets it would be impossible to target and destroy enough of them), then this may cause an adversary to consider that their actions will not have the perceived benefit they would wish. Of course, redundancy has an inbuilt cost that will need assessment **before** anything is built.

.....
31 The Osirak raid was conducted in 1981 by the Israeli Air Force against the Iraqi nuclear reactor under construction near Baghdad.

32 The increasing complexity of equipment and munitions makes this increasingly difficult as a strategy.



Imposition-of-costs does what the name suggests – it imposes unacceptable costs on the adversary

Deterrence by imposition-of-cost

2.12. Imposition-of-cost can be described as imposing, or the threat of imposing, some form of retaliation against an actor should they carry out a course of action. The costs will normally be unacceptable to the actor and the costs do not necessarily need to be in the same domain as the actor's original action. The UK must seek to communicate its intent **before** an adversary carries out any adverse action, otherwise deterrence may not be achieved in the first instance. The UK must convince the adversary that the UK has both means (capability) and the genuine intent (credibility) to do so. If the adversary believes that the UK lacks either of these elements, deterrence by imposition-of-costs is unlikely to be achieved.

2.13. **Perceived cost of an action.** The following are the elements that will be considered by an adversary when calculating the impact on them should they carry out any given action. They may be used independently or collectively.

- a. **Perceived threat of punishment or retaliation to an adversary from UK action.** If the adversary believes the UK would impose unacceptable costs because of retaliation, deterrence is likely to be achieved. This

is the most commonly considered element of deterrence, but it usually requires significant resolve by the UK as well as the expenditure of assets, time or political capital. Imposition-of-costs does what the name suggests – it imposes unacceptable costs on the adversary as retribution, if they pursue their aims. It is important to note that this imposition-of-costs or response to action in one domain may occur in a different domain. Integration across domains raises potential costs for the adversary and enhances deterrence. For example, a kinetic strike might be conducted against military assets in response to a cyberattack that reaches a necessary threshold to activate a tripwire. Retaliation may not always be kinetic military action; sanctions, travel bans, seizing assets or galvanising international opinion are all examples of potential retaliation or imposition-of-costs.

b. **Perceived cost imposed by allies of the UK or by neutral third parties.** This is an extension of the sub-paragraph above in which wider actions (not from the UK directly but other actors) may impose costs on the adversary for their actions. This may be in terms of an international response, such as sanctions, but it could also be another third party taking advantage of the adversary's preoccupation and distraction with their action against the UK. For example, if an adversary moves troops or ships away from a pre-existing zone of tension to conduct their action against the UK, they may leave a border weakly defended.

c. **Perceived costs in conducting an action.** This is usually considered in terms of resources required to achieve the aim, for example, excessive ship, troop or aircraft losses, but it may also be considered in financial cost terms. Adversaries will want to avoid a 'Pyrrhic Victory'³³ where the cost of achieving an aim damages them irrevocably, although history has shown that many actors will fail to foresee such an event and will continue to commit resources into achieving an aim once they have started.

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 33 Named after King Pyrrhus who defeated the Roman army in battle in 280 BC. He sustained such heavy losses in the course of this victory that he was unable to sustain his planned campaign against Rome.

Section 2 – Red lines, thresholds and ambiguity

Red lines

2.14. A red line is defined as: a boundary or limit which should not be crossed.³⁴ In the deterrence context, a red line may be further described as a specifically-defined adversary behaviour,³⁵ while a threshold is a 'level' of intensity; both warrant a response as a 'tripwire' for further activity, whether a decision or other action of some sort. The two are closely related as red lines proscribe specific prohibited behaviours given the UK's (or alliance's) thresholds. In other words, if communicated, red lines reflect the UK government's underlying thresholds, those that act as tripwires. For the UK Armed Forces' contribution to deterrence, communicating the UK's red lines may also involve military activity, for example, forward presence, test exercises or ordering new equipment. These may be carefully orchestrated to reinforce communications by the UK government. However, it may be that the UK government wishes to allow itself room for political manoeuvre and therefore may communicate a level of ambiguity.³⁶ This may take several forms, which we will explore further.

2.15. Politically, red lines have become more unpalatable in recent years as it reduces political leaders' room for manoeuvre.³⁷ However, in the specificity-centric nature of deterrence, red lines have the utility of making the UK's position clear on any given course of action (communication). An adversary can then assess if they believe the UK's stated position

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34 *Concise Oxford English Dictionary*.

35 For example, President Obama's red line that the Syrian government should not use chemical weapons against the Syrian population (with the inference that Syria would face United States military action if it did).

36 The ambiguity around Article 5 in the North Atlantic Treaty Organization (NATO) is a good example of deliberate ambiguity, a position the UK continues to support even though some nations call for more concrete red lines.

37 An example of this is the early insistence by some Western governments that President Assad be deposed from Syria. As it has become increasingly unlikely that this will happen, it has caused difficulties in negotiations.

(credibility) and, if so, take a view on what the response might be (capability). If the adversary perceives that the UK's response is likely to either inflict unacceptable costs or deny benefits to an unacceptable level, deterrence is likely to be achieved. Red lines are more likely to be effective against risk-prone adversaries (as opposed to risk-averse adversaries) since the red line will usually be clear in what is not acceptable to the UK. However, we should note that having stated a red line, to not enforce any transgression risks undermining all future deterrence communications and, therefore, our reputation.

Thresholds

2.16. Sometimes an adversary will not know for certain that there is a threshold, or what level a threshold has been set on an adversary course of action until it has been crossed. The UK may undertake deterrence activity against an adversary with the clear communication that a course of action is viewed as contrary to the UK's interests and that consequences are likely to follow as crossing the threshold will activate a tripwire leading to a decision or action by the UK. But, the actual threshold may not be declared by the UK. This allows the political leadership room to manoeuvre and allows for measured assessments of the impact of the adversary's action without committing to retaliation. Deterrence theory and conduct takes account of this, allowing for retrospective action against an adversary for conducting a course of action. Of course, in such an instance, deterrence may not necessarily have been achieved. Hence, there is a value in some instances of periodically stating the UK's values and certain thresholds evolving from its values. Appropriate retribution for such actions will, however, contribute to subsequent deterrent effects, either against the adversary in question or other such adversaries. When conducting deterrence operation planning, commanders and staff should consider previous actions by the UK for any similar transgressions by other adversaries; one solution does not necessarily suit all, but adversaries may view previous thresholds as a precedent, as well as the response that crossing them activates.

Ambiguity

2.17. Deliberate ambiguity has its place in deterrence operations but its use must be carefully considered in the context of understanding and communication.³⁸ Ambiguity of **threshold**, **response** or **capability** may be considered by the operational commander and their staff. This ambiguity is achieved by being clear on the threshold **or** the response **or** the capabilities, but not necessarily on all three. The key concept here is that of a threshold; a decision or action by the UK in response to crossing this threshold. Whilst it remains important to communicate to an adversary that you do not wish them to pursue a course of action, the threshold or response may be kept from the adversary to retain political freedom of movement. It may also be useful if the UK or operational commander have not yet decided what the threshold or response might be. This may have the benefit of convincing a risk-averse adversary that the calculus of action does not add up, whilst retaining some freedom of movement.

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- a. **Ambiguity of threshold.** The most common approach would be an ambiguous threshold with a clear response. For example, if Actor A conducts an Action 1 that the UK regards as over the threshold, then a clearly defined response will happen, all without specifying how severe Action 1 must be for the response to occur.
- b. **Ambiguity of response.** The other approach is if Actor A conducts a clearly defined Action 2 then some form of a communicated response is likely to happen, but with an ambiguous degree of severity. This sort of approach is likely to work best when the understand function suggests an adversary is more likely to 'try their luck' than launch a dedicated action; it maintains a large freedom of movement.
- c. **Ambiguity of capabilities.** For our Armed Forces or a joint commander, they may also have to consider that an adversary is uncertain of **precisely** what military capabilities are available. This

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³⁸ Secretary of State for Defence, Michael Fallon talking about deterrence said it should "leave uncertainty in the mind of any potential adversary. If he's looking at a country to attack as to what kind of response, he can expect – it's to leave ambiguity in the mind of your enemies". Andrew Marr Show, BBC, 14 May 2017.

ambiguity can cause an adversary to pause for thought if they think the UK **might** have a capability that can punish them. This is particularly true if an adversary has a vulnerability, known only to themselves, that a **possible** UK capability might attack. The adversary may calculate that the UK has identified the adversary's vulnerability and be deterred accordingly.

2.18. **Hybrid or 'gray zone' operations.** Ambiguity is a key element of deterrence in response to operations. The recent increase in deliberate hybrid operations makes ambiguity useful to the UK and its allies about red lines, especially when hybrid operations against us are conducted by, with and through proxy forces. If an adversary is clear what actions they can and cannot take, there is always the prospect of them circumventing a line or simply creating a large quantity of smaller actions, none of which might breach a clear red line. In this way, an adversary to the UK and allies can 'legitimately' claim to have never 'crossed' a red line. Ambiguity, backed up by credibility of resolve and capability to do so, can cause an adversary to exercise greater caution regarding their actions as they will not know for certain when they might cross the UK or alliance's red line. This is especially the case when it comes to the cumulative effect of smaller actions and fear of 'the straw that breaks the camel's back'.

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Ambiguity can cause an adversary to reconsider if they think the UK has a capability that can punish them

Section 3 – Escalation and de-escalation

2.19. Escalation and de-escalation are subject to many variables. This section outlines some of the key variables as well as exploring how to use them to achieve dominance or avoid being out-escalated. The wide range of factors at play here can give some idea as to why deterrence has never been measured empirically; the factors are inherently subjective, not only differing between the UK, allies and adversaries but also amongst all the actors. No one individual will allocate the same weighting to each factor. Instead, it is a culmination of factors in the minds of the whole.

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2.20. **Escalation dominance.** To avoid being out-escalated, it is essential that the UK is willing to go through with any actions it has threatened; this may extend to some it has signalled unintentionally. This is the essence of escalation dominance. Against an actor to whom an issue fundamentally matters more, that actor will almost always be prepared to escalate, even to their own detriment. The centrality of understanding cannot be understated here. We should be aware that UK actions may be misconstrued by other actors as being threatening, demeaning or detrimental to their security in general (not always military security). Whilst this may not remove or even reduce the UK's actions, by careful understanding, the UK should aim to anticipate how its actions may be perceived by other actors, who may have different cultures and values. In these instances, the UK may wish to minimise the cost of restraint by using a cross-government approach.

2.21. **The leader's own actions.** Some leaders,³⁹ whether through pride, arrogance, ambition, corruption, laziness or incompetence, will create a situation where they perceive they should act, either to save face, prevent a security issue or even to save their regime. In this instance, there is often little the UK can do to reduce the cost of restraint and the deterrence impacts should be factored accordingly, for example, by increasing the prominence of deterrence by imposition-of-costs or denial-of-benefit in the UK deterrence posture.

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39 Taken to mean either an individual or a ruling grouping – those in charge of decision-making.

2.22. **Rival factions to the leaders.** An actor's internal politics will sometimes push an actor towards an activity that is counter to the UK's interest. It may be possible in this case to assist the incumbent leaders; the military contribution could include providing training teams to the military or police, for example. Using a cross-government approach could also include beneficial trade deals for that actor, international development grants, diplomatic recognition or sharing science and technology. In short, anything that bolsters the position of an incumbent leader (reducing their threat from within), as well as raising the population's perception of the UK, should reduce the population's appetite to conduct action against the UK. For example, if the UK is a major trading partner, this is likely to induce a reluctance to act against the UK. Targeting multiple centres of decision-making is an important objective of deterrence strategy. Identifying those centres is one of the key tasks of understanding an adversary.

2.23. **Third party actors.** The actions of a third party, external to the UK and the adversary, may increase the cost of restraint for that adversary. In this case, thought is likely to be given to exercising UK levers on the third party through a cross-government approach or by engaging allies to exert leverage. This area and expertise is the preserve of the FCO but they may call upon our Armed Forces to contribute as they see fit. Our Armed Forces should consider how the FCO may conduct this diplomacy and remember that the military may have to fit in with FCO activities, rather than the other way around. When operationalising deterrence, planning considerations should include the risk of unintended perceptions developed by 'observers', who may perceive an action in a way not intended by the UK (unintended consequence) because the audience was not primarily the direct recipient.

2.24. **Time.** The deterrence timeline is often measured in months and years, but in times of elevated tensions this may reduce to days and weeks, possibly even to hours in times of extreme crisis. It is within this context that the following actions should be considered.

- a. **Delay of actions.** In deterrence terms, there may be a significant latency in the consequences of an action on both the UK and the

adversary.⁴⁰ This is because actors and adversaries will draw their conclusions from the long-term actions and communications of the UK government and our Armed Forces. Our adversaries will also seek to understand as deeply as possible our intentions, perceptions and possible responses to any course of action. At the cross-government level this is the responsibility of the UK government and the Cabinet Office, but our Armed Forces also have a role to play in this. For example, at the strategic level, equipment and procurement decisions influence an actor's perception of our capability, as do recruitment levels for our Armed Forces and the level of our training and readiness. These may be the result of decisions made some time ago but they will have a clear influence on the deterrence perception of our Armed Forces.

b. **Repetition of actions.** An actor that repeatedly carries out actions that contribute to deterrence will build their credibility, both with those who are a direct recipient of their action and other observers. This is primarily linked to willpower and reinforcing the perception in the minds of the adversary or others that the actor in question is prepared to conduct (military) action to meet perceived threats, whether across a threshold or not. Therefore, repeated tailored or immediate deterrence actions that are clearly part of preparation for a full response can contribute to increasing the credibility of an overall general deterrence posture. Other actors observing the actions may perceive a strong resolve to act and the use of capable forces that could be used against them should they threaten the UK. This repetition of action includes testing to prove our capabilities and exercising to demonstrate will and capability.

2.25. **Increased communication.** If analysis suggests that a matter is essential to the UK but not necessarily so to the adversary (as they might perceive), thought should be given to persuading the adversary of this point of view or perception in a way that is not received as threatening or condescending. Communicating the UK's critical stake to the adversary in a way that presents

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40 An example of this might be the threat to expel United States diplomats by Russia in July 2017 in response to the expulsion of 35 Russian diplomats and the closing of diplomatic compounds in the United States during December 2016, some seven months earlier.

the gravity of the situation from the UK's perception, but without necessarily resorting to 'brinkmanship',⁴¹ may well enable deterrence to be achieved. Although this will often be the purview of the FCO, there are occasions when a non-violent military-to-military engagement might be a way to achieve this.

2.26. **Asymmetry of stakes.** In any given scenario, adversaries may judge that they have 'more to lose' than opposing actors (in this case the UK). Time should be spent understanding the impact on an adversary if they **do not** achieve their goal. Something that may be perceived as an essential matter of survival to them may be a matter of minor inconvenience, insult or injury to the UK. In this case, a judgement should be made on the encouragement-of-restraint or indeed, whether resources need to be allocated to deterring the matter at all.

2.27. **Asymmetry of power.** An adversary facing the UK will conduct its own analysis, however informal, on the UK strengths and weaknesses when considering UK deterrence postures. Commanders and staff should give careful thought to this part of the understand function; namely, what conclusions an adversary might draw, reasonable or otherwise, when viewed from that adversary's perspective. The widely accepted supremacy of Western military equipment since 1991 has led almost all adversaries to challenge the West in an asymmetric manner; there is no incentive to 'fight fair'. Therefore, when considering operational deterrence, we should give thought to ways in which an adversary might seek to circumvent UK operational deterrence. This should then prompt a commander to 'close off' these identified options before they are enacted, or develop contingency plans with which to deal with them should they arise.⁴²

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41 In strategic terms, this will always be a Foreign and Commonwealth Office (FCO) lead but within a military deployment, the commander may need to take responsibility for this at the operational level.

42 'Fear of atomic war might lead to indirect methods of aggression, infiltration taking civil forms as well as military, to which nuclear retaliation would be irrelevant'. B. H. Liddell Hart, *The revolution in Warfare*, 1946.

2.28. **Forward presence *versus* effective reinforcement.** In a military context, the trade-off between forward presence and effective reinforcement is often a consideration for deterrent effect. The perception being sought is one of commitment to a certain outcome. Forward presence and effective reinforcement may happen in any domain and at any level of command, from the strategic to the tactical level.⁴³ The operational commander and their staff should assess the pros and cons of such deployments or reinforcement plans when planning deterrence operations; their use will need balancing with wider considerations such as force rotations, easily targeted positions and vulnerable supply routes. However, in outline, forward presence and effective reinforcement should be compared in instances where:

- force elements at readiness (FE@R) must be held against an adversary course of action;
- the presence of UK-allied forces in a location may be perceived as inflammatory, threatening or deterrent;
- the ability of the UK to reinforce an area is an integral part of any given deterrence plan;
- UK allies may need assurance regarding the UK's commitment to assist them; and/or
- UK allies may need assurance regarding the UK's ability to assist them.⁴⁴

.....
43 An example of forward presence is the North Atlantic Treaty Organization (NATO) enhanced forward presence (eFP) mission which comprises several NATO forces being deployed to Estonia, Latvia, Lithuania and Poland to safeguard the integrity of NATO members' territory.

44 As part of this, anti-access and area denial (A2AD) considerations may need to be considered. This should include the ability of the adversary to prevent UK effective reinforcement. It is not just about an adversary's ability to sink UK ships or shoot down UK aircraft, it is also about an adversary's ability to influence those whose acquiescence is essential for our effective reinforcement.

Cuban Missile Crisis



The Cuban Missile Crisis in 1962 brought the Cold War to the brink of armed action as the Soviet Union sought to place nuclear missiles on Cuban soil, only 90 miles from the United States mainland. It was also discovered that the Soviet Union had already managed to place some nuclear missiles in Cuba without the knowledge of the United States. The United States declared that any ships carrying such missiles would be subject to armed action if they came within 500 miles of Cuba. After several days of tension and intense diplomatic negotiations, the Soviet ships carrying the missiles turned away and returned to the Soviet Union. However, although combined with the threat of massive military action, the United States also agreed to remove nuclear missiles secretly stationed in Turkey, on the very border of the Soviet Union as well as some in Italy; importantly, this was not made public at the time. The Soviet leadership agreed to this de-escalation; perhaps the best example in the past 100 years of political de-escalation providing a solution to an otherwise seemingly inevitable military confrontation.

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2.29. **Provocation and precipitation.** Different adversaries may perceive the UK's actions in different ways regarding forward presence and effective reinforcement. A balance will always need to be struck between too provocative a stance and too little demonstration of capability and intent. A high forward presence may inflame a situation but, equally, so might conducting large-scale or frequent exercises to ensure effective reinforcement would work. Either of these may be viewed as escalation by an adversary and may therefore have the opposite effect to that intended, specifically, a spiral to greater violence. This is a paradox of deterrence – that actions designed to prevent a conflict may provoke that very same conflict, either as an affront or a perceived threat. As with so much of deterrence, this is about perceptions from an adversary's point of view. This may be managed with thorough understanding and effective communication, although this will often require a cross-government approach and may involve an FCO lead.

2.30. **Immediacy of effect.** Forward presence increases the immediacy of effect of UK and allied forces. As such, it raises the cost of adversary actions as forward deployed forces impose costs in the initial assault. Cost imposition by reinforcements may be delayed, and thus have a decreased effect on the adversary’s calculus.

2.31. **Comparative advantages and disadvantages.** Forward presence *versus* effective reinforcement is not always a debate to have. It may be that planning considerations are more tailored towards rules of engagement, using a capability or threat against a specific asset of an adversary. However, the frequency of forward presence and effective reinforcement debates in deterrence operations warrants their detailed consideration, as can be seen in Table 2.1.

Forward presence				
Advantages	Provides clear message of intent and resolve to adversary; no ambiguity.	Adversary can see the capability ranged against it, which can provide a concrete threat, either of consequence or overmatch.	A small amount of effective forward presence can save considerable amounts of money, political relations and human life, if conflict is avoided.	Provides assurance to our allies that the UK is committed and capable in assisting them.
Disadvantages	If there is too much forward presence or if it is messaged in a clumsy manner, it may be perceived as provocative or as a threat.	Adversary can plan to neutralise, destroy or negate a capability it can clearly see and understand. It allows testing of red lines or alliance resolve by an adversary.	Permanently deploying force elements is costly in time and assets. They become unavailable for activities elsewhere and require sustainment.	It may be that forward presence is not the best form of deterrence against any given threat. A lack of expected or desired assets may undermine assurance in the perception of allies.

Effective reinforcement				
Advantages	<p>Introduces doubt into the mind of adversaries on our threshold for acting. With effective credibility, communication and capability underpinned by effective comprehension, this ambiguity may be more effective than forward presence, less costly and less provocative.</p>	<p>Provides doubt in the mind of adversaries as to the capabilities they may face if we reinforce. They will be unable to plan against all our contingencies.</p>	<p>With force elements allocated for reinforcement it is easier and cheaper to sustain them at their home base. They can usually train more effectively although planners must think about notice-to-move timings.</p>	<p>Reinforcement exercises can provide a clear message to adversaries and allies without the provocation and expense of forward presence, as well as benefiting military training.</p>
Disadvantages	<p>If planning assumptions on any of the UK's credibility, communication, capability and comprehension of the adversary are significantly incorrect, adversaries may doubt our resolve to act.</p>	<p>Effective reinforcement requires the ability to deploy assets quickly. Many factors may delay or negate our ability to deploy forces such as decision-making or effective adversary anti-access and area denial. This may provide an adversary with the time to coerce the UK out of the fight before any force may be brought to bear.</p>	<p>Force elements allocated to one theatre/location cannot be double-hatted for other tasks that cannot be abandoned at a specific notice-to-move.</p>	<p>If the analysis and understanding of the situation is incorrect, exercises may inflame the situation or provide adversaries with insight into our deployment plans.</p>

Table 2.1 – Comparative advantages and disadvantages of forward presence and effective reinforcement

Key points

- If the perceived benefit for an adversary is more than the perceived cost, it is likely that deterrence will not be achieved.
- Perception, as opposed to reality, is a vital part of the deterrence equation.
- If an actor perceives that their very existence or position of power is dependent on their carrying out an action, their cost of restraint is very high.
- Benefits of restraint is when the adversary can be convinced that not carrying out a course of action will still result in an acceptable outcome for them.
- Denial-of-benefits can be described as preventing an actor from achieving the anticipated or hoped for results of any action.
- The advantage of deterrence by denial-of-benefits is that decision-makers do not need to actively conduct imposition-of-cost actions against an adversary.
- Imposition-of-cost is imposing, or the threat of imposing, some form of retaliation against an actor should they carry out a course of action.
- Deliberate ambiguity has its place in deterrence operations but its use must be carefully considered in the context of understanding and communication.
- To avoid being out-escalated, it is essential that the UK is willing to go through with any actions it has threatened; this may extend to some it has signalled unintentionally.
- Time should be spent understanding the impact on an adversary if they do not achieve their goal.
- We should give thought to ways in which an adversary might seek to circumvent UK operational deterrence.
- A balance will always need to be struck between too provocative a stance and too little demonstration of capability and intent.





Chapter 3

Chapter 3 is concerned with the Defence contribution to deterrence by the UK and its allies and partners. It looks at the elements and components of the Defence contribution as well as wider implications such as legal considerations.

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In matters of **military contingency, the expected**, precisely because it is expected, **is not to be expected**.

Rationale: what we **expect**, we **plan** for; what we **plan** and **provide** for, we thereby **deter**; what we deter does not happen. What does happen is what we did not deter, because we did not plan and provide for it, because we did not expect it.

”

Sir Michael Quinlan
Permanent Under Secretary,
Ministry of Defence, 1988-1992

Chapter 3 – Defence contribution to deterrence

3.1. Deterrence is conducted at many levels but is principally addressed in this publication at the national level, the highest level at which the UK government exercises control over actions. The UK will frequently conduct deterrence as part of an alliance, such as North Atlantic Treaty Organization (NATO), or with other coalition allies. In cases where deterrence is strictly a national undertaking, our UK Armed Forces may well be an essential part of a cross-government approach. However, the Ministry of Defence (MOD) is rarely the lead department, even if Defence is sometimes one of the most integral parts of deterrence in a given situation. Commanders and their staff must recognise that, for the most part, the Cabinet Office and the Foreign and Commonwealth Office (FCO) will have the lead. However, Defence has its own, intrinsic role to play in terms of deterrence, either once a deterrence course of action has been authorised or during the course of a military deployment when pursuing other aims. This is explored further in Chapter 4.

3.2. For deterrence to be effective, it will require Defence activities to be synchronised with the wider government strategy. This synchronisation will be conducted by the MOD as the Military Strategic Headquarters and will include applying all components of our Armed Forces' fighting power (physical, conceptual and moral). It will also require contribution from each of the five war fighting domains. In deterrence terms, this creates an overall 'posture' adopted by Defence that can take many forms, ranging from acquiring high-end military equipment through maintaining capable standing forces to frequently exercising these forces. It can also include Defence Engagement,⁴⁵ defined by the government's *International Defence Engagement Strategy* as: **the means by which we use our Defence assets and activities short of combat operations to achieve influence.** Deterrence is stated as an explicit objective of Defence Engagement and it also emphasises the need to 'maintain...the international profile of UK Defence capability and our political will to use it if necessary'.⁴⁶

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45 As detailed in Joint Doctrine Note (JDN) 1/15, *Defence Engagement*.

46 UK government, *International Defence Engagement Strategy*, 2013.

3.3. The Defence contribution to deterrence is an essential but nuanced approach. At the strategic level, the Cabinet Office and the FCO have the lead and the MOD conducts activities as required and directed. Yet at the operational level (for example, when conducting a non-combatant evacuation operation), operational commanders may find themselves responsible for enacting their own deterrence. The ends and ways remain broadly similar with only the means being largely different at this level.

3.4. **Context of deterrence.** Deterrence is context dependent. The concept of deterrence in the Cold War between superpowers with a myriad of strengths and vulnerabilities has key conceptual differences to the modern day concept of deterring North Korea or Hezbollah, for example.

Section 1 – Command and control

3.5. **National governance.** The governmental organisations involved in UK deterrence were outlined in Chapter 1. The cross-government approach remains central to these deterrence operations but our Armed Forces have a key role to play in the following.

a. **International approach.** Our Armed Forces are a key part of international alliances, especially NATO. Other multilateral arrangements exist, such as the Northern Group and the 5-Eyes community. The UK Armed Forces may not be the leaders of activity in these alliances but they will form a significant part of the contribution.

b. **Partnerships.** Our Armed Forces also participate in some key bilateral arrangements such as with the United States and France. They also exercise with, or contribute Service personnel to loan service with selected allied nations, such as Oman.

c. **Force structures and deployments.** The Permanent Joint Headquarters (PJHQ) oversees the deployment and coordination of UK Armed Forces overseas, whether to the permanent joint operating bases or on specific deployments, both on operations or training. As has

been described, **all** UK Armed Forces activity, especially that overseas, is observed by other actors and contributes to a perception of our UK Armed Forces. This perception is in terms of force projection capabilities, competency of personnel, and equipment for all aspects of operations, including maintenance.

‘Sometimes, like the prospect of defending against thousands of nuclear-tipped missiles, deterrence is the least bad option. That is not the case in cybersecurity. We have other options...and we should employ them alongside deterrence.’

Michael Sulmeyer⁴⁷

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3.6. **Strategic coordination.** Ministers may decide that a particular deterrent effect requires the use of our Armed Forces in some form. Taskings may come through the MOD to PJHQ and the single Services. Dialogue is essential both up and down the chain of command in these instances to ensure that suitable elements are tasked.

Section 2 – Elements

3.7. The military power of our UK Armed Forces may be considered as the maritime, land, air, space and cyber domains. It is important to note that these are the domains where effects may be created but they do not necessarily ascribe complete responsibility to any of the Royal Navy, British Army, Royal Air Force or Joint Forces Command.⁴⁸ Joint Forces Command, for example, contains some key cross-domain entities such as cyber, space, special forces and medical assets. Thus, our deterrence posture will likely include multi-domain and multidimensional operations.

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 47 Professor of cybersecurity, Harvard University, in testimony to Senate Armed Services Committee, Subcommittee on Cybersecurity, 2018.

48 Each command may include an organic component of another domain; for example, the Royal Navy has its own land component, the Royal Marines and air component, the Fleet Air Arm.

3.8. **Defence deterrent elements.** The operating environment will include several of the domains in which military activity occurs. This will be under the command and control of the joint commander and could take place within any number of dimensions⁴⁹ or environments.⁵⁰ All elements will contribute capability in terms of offensive, defensive, communication, and intelligence, surveillance and reconnaissance capabilities as well as enabling capability. Special forces will operate across all domains and environments. As a start point, all domains will rely heavily on their physical war fighting capabilities to perform the bedrock of a specific deterrence posture but the deterrent effect sought will undoubtedly be greater than the sum of the constituent part and this will be achieved through synchronisation and priorities of tasking.

- a. **Maritime.** The maritime element will predominantly contribute to deterrence operations through the conventional roles of maritime power: war fighting, maritime security and Defence Engagement.⁵¹ This may include the high seas and the littoral, as well as the maritime surface, sub-surface and above-surface dimensions. The Royal Navy achieves this through the attributes of access, poise, mobility, persistence and versatility.
- b. **Land.** The land element will contribute to deterrence operations through the four functions of UK land power: fight, engage, secure and support. It achieves this through the attributes of soldiers, presence, persistence and versatility.⁵²
- c. **Air.** The air element will contribute to deterrence operations through the four enduring roles of air power: control of the air; attack; air mobility; and intelligence, surveillance and reconnaissance. Air power achieves this with the attributes of height, speed, reach, ubiquity and agility.⁵³ This will include creating effects across the maximum vertical and horizontal ranges achievable.

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49 The physical, virtual and cognitive dimensions.

50 Examples include, but are not limited to, informational, societal, climatic or topographic. Each may be broken down further, for example, climatic may consist of desert, arctic, tropical or temperate (an illustrative, not an exhaustive, list).

51 Refer to Joint Doctrine Publication (JDP) 0-10, *UK Maritime Power* for more detail.

52 Refer to JDP 0-20, *UK Land Power* for more detail.

53 Refer to JDP 0-30, *UK Air and Space Power* for more detail.

- d. **Space.** Deterrence operations in the space domain are complicated by the overarching impact space has on all other domains, primarily as a conduit. The control of space and space situational awareness will be crucial in achieving this.
- e. **Cyber.** The joint element will contribute to deterrent effects across all operational domains (including the electromagnetic spectrum). However, the maritime, land and air elements have their own discrete capabilities designed to contribute to cyber and electromagnetic operations from within their own respective domains. All war fighting domains will need to be able to demonstrate resilience to cyberattack.

Section 3 – Components

3.9. It is useful, in deterrence terms, to focus on the components of fighting power in a deterrence context. These are highlighted here in the context of the Defence contribution as it weaves into types of deterrence, such as general, tailored and immediate deterrence. The conduct of the moral, physical and conceptual components will be observed and analysed by all other actors, friend, foe and neutral, and their conclusions will contribute to the reputation of the UK's general deterrence posture.

3.10. Deterrence contains conceptual, moral and physical components in the same way as other aspects of military activity. The conceptual component involves the theory of deterrence and its implementation. The moral component in deterrence is less about ethics and morale (although these do play a part) and more about perceptions, beliefs and understanding. The physical component mainly concerns capabilities and their ability to impose costs or deny benefits.

Moral component

3.11. In the context of deterrence, the moral component is considered as the willingness and readiness of an actor's armed forces to fight, combined with how they conduct an action and the success rate when they do. Examples of this include the propensity of an actor's armed forces to resort to force as a first resort *versus* their restraint,⁵⁴ their determination in combat and their adherence to the Law of Armed Conflict when doing so.



Moral component influence

Fall of Germany, 1945

Towards the end of World War 2 in Europe, the way captured German troops were treated on the two different fronts (Eastern and Western) engendered different motivations and caused very different behaviours. German troops surrendering on the Eastern Front were frequently executed or despatched to concentration camps, whereas troops on the Western Front were more frequently fed, sheltered and given medical care. This difference in treatment encouraged the German forces on the Western Front to surrender far more readily to the Western allied forces, whilst fighting less and therefore causing fewer casualties. The German forces were deterred from surrendering to the Soviets on the Eastern Front, knowing what treatment they were likely to face. This caused them to fight to the bitter end. This, in turn, caused more casualties amongst the Soviet forces.

3.12. **Just cause of deterrence.** Deterrence is one aspect of preventing action contrary to UK interests. The UK public should perceive our deterrent actions as just and consistent with our political principles and the rule of law. If the UK government chooses to employ military force, the public will want to know that all other means were exhausted and that the UK's use of these weapons meets the requirements of discrimination and proportionality.

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54 An actor's rules of engagement are important here, as are the political and strategic policy instructions regarding use of force or restraint.

The United States' entry into World War 2



The United States was reluctant to be drawn into combat operations in World War 2, despite offering logistical support (amongst other aid) to the UK and its allies initially. This was due in part to the United States' political leadership being deterred from participating by public opinion following World War 1. After the Japanese attack on Pearl Harbor in December 1941, no such deterrent existed; the United States' public were incensed by the attack and the United States government readily committed to war. The pre-emptive actions of the Japanese had ensured that the United States could declare war with the 'moral high ground' intact.

3

Physical component

3.13. The reputation of the physical component is achieved by a combination of equipment capability multiplied by equipment numbers. A state with a handful of high-grade platforms may have less of a deterrent effect than one with many of a lesser capability or *vice versa*. Quantity does have a quality all of its own. The credible readiness of such a force is also a factor in creating a reputation. The ability to mount, deploy, sustain and recover an effective force will be carefully assessed by adversaries. But, it is not simply platforms or weapons that are judged in this way by adversaries, it is also the personnel manning those platforms and weapons systems and their prowess in doing so. A state that is known to have fit, well-trained, skilful and committed members of the armed forces will have a greater deterrent value than one whose personnel are unfit, poorly motivated and badly trained.

3.14. **Organisations.** Military organisations are perceived by adversaries in regard to their efficiency, capacity and competency. These aspects form the adversary's perception of capability.

- **Efficiency** refers to an organisation's speed of operation (for example, an operational headquarters' speed of decision-action cycle).

- **Capacity** refers to the breadth and scale of operations of which it is capable.
- **Competency** is simply its ability to make good decisions and execute good plans.

These perceptions will almost always be borne of observation from all-comers, therefore maintaining the highest standards will inform adversary perceptions. Exercises and demonstrations by organisations have a crucial part to play here in demonstrating both credibility and capability.

3.15. **Personnel.** In military terms, the deterrence value of personnel comes from both quality and quantity. This, in turn, is guided by the perceived ability of commanders to bring the requisite number to bear. An adversary might judge the number of high-quality personnel required against them to be less than that of low-quality ones. This function will flow from the ability of organisations and equipment to deliver them; they are all bound up together.

3.16. **Capabilities.** Capability influences an adversary's perception by informing the adversary of what the UK might be able to achieve. An operational commander and their staff should strive for as wide a portfolio of capability as possible to broaden the possibilities for responses; something more likely to deter an adversary. For example, maintaining a support helicopter capability in theatre presents an adversary with the possibility of rapid reinforcement, however, examples such as these should be publicly exercised to ensure the messaging is correct. Likewise, the presence of an anti-indirect fire system in the inventory is more likely to persuade an adversary that an attempt at using indirect fire will be unsuccessful.

3.17. **Intelligence and messaging.** Because of varying national priorities and caveats, commanders and staff at all levels will need to constantly strive for this coherence. This places a new burden on cross-governmental strategic communications and the intelligence community to go beyond threat anticipation and towards understanding 'shaping operations'. This must become an integral part of any alliance headquarters function – the importance of coherent messaging to alliance cohesion cannot be overstated.⁵⁵

55 See Allied Joint Publication-3.10, *Allied Joint Doctrine for Information Operations*.



Demonstrating capability influences an adversary's perception

Conceptual component

3.18. The concept component can be described as the ability of our Armed Forces to execute plans and missions in timely, efficient and imaginative ways, using the best aspects of the moral and physical components. Conducting exercises and operations (which includes their scale and ambition) are the pivotal aspects of this, giving credibility to any prospective deterrence by imposition-of-costs but also planning that results in deterrence by denial-of-benefit. Adversaries will also take a view on whether a nation's doctrines are seen as modern and effective and how well they use them.

3.19. Deterrence is a rapidly evolving and multifaceted undertaking. It has become far more complex than the bipolar Cold War aims, that of deterring the Soviet Union invading western Europe and from using nuclear weapons. Deterrence theory and practice demands clear and unequivocal aims:

'Whom do you wish to deter – from doing what – and under which conditions?'

3.20. To deliver tailored or immediate deterrence, the selection and maintenance of the aim is paramount, for without a clear objective and outcome for deterrence, short-term actions may not contribute towards the long-term aim. To simply 'deter an adversary [X]' is insufficient. The analysis must show a clear course of action by an adversary that is undesirable, and sufficiently so to cause resources to be allocated to the deterrence of that action.

3.21. Military assets and aims must be organised, resourced, marshalled, directed and led in such a manner as to contribute to this deterrence. The mechanics of how this might be achieved is detailed in Chapter 4. Here it is worth re-emphasising the role of military exercises in deterrence strategy. Paradoxically, however, it must be remembered that the absence of action by an adversary does not necessarily prove that deterrence has been achieved.

Section 4 – Implications for Defence

3.22. **Defence forecasting.** Within this global construct, the MOD may consider what effects our tailored deterrence activities will have on an adversary, and what alternative actions might they look to take if the UK deters them from their first choice? An example of an unwitting second order effect may be that while seeking to deter an adversary from a specific action, it may encourage them to act more quickly before a window of opportunity closes.⁵⁶ Similarly, activities designed to influence one actor will be observed by other third party actors who will learn from, and be influenced by, what they see; this may be true when the UK has failed to deter, or the UK has used thresholds and/or red lines and either enforced them or failed to do so. Two examples of how the UK Armed Forces can contribute in this understanding and contingency planning within an integrated approach are wargaming and red teaming.⁵⁷

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56 An example of this is moving the United States' Pacific Fleet from San Diego to Pearl Harbor in early 1941 and the United States oil embargo on Japan in July 1941. The Japanese High Command felt they had little option but to launch a pre-emptive strike against the United States to achieve their strategic aims before their fuels ran out.

57 For more information, see the Development, Concepts and Doctrine Centre's *Wargaming Handbook* and *Red Teaming Guide*.

3.23. **Deterrence education and training.** If deterrence plans and activities are to be executed effectively, time must be given within Defence courses to train and educate about deterrence. The nuances of deterrence understanding, planning and battle rhythm should be inculcated into the processes and formats of all headquarters and assimilated by commanders and staff alike. This will take time and should be practiced little and often. A system of deterrence lessons identified will help develop deterrence thinking and practice across all operational commands. Pedagogical approaches should include experiential learning activities such as table-top exercises and scenario-based discussions.

3.24. **Identifying threats.** As detailed in Chapter 1, it is essential that those involved in planning and conducting deterrence activities identify 'whom is it that you wish to deter, from doing what and under what conditions?'. As outlined in absolute deterrence *versus* restrictive deterrence, some threats are essential to deter and some are desirable to deter. The impact of failure to deter an action against the operational formation must be considered, and not only in the form of lives lost, equipment destroyed, communications disrupted or plans thwarted. For example, if a coalition of allies is essential to accomplish a mission, it will be necessary to ensure the cohesion of that alliance and, therefore, a valid aim would be to deter an adversary from attacking the cohesion of the alliance. An example of this would be the coalition for the recapture of Kuwait in 1991, where Iraq sought to goad Israel into action by Scud attacks with the aim of causing the Arab nations to leave the coalition.⁵⁸

3.25. **Resourcing the capability to deter threats.** Technology may have increased the complexity and interdependence of the threats to be deterred but it has also increased the range of options by which to deter such threats. Technology has become ubiquitous and pervasive across society, and the pace of change created by more rapid technological advancements will have implications on future deterrence of which commanders must be mindful. This adds complexity to the planning options and, therefore, the resourcing of such options. Commanders and their staff should consider the wide range

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58 In the end, the United States prevailed upon Israel to not react but instead encouraged restraint by Israel, partly through the deployment of Patriot missiles. Israel did not become involved in the conflict, a factor that is considered by many to have contributed to the cohesion of the coalition.

of resourcing options they may have, combined with their range of capability options.⁵⁹

3.26. **Integrating deterrence capabilities.** The complexity of modern operations and the range of options available to the operational commander and staff may also be a source of strength to deter any given adversary. This complexity also provides an opportunity to approach deterrence by threatening imposition-of-costs against different centres of gravity for an adversary. However, in the context of deterrence, caution and analysis is required before attacking any adversary's centre of gravity. Attacking a centre of gravity could be highly escalatory because it might breach an adversary's thresholds.⁶⁰ Commanders and their staff must decide how they might integrate their deterrence capabilities into a cohesive whole; one best placed to address all planned deterrence targets (if appropriate). Commanders and planners should consider drawing up a matrix of deterrence ends, ways and means to assist with this. Integration of deterrent capabilities provides multiple avenues by which to respond to adversary actions, thus increasing their perceived costs.

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59 It should be noted that this is not a tacit reference to Financial Military Capability (FinMilCap) type resourcing. It refers to the assets available at any given time to an operational commander in terms of personnel, equipment and time. With the exception of nuclear assets, no one equipment type is necessarily 'better' than any other and no inferences should be made as such.

60 An example of this is a nuclear nation's ability to detect nuclear launches from space. If their satellites are rendered unable to observe such launches, an oft-stated assumption by them (United States, Russia, China) is that another nation is preparing for a pre-emptive nuclear attack and they reserve the right to retaliate – pre-emptively.

Concept of counter-force and countervalue



An example of the conceptual deterrence elements of counter-force and countervalue is the case of North Korea. Kim Jong-un has nuclear weapons and will not relinquish them, it is believed, because he has seen what has happened to Qaddafi, Saddam Hussein and Ukraine. It is not known against whom Kim Jong-un would use his nuclear weapon, but it is highly likely to be a countervalue target; he has already quoted Guam as one possibility. Conversely, it could be assessed that the United States might aspire to a counter-force strike against all of North Korea's nuclear facilities to remove that nuclear threat, but the United States may be deterred from doing so because of the threat of a retaliatory (conventional) countervalue artillery strike against Seoul.⁶¹

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⁶¹ In this publication it cannot be stated with any certainty that these are indeed the precise perceptions or aspirations of the actors discussed. However, the example is a live one and well-known to military audiences; one that illustrates the concept well.

Breadth and depth of deterrence

3.27. As we have already acknowledged that deterrence is context dependent, the breadth of deterrence is described as the range of capabilities that the UK Armed Forces may be deployed against. The depth of deterrence describes the range of actors against which the UK Armed Forces may be deployed.

a. **Breadth of deterrence.** The breadth of deterrence for the military will usually run from nuclear delivery at one extreme, through conventional warfare, power projection, counter-insurgency and counterterrorism to providing training teams at the other, all inclusive of operations in space and cyberspace. Although it includes wider Defence Engagement, it is important to note that it stops short of Defence attachés; these abide by the Vienna Convention and are therefore regarded as outside the military contribution to deterrence.

b. **Depth of deterrence.** The depth of deterrence runs from major state actors at the top, down to military-grade 'lone wolf' terrorists⁶² at the bottom. It stops above the level of organised crime, noting that there is often an overlap with terrorism, countering organised crime is almost exclusively the remit of the police.

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Section 5 – The law and deterrence

There is a fundamental relationship in deterrence between 'ethics', 'legitimacy' and the 'law'.

3.28. All UK military activity must take place within the framework of the law. Depending on the global, regional or local situation, this may either be during peacetime or during a period of conflict; the idea of a declared state of war

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62 Most 'lone wolf' terrorists are the preserve of the police and security services in the UK. However, an example where the military might be called in could be to provide a visible presence in high profile areas to deter a 'lone wolf' attack (such as in September 2017 after the Parsons Green bombing in London when Operation TEMPERER was called).

being now largely defunct in the modern age. Each of these conditions will have certain implications for undertaking deterrence activity.

3.29. Legality of action. UK Defence must act in accordance with relevant international and UK law at all times when conducting deterrence activities. Given that many deterrence activities take place outside of armed conflict, the legal framework may often be one of peacetime; commanders and their staff must work within this constraint to develop effective plans. In addition, many deterrence actions may be taken by other government departments under domestic legislation, such as the Civil Contingencies Act 2004 (CCA 2004).

3.30. The law applicable to deterrence activity. As deterrence activity is a continuous spectrum, its conduct across the boundary between peace and conflict requires careful understanding of the legal systems at work during both. The emergence of hybrid operations only adds to this blurring and will require careful analysis, understanding and use of available legal frameworks to create the desired deterrent effects.

3.31. The law applicable to deterrence activity during peacetime. Deterrence is about the actions taken that influence an adversary before they make a decision. Therefore the decisions made (and communicated) by an adversary should be the desired end-state for those conducting deterrence operations. As these decisions will usually be taken in the construct of peacetime, it is essential that planners and decision-makers take full account of the legal nuances that will give them freedoms and constraints.

- a. **Peacetime legal frameworks.** All deterrence activities must be conducted in accordance with domestic UK and international law. Outside a situation of armed conflict, the Law of Armed Conflict (LOAC) will not apply.
- b. **Interventions short of force.** For deployed forces that are not actively involved in conflict (such as the UK deployments to the Falkland Islands or the enhanced forward presence in the Baltic States), the peacetime legal framework will apply. A key consideration will therefore be how to undertake conflict deterrence operations within this peacetime legal construct.

c. **'Gray zone' or hybrid operations.** Many hybrid operations may manifest their outcomes as terrorism, extremism, or civil or military disorder. The legal frameworks that apply to peacetime deterrence activity will often also apply to countering hybrid operations as hybrid operations are usually designed to be conducted below the threshold for a use of force.

3.32. **The law applicable to deterrence activity during conflict.** Deterring adversaries during conflict also requires a nuanced understanding of legal freedoms and constraints. Two initial considerations are given here but others may be considered by commanders and their staff.

a. **Interventions using force.** An example of an intervention using force is Sierra Leone in 2000 (Operation PALLISER) where a non-combatant evacuation operation was expanded in scope to include the deployment of UK Armed Forces in an enforcement role. However, it should be noted that UK Armed Forces were not authorised to use offensive force; any force used was in self-defence to imminent threats. Careful consideration must be given to the legal framework when planning deterrence operations in these contexts. Each situation is likely to be different with differing political freedoms and constraints as well as rules of engagement. Much like interventions short of force described above, some operations may have preset levels of force that they can escalate to in support of deterrence operations.

b. **Law of Armed Conflict.** Once the UK has become party to an armed conflict, the LOAC will apply. That will allow a variety of military measures to be taken that are otherwise unavailable. These include the use of offensive force. It may also increase the range of options available to impose costs on an adversary in all domains. However, the need to address ethical considerations will always remain alongside the legal considerations.

3.33. **Proportionality and discrimination.** The proportionality of deterrence activity with reference to the action the UK seeks to deter and the ability of the deterrence activity to be discriminate should be considered as part of any deterrence plan.

A missed opportunity for deterrence – Kosovo 1999



During the Kosovo campaign, the Serbian forces in Kosovo successfully hid many heavy military assets in underground facilities, ranging from motorway underpasses to specially constructed tunnels. In addition, the Serbian air defence missile systems had successfully created an algorithm to assist their radars in detecting United States F-117 stealth fighters which resulted in the first successful shooting down of an F-117. Both of these factors are examples of removal and defeat respectively, yet neither was communicated to the NATO forces conducting the bombing campaign. Instead, the Serbian forces intended to conduct deception operations against the NATO forces, anticipating that they might repel NATO in the event of invasion. In the end, the political capitulation of the Milosevic regime negated both of these factors. It is not necessarily possible in hindsight to confirm whether the revelation to NATO of these deceptions would have had an effect on how NATO would have conducted the bombing campaign. However, it is worth considering how NATO might have adjusted their plan if they knew that the campaign was not working on military equipment and that prize assets were threatened. Serbia was stronger than NATO anticipated yet Serbia failed to communicate this, therefore missing an opportunity to deter NATO.

Key points

- The Ministry of Defence (MOD) is rarely the lead department, even if Defence is sometimes one of the most integral parts of deterrence in a given situation.
- For deterrence to be effective, it will require Defence activities to be synchronised with the wider government strategy.
- The moral component is considered as the willingness and readiness of an actor's armed forces to fight, combined with how they conduct an action and the success rate when they do.
- The ability to mount, deploy, sustain and recover an effective force will be carefully assessed by adversaries.
- Adversaries will also take a view on whether a nation's doctrines are seen as modern and effective and how well they use them.
- The MOD may consider what effects our tailored deterrence activities will have on an adversary, and what alternative actions might they look to take if the UK deters them from their first choice.
- Technology may have increased the complexity and interdependence of the threats to be deterred but it has also increased the range of options by which to deter such threats.
- Deterrence is about the actions taken that influence an adversary before they make a decision.
- The legal frameworks that apply to peacetime deterrence activity will often also apply to countering hybrid operations as hybrid operations are usually designed to be conducted below the threshold for a use of force.
- The proportionality of deterrence activity with reference to the action the UK seeks to deter and the ability of the deterrence activity to be discriminate should be considered as part of any deterrence plan.





Chapter 4

Chapter 4 is concerned with ideas for operationalising deterrence, especially the Defence contribution. It provides guidance, ideas and handrails for commanders and staff engaged in planning who wish to factor in deterrence to their plans. It seeks to illustrate the topics for consideration in the execution and exploitation of plans with a deterrence aspect.

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“
Deterrence is about **your actions** taken **before their decision** is made...
”

David Toczek
USSTRATCOM

Chapter 4 – Integrating and delivering deterrence

Section 1 – Planning deterrence activity

Deterrence implementation – contribution of Defence capabilities to deterrence

4.1. This chapter introduces some of the tools and techniques available to practitioners of deterrence activity. It gathers together the key aspects of concepts described in detail in previous chapters; hence there is some apparent repetition. However, it is designed to be a repository of the most important elements of deterrence and looks at how deterrence activity might play out.

4.2. **Understanding and specificity.** It is critical that commanders and their staff understand the context of the operation on which they are engaged. The understand function for deterrence is more detailed and nuanced than for most types of operation because it is not empirical and it deals entirely with human perceptions. To affect the calculus of decision-makers, intensive efforts must be made to understand the factors the adversary considers for their decisions. This understanding should delve deeply into the motivations of the actors involved, some of which might be:⁶³

- their psychology and cultural mindset;
- how they perceive themselves and others;
- what values they hold dear;
- what values they spurn or deride;

.....
63 For more detail on how such calculi can be considered and applied see Daryl G. Press, *Calculating Credibility*.

- the societal pressures at play in the homeland;
- any factionalism within decision-making bodies;
- what the implications are for an adversary, should deterrence succeed;
- what the formally constituted mechanism is for decision-making within an adversary government;
- any informal mechanisms for decision-making within an adversary government;
- how the decision-makers receive information; and
- if there are any gatekeepers through which information must flow for these mechanisms and whether such gatekeepers have an agenda or lens through which they observe information.

4.3. The impact of actions and opinions of second and third parties should also be considered: which ones may have ready leverage over both the adversary and/or the UK; which may seek to gain an advantage over the UK's current adversary; and which ones may see benefit of conflict or not in their region by which they might take advantage of opportunity. At all times, the question must be repeated:

'Whom do we wish to deter – from doing what – and under which conditions?'

4.4. The specificity of the above question is pivotal; it can be aimed at an operational level (for example, to deter Argentina⁶⁴ from attempting to take the Falkland Islands by force) and there is no limit to the number of deterrence actions that may be planned. However, these actions should be de-conflicted to ensure there is no 'fratricide' and that they are ideally complementary. The actions may be short term and singular or they may be long term and repeating.

.....
64 Specifically – the 'decision-makers' of Argentina.



When deterring a nuclear-armed adversary, military planning should include nuclear deterrent experts

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4.5. Conventional deterrence against a nuclear-armed adversary. As stated in the preface, this joint doctrine note does not consider the nuclear deterrent dimension. However, even when conventionally deterring a nuclear-armed adversary, military planning should include nuclear deterrent experts from the Defence Nuclear Organisation from the start.

4.6. Constant deterrence cycle. The deterrence situation is never stable; it is an endlessly shifting interaction of the adversaries and other actors. The asymmetry of stakes and power will be in constant flux and require habitual assessment, decision-making and resource allocation as required. If a headquarters wishes to focus on deterrence and/or creating a deterrent effect, deterrence must be factored into the battle rhythm of any operational headquarters in just the same way as other plans and operations. The adversary will also be seeking to undermine national cohesion and unity of purpose. For this reason, the communication function of any deterrent posture must remain the preserve of the government. The psychological decision calculus addresses three key considerations.

- Past actions – how likely is a certain response?

- Current calculus – meaning power and interests; what can be exploited?
- Anticipated lesson – ‘never again’?

4.7. **Multiplicity of targets and effects.** Almost all adversaries have multiple decision-makers (or at least, if not, multiple opinion-formers). Any deterrence operation should be crafted to take account of these main individuals or the bodies that they comprise. Even in authoritarian regimes, there will usually be a few trusted advisers. In some (more democratic) regimes, the opinion of the population will hold more sway and may be targeted. However, care should be taken so as not to have an effect on one actor (for example, alliance member A) or an aspect of an actor that might sway another actor (alliance member B) into an even less desirable action.



Failed deterrence example – Pearl Harbor

In the lead up to Pearl Harbor in World War 2, the United States had concerns about Japanese expansionism. It was perceived that one possible means of preventing further Japanese expansion was to stop oil exports to Japan, partly as a deterrent warning and partly as a physical constraint on their activities. However, the net effect was to cause undue concern in the ranks of the Japanese hierarchy that it would be thwarted in its strategic objectives by the United States export ban if it did not act to secure alternative oil supplies. This caused the Japanese leadership to consider itself ‘forced’ (in its eyes at least) into rapid and decisive pre-emptive action. In this way, the unintended effect of one action caused an undesirable consequence in another way.

Section 2 – Uncertainty

Understanding and communication

4.8. **UK understanding of adversary decision-makers.** The first area of uncertainty is that the identity of adversary decision-makers may not always be known – neither the individuals, the organisations they lead, nor the organisational structure of the adversary. Even if the first three elements are known, we may not know the methods by which they make their decisions. It is usually easier with state actors who often have some form of transparency, but not so easy with authoritarian regimes or non-state actors; even the more transparent state actors will actively shield their decision-making when it comes to national security. It is important for the operational commander and their staff to be clear that they will not always have the answers and therefore a best assessment from the J2 branch is essential.⁶⁵ This assessment should, however, include the widest analysis possible of the adversaries' power, interests and motivations and how these might be demonstrated or communicated.

4.9. **Uncertainty in the adversary decision-makers' understanding.** The second area of uncertainty is the uncertainty in the mind of adversary decision-makers. An operational commander and their staff must remember that an adversary does not always know how successful their actions will be against the UK or what effect that adversary's decisions will have, nor will they necessarily perceive the UK's intentions correctly. The adversary's own uncertainty must be addressed. Communication is crucial here to meet planning objectives. This may be addressed in one of three main ways.

- a. **Clear and truthful messaging.** Demonstrating (and convincing) the adversary decision-makers that undesirable actions on their part will be met with even more undesirable effects on their being. This is the most effective form of deterrence because it does not involve bluffing.

.....
 65 For more detail, see Joint Doctrine Publication (JDP) 2-00, *Understanding and Intelligence Support to Joint Operations*, 3rd Edition, Chapters 4 and 5.

b. **Clear but untruthful messaging.** Convincing the adversary that undesirable actions on their part will be met with even more undesirable effects on their being, even if it is not true – otherwise known as bluffing. This has worked on operations in the past and may be considered a key component of deception operations. However, with deterrence operations, where credibility is key, care must be taken with this approach because if the deception is discovered, it will not only neutralise the deterrence in question but it will undermine the UK’s credibility in the future. This approach should only be used as a last resort for the highest of deterrence priorities.



Successful deterrence example – Gulf 1991

During the opening air campaign against Iraq in 1991, the United States sent very clear public- and private-channel messages to the Iraqi leadership that any use of chemical weapons on allied troops would be unacceptable. The United States delivered clear, but vague statements about exacting revenge, the threat to the Saddam regime, and that all means of response were on the table.

For example, in his January letter to Tariq Aziz, the Iraqi foreign minister, President George H. W. Bush warned that the United States ‘will not tolerate the use of chemical or biological weapons or the destruction of Kuwait’s oil fields and installations. ... The American people would demand the strongest possible response. You and your country will pay a terrible price if you order unconscionable acts of this sort’.⁶⁶ Iraq used no chemical weapons against the allies, despite suffering the biggest defeat on the field of battle in modern times. In the years since it has emerged that the United States had no intention of using nuclear weapons in the event of an Iraqi chemical strike. The United States assessment of Iraqi decision-making was particularly nuanced and the messaging carefully tailored to the specific situation (that of chemical use); this made the deterrence by imposition-of-costs-punishment threat particularly credible which reinforced the ‘clear but untruthful messaging’.

.....
66 Letter given to Tariq Aziz, Iraqi Foreign Minister from United States President George H.W. Bush, dated 9 January 1991.

c. **Clear and ambiguous messaging.** Convincing an adversary that the UK has a very strong position on their potential action (and by implication a clear threshold) but not a threshold or potential action that the UK wishes to reveal (specifically, keep intentionally ambiguous). This may be to allow for political manoeuvre or to prevent setting a threshold, beneath which an adversary can 'legitimately' cause difficulties.

4.10. Uncertainty in the adversary decision-makers' perception of the UK.

The final area of uncertainty is how an adversary will perceive the UK and the UK's actions, particularly their assessment of the UK's ability to impose costs on them. In the military context, this will particularly relate to the reputation of the UK Armed Forces. The ability of the commander, staff and intelligence to empathise (not sympathise) with the adversary's perception is essential here. Whilst the adversary's likely courses of action may not be agreed with, an effective intelligence function and red team will assist in highlighting uncertainty here. A sound cultural understanding of adversary values will underpin this. Carefully monitoring adversary communications and actions during the early phase of deterrence operations can help fine-tune this understanding.

4

Characterising, reducing and managing uncertainty

4.11. In all deterrence operations, the adversary's centre of gravity⁶⁷ may be simplified to focus on their decision-making calculus. It may often be the leaders that make up the decision-making body, but the analysis may reveal that this is not necessarily so. This 'understanding and specificity' is an essential part of deterrence understanding and a great deal of effort should be put into gaining a deep understanding of this calculus. It may be a hard calculus for a country such as the UK to understand with a particularly 'Western' mindset and this calculus will shift with each change in the leadership or competency of the adversary's capacity. However, there are three key parts of uncertainty when

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67 Centre of gravity is defined as: **the primary source of power that provides an actor its strength, freedom of action and/or will to fight.** NATOTerm. The concept of a centre of gravity is explained in detail in JDP 2-00, *Understanding and Intelligence Support to Joint Operations*, 3rd Edition, Chapter 6.

dealing with deterrence, each one of them requiring a different mitigation. In a deterrence context, the three key parts of uncertainty are:

- the UK's understanding of adversary decision-makers;
- uncertainty in the adversary decision-makers' understanding; and
- uncertainty in the adversary decision-makers' perception of the UK.

4.12. **The centrality of uncertainty.** There can never be 'complete' understanding of an adversary or an actor – in particular, their perceptions, motivations and fears. The level of knowledge required to consistently predict the response of a state or non-state actor is generally unattainable; leaderships sometimes surprise their own people. Therefore it must always be remembered that understanding will inevitably be a 'best effort' and plans should be configured accordingly. Deterrence is a political activity and that is why it is important to design a deterrence strategy at governmental level to accommodate such imperfect understanding.

4.13. **Perception and reality.** Nowhere is it truer than in deterrence activity to say that 'perception is reality' and, therefore, strategic communications is the key. Potential adversaries must not only perceive from their observations of the UK and our Armed Forces that the UK is capable of deterring them from a course of action, but the adversaries must also perceive that the messages (communication) emanating from all relevant areas of the UK match those observations. Deterrence is entirely dependent on human nature, and humans perceive realities in differing ways.

4.14. **Adversary viewpoint.** The 'understand' (or comprehension) foundation of deterrence is pivotal. If significant effort is to be expended pursuing deterrence, the focus should be on understanding adversaries' points of view, rationale (however different it may appear), their motivations and their fears. Above all, decision-makers should not seek to turn the assessment of an adversary's perception into something that suits a pre-existing plan or a preconception. That is the path to misunderstandings, miscommunication and miscalculations. However, within deception planning, building on an adversary's preconception has always been a successful ploy.



Potential adversaries must perceive from their observations that the UK is capable of deterring them

Section 3 – Deterrence operations

4.15. Operationalising deterrence is not a precise science, it deals with profoundly subjective human psychologies, values, interpretations and perceptions. Therefore there is no one template for planning, but described in this chapter is a suggested sequence of functional steps that commanders and their staff at all levels can consider as a handrail when planning for deterrence operations.⁶⁸ The bottom line is that deterrence is a unique relationship between the ‘deterter’ and the ‘deterree’.

4.16. **Strategic orchestration.** The Defence contribution to deterrence should be nested within strategic orchestration of Defence activities. There are many tools to assist with the planning, sequencing and execution of such activities. The North Atlantic Treaty Organization (NATO) *Allied Command Operations Comprehensive Operations Planning Directive (COPD)* provides a coherent process for orchestration of strategic activity. As well as highlighting a formal analysis for centres of gravity, it also links strategic Defence contributions to political activity.

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 68 The United States' *Deterrence Operations, Joint Operating Concept*, 2006 gives a good start point for operationalising deterrence.

4.17. **Step 1 – Specify the desired outcome within the context.** The question must be asked first:

‘Whom do we wish to deter – from doing what – and under which conditions?’

The decision-making calculus of any given adversary is based entirely on scenario-specific conditions. An operational commander and staff should take initial guidance from the strategic context and any directives issued from higher command. Considerations should include those described in ‘deterrence implementation’. A stakeholder analysis should be carried out to examine what either successful or unsuccessful deterrence would look like. This could include tracking how an adversary’s calculus may evolve should they begin to lose in a conflict. This will help to reveal where any third party leverage (either in support of UK interests or against them) may come into play, as well as highlighting where any unintended consequences may fall. This will inform guidance on the planning process to follow.⁶⁹ Is the military lever of power appropriate to the strategic objective – what are its strengths and or weaknesses?

4

4.18. **Step 2 – Understand, understand, understand.** This emphasis on the understand function centres on the adversary’s decision-making calculus; what informs it and what drives its process and outcomes.⁷⁰ In a deterrence context, this is much more than simply J2. It is not just understanding where an adversary’s ships, tanks and planes are, nor is it even knowing their objectives, timelines and centres of gravity. It is about understanding why they hold the perceptions they do and what motivates those perceptions. For a simplified process, this may be broken down into three elements.

- a. **First.** An understanding of the motivations and potential gains from the adversary’s point of view. What factors are driving them to pursue a potentially unwelcome course of action to the UK? What benefits does the adversary perceive and what does the adversary perceive to be

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69 Much as mission analysis informs the estimate process.

70 Covered in JDP 04, *Understanding and Decision-making*, 2nd Edition.

the cost of restraint⁷¹ (should they decide not to carry out their intended actions)?

b. **Second.** An understanding of the penalties and costs from the adversary's point of view,⁷² as to what they perceive the cost of action to be in terms of punishment, retaliation or retribution from the UK or its allies? This understanding should also consider what an adversary's assessment might be of the UK's ability to deliver denial-of-benefits against the adversary's intended actions.

c. **Third.** The UK's understanding should aim to assess and take account of where the adversary's perceived uncertainties lie within the adversary's decision-making calculus. Where might the adversary be uncertain of UK assets, alliances, capabilities, intentions, outcomes or the effects of any actions they may undertake? These competing uncertainties should be overlaid on the previous two analyses. Of course this is a 'best assessment' understanding and this knowledge can never be complete; however, a little time spent considering the situation through this lens of the adversary can reveal useful insights into adversary motivations and perceptions. This process will also reveal high-level commanders critical information requirements for further refinement of any deterrence operations.

4.19. **Step 3 – Match benefit of a deterrence option against adversary vulnerability.** Once the analysis of step 2 is completed, an operational commander and their staff should aim to derive a list of pressure points that would create the best deterrent effect against an adversary and a list of pressure points that are most vulnerable for an adversary. These may be illustrated as shown in Figure 4.1 to produce an effective visual dashboard of where resources and effort might be directed for best effect. It should be noted that this does not address how these effects should be created. It is a tool for commanders and staff to consider which elements of an adversary might be targeted for best effect within a cross-government approach. This step is a cost-benefit analysis.

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71 This 'cost' is included in this paragraph and not the one below because it is concerned with the motivations to do something, as opposed to the motivations to not do something.

72 For more detail, see JDP 04, *Understanding and Decision-making*, 2nd Edition.

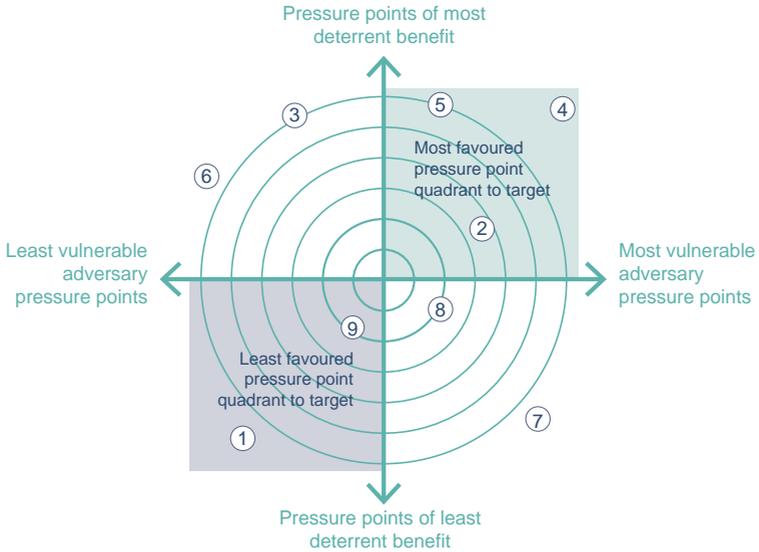


Figure 4.1 – Vulnerabilities and deterrence potential

4.20. **Step 4 – Course of action development.** Step 3 gives planners an idea of where the military effects might best be targeted. Military staff should now develop courses of action to address those targets. Each course of action might be developed with the following headings in mind.

- a. **Impose costs.** What costs might be imposed upon the adversary in response to their actions if they are not deterred and how to message or communicate those threats before the adversary makes the decision to act? This should take account of thresholds and red lines on both sides, if there are any. As many options as possible of imposing costs should be developed by the staff during course of action development.
- b. **Deny benefits.** What actions can we take to deny the benefits the adversary might seek to gain from their potential actions? How would we message or communicate those threats before the adversary makes the decision to act? What might the adversary be seeking to achieve by

their undesirable actions? How might a commander and their staff deny these benefits or render them nugatory?

c. **Highlight benefits of restraint.** What might the military contingent do to convince the adversary that restraint will result in a better/acceptable outcome for them? Much of this is likely to be in the domain of the Foreign and Commonwealth Office (FCO) and other government departments, but it should be considered from a military point of view nonetheless.

d. **Reduce costs of restraint.** Is the adversary facing internal problems that create a cost of restraint? What might be done to reduce these internal problems?

e. **Identify risks and mitigations.** What are the key known-unknowns for a particular course of action? What effects might they have and how might this be mitigated if it does come to pass? What are the identified potential second and third order effects of a particular course of action?

f. **Escalation and de-escalation.** Identify means through which the posture could be escalated further or de-escalated when it needs to be.

4.21. **Step 5 – Red teaming and wargaming.** To choose and resource courses of action, commanders and their staff should now conduct a robust red team assessment and/or wargame of the options identified under the guidance of the commander.⁷³ This is an essential part of exploring the possible outcomes; the outcomes of deterrence activity are harder to predict than those of military hardware *versus* military hardware. While considering each course of action, the red team should consider the following factors:

- how to deter the adversary's most dangerous course of action;
- how to deter the adversary's most likely courses of action (in different circumstances);

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73 For more information, see Development, Concepts and Doctrine Centre's *Wargaming Guide and Red Teaming Handbook*.

- which of our own courses of action can be resourced effectively to counter these adversary courses of action;
- what are the collateral effects on our courses of action of other (non-deterrence) military activity;
- what are the collateral effects on other non-military deterrence activity for example, are they diplomatic, societal or economic;
- which of the courses of action will require assistance from non-military agencies and other government departments (the commander and their staff must be realistic, the military priorities will always be subject to political considerations); and
- what would our own course of action be should deterrence fail (for example, measured retaliation, massive counterforce strike).

4.22. Step 6 – Conduct deterrence courses of action chosen and monitor progress.

Many military deterrence operations will be conducted during peacetime with the specific aim of influencing an adversary's decision-making process (possibly to prevent conflict). Developments pertaining to the adversary and their decision-making calculus must be constantly monitored and analysed to see if there is a material change in how the military should approach imposition-of-costs, denial-of-benefits or encouragement-of-restraint for any given course of action.⁷⁴ However, many deterrence operations require a balance between keeping a steady course, maintaining a consistent approach and yet responding to an ever-changing situation. Attempts to constantly vary an approach may have a detrimental effect on the outcome. This will require the judgement of the staff and, ultimately, the operational commander. As discussed in Chapter 1, the empirical measurement of deterrence has never been achieved. However, should the circumstances of a given situation lend itself to some means of measurement, the commander and staff may consider doing so.⁷⁵

.....
74 See Chapter 2 for more information.

75 Planners should also consider the cost-benefit analysis in terms of time and resources in attempting to do so.

Section 4 – Deterrence effects

4.23. Looking at the effects across the spectrum of strategic, operational and tactical, they can have an influence that is broader than may be anticipated. Planners should consider how they might aim deterrence activity at one level to influence another level. For example, if an adversary's operational commander can be deterred, they may advise their strategic command (such as their government) that it is not in their interests to pursue their aims further.

4.24. **Strategic effects.** At the strategic level, adversaries may be deterred from even contemplating action against the UK or its interests in the first place. These strategic decisions are likely to be taken by state actor national governments or leadership, the leaders of pseudo-state actors and significant non-state actors. They are also likely to involve diplomatic and economic actions that are deterred, not just military ones. Their decision to refrain from any given action against the UK or its interests may not always be apparent at the time; it is hard to prove a negative, especially if their operations security is good.

4.25. **Operational effects.** At the operational level, the adversary actions deterred are considered here only in a military context, rather than a political context. This military deterrence may involve deterring an adversary from employing certain capabilities or seeking to attack certain targets. For example, an adversary conducting kinetic action, cyberattacks or intelligence, surveillance and reconnaissance tasks against a UK deployed force. If the adversary fears provoking an unacceptable UK kinetic response or an increase in the number of forces in theatre. These are addressed in more detail in Chapter 3 under operational considerations.

4.26. **Tactical effects.** In certain cases, actions at the tactical level may create a deterrent effect that is felt at the strategic or operational level. The impact of such effects may be amplified by modern media and communications to our advantage or disadvantage. It is therefore important that decision-makers are aware of the tactical effects being created and the subsequent effects are then suitably planned for at other levels.

Key points

- To affect the calculus of decision-makers, intensive efforts must be made to understand the factors the adversary considers for their decisions.
- The impact of actions and opinions of second and third parties should also be considered; which ones may have ready leverage over both the adversary and/or the UK.
- When conventionally deterring a nuclear-armed adversary, military planning should include nuclear deterrent experts from the Defence Nuclear Organisation from the start. The deterrence situation is never stable; it is an endlessly shifting interaction of the adversaries and other actors.
- An operational commander and their staff must remember that an adversary does not always know how successful their actions will be against the UK or what effect that adversary's decisions will have, nor will they necessarily perceive the UK's intentions correctly.
- There can never be 'complete' understanding of an adversary or an actor – in particular, their perceptions, motivations and fears. Therefore it must always be remembered that understanding will inevitably be a 'best effort' and plans should be configured accordingly.
- We must understand the motivations and potential gains from the adversary's point of view.
- We must understand the penalties and costs from the adversary's point of view.
- We must assess and take account of where the adversary's perceived uncertainties lie within the adversary's decision-making calculus.
- Planners should consider how they might aim deterrence activity at one level to influence another level.

Lexicon

Part 1 – Acronyms and abbreviations

A2AD	anti-access and area denial
AJP	Allied joint publication
CCA 2004	Civil Contingencies Act 2004
COBR	Cabinet Office Briefing Room
DFID	Department for International Development
DIME	diplomatic, information, military and economic
eFP	enhanced forward presence
FCO	Foreign and Commonwealth
FE@R	force elements at readiness
FinMilCap	Financial Military Capability
HM	Her Majesty's
JCN	joint concept note
JDN	joint doctrine note
JDP	joint doctrine publication
LOAC	Law of Armed Conflict
MOD	Ministry of Defence
NATO	North Atlantic Treaty Organization
PJHQ	Permanent Joint Headquarters
UK	United Kingdom
UN	United Nations

Part 2 – Terms and definitions

This section is divided into two parts. First, we list endorsed terms and descriptions. Secondly, we list terms and definition that are used as reference for this publication only.

Endorsed definitions

centre of gravity

The primary source of power that provides an actor its strength, freedom of action and/or will to fight. (NATOTerm)

deterrence

The convincing of a potential aggressor that the consequences of coercion or armed conflict would outweigh the potential gains. This requires the maintenance of a credible military capability and strategy with the clear political will to act. (NATOTerm)

measurement of effectiveness

The assessment of the realisation of intended effects. (NATOTerm)

strategic communication (in Defence)

Advancing national interests by using all defence means of communication to influence the attitudes and behaviours of people. (JDN 1/12 – not ratified)

strategic communications (NATO)

In the NATO military context, the integration of communication capabilities and information staff function with other military activities, in order to understand and shape the information environment, in support of NATO strategic aims and objectives. (NATOTerm)

understanding

In the context of decision-making, understanding is the perception and interpretation of a particular situation in order to provide the context, insight and foresight required for effective decision-making. (JDP 04, 2nd Edition)

Terms used for reference in this publication only

ambiguity

The quality of being open to more than one interpretation.

(*Concise Oxford English Dictionary* (COED), 12th Edition, 2011)

denial-of-benefits

The prevention of an actor from achieving the anticipated or hoped for results of any action.

encouragement-of-restraint

The convincing, persuasion or demonstration to an adversary that restraint (in their actions) will result in a better, acceptable or least worse outcome for them.

imposition-of-costs

The imposing, or the threat of imposing, some form of retaliation against an actor should they carry out a course of action.

red line

A boundary or limit which should not be crossed. (COED)

resilience

Ability of the community, services, area or infrastructure to detect, prevent, and, if necessary to withstand, handle and recover from disruptive challenges.

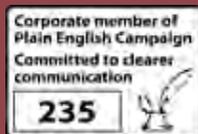
(Cabinet Office, *UK Civil Protection Lexicon*, Version 2.1.1, February 2013)

threshold

The level at which one starts to feel or react to something. (COED)

tripwire

A wire that is stretched close to the ground and activates a trap, explosion or alarm when disturbed. (COED)



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