Australian Government
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On Strategic Art



A Guide to Strategic Thinking &
The Australian Strategy Formulation Framework

Defence and Strategic Studies Centre
Australian War College

To defend Australia and its national interests in order
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On Strategic Art

Edition 1

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The Australian Strategy Formulation Framework

Foreword

The Australian War College continues to mature its educational experiences in the strategic and military arts.

As Australia's *National Defence Strategy* highlights, Australia's strategic environment is the most challenging it has been since the Second World War. Government has directed Defence to focus its efforts on a Strategy of Denial. Such a strategy requires investment in both hard capabilities, as well as Defence's intellectual capital. It is intellectual capital that will help guide Defence's efforts towards supporting the national interest. Future senior leaders will also expend intellectual capital to harness all aspects of Defence within a whole-of-government and whole-of-nation approach. However, as Henry Kissinger once stated, high office consumes intellectual capital; it does not create it. Therefore, it is necessary to invest in, nurture, and continue to grow the strategic intellectual capital necessary to guide Defence's support to, and defence of, Australia's national interests.

To meet the above challenges, the Australian War College's Defence and Strategic Studies Course has undergone a significant transformation over the last two years. The War College's Defence and Strategic Studies Course provides a robust, structured, and scaffolded professional experience in the theory and practice of strategy, strategic art, and strategic leadership within a national and international context. At the heart of this professional education is the Strategic Art Program, a longitudinal program that allows students to explore how to translate strategic theory into practice. This handbook captures the essence of that program to assist War College students now and into the future.

On Strategic Art is a handbook for the student, the scholar, and the practitioner of strategy. The handbook's three parts discuss the theory, practice, and learning of strategy. Combined, the handbook represents strategic art: the translation of strategic theory into practical reality. Although the audience of this handbook are the students of the Defence and Strategic Studies Course, the book may be of utility to others in the wider National Security community and international partners.

Given the challenges of the strategic environment, it is vital that we do not forget that the practice of strategy is a national endeavour. This handbook is a first step towards helping us understand how to develop effective strategy in support of Australia's national interests.

Ruth Elsley CSC
Air Commodore
Commandant Australian War College

Acknowledgements

This handbook is designed to complement the Australian War College's Strategic Art Program. The Strategic Art Program is a longitudinal program that provides a foundation for the Defence and Strategic Studies Course. The program was designed and piloted in 2023, and integrated into the course in 2024. Yet, this program and handbook would not have been possible without the support of a range of academic and military professionals.

First to thank is Air Vice Marshal Phil Lester, Royal Air Force, and his team from the United Kingdom's Royal College of Defence Studies. AVM Lester provided early copies of the United Kingdom's *Making Strategy Better*, as well as their strategy formulation lecture. These products helped framed the early analysis and development of the Australian program. The UK strategy formulation framework is the early inspiration for the *Australian Strategy Formulation Framework*.

Next to thank is Associate Professor Andrew Phillips, University of Queensland. He developed the *foundations of national power*. I am grateful for his agreement to discuss the concept in this handbook. Additionally, his advice and lectures at the Australian War College continue to provide a more holistic lens for considering national power, strategic theory, and its relationship with other fields of study. His efforts help course members transition from operational to national-strategic thinking.

Doctor Celestino Perez, Jr (US Army War College) and Doctor Paul Saffo (Standford University) have also provided inspiration in the framing and development of the Strategic Art Program and this handbook. Dr Perez has helped frame the discussion on complexity, causality, and Design. Dr Saffo has inspired the discussion on futures analysis, both in Chapter Six as well as annex D.

Thank you also goes to Professor Michael Rainsborough, Associate Professor Michael Hatherell, and Doctor Claire York of the Deakin University staff. Each has been highly supportive of the Strategic Art Program and its inclusion across the Course. Their efforts have also helped develop the key longitudinal assessments and practicals that support the program. Finally, their critical advice has clarified the program's theories, concepts, and frameworks.

The Australian War College command has also provided significant freedom of action for the development of this program and handbook. Within the Defence and Strategic Studies course staff, both the 2023 and 2024 Directors, Colonel Mark Jennings and Group Captain Sean Unwin, have championed the program. Colonel Grant Motley, NZ Army, has also assisted in the development of the framework itself.

Finally, this handbook would not have been developed without the 2024 Australian War College Inaugural Strategy Competition Team. These five course members provided advice and advocacy for the Strategic Art Program and an Australian handbook. I thank them for their faith and support.

Nick Bosio CSC, PhD
Colonel
Author *On Strategic Art* / 2023-2024 Strategic Art Program Convenor

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Chapter 1

1 INTRODUCTION

Placing Strategy within the Australian Context

> *…[T]he church of strategy must be a broad one. …The apotheosis of strategy is synergy: combining multiple tools, whether arms, money, diplomacy, or even ideas to achieve one's highest objectives. Its essence lies in fusing power with creativity to prevail in competitive situations, whatever the precise form of that power may be.*
>
> Hal Brands, "Introduction", *The New Makers of Modern Strategy*[1]

In 1998, Air Marshal Ray Funnell became the inaugural Principal of the Australian College of Defence and Strategic Studies. His 1988 monograph, *Introduction to Strategic Thinking*, helped guide the foundation of the college and the thinking of its early graduates.[2] Funnell's work grounded practitioners in the context that frames strategy. This handbook is the contemporary successor to Funnell's founding work.

The literature on strategy is extensive and often contradictory. Nevertheless, certain themes are enduring. Hal Brands highlights many of these themes in his introduction to *The New Makers of Modern Strategy*.[3] Books such as *Strategy*, by Lawrence Freedman, and *The Evolution of Modern Grand Strategic Thought*, by Lukas Milevski, help draw out the lessons of the past for future thinking. What can be seen from this literature is that strategy requires imagination; experience, both practical and theoretical; an appreciation of another's perspective; and an acceptance of different styles of thinking. Academics like Peter Mansoor, Williamson Murray, and others would call such thinking traits 'strategic habits-of-mind'.[4] Developing, using, and enhancing such habits are vital for strategic professionals. Understanding what makes strategy different from other levels of deliberative thinking and planning is critical to navigating and succeeding in times of peace, competition, conflict, and war.

This handbook is for the practitioner of strategy: the strategic artist. Although this book supports the Australian War College's Defence and Strategic Studies Course, any national security professional may use it. This work provides an overview of the first-principles knowledge of strategic art. Further, this handbook is a reference for future reflection, professional development, and the practical application of developing strategy. In other words, this book focuses on the Australian *praxis of strategic art*.

Consisting of ten chapters and annexes, this handbook provides an overview of the first-principles of strategic thinking, strategy formulation, and strategic art. By focusing on strategic art and strategy formulation, this handbook is similar to equivalent books by other nations, such as the UK *Making Strategy Better* and the US National War College's *A National Security Strategy Primer*. These similarities are particularly true for Part Two of this handbook. However, this handbook also provides greater detail on the first principles of strategic thinking, planning, and the methodology known as Design. Future chapters provide an overview of how people think, what thinking tendencies are often best suited to strategy and strategic art, and why Design provides a disciplined approach to such thinking. Additionally, much like the primers of other nations, this handbook details a strategy formulation framework that leverages much of the above mentioned first-principles theory. To achieve the above, this handbook is broken into three parts:

- **Part One – The Theory of Strategic Art (Chapters Two to Four).** These chapters form the theoretical heart of the handbook. Each chapter builds on the last to provide the fundamental theories and concepts necessary to think about, frame, and consider strategy and strategic art.

- **Part Two – The Practice of Strategic Art (Chapters Five to Eight).** These chapters translate the theories of Part One into practice. The chapters explain the *Australian Strategy Formulation Framework*, a disciplined approach to strategy development and exercising strategic art.

- **Part Three – The Building of Strategic Art (Chapters Nine and Ten).** This final part provides additional information beyond the primary material presented in Parts One and Two. This part outlines the importance of professional education, the principles that guide an education in strategic art, and several methods to help grow strategic imagination before and during competition, crisis, and conflict.

Key concepts and terms are defined throughout the handbook to assist the reader. From Chapter Two, when a key term is first defined, it will be written in ***bold-italics*** to draw attention to its definition. To assist readers, annex A provides a glossary. This glossary includes a range of other terms and phrases that may assist the practitioner of strategy.

Parts One and Two also use text boxes to highlight key concepts and important points. Four text boxes are used within Parts One and Two: **Key Concepts**, **Key Take Aways**, **Step Summary**, and **Additional Information**. These text boxes are designed to assist learning and enable practitioners to remind themselves of key concepts and approaches quickly. **Figure 1.1** illustrates these four boxes and their use. The rest of this chapter highlights the importance of context to strategic art, and the need for an Australian perspective on strategy.

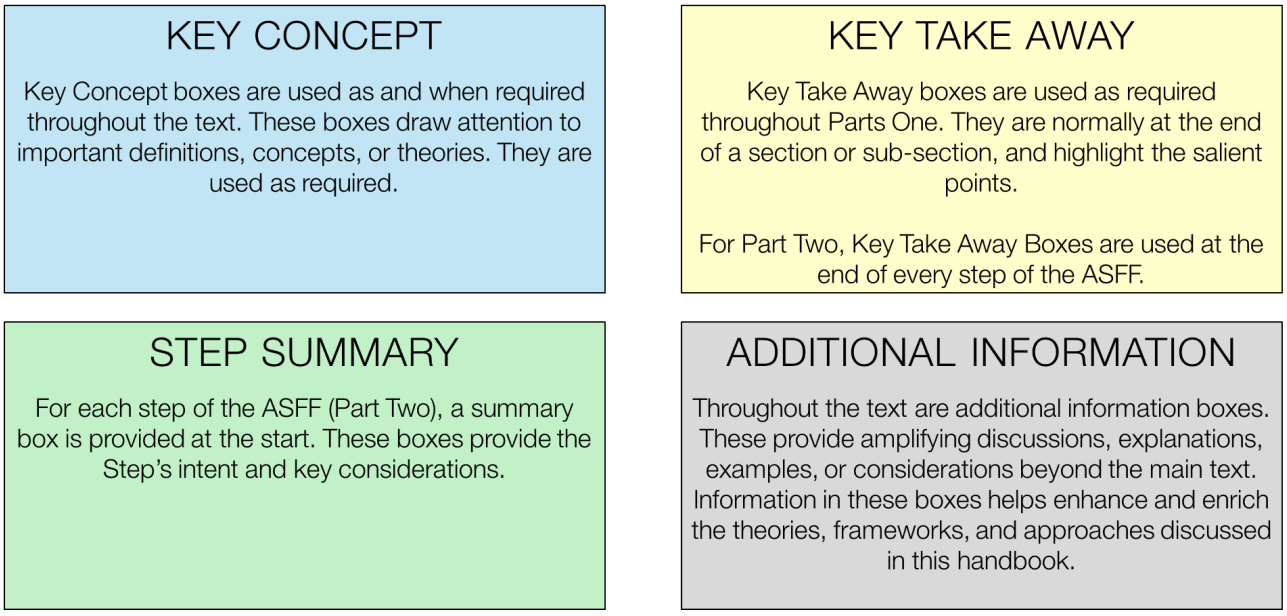


Figure 1.1: Text Boxes Within Handbook

1.1 Context Matters – Strategic Thinking that is Relevant to Australia

As later chapters discuss, a key theme of strategy and strategic art is that context matters. How Australia frames and thinks about its strategy will differ from other nations. Although a key ally, how the United States frames strategy differs from how Australians could or should think about and formulate strategy. Therefore, it is necessary to place the common themes of strategy and strategic art within

the context of the nation's (or actor's) strategic culture, thought, political dynamics, and governmental/military norms. Assuming that all nations do, or should, mirror another nation's approach fails the first test of strategic art: understanding context.

Although this is not always the case, great or major powers with global reach may think of strategy as a form of hierarchy: national, military, and theatre strategy. Such thinking may not be as appropriate for smaller nations. Smaller nations; due to their size, capacity, or political intent; may have only national strategies. Another example of the differences between nations is where the military-to-civilian interface starts at the governmental or departmental level.[*]

Understanding at what level inter-departmental interaction occurs matters for the practice and education of strategic art. One nation may have a large military and structured governmental system with clearly legislated roles and financial controls between agencies. In such a case, the links between the military, other Government departments, and the political advisors of the executive government may be very high, such as 2-Star or higher. Meanwhile, a nation with a smaller military, and/or less codified boundaries between agencies and departments, may see inter-departmental interactions happen at a lower level. In these situations, military officers of O6 (OF5) rank may be the norm. Westminster nations often have this less codified governmental structure. For Australia, with its Westminster system and small military, most inter-departmental interactions occur at the military O6 (OF5) and O7 (OF6) levels. In some cases, these military cohorts also have significant direct engagement with executive government. Therefore, it is vital that O6 (OF5) and O7 (OF6) Australian officers appreciate, and can think at, the national level of decision-making, policy, and strategy. Such thinking is the hallmark of good strategic art.

Given the above, this handbook considers and describes strategic art and strategy development at the national level. Focusing at the national level does not mean that lower levels of strategy, such as military or theatre-like strategy, may not be relevant to Australia at a future date. However, in this period of strategic competition, it is necessary to learn and practise strategic thinking at the right level. Such thinking should be at the national strategic level, relevant for inter-departmental work, flexible enough to enable national action, and acceptable within the Australian context. Chapter Two explores how thinking can influence decision-making and practice.

Additional Information
A Handbook compared to a Primer

Although for the practitioner, this handbook is not a primer. Traditionally, primers focus on a subject's 'how-to', or procedural knowledge (see Chapter Nine). Handbooks are more expansive and often provide first-principles theory, or propositional knowledge (Chapter Nine), and advice on applying that theory in practice. Handbooks help a person learn their profession, understand its underlying theory and principles, and act as a reference during their professional career.

As a handbook, this text explores the relevant theories, methods, concepts, and practical approaches a strategy professional should understand. As such, this text is for the students and graduates of the Australian War College's Defence and Strategic Studies Course, and those who are well-versed in strategic theory and seek to translate that theory into practice.

[*] It is recognised that inter-agency interactions and integration is often the norm at lower levels. These interactions occur in what is contemporarily considered to be the tactical and operational levels of command and action. However, strategy and policy are often the purview of a nation's governmental architecture and its political leadership – known as the *department* and the *executive government* in Westminster parlance. How each nation manages the interaction between departments, and the level that interaction occurs, is also relevant to how strategic art should be thought of and employed.

Additional Information
Scope of Handbook: What This Book Does Not Cover

Some aspects of strategic discourse are not covered in this handbook. The Australian Doctrine Library covers many points *Making Strategy Better* or *A National Security Strategy Primer* discuss. Readers are therefore recommended to read and understand the ADF's capstone doctrine, *Australian Military Power*. The following table outlines some critical concepts within the doctrine related to competition and conflict. The doctrine also discusses how Australia considers different levels of command, and how the interactions between the military and other arms of Government within the Australian system are managed.

Typical Areas of Strategic Discourse	Recommended Reading
Nature and Character of War	ADF-C-0 *Australian Military Power*, 40-42
Conflict Spectrum	ADF-C-0 *Australian Military Power,* 42-44
Various levels of command and structured planning in the Australian Government, Defence, and ADF	ADF-C-0 *Australian Military Power*, 49-51
An explanation of the National Instruments of Power: Diplomacy, Information, Military, and Economic (DIME)	ADF-C-0 *Australian Military Power,* 13-19
The broad concept of planning: Ends-Ways-Means	ADF-P-5 *Planning*, 39-40

All concepts listed above are underpinned by the principles of thinking, planning, and strategic art discussed in Part One.

[1] Hal Brands, "Introduction," in *The New Makers of Modern Strategy: From the Ancient World to the Digital Age*, ed. Hal Brands (Princeton, New Jersey, USA: Princeton University Press, 2023), 9.

[2] Raymond G. Funnell, *Introduction to Strategic Thinking* (Canberra: Australian Defence College, 1988).

[3] Brands, "Introduction," 9-13.

[4] For the discussion on habits-of-mind, see: Henry G. Gole, *The Road to Rainbow: Army Planning for Global War, 1934-1940* (Annapolis, Maryland, USA: Naval Institute Press, 2003), 158; Williamson Murray, *Military Adaptation in War: With Fear of Change*, Kobo eBook ed. (New York, New York, USA: Cambridge University Press, 2011), 6.1-56, 7.13-15; Peter R. Mansoor, "Introduction to Hybrid Warfare in History," in *Hybrid Warfare: Fighting Complex Opponents from the Ancient World to the Present*, ed. Williamson Murray and Peter R. Mansoor (New York, New York, USA: Cambridge University Press, 2012), 11.148; Nicholas J. Bosio, "An Analysis of the Relationship between Contemporary Western Military Theory, Systems Thinking, and their Key Schools-of-Thought" (Doctor of Philosophy Doctorate (research), Australian National University, 2022), 223-24, 54-68, http://hdl.handle.net/1885/260048.

PART 1 – THE THEORY OF STRATEGIC ART

Chapter 2

2 ON THINKING

The Foundational Theory of Planning

> *... **what** people think cannot be separated from the question of **how** they think.*
>
> Azar Gat, *A History of Military Thought*[1]

As Azar Gat's quote above indicates, thinking, planning, and strategy development are intrinsically linked. How individuals, and by extension nations, frame their thinking about the environment shapes how they believe they should act. Recognising how paradigms can influence planning is the first step towards translating the theory of strategy into the practice of strategic art.

This chapter provides an overview of some theories that underpin thinking, planning, and strategy. The chapter starts by discussing how humans make decisions. This discussion illustrates the relationship between natural decision-making and planning, and how mental models help drive creativity. Complexity also influences decision-making. Therefore, the chapter provides a simple model to understand the concept of complexity, and how the complexity of a situation is shaped by a person's knowledge, span of influence, and position within an organisation. Because a person's perception of a situation is shaped by their thinking, the chapter explains how paradigms influence decision-making. This explanation outlines the two broad schools-of-thought that influence thinking, planning, and action: *problem-framing* and *problem-solving* thinking. Within strategic and war studies, these paradigms are known as *war-as-art* and *war-as-science* thinking, respectively.

2.1 Human Decision Making and Planning – The Heuristic in Action

Planning and decision-making are activities of the mind. No matter the framework or process used to develop a plan or strategy, the human brain will use the natural decision-making process. Understanding this process is critical for three reasons. First, such understanding makes professionals aware of their cognitive processes, which often parallels group planning. Second, knowing this framework highlights the importance of mental models, and how these models influence creativity. Finally, by understanding natural decision-making, it is easier to identify how to enhance one's mental models, and, by extension, strategic art. This section provides an overview of the natural cognitive decision-making process known as the *heuristic* and its relationship to planning.

2.1.1 The Heuristic: Natural Decision-Making in Action

The research of various academics such as Gary Klein, Daniel Kahneman, Gerd Gigerenzer, and others highlight that heuristics underpin all decision-making.[2] Although there are many types of heuristics, most follow a generalised pattern.[3]

The generalised heuristic pattern consists of five elements.[4] First, heuristics start by assessing the situation. This assessment involves gathering information and developing an understanding of the

environment. Following this assessment comes framing the problem. Here, heuristics help people frame the problem, or problems, to be solved. Such framing establishes goals and objectives for success, and determines what resources are available. Next, the heuristic draws on a person's knowledge to develop options. Within the available resources, a range of options are identified to meet the problem frame and goals. The heuristic then compares and contrasts options: options developed are compared and contrasted to each other and the identified situation. Each option is modified as necessary to suit the situation better. These modifications often enhance a person's knowledge, supporting future decision-making. Finally, heuristics allow people to decide and act. The best option that meets the situation, goals, and resources is selected and executed. This generalised framework is represented in Figure 2.1, and is driven by two factors: cognitive skills and mental models.[5]

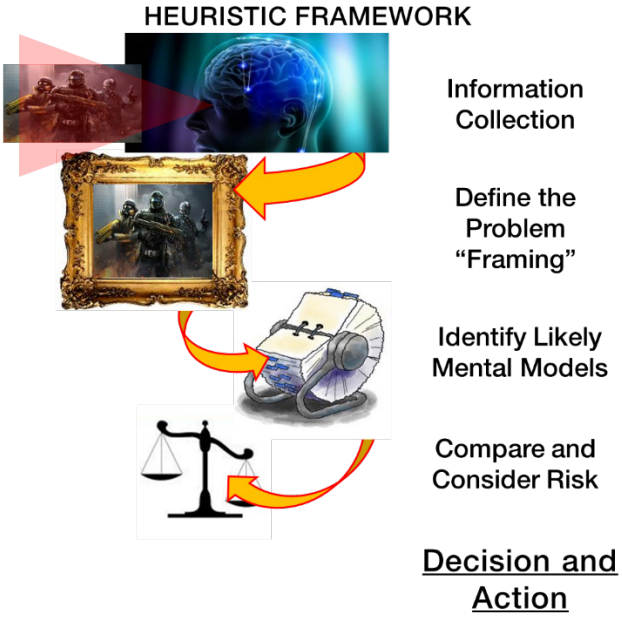


Figure 2.1: The Heuristic Framework

Effective natural decision-making requires efficient cognitive skills and an expansive library of mental models. Cognitive skills are the brain's capacity to identify patterns in the environment, and match them to the mental models that drive the heuristic. Various mental exercises and activities can enhance these pattern identification and matching skills.[6] However, it is *mental models* that enable creative decision making.

> *Mental Models*
> Mental models are '…deeply ingrained assumptions, generalisations, or even pictures or images that influence how…' an individual (or a group) understands theories, concepts and the real world.

Research into natural decision-making highlights the importance of mental models to creativity.[7] Often, the options the heuristic develops are initially drawn from a person's library of mental models.[8] Mental models are shaped by physical and mental (decision-making) experiences, and are generally linked to procedural and propositional knowledge (discussed further in Chapter Nine). The more mental models a person has, the more options available to the heuristic. Furthermore, having a wide range of mental models drives creative thinking, planning, and action.[9] The point is this: The more mental models available, the more options for decision-making, creating a form of decision-making 'imagination'. A key point for the strategic artist, discussed further in Part Three, is that using, exploring, and creating a wide range of mental models helps build strategic imagination. Before looking at how to leverage mental models in strategy, it is necessary to recognise the links between, and the relevance of, heuristics in planning.

Heuristics, Mental Models, and Decision-Making

Heuristics process, evaluate, modify and determine the best course of action based on the situation and information known to the individual. Heuristics directly influence decision-making and are underpinned by mental models—the more mental models available to a person, the more options for decision-making. Therefore, using, exploring, and creating a wide range of mental models helps build strategic imagination and decision-making creativity.

2.1.2 Good Planning: Leveraging Natural Decision-Making in Slow Time

ADF-P-5 – *Planning* and a range of academic writings demonstrate the overlap between the heuristic framework and planning.[10] These writings highlight how such planning frameworks help planners explicitly assess the problem, environment, resources available, and possible solutions. In effect, good planning frameworks are explicit models of natural human decision-making. There are many benefits to understanding the link between heuristics and planning frameworks.[11]

The real power of understanding the links between natural decision-making and explicit planning frameworks is the capacity to make mental models explicit. In effect, good planning is a disciplined and structured way of slowing down natural decision-making, forcing people to make their logic explicit, and testing that thinking to develop new perspectives and approaches to problems. This deliberate style of thinking is known as *System 2*, or *Slow Thinking*, by Kahneman in his seminal book *Thinking Fast and Slow*.[12] Such thinking takes natural decision-making (which Kahneman calls *System 1*, or *Fast Thinking*) and tests and adapts it to circumstances and context. Therefore, good planning is a way to force people to focus, slow down thinking, pay attention to different ideas, and balance those ideas with the situation and context – all hallmarks of good *System 2* thinking.[13] Through such a disciplined approach, good planning enables people to explore and find commonalities and differences between different perspectives.[14] Although natural decision-making has some limitations, disciplined approaches like those discussed above can create new mental models that are common amongst a group and help reduce bias.[15] The situation's complexity also shapes decision-making and how mental models influence thinking and action.

Heuristics, Planning, and Testing Mental Models

Good planning frameworks are often aligned with the structure of a heuristic. Good planning frameworks help slow down human decision-making. Good planning is a disciplined and structured way of slowing down natural decision-making, forcing people to make their logic explicit, and testing that thinking to develop new perspectives and approaches to problems. This enables:

- The testing of ideas and mental models.
- Identification of the commonalities and differences between people's perspectives.
- The consideration of different ideas and points of view.
- The creation of shared understanding and new mental models.

Additional Information
Overcoming the Limitations of Natural Decision-Making

Understanding how the mind makes decisions, and how it leverages mental models, suggests there are risks associated with such decision-making. Klein, in *Sources of Power*, discusses many of these risks. His analysis indicates that stress, lack of mental models (experience or education), the human wish to seek certainty, and ideological worldviews create bias. This bias influences how people observe, interpret, and analyse the world.

Craig Parson and Kahneman delve deeper into these risks. Parson's work discusses causal narratives and logic. Parson's psychological logics focus on hard-wired psychological dynamics—especially cognitive biases—that lead people to make (almost always) irrational decisions. Although his work will be discussed later in this chapter, Parson's analysis relates to natural decision-making and how people use mental models. This work indicates that how people view the world is 'coloured' by their mental models, worldviews, and internalised beliefs. Kahneman reinforces these points and explains how to overcome these limitations throughout his work. Here, Kahneman and Klein complement each other. Their combined work highlights how to harness natural decision-making and leverage it in a disciplined way during times of competition, crisis, and conflict.

Additional Information
Other Benefits of Understanding the Links Between Heuristics and Planning

In addition to the above, understanding the broad links between heuristics and planning can help in two other ways.

First, such knowledge allows planners and advisors to relate different nation's planning doctrines, frameworks, and methods to one another. Understanding that the heuristic framework underpins all planning provides a common framework that helps coalition partners integrate different planning doctrines, groups, and cultures into a single planning team.

Next, understanding natural decision-making lets planners at any level (tactical, operational, or strategic) check their planning framework to ensure it is suitable and effective for use. This check is essential when introducing a new framework or process based on recent business, military, or academic "fads" (Systemic Operational Design, as a case study, is one example). Suppose adjustments to the planning framework or the newly directed approach do not 'feel right' or 'make sense'. In that case, the new planning framework has diverted too far from human decision-making. Therefore, it will be disjointed, difficult to use, and will fail to achieve the most important outcome of any planning framework or methodology: making mental models explicit.

2.2 Complexity and Context – Recognising the Complexity Spectrum

Many contemporary security, domestic, and international issues are complex. However, not everything is complex all the time. Nor is it always complex to all people, or at all levels of an organisation or nation. Some texts incorrectly use the words complicated, complex, and wicked interchangeably. This can create confusion, leading to using the wrong tools for the wrong problems. Therefore, it is necessary to understand the differences between these concepts, and, by extension, how to consider complex or complicated problems. This section provides a simple framework to understand complexity.

2.2.1 Systems Thinking and Complexity: Four Underpinning Concepts

Before launching into a framework to understand complexity, it is necessary to untangle the often-used terms of 'systems' and 'systems thinking'. The intent here is not to provide complicated tools and techniques to explore complexity. Rather, understanding these terms helps draw out what is important and different about complexity compared to other situations, with the key differences being time and causality. To start this overview, it is useful to discuss what a 'system' is.

> ***System***
> A system is defined as: *An entity, physical or metaphorical, that maintains its existence through the mutual interaction of its parts to achieve a specific goal or goals*

A ***system*** can be a real thing or a concept.[16] As a real object, a 'system' may be a capability, person, or institution. Further, a 'system' may also be a concept that people use to help understand the situation.[17] An example of a conceptual system could be the 'Indo-Pacific'. In this case, the system is a construct that helps people better understand the complexity observed. How and why actors, elements, and environs interact is known as causality.

Causality is underpinned by four concepts: ***feedback***, ***delay***, ***emergence***, and ***interdependence***.[18] ***Systems thinking*** studies these causal concepts.[19] As factors such as feedback and interdependence increase, so do the disproportionate outcomes of actions. Actions having unexpected and disproportionate outcomes are hallmarks of nonlinear situations. Such situations exhibit

> …erratic behavior through disproportionately large or disproportionately small outputs, or [it]may involve 'synergistic' interactions in which the whole is not equal to the sum of the parts.[20]

Nonlinear situations continuously change, making them very difficult to understand. This dynamic change is a hallmark of complexity.

> **Additional Information**
> **The Infinite Game (Metaphoric Strategic System)**
>
> An example of a metaphoric strategic system is the idea that strategy is an 'infinite game'. Using a system as a metaphor is known as a ***conceptual metaphor***. Conceptual metaphors are potent devices that influence thinking, planning, and action. To illustrate this concept, and how it can be used in both systems and broader strategic thinking, consider the concept of *a game as an analogy for the strategic environment and strategy*. There are two types of 'games': finite games with a clear start and end point, and infinite games that continue without a defined end. Academics and commentators like Simon Sinek discuss how infinite games are about continuing advantage rather than defining 'victory'. Infinite games also feature a hard-to-define set of 'players' and are often characterised by a constantly changing environment. The concept of an 'infinite game' is a metaphor for the strategic environment and real-world actors, both known and unknown. In effect, the concept of a game and its infinite nature help people better understand how the strategic environment evolves. Such a model provides a common frame for all to consider the complexity within the environment. This illustrative example demonstrates two points. The first is how a theory, framework, or concept can help individuals and groups understand the world they observe. This idea of using a concept as a metaphor or analogy for a situation is seen again in historical analogy, discussed in Chapter Ten. The second point is the importance of interactions within any environment or system.

2.2.2 The Concept of Complexity: A Matter of Perspective and Change in Time

There are many definitions for complex and complicated systems. Often, these definitions are driven by mathematical models or abstract graphical depictions.[21] An easier way of considering complexity is to compare one's perspective of the problem over time. Leveraging *change over time* as a generalised way to think about complexity leads to a simple framework that helps observers consider if a situation is complex or complicated.

Figure 2.2 illustrates a simplified representation of the complexity spectrum. It covers two axes. The first, *Perspective 1*, asks: *Can you see the whole problem?* There may be a range of reasons why a person can see the whole problem. The problem may be small in scale. Another reason may be that the person's knowledge and experience allow them to understand the situation. An extensive library of mental models from various disciplines and experiences may allow an observer to infer aspects of a problem space easily. So, too, can historical analogy, with some limitations, discussed in Chapter Ten. Additionally, different levels of an organisation or nation will have a different perspective on how much of the problem they can see. A higher-level observer, such as an institutional leader or statesperson, may be able to see (or infer) the whole situation. However, subordinates, other agencies, or another nation may not. How well an observer can see the whole problem space shapes if they find the problem to be simple, complicated, or complex.

		PERSPECTIVE 2	
		When I look at the Problem, it Does Not Change over time	When I look at the Problem, it is Different every time.
PERSPECTIVE 1	I can see all the parts of the problem at my level	SIMPLE PROBLEMS	COMPLEX PROBLEMS
	I can not see all the parts of the problem at my level	COMPLICATED PROBLEMS	COMPLEX, trending to... WICKED PROBLEMS

Figure 2.2: The Complexity Spectrum

The second perspective asks the question: *Does the problem change over time?* This perspective considers if the situation changes every time it is observed. If a problem is relatively static, or changes over such a long period that it appears static from an observer's perspective, then the problem is not complex. However, if the problem changes every time the observer considers the situation, it will likely be complex. Of course, Perspective 1 influences Perspective 2. A person close to a problem may see it change constantly. Another person, more removed and with a wider perspective, may not see as much change over time. In both cases, the perspective on time is influenced by the perspective of scope, leading to differing views on complexity. These differences in perspective drive how agencies, departments, and nations view problems differently. A way to understand these different perspectives is to explore causal narratives.

What Drives Complexity and How to Explain It?

Complexity is driven by change over time. This means that change happening very quickly in a small system can be more complex than a larger system undergoing little change over a longer period. If the rate of change can be slowed, the complexity of a system may be reduced.

From a strategic perspective, geo-political and geo-strategic crises are often fluid. Relationships and perceptions between actions are in flux, leading to a lot of change in very short periods. Because of this high rate of change, such situations are often complex. Understanding such complexity requires a nuanced analysis of causality.

Causal narratives are a helpful way of capturing and explaining a situation's causal logic and the relationships between actors and events – past, present, and future.

2.2.3 Thinking About Complexity: Causal Narratives and Explanations

Causal narratives, if developed well, are a strong way to explain the causality and dynamics of a strategic environment. Many tools and techniques exist to explore causality, causal narratives, and critical leverage points within an environment. Some of these tools will be discussed more in future chapters and annexes. Most tools – founded in systems thinking or other disciplines – seek to map a given situation's causal narratives and mechanisms (feedback, delay, interdependence, and emergence).[22] Parsons' book, *How to Map Arguments in Political Science*, provides a useful way for practitioners to think about the causal narratives of a situation.

Causal Narratives Help Engage Decision-Makers

Causal narratives are best thought of as narratives that explain the causal logic of a situation (explanatory narrative). They are often written as short paragraphs and supported by causal mechanism tools, such as the *theories of success*, *challenge*, and *failure* discussed in Chapter Four.

A causal narrative should be a written explanation that includes why actors do specific things, how they perceive the world and each other, and what this may mean.

Good causal narratives often help tell the story of why the situation looks like it does, and how it affects the international order. Illustrative examples of 'on the ground' issues (such as military unit activities, diplomatic exchanges, individual elements of trade, etc) can help people engage with, and relate to, the complexity of the situation (see Part Two and annex E for advice on how to include examples within the main text of a strategic plan).

Such narratives help translate the analysis into common mental models.

The central idea in Parsons's argument is that four basic logics help explain why a person, or a group, behaves in a particular way.[23] Scholars and practitioners can combine these four explanations to tell increasingly complex causal narratives about how the world works, what the problems in the environment are, and how one's intervention may unfold.

The first logic is known as *structural logic*. Such logic considers how and why groups use, distribute, and are influenced by material, resources, and geographic realities.[24] This logic explains human behaviour through a materialistic lens: resources, the economy, and other material-like issues. This logic is then contrasted with *ideational logic*, which explains human behaviour in terms of a person's

or community's ideas, norms, practices, conceptions of history, and values.[25] In essence, ideational logic considers how culture, history, and society's view of itself influences thinking and action.

Institutional logics have some overlaps with structural and ideational logics. Institutional logic focuses on how the rules, formalised or informal, regulate the thinking and behaviour of a person or group. Formal rules, such as laws, regulations, and hierarchy, are as relevant as informal regulations, including tradition, power dynamics, and 'gatekeeper' influence.[26] This type of explanation explores how institutions, rules, and traditions established in the past create causal dependencies and incentives that lead to unintended consequences.

The final logic is *psychological logic*. This logic explores the hard-wired cognitive biases and dynamics influencing an actor's behaviour.[27] Such behaviour is not linked to 'bounded rationality', or the concept that all people act in a rational, cost-benefit, way. Instead, these psychological logics recognise that rationality is a subjective concept. Psychological causality helps reinforce an observer's understanding of why an actor's actions will be entirely rational for the actor, but (almost always) appear irrational to others.[28] These four causal explanations provide a framework to explore causality within a strategic environment. They are influenced by how individuals and groups perceive the world.

"Irrational Actions" are Rational

There is often an argument that people will act 'rationally', or following a cost-benefit analysis. This may be the case. However, determining what that cost-benefit calculus is is often very difficult.

Too often, one group (Group A) projects their values and risk appetite onto another (Group B). Such projections often lead to Group A observers stating that Group B is acting 'irrational' because Group B's actions do not align with Group A's cost-benefit calculus. Such statements often fail to understand Group B's perspective and causal logic.

Teasing out the causal logic of Group B achieves two outcomes. First, it helps explain why Group B's actions appear entirely rational *to Group B*. Second, it helps Group A better understand how Group B may respond next.

The Four Causal Logics that Support Causal Narrative Development

This section has presented four causal logics that can be used as lenses to consider a situation and develop a causal narrative. The four logics are:

- *Structural Logic.* How a group is influenced by physical issues (resources, geography), and how these material issues influence the group's thinking.
- *Ideation Logic.* How a group's history, culture, and collective worldviews influence their thinking, decision-making, and perception of others.
- *Institutional Logic.* How the structures of government influence a group's decision-making, actions, strategic culture, and responses to change.
- *Psychological Logic.* How human cognitive biases influence decision-making and behaviour.

These causal logics help inform *theories of success*, *challenge*, and *failure* (Chapter Four) and many of the steps in the *Australian Strategy Formulation Framework* (Part Two).

2.3 World Views and Thinking – How Paradigms Influence Planning

Gat's opening quote to this chapter indicates that how people perceive the world shapes their thinking, planning, and action. In the context of strategy, such perceptions can quickly bias analysis and limit national options and approaches. History is replete with examples of how perception led to narrowed worldviews and, by extension, poor strategic thinking, planning, and positioning. Recognising the influence perceptions and thinking have on action is the last generalised first-principles theory that shapes strategy and strategic art.

2.3.1 Two Broad Worldviews Influence Thinking: Problem Solving and Framing

A ***paradigm*** is '…an intellectual framework of shared preconceptions and governing ideas which shapes research and analysis.'[29] Meanwhile, ***worldviews*** are paradigms within a specific real-world context.[30] Because paradigms and worldviews are grounded in how a person perceives the world, they can drive how people think and act in different circumstances.[31] Strategy formulation and strategic art are no different.

Practitioners and scholars generally accept that within the disciplines of strategy, war, and the profession of arms, there are two broad schools-of-thought. The first is ***War-as-Science***, which is the belief that there are '…certain principles and rules guiding the conduct of war' and strategy.[32] These principles can be identified and are independent of observation, meaning they are objective in nature. In essence, *war-as-science* assumes competition, conflict, and war have defined structures that can be observed, considered, and independently analysed. Such analysis leads to a series of principles and rules that govern war, conflict, and the concept of strategy. *War-as-science* is about what is *believed* to be real and not real. Such thinking is a form of ontology, or the belief in a defined reality.

The above contrasts with ***War-as-Art***, or the '…belief that reality does not conform to universal laws or principles.'[33] Knowledge of competition, conflict, and war is dependent on observation and human interaction. Therefore, knowledge is dependent on subjective understanding and specific context. Such thinking posits that frameworks should be developed and used to guide understanding. A framework may be a ***theory*** or a meta-theory (a theory that relates multiple theories together).[34] Frameworks may also be the use of history as an analogy to understand today. No matter the framework, it is a mental model that is either explicit (a theory) or implied (a paradigm). In effect, *war-as-art* focuses on how individuals or groups *think things work*. Such frameworks shape an individual or group's understanding of knowledge. Such thinking and analysis is known as epistemology, or the theory of knowledge.[35] Research into the relationship between these two schools-of-thought demonstrates that the more abstract the concepts and theories of a subject, the more those theories and thinking should be grounded in *war-as-art* thinking. This research is summarised in the figure below (Figure 2.3).[36]

> ***Theory*** is defined as '…a coherent group of general propositions used as principles of explanation for a class of phenomena.' Theory helps form the foundations of mental models.

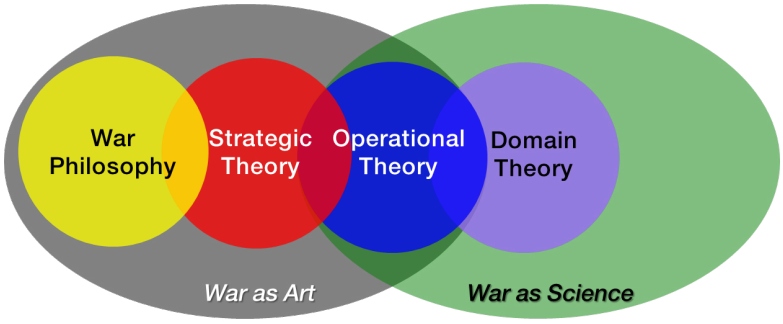


Figure 2.3: Schools-of-Thought and the Military Arts

Many schools-of-thought across multiple disciplines have similar philosophical underpinnings. Although *war-as-science* and *war-as-art* relate to military theory and practice, they have links to broader statecraft, and the paradigms that influence international relations and political science. As such, the characteristics of *war-as-science* and *war-as-art* are analogous to other disciplinary schools-of-thought such as metaphysical *realism* and *idealism*, or International Relations *liberalism* and *realism*, respectively. Wider multi-disciplinary research indicates that two generalised and discipline-agnostic approaches explain these school-of-thought overlaps. These two approaches illustrate how people view and think about the world: *problem-solving* and *problem-framing* thinking.[37]

2.3.2 Problem Solving Thinking: The World is a Bounded System

The first style of thinking is known as problem-solving thinking. This thinking style can also be known as ***hard systems thinking*** or ontological thinking. As several scholars indicate, this thinking style is the usual way humans perceive the world, and is how most heuristics enact decision-making.[38] This style of thinking is illustrated in Figure 2.4.[39]

Problem-solving thinking, like any school-of-thought, is a way of perceiving the world. Within this paradigm, a person or group perceives the *world as a system* that can be bounded. As such, the perceived world can be broken up and analysed. Such analysis informs planning and action. The real world reacts to the group's actions. This real-world reaction then causes the individual to adjust their plan. However, the reaction does not change the initial worldview that the *world is a system*, or bounded reality.[40] Therefore, the reaction changes how one influences the world (the plan) and not how one thinks about the world (analysis). This style of thinking is contrasted with the other school-of-thought.

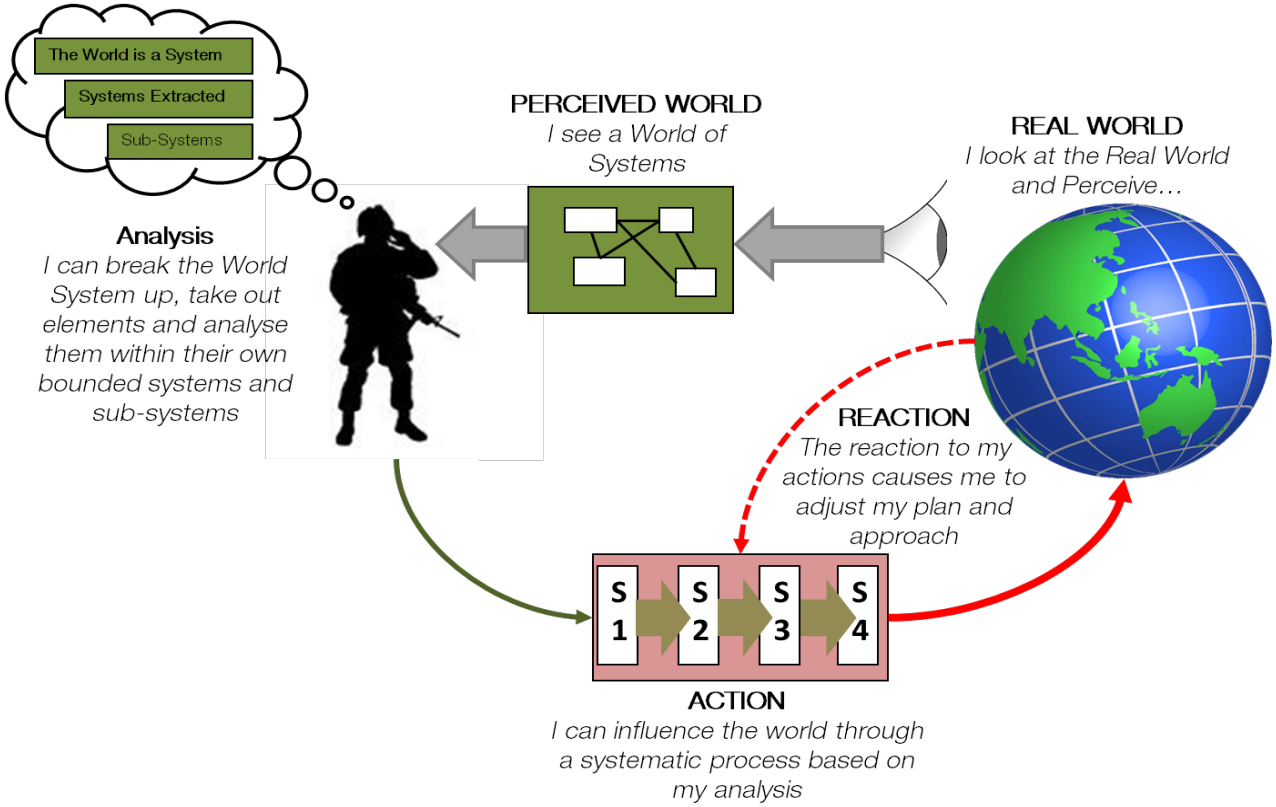


Figure 2.4: Problem-Solving Thinking in Action

2.3.3 Problem Framing Thinking: Frameworks Shape Thinking and Action

Compared to problem-solving thinking, problem-framing perceives the world as ill-defined. However, frameworks – theories, paradigms, experiences, or history – are used to understand the situation. This thinking style is very subjective, sometimes called ***soft systems thinking*** or epistemological thinking. How this style of thinking works is illustrated in Figure 2.5.[41]

Compared to problem-solving thinking, problem-framing perceives the world *as complex.* However, the *idea of what the world looks like* is drawn from the observer's theories, concepts, experiences, and historical knowledge. In systems thinking, this perception of the world is called a system, and is metaphorical. This system may be an International Relations paradigm such as classical realism or liberalism. It may be a meta-theory that joins ideas from different disciplines to explore the perceived world. In all cases, the idea is a model of the world and, therefore, a mental model. This fact has repercussions for enhancing and growing a practitioner's mental models, discussed in Part Three. For now, it is vital to recognise that no matter what is used to form the idea, it is this idea – or model – that the observer uses to explain the real world. Such an explanation can create a *framework to enhance understanding* between observers (or planners). This framework may be an internal worldview drawn directly from an observer's physical and educational experiences. Better frameworks are often created by making mental models explicit, testing them, and combining with other models through a disciplined approach. Part Two explains such an approach, called the *Australian Strategy Formulation Framework*. Explicit frameworks become a narrative that creates a shared (or common) mental model for a group. Such explicit frameworks take time to develop and re-frame.[42] Nevertheless, these shared frameworks (common mental models) are powerful guides for planning and action.[43]

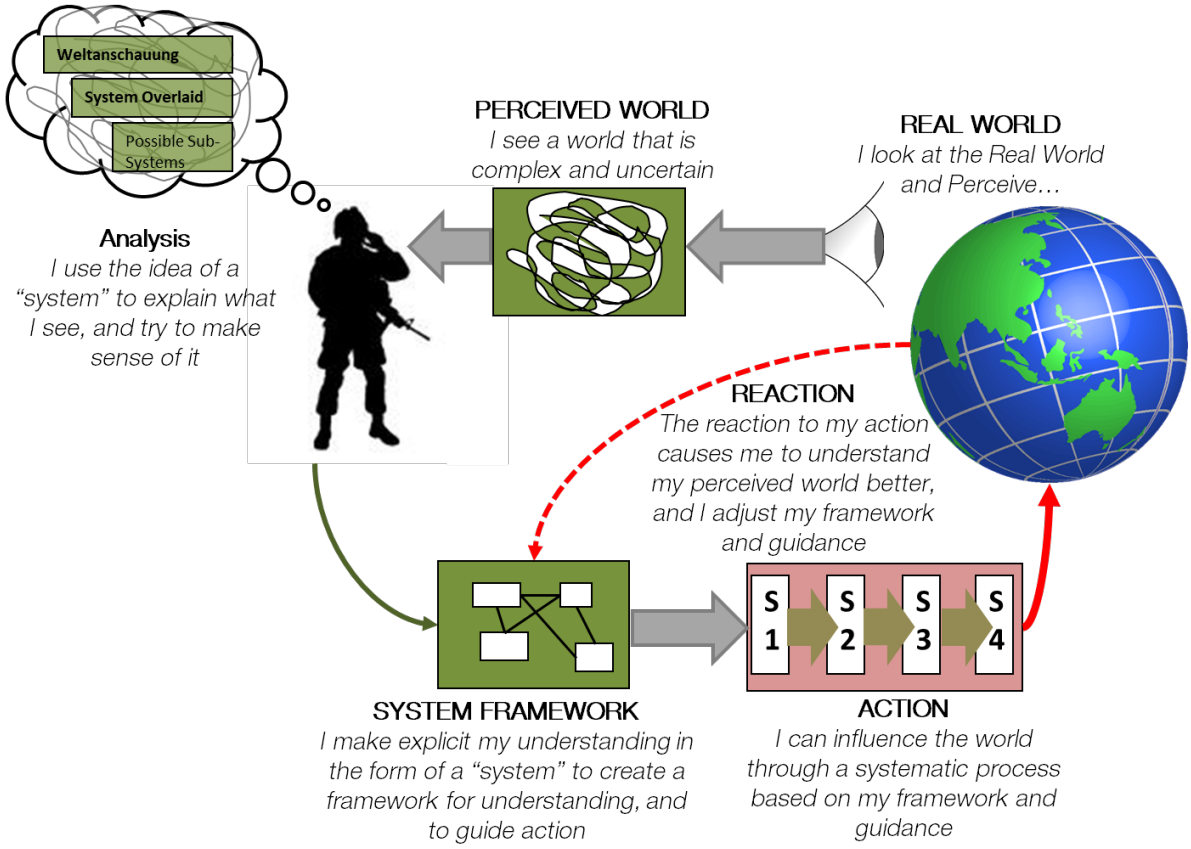


Figure 2.5: Problem Framing Thinking in Action

The two broad worldviews discussed above can be found in various disciplines: war studies, strategic studies, political science, and international relations. They also exist in philosophy, engineering, the natural sciences, and medicine. Both are valid for different situations. Much of human civilisation

has been developed through *problem-solving* thinking. However, the history of competition, conflict, and war highlights that sometimes the wrong problem is solved, or not all problems can be solved immediately without framing. In these complex cases, it is necessary first to understand the environment and frame which problems require solving. To assist in fostering the right style of thinking for the right problem space, research has identified which thinking tendencies relate to each school-of-thought.

Key Difference Between *Problem-Solving* and *Problem-Framing* Thinking

The difference between *problem-solving* and *problem-framing* thinking is the reaction of the real world. In *problem-framing* thinking, the reaction changes the observer's perception of the world – or the framework that guides planning and action. As the name implies, *problem-framing* thinking is very good at framing environmental concerns and identifying which problems need action. However, time delays due to reframing, or ill-disciplined application, may mean that *problem-framing* thinking does not directly solve a problem.

2.3.4 Thinking Underpinning Schools-of-Thought: Thinking Tendencies

Research across disciplines identifies that schools-of-thought consist of several common thinking characteristics, as seen in Figure 2.6.[44]

KEY CHARACTERISTICS	COMMON TENDENCES	
	War as Science ***Problem Solving*** ***Hard Systems Thinking***	***War as Art*** ***Problem Framing*** ***Soft Systems Thinking***
Philosophical Underpinning	Metaphysical Realism	Metaphysical Idealism
Approach to problem solving	Functionalist	Interpretive
Problem Context is	Objective Assumed as understood	Subjective Assumed as ill-defined
Problem Boundaries/Space	Determinate	Indeterminate
Perception of Problem	Structured	Unstructured
Problem Solving Action	"How-orientated" action	"What-orientated" action
Problem Solving Outcome	Enhance, or make better, a solution	Understand/framework of knowledge

Figure 2.6: Thinking Tendencies that Underpin Schools-of-Thought

The above figure highlights how different worldviews elicit different approaches to problems and their solutions. Although other texts better describe these thinking tendencies, their lay definitions suffice when considering their relationship to strategic art. For example, functionalist thinking views problem spaces and problems to be interconnected systems with defined boundaries, relationships, and functions.[45] Meanwhile, interpretive analysis considers a situation from different subjective perspectives to find commonalities and differences between each subjective point of view.[46]

Understanding these thinking tendencies and how they relate to different schools-of-thought is vital to successful strategic (and operational) art. When overlaid with the military arts (Figure 2.3), each area of study represents a different thinking style. Domain theory, which focuses on tactics and capabilities, is grounded in structured and broadly objective thinking that seeks solutions to problems. Such thinking

is the *war-as-science* and problem-solving school-of-thought. Meanwhile, operational thinking and theory, or the concept of campaigning, balances both schools-of-thought equally to frame the problems *within a defined environment*, and then solve these identified problems.[47] Finally, the abstract nature of strategic theory is underpinned by *war-as-art* thinking; or thinking that is often unstructured, accepts subjective views and contexts, and focuses on problem-framing. This discussion highlights the role of strategic theory and thinking: to frame the strategic environment and provide a framework that guides operational thinking and bounds tactical action.[48] Chapter Three leverages this first-principles theory to explain strategy, strategic art, and national power.

The Importance of *War-as-Art* and *Problem-Framing* Thinking to Strategy

Strategic theory and thinking are grounded in *war-as-art* and *problem-framing* thinking. It is true that *problem-solving's* functionalist and deterministic thinking has its place, and can be vital in discrete situations. However, the interpretive, subjective, and unbounded nature of *problem-framing* helps practitioners translate the complexity of the real world into a shared understanding and a framework that guides others' (often operational artists at agency and task force level) planning and action.

Additional Information
The Dangers of Only Using Problem-Solving Thinking

Figure 2.6 highlights that *war-as-science* and *problem-solving* thinking tend to hold functionalist, objective, and determinate traits. Therefore, worldviews and schools-of-thought grounded in *problem-solving* thinking often demonstrate these same traits. Some worldviews with such tendencies include *Structured Realism* (or Neo-Realism), Systems Engineering, and many aspects of Economic theory. Leveraging the earlier definitions for simple, complicated, and complex, such structured thinking is vital in solving complicated problems. However, when these tendencies influence people, they can often assume all problems are 'set'. Such thinking means that individuals and groups will rarely change their frames of reference.

In contrast, *war-as-art* and *problem-framing* thinking hold a range of interpretive, subjective, and indeterminate thinking tendencies. Such tendencies are very good at helping to frame environments and problems. However, such thinking requires significant discipline to ensure it produces a valuable framework that guides action, rather than descending into adjective soup.

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[1] Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War*, First ed. (Oxford, England, UK: Oxford University Press, 2001), 256.

[2] The core texts of this research include: Gary Klein, *Sources of Power: How People Make Decisions*, Second Printing ed. (Cambridge, Massachusetts, USA: MIT Press, 1998); Gerd Gigerenzer, Peter M. Todd, and A. B. C. Research Group, eds., *Simple Heuristics That Make Us Smart*, Electronic PDF ed., Evolution and Cognition (Oxford, England, UK: Oxford University Press, 1999); Daniel Kahneman, *Thinking, Fast and Slow* (New York, New York, USA: Farrar, Straus and Giroux, 2011).

[3] Klein, *Sources of Power*, 24-28; Gerd Gigerenzer and Peter M. Todd, "Fast and Frugal Heuristics: The Adaptive Toolbox," in *Simple Heuristics That Make Us Smart*, ed. Gerd Gigerenzer, Peter M. Todd, and A. B. C. Research Group (Oxford, England, UK: Oxford University Press, 1999), 18-18.

[4] This paragraph's discussion is drawn from the summary of the research into heuristics outlined by: Nicholas J. Bosio, "Gaming to Win: Enhancing Military Decision-Making," *Australian Army Journal* XVIII, no. 1 (2022): 39-42; Australian Defence Force, *ADF-P-5 - Planning*, ed. Lessons and Doctrine Directorate, 5 Series - Planning, (Canberra, ACT: Department of Defence, 2022), 11.

[5] This figure is drawn from: Bosio, "Gaming to Win," 43.

[6] A range of studies outline that physical board and war gaming can support this. These studies are summarised in Bosio, "Gaming to Win," 44-46.

[7] See annex A for a more extensive definition on ***mental models***. Quote from: Peter M. Senge, *The Fifth Discipline*, Kobo ePud ed. (London, England, UK: Random House Business Books, 1990), 8.

[8] Reynolds and Klein provide significant analysis of these points. Bosio summarises the wider research. See: Paul Davidson Reynolds, *A Primer in Theory Construction*, Sixth Printing - First ed. (Indianapolis, Indiana, USA: The Bobbs-Merrill Company, 1976), 21-43; Klein, *Sources of Power*, 24-28, 152-53, 261-69; Nicholas J. Bosio, *Understanding War's Theory: What Military Theory Is, Where it Fits, and Who Influences It*, ed. Australian Army Research Centre, vol. 001, Australian Army Occasional Paper - Conflict Theory and Strategy Series, (Canberra, ACT, AUST: Australian Army Research Centre, 2018), 11-14.

[9] Creativity in this case relates to a wide range of mental models that give different options to the heuristic. The need for broad mental models is outlined by both Klein and Storr, and supported by others. For primary references, see: Klein, *Sources of Power*, 32-35; Jim Storr, *The Human Face of War*, ed. Gary Sheffield and Dan Todman, Birmingham War Studies, (London, England, UK: Continuum, 2009), 143-53, 55.

[10] These links are discussed in doctrine and by Bosio. Both summarise the literature of Klein, Kahneman, and Storr. Zweilbelson's discussion on thinking in complexity has many similarities to Klein and Kahneman when compared and considered. See: Bosio, "Gaming to Win," 42-43; Australian Defence Force, *ADF-P-5*, 10-12; Ben Zweibelson, *Beyond the Pale: Designing Military Decision-Making Anew*, PDF ed. (Maxwell Air Force base, Alabama, USA: Air University Press, 2023), 288-99.

[11] One benefit, discussed in the Additional Information text box, is to use the heuristic framework to test the appropriateness of a planning framework – or testing "fads". A case study of this is Systemic Operational Design, introduced into the Israeli Defence Force prior to the 2006 Israeli-Hezbollah War. For this case study, see Glenn. Zweilbelson also discusses the issues with Effects Based Operations. Bosio analysis a series of warfighting concepts and highlights the issues with them. Russell W. Glenn, *All Glory is Fleeting - Insights from the Second Lebanon War*, ed. National Defense Research Institute (Santa Monica, CA, USA: RAND Corporation, 2012), Report; Bosio, "Relationshop between Military Theory and Systems Thinking," 133-50; Zweibelson, *Beyond the Pale*, 137-48.

[12] Kahneman, *Thinking, Fast and Slow*, 20-24.

[13] Kahneman, *Thinking, Fast and Slow*, 31-38.

[14] Kahneman, *Thinking, Fast and Slow*, 234-44, 49-53, 415-18.

[15] See the text box on some of the limitations to natural decision-making, and how to overcome these limitations. Discussion drawn from: Klein, *Sources of Power*, 271-84; Daniel Kahneman and Gary Klein, "Conditions for Intuitive Expertise: A Failure to Disagree," *American Psychologist* 64, no. 6 (2009).

[16] Bosio, "Relationshop between Military Theory and Systems Thinking," 46.

[17] Systems that are concepts are often linked to ***conceptual metaphors***, defined at annex A. Also see the additional information box of this section. Research into their use is at: George Lakoff and Mark Johnson, *Metaphors We Live By*, Kindle Edition ed. (Chicago, USA: University of Chicago Press, 1980); Alan D. Beyerchen, *Why Metaphors Matter - Understanding the Power of Implicit Comparison and its uses within the Marine Corps*, vol. 5, Perspectives on Warfighting, (Quantico, Virginia, USA: Marine Corps University, 1997).

[18] See annex A for the definitions of these concepts. Also see the following works for further explanation: Alan C. McLucas, *Decision Making: Risk Management, Systems Thinking and Situation Awareness* (Canberra, ACT, AUST: Argos Press, 2003); Zachery Tyson Brown, "A Crude Look at the Whole: A Simple Guide to Complexity for National Security Professionals," Steven L. Foster and Diane L. Maye eds. *The Strategy Bridge*, *The Strategy Bridge*, 2019, https://thestrategybridge.org/the-bridge/2019/1/29/a-crude-look-at-the-whole-a-simple-guide-to-complexity-for-national-security-professionals; Bosio, "Relationshop between Military Theory and Systems Thinking," 342-63.

[19] The definition of ***systems thinking*** is in annex A, and is drawn from: Bosio, "Relationshop between Military Theory and Systems Thinking," 47.

[20] This quote is from Beyerchen. Cimbala also explains a similar concept. See: Alan D. Beyerchen, "Clausewitz, Nonlinearity and the Unpredictability of War," *International Security* 17, no. 3 (1993): 63; Stephen J. Cimbala, *Clausewitz and Chaos: Friction in War and Military Policy* (Westport, Conn: Praeger, 2001), 6-7.

[21] For a discussion into the mathematical models of complexity, and its links to systems thinking and systems theory, see the following texts: Jay W. Forrester, *Industrial Dynamics* (Massachusetts, USA: Massachusetts Institute of Technology Press, 1961); Ludwig von Bertalanffy, *General System Theory: Foundations, Development, Applications*, Revised (Fourth Printing) ed. (New York, USA: George Braziller, 1968); Gerald M. Weinberg, *An Introduction to General Systems Thinking* (New York, USA: John Wiley & Sons, 1975); John D. Sterman, *Business Dynamics - Systems Thinking and Modeling for a Complex World* (Boston, USA: McGraw-Hill Higher Education, 2000); McLucas, *Decision Making*; Alan C. McLucas, *System Dynamics Applications: A Modular Approach to Modelling Complex World Behaviour* (Canberra, ACT, AUST: Argos Press, 2005).

[22] Some key texts that explore how tools help map causality to create a narrative include: Peter B. Checkland, *Systems Thinking, Systems Practice*, Kindle ePub 30th Retrospective ed. (Chichester, West Sussex, UK: John Wiley and Sons, 1993); Peter B. Checkland and Jim Scholes, *Soft Systems Methodology in Action*, 5th Reprint with 30th Retrospective ed. (Chichester, London, UK: John Wiley and Sons, 1990); Michael C. Jackson, *Systems Thinking: Creative Holism for Managers*, PDF ed. (West Sussex, England, UK: John Wiley & Sons, 2003).

[23] This is a summary of Parson's work. For more details, readers are commended to explore Parsons work. See: Craig Parsons, *How to Map Arguments in Political Science* (Oxford, England, UK: Oxford University Press, 2007).

[24] Parsons, *How to Map Arguments*, 50-51.

[25] Parsons, *How to Map Arguments*, 96-98.

[26] Parsons, *How to Map Arguments*, 69-74.

[27] Parsons, *How to Map Arguments*, 137-47.

[28] Parsons, *How to Map Arguments*, 137-38.

[29] This is drawn from: Bosio, "Relationshop between Military Theory and Systems Thinking," 301.

[30] Bosio, "Relationshop between Military Theory and Systems Thinking.", 301, 304.

[31] This relates to the two types of knowledge and how they are employed: procedural and propositional knowledge. Procedural knowledge is knowledge of how and why. Propositional knowledge is knowledge of what and why. For a succinct summary, see Mick B. Ryan, *The Ryan Review: A study of Army's Education, Training and Doctrine Needs for the Future*, ed. Australian Army (Canberra, ACT, Australia: Department of Defence, 2016), 48-49; Bosio, *Understanding War's Theory*, 001, 11-14.

[32] Milan N. Vego, "Science vs the Art of War," *Joint Force Quarterly*, no. 66 (2012): 62.

[33] Vego, "Science vs Art," 67.

[34] See Annex A for the definition of theory.

[35] The discussion on war-as-art and war-as-science is drawn from a range of areas. Bosio summarises this research, and then builds on it to show the links between war-as-art and war-as-science to more generalised, discipline-agnostic, schools. See: Bosio, "Relationshop between Military Theory and Systems Thinking," 39-42, 48-50, 53, 222

[36] This figure is from Bosio, "Relationshop between Military Theory and Systems Thinking," 42.

[37] See: Bosio, "Relationshop between Military Theory and Systems Thinking," 39-42, 48-50, 107-10, 222.

[38] This is summarised well by Checkland: Peter B. Checkland, "O.R. and the Systems Movement: Mappings and Conflicts," *The Journal of the Operational Research Society* 34, no. 8 (1983): 671-72; Checkland and Scholes, *SSM in Action*, 22.

[39] This figure is from Bosio, "Relationshop between Military Theory and Systems Thinking," 51.

[40] Checkland and Scholes, *SSM in Action*, A11, 21-23; Bosio, "Relationshop between Military Theory and Systems Thinking," 50-51.

[41] Bosio, "Relationshop between Military Theory and Systems Thinking," 52.

[42] Bosio, "Relationshop between Military Theory and Systems Thinking," 151-54; Richard R. Dickens, "Operational Design: The Art of Framing the Solution" (Research Report, Air University, 2010), 9-13 (AU/ACSC/DICKENS/AY10); Christopher R. Smith, *Design and Planning of Campaigns and Operations in the Twenty-First Century*, ed. Land Warfare Studies Centre, vol. 320, Study Paper, (Duntroon, A.C.T: Land Warfare Studies Centre, 2011), 350, 59-62.

[43] Checkland and Scholes, *SSM in Action*, A10, 33-38; Bosio, "Relationshop between Military Theory and Systems Thinking," 51-53.

[44] This table is drawn from a wide range of research. This research is consolidated and leveraged by Bosio to analyse the influence of paradigms on thinking, planning, and action. See: Bosio, "Relationshop between Military Theory and Systems Thinking," 107-10.

[45] The complexity and systems thinking literature explores this point further. For illustrative examples, see: Brian Wilson, *Systems: Concepts, Methodologies and Applications*, Second (1990) ed. (Chichester, England, UK: John Wiley and Sons, 1984); Checkland and Scholes, *SSM in Action*; Checkland, *STSP*; Sterman, *Business Dynamics*; McLucas, *Decision Making*; Jackson, *Creative Holism for Managers*; McLucas, *System Dynamics Applications*.

[46] The discussion on problem-solving and problem-framing thinking, and its influence on action is extensively discussion in the systems thinking literature. For a summary see: John Mingers and Anthony Gill, eds., *Multi-Methodology: The Theory and Practice of Combining Management Science Methodologies* (Chichester, West Sussex, UK: John Wiley and Sons, 1997); Jackson, *Creative Holism for Managers*; Bosio, "Relationshop between Military Theory and Systems Thinking," 275.

[47] This is a summary of the analysis conducted in Bosio, "Relationshop between Military Theory and Systems Thinking," 221-29.

[48] This point is raised in several works already cited throughout this chapter, with scholars such as Hal Brands, Lawrence Freedmen, Hew Strachan, Williamson Murray, and others making such statements. A contemporary look of this is presented by Smith and Bosio separately. See: Bosio, "Relationshop between Military Theory and Systems Thinking," 217-18, 25, 59-62; M.L.R. Smith, "Why is the West so Rotten at Strategy?," *International Affairs* 100, no. 4 (19 June 2024 2024): 22-24, https://academic.oup.com/ia/article/100/4/1591/7692874.

Chapter 3

3 ON STRATEGIC ART AND NATIONAL POWER

The Foundational Theory of Strategic Art

> *Tactics is easily reduced to firm rules because it is entirely geometrical like fortifications. Strategy appears to be much less susceptible to this, since it is dependent upon innumerable circumstances – physical, political, and moral – which are never the same and which are entirely the domain of genius.*
>
> Paul De Maizeroy, *Théorie de la Guerre* [Theory of War][1]

Any handbook on strategy will cover a wide range of topics. This diversity is for two reasons. The first is that the practice of strategy is a multi-discipline effort. Second, many definitions exist of strategy, grand strategy, and statecraft. For clarity, ***statecraft*** is seen as *the art of conducting state affairs*. As such, statecraft encompasses diplomacy, trade, the economy, conflict, and war. As will be explored through this and subsequent chapters, statecraft and strategy are intrinsically linked.

This chapter provides definitions for strategy and national power. Leveraging the theory in Chapter Two, this chapter defines strategy and strategic art. The chapter also highlights the five themes of good strategic art. Next, the chapter discusses the different ways practitioners may approach strategy development. No matter the approach taken, all strategies must relate, in some way, to national power. Therefore, the chapter concludes by exploring national power and providing a model to help practitioners think beyond concepts such as DIME (Diplomacy, Information, Military, and Economic). This model is known as the *Foundations of National Power*.

3.1 Strategy Defined – An Intellectual Framework for Action

The term 'strategy' is an oft-used term. From business studies, leadership, engineering, policy, and – where the term originated – war studies, the term has diverse meanings. Business studies emphasise that 'strategy' is a detailed plan. Meanwhile, many policy documents refer to 'strategies' as a form of vision or framework. There is an irony that strategy has meant all and none of these things throughout history.[2] As Brands states in *The New Makers of Modern Strategy*: '…the church of strategy must be a broad one.'[3] To provide clarity for the strategic artist, this section defines strategy.

Before discussing the definition, it is worth noting that this handbook uses 'strategy' as the general term to describe the thinking necessary to link national interests, values, and statecraft. This generalisation is because, as Lukas Milevski explains, grand strategy has an elastic nature.[4] Furthermore, given the strong relationship between strategy and statecraft, strategy occurs before, during, and after conflict (see Additional Information section at the end of this chapter).[5]

3.1.1 Strategic Theory: Considering the Environment and Strategy

Understanding strategy starts with understanding strategic theory. MLR Smith and John Stone, in an article entitled 'Explaining Strategic Theory', capture both the essence of strategic theory and its relationship to strategy. They state that ***strategic theory*** is '…a theory of interdependent decision-making under conditions of uncertainty.'[6] As a body of knowledge, strategic theory

> …offers a concise and coherent basis for investigating the social behaviour associated with conflict, that is, in situations where actors are endeavouring to secure their interests and values against the interests of other political actors.[7]

In the above, 'conflict' is more expansive than military action. In this context, conflict is where political groups struggle to achieve their interests through all methods: economic, political, social, and military.[8] Although there are nuanced differences between ***competition***, ***conflict***, and ***war***, they all hold a single underlying theme: a struggle of political will through various means.[9] Many scholars, such as Colin Gray, Freedman, Hew Strachan, and Brands, reinforce these points.[10] Brands describes the essence of strategy and strategic theory:

> Strategy is very complex, and strategy is also very simple. …[T]he essence of strategy is straightforward: it is the craft of summoning and using power to achieve our central purposes, amid the friction of global affairs and the resistance of rivals and enemies. Strategy is the indispensable art of getting what we want, with what we have, in a world that seems set on denying us.[11]

The above essence highlights some key points. First, there are some enduring themes to strategy and strategic art. These themes will be discussed later. Next is the concept of power. A later section on national power will delve into power in more detail. For now, it is important to recognise that strategy and power are interlinked. Finally, the above helps define the general concept of strategy.

3.1.2 Strategy: The Art of Getting What a Nation Wants

The above discussion indicates that strategy is about leveraging a group's; be it sub-nation, nation, or coalition; power to achieve an end. Brand's book, *What Good is Grand Strategy?*, helps illustrate this concept of strategy. Although Brand's work relates to the contemporary term 'Grand Strategy', his insights are just as pertinent for strategy in a more generalised sense. This handbook leverages the analysis of Brands and others, such as Gray, Freedman, Beatrice Heuser, Murray, and Milevsky, to define ***strategy***.[12] This definition guides both thinking about and practising strategy.

Strategy

Strategy is defined as: *The intellectual framework guiding how a political community develops and applies diverse forms of power in order to achieve its political ends.*

How the Definition can Guide Thinking About Strategy

The definition of strategy provides some key elements that help guide thinking about, planning for, and executing strategy. These elements include:

- **Intellectual Framework.** This part of the definition highlights the importance of considering codified and shared worldviews on how power is developed and used in a political community. Therefore, strategy, and those who think about and develop it, should not limit itself to formally written documents or speeches. Rather, strategic professionals should consider history, context, worldviews, and culture when considering strategy. These commonly shared ideas are sometimes known as strategic culture (discussed later). Such ideas are constantly changing and never universally accepted. Examples of these shifting intellectual frameworks are the pivotal changes in Australia's posture over the last three decades: the 1987 Dibb Review, the 2001 "DOA+" White Paper, and the current Defence Strategic Review and National Defence Strategy.
- **Political Community.** Strategy exists when a political entity leverages its power to achieve an end. Although much of the literature focuses on nation-states, the definition of strategy can be applied to city-states and empires of the past, or contemporary non-state actors and political movements.
- **Develop and Apply.** For the practitioners of strategy, the intellectual framework of strategy should guide the application of power and how to develop new, or enhance existing, resources into sources of power.
- **Diverse Forms of Power.** Because strategy and strategic theory are grounded in problem-framing thinking (Chapter Two), any thinking at this level requires considering how multiple forms of power can be used individually or combined.
- **Achieve Political Ends.** Power is not developed for its own sake. Instead, power is intended to achieve some outcome, such as security, dominance, access, deterrence, denial, stability, ideological goals, human rights, etc. Many of these goals are ongoing and never entirely 'resolved'. A nation's security is an example. Therefore, much like politics, strategy does not necessarily have a definitive start and end.

3.1.3 Strategy as a Habit-of-Mind: A Way of Thinking

The definition of strategy highlights the importance of thinking. As Chapter Two indicates, problem-framing thinking best suits strategic thinking and strategy development. Maeve Ryan and Andrew Ehrhardt reinforce this point:

> …strategy is best understood not as a process (leading to the production of plans) but as a **habit of mind**: a conscious attempt to look beyond the confines of short-term requirements of national defense or day-to-day, immediate foreign policy, and to the pursuit of national interests in a more systematic and synchronized way. It remains conscious of first-order assumptions and first-order principles within a nation's policymaking culture, and importantly, the ways in which these should be altered in the context of a changing international order. [emphasis added][13]

The 'habit-of-mind' Ryan and Ehrhardt advocate is similar to that discussed by Murray, Gole, and Mansoor (Chapter One).[14] Multi-disciplinary research highlights that successful practitioners, including strategy practitioners, often exhibit a ***pluralist habit-of-mind*** consisting of the following traits:[15]

- Open-mindedness regarding divergent worldviews;
- Flexibility in considering alternatives and opinions;
- Understanding the opinions of other people;
- Prudence in suspending, making, or altering judgements; and
- Willingness to reconsider and revise views.

The above traits reinforce the problem-framing nature of strategy. These traits are also critical to strategic art, and are seen in the overlap between strategic thinking and culture.

3.2 Strategic Art – Developing a Framework for Action

This section defines strategic art and outlines the key themes that underpin good strategic art. However, before delving into strategic art, it is helpful to highlight that it relates to two other concepts: strategic thinking and strategic culture (Figure 3.1).

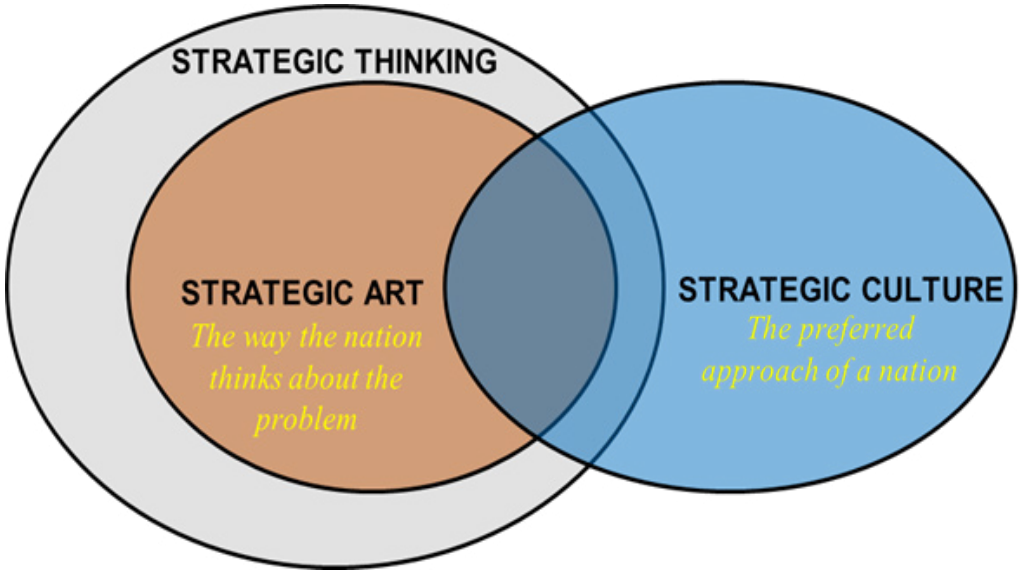


Figure 3.1: Relationship Between Strategic Thinking and Strategic Culture

3.2.1 The Nexus of Three Ideas: Strategic Thinking and Strategic Culture

Strategic thinking is defined as '…discovering and committing to novel strategies which can re-write the rules of the competitive arena and necessitates relaxing at least part of conventional wisdom.'[16] From this definition, strategic thinking is seen as thinking about complexity from different perspectives. As Chapter Two indicated, complexity relates to dynamic change. Given this, strategic thinking is concerned with the complexity caused by the dynamic changes in an environment. Furthermore, the concept of 'art', be it the military arts, operational art, or strategic art, also relates to thinking.[17] Therefore, the first step in defining strategic art is recognising it as a form of strategic thinking. Further, 'art' implies that strategic art is an applied form of strategic thinking. This applied form of strategic thinking is also influenced by the final related concept: *strategic culture*.

Strategic Culture

Strategic culture is defined as: *the underlying national (group) culture that is the root of, and influences, strategic behaviour.*

Strategic culture can be thought of as: *the preferred approach a nation takes to strategic problems.*

Strategic culture is the underlying national culture that shapes and influences the nation's strategic behaviour.[18] ***Strategic behaviour*** is defined as '…the behaviour related to the threat or use of force, and other coercive means, for political purposes.'[19] For a nation, strategic culture is the *preferred national approach to strategic problems*. Meanwhile, strategic art is *how a nation thinks about strategic problems*. Figure 3.1 suggests another point: the importance of recognising the nation's 'self-identity'.

Figure 3.1 not only illustrates the interplay within strategic theory, but also highlights the challenges faced by strategic artists. Where there is no strategic art or thinking, individuals rely on the norms of strategic culture. Such norms lead individuals and groups to assume that all strategic problems have set solutions dictated by strategic culture. As Smith argues, this strategic culture may be heavily influenced by an idealised form of ideology that limits thinking to "what we believe is right" (ontological) rather than "how we think things work" (epistemological).[20] Chapter Two highlights that such norms are a form of functionalist and structured thinking, leading to a pure problem-solving worldview. However, the unbounded nature of pure strategic thought can be just as dangerous. Unbounded thinking often leads to unrealistic outcomes that have no grounding in the nation's culture, nor the reality of the situation.

The nexus of strategic thinking and strategic culture in Figure 3.1 indicates good strategic art. In effect, good strategic art, like good leadership, starts with an 'awareness of self'. Without such awareness, strategic art often provides a problem frame that contradicts a national preference.[21] Therefore, good strategic art recognises culture, leverages appropriate thinking, and guides such thinking towards a strategic approach.

3.2.2 Strategic Art: Its Definition and Themes

Ideas concerning strategic art can be drawn from the historical record, military theorists throughout history, and the above discussion. First, strategic art is an intellectual exercise. Next, strategic art leverages theory to help understand the strategic environment and its challenges. Since theory helps form the foundation of mental models, strategic art uses different theories to make a range of mental models explicit, thereby creating common understanding.[22] Strategic art also acts as a disciplined approach to problem-framing thinking. Therefore, strategic art is both an intellectual exercise and a practical method of inquiry.[23] Given this duality of intellectual and practical, strategic art requires an appreciation of both theory and practice. This means strategic art is the praxis of strategy, or the practical application of strategic theory.

The above indicates that a strategic artist should accept that the environment and its actors are unknown and potentially unbounded. Next, strategic artists should consider this environment and its actors through different lenses. Based on this interpretive analysis, the artist attempts to frame the environment in a way that helps others to understand, and act within, it. As such, this handbook defines ***strategic art*** as:

Strategic Art

The capacity and ability to frame problems within an unbounded environment (not bound by geography, time, and/or current policy)*, thereby bounding the problem space for operational thinking*

Elements of the above definition can be found in the works of academics and practitioners throughout recorded history. This short exploration of strategy, strategic theory, and strategic art also highlights several themes that underpin good strategy and strategic art. These themes are captured in the Key Take Away box, and are seen in the works of the scholars previously mentioned.[24] However, how these themes are enacted can influence strategic art's effectiveness.

The Themes of Strategic Art

The five themes of strategic art are:

Strategy is an Art: The War-as-Art Paradigm Prevails

- *War-As-Art* thinking most important.
- Subjective viewpoints, interpretive paradigms, unbounded thinking frame strategy.

Consider the Whole: Wars and Nations

- Success is the focus, victory is a narrative.
- Understand that nations do statecraft, not the instruments of national power
- Education matters – it helps the artist understand diverse world views.

National Power is More Than its Tools (Orchestration)

- Instruments of national power do not represent national power. These are the means, not the ways or ends.
- National Power relates to ideological cohesion, economic potential, and political control.

Managing National Action (Synchronisation)

- Often national actions should be guided by frameworks, not plans
- The national instruments (tools) may operate independently or combined
- Common goals matter, not common plans and controls

Harness National Potential

- Military Power is not always explicit. Consider a nation's military potential based on their economic power.
- Economic Power drives diplomatic and military potential in conflict
- National potential is guided, not controlled.
- Broad education of the State's Agents enables national potential to be guided and harnessed.

3.3 Different Approaches to Developing Strategy

This section considers some of the different approaches to developing strategy. The three approaches are discussed in turn: *strategy as process*, *strategy as problem-solving*, and *strategy as a framework*. No matter one's view on strategy, an often-quoted way of thinking about and building strategy is the *ends-ways-means* concept.

The ends-ways-means concept, first explained by Arthur Lykke in 1989, can be found in almost all approaches to developing strategy.[25] Lykke's original work related to 'military strategy'. However, the concept of objectives (ends), methods to get to those objectives (ways), and the resources one has (means) can be applied to any form of strategy. Given Chapter Two's discussion on heuristics, natural decision-making, and its relationship to general planning, it is easy to see how ends-ways-means can relate to any form of planning. Often, how rigid ends-ways-means is applied shapes if strategy is viewed as a process, a form of problem-solving, or a framework to guide action. Another essential part of the discussion is the language used to explain strategy development.

3.3.1 Strategy as Process

Understanding *strategy as process* starts with understanding the language used to teach strategy development. Several commentators and scholars highlight how mathematical or science-based terminology is used to explain strategy development.[26] Terms such as 'ends-ways-means calculation', 'convert formula to plan', and similar terminology can be found in military doctrine, online articles, and Staff/War College reference material worldwide. These terms draw on science and mathematics as metaphors for strategy and create a structured approach to thinking about strategy, as seen in Figure 3.2.[27] These terms may also imply that there is a process that, if enacted, leads to good strategy. Jominian theories of war and conflict influence such thinking.[28]

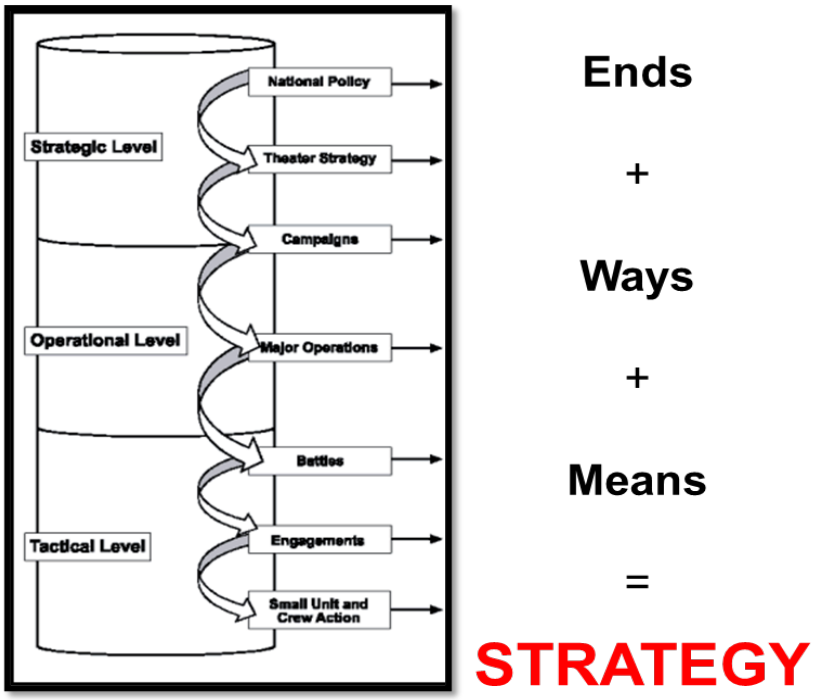


Figure 3.2: Strategy as Process

There are many critics of this process view of strategy. In his article 'Ends+Ways+Means = (Bad) Strategy', Jeffery Meiser highlights how this view of strategy often leads to several conscious and unconscious beliefs.[29] These include:

- That strategy is a process underpinned by the same style of thinking used in other forms of planning, including operational and tactical planning.
- The process of developing a strategy must end in a codified plan. Therefore, if the strategy is not codified, it does not exist.
- That all problems are 'whole-of-government', even if that is inappropriate.
- A nation has a 'strategy' as long as 'whole-of-government' instruments (i.e., agency-level and lower) are integrated and considered.

MLR Smith reinforces the above in a series of articles concerning bad strategy and an overemphasis on a 'total war mindset'.[30]

Of course, *strategy as a process* does have its uses. Where ends are clear, such structured and deterministic thinking is highly appropriate. An example is strategic contingency planning. The purpose of contingency planning is to develop a response to a possible and realistic scenario. Often, these contingencies are responses to possible crises. Such strategies are known as *positional strategies* (Chapter Four). Contingency planning requires structured rigour to ensure the contingency plan is a useful representation of a possible future situation. In such a case, approaching strategy as a process ensures that planning teams bring discipline to their unbounded imagination concerning what *might* happen, drawing them into the realms of what *could* happen. Nevertheless, such structured approaches can also be very problematic. Iain King argues that strategists must go beyond ends-ways-means.[31] This discussion leads to the next approach to strategy: *strategy as problem-solving*.

Strategy as Process

Strategy as Process views the development of strategy as a defined planning process that, if followed, leads to good strategy. This approach has several positives and negatives:

Negatives:

- Underpinned by functionalist, deterministic, and bounded thinking about the problem. Can be similar to tactical planning in this respect.
- Focused on problem solving, not the wider environment.
- The belief that strategy must always be a codified document that is whole-of-government, even if that is inappropriate.
- Over-emphasises the instruments of national power and discrete capabilities.

Positives:

- Very useful when the environment and required 'ends' are clear. In such circumstances, structured and deterministic thinking is highly appropriate.
- Useful for contingency planning as it helps bound the possible contingencies.
- Very useful for refining a strategy that was developed via another approach over time.

3.3.2 Strategy as Problem Solving

Richard Rumelt, in his book *The Crux*, argues that strategy is a form of problem-solving. The central idea of Rumelt's work is that strategy should be a coherent set of actions that target the most pressing and addressable challenge. Rumelt's idea is compared to the tendency, often in business circles, to develop a strategy that may read like a long list of desired outcomes. Michael Hatherell, in his review of Rumelt's work, places the central idea of *The Crux* within the context of national security and strategy.[32] Rumelt's idea and Hatherell's review see strategy as a form of problem-solving. Strategy should seek to solve the central issue in the environment. Then, through such action, the next major issue will be identified and can be solved. Such thinking is a structured and disciplined form of analysis. There are also similarities between Rumelt's idea and John Boyd's Observe-Orient-Decide-Act (OODA) cycle.

As Figure 3.3 highlights, the *Orient* in Boyd's OODA Loop is the most essential part of the cycle.[33] Orient is influenced by culture, history, experience, and education. The same is true for the problem-solving approach to strategy.

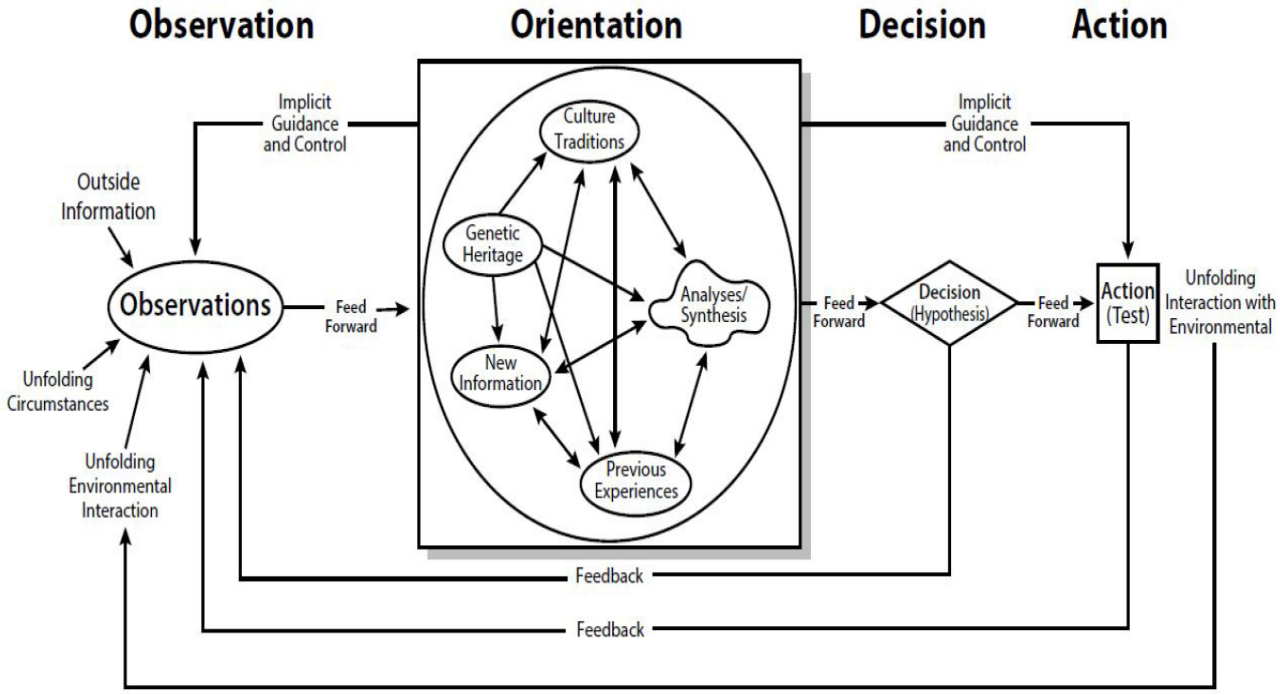


Figure 3.3: Boyd's Detailed OODA Loop

A range of historical figures have advocated for a *strategy as a problem-solving* approach. In his article 'Strategy as Problem-Solving', Andrew Carr explores some of this history.[34] Carr's analysis of *strategy as problem-solving* highlights that problem-framing thinking is required to recognise the most critical problem. Such framing can be achieved through historical analogy, metaphor, and selected framing techniques. Collectively, these techniques link to a methodology known as Design, discussed more in Chapter Four. The most critical strategic problem, or the 'crux' as Rumelt calls it, is a form of ***leverage point***, or a point where a small change can significantly affect the situation. Leverage points are a part of both systems thinking and good planning. These leverage points; found through understanding culture, history, experience, and causality; help orient the strategy towards relevant action.[35] Figure 3.4 represents the concept of leverage points and how they relate to the *strategy as problem-solving* approach.

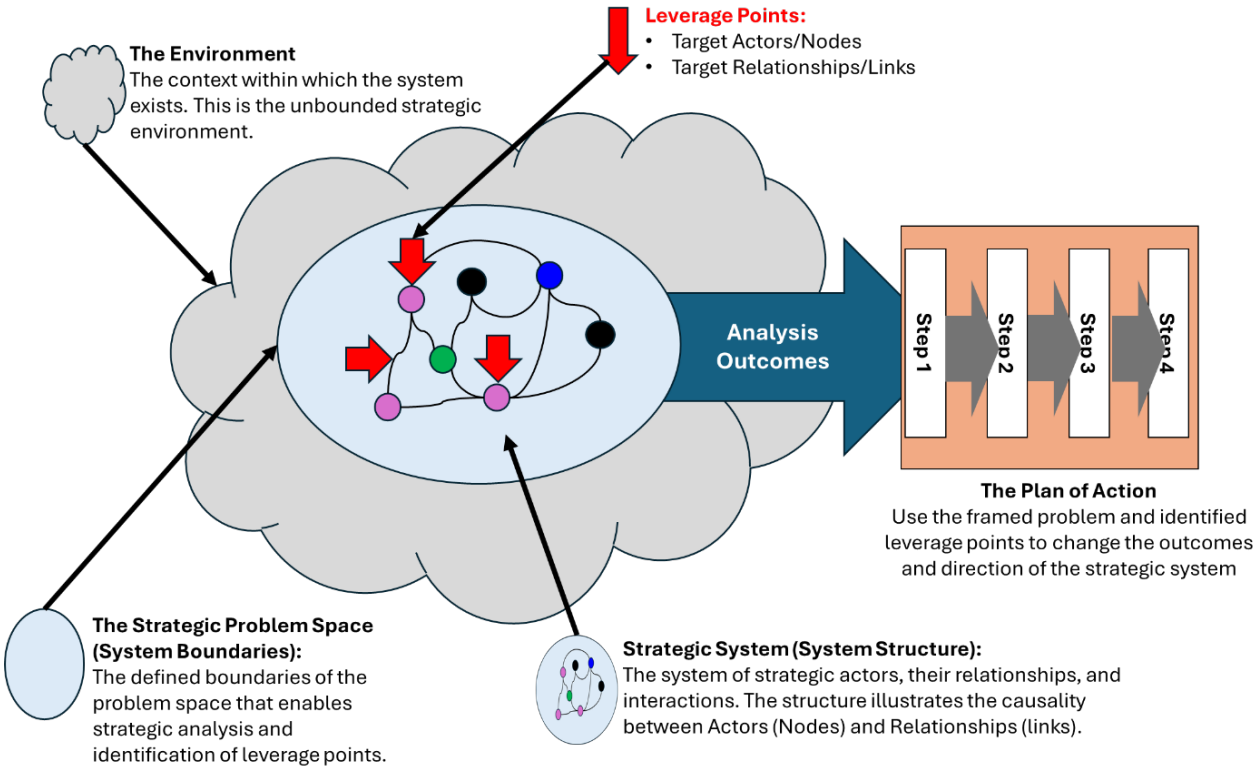


Figure 3.4: A Representation of Strategy as Problem-Solving

There are aspects of Jominian and Clausewitzian theory in the *strategy as problem-solving* approach. As such, the approach combines both problem-solving and problem-framing thinking.[36] However, the approach does contain risk. Because *strategy as problem-solving* focuses on identifying problems, the approach may assume a bounded environmental space. This environmental bounding is the Jominain tendency of the approach coming through.[37] Some may suggest that *strategy as problem-solving* is more operational art than strategic. However, like *strategy as process*, *strategy as problem-solving* has specific uses. Positional strategies, discussed more in Chapter Four, often lend themselves to *strategy as problem-solving*. Where the intent is to seek advantage within a generalised environment, another approach is required.

Strategy as Problem-Solving

Strategy as Problem-Solving views strategy as a form of bounded problem-framing, followed by problem-solving. The strategic environment is bounded, the problems within the boundaries analysed, and leverage points identified. Based on these leverage points, a plan of action is developed. This approach has several positives and negatives:

Negatives:

- Can be overly focused on an assumed bounded environment.
- Very similar to operational planning and Operational Art.
- Can over-emphasise whole-of-government, even if that is inappropriate.

Positives:

- Blends both *problem-framing* and *problem-solving* thinking.
- Useful for dynamic *positional strategies* (Chapter Four).
- Useful for dynamic re-positioning of a strategy that was developed under a different approach.

3.3.3 Strategy as a Framework

The final approach to thinking about and developing strategy is known as *strategy as a framework*. This approach may be considered the most 'Clausewitzian' way of viewing strategy. Underpinning *strategy as a framework* are the concepts of *theory of victory* and *theory of success*, discussed in Chapter Four. For now, it is worth understanding that *strategy as a framework* uses a *theory of success* to achieve two points. First is a vision for action. The second is a causal explanation of why that vision will work and is appropriate. These two parts provide a framework that bounds the environment and guides action for operational agencies. Such a framework guides national institutions and agencies' operational planning and action. Such guidance should not be a rigid form of orchestration and synchronisation. Using a framework helps maintain institutional, agency, and national flexibility.

Both Meiser and Frank Hoffman argue for the *strategy as a framework* approach.[38] Hoffman, citing Gray, states that a strategist

> …is, *ipso facto*, a theorist. A plan is a theory specifying how a particular goal might be secured. Until the course of future events unfolds, …[strategists] are deciding and acting only on the basis of a theory of success. …[S]trategies are theories, which is to say they are purported explanations of how desired effects can be achieved by selected causes of threat and action applied in a particular sequence.[39]

Meiser and Sitara Nath, in their article on 'The Strategy Delusion', further explore the concept of *strategy as a framework* by applying it as a method to test and explore declaratory policy.[40] Much of this scholarship highlights how many successful historical strategies have framework-like approaches. When the above work is considered as a whole, four points can be drawn out concerning *strategy as a framework*:

- Approaching *strategy as a framework* can be very powerful. It provides options and flexibility.
- *Strategy as a framework* helps guide operational thinking.
- Translating the frameworks requires strategists to think about the future, have imagination, and understand culture.
- Making theories explicit is a crucial part of successful framework strategies.

The above helps highlight how *strategy as a framework* differs from other approaches. *Strategy as process* is predominantly founded in war-as-science and problem-solving thinking. Meanwhile, *strategy as problem-solving* seeks to balance both thinking styles within a bounded problem space. Finally, *strategy as a framework* uses the thinking tendencies of problem-framing: indeterminate and interpretive analysis. Because of this grounding in problem-framing thinking, *strategy as a framework* is the foundation for the *Australian Strategy Formulation Framework*, described in Part Two. Such thinking also allows for a broader interpretation of national power.

Strategy as a Framework

Strategy as a Framework views strategy as a form of hypothesis (Theory of Success, Chapter Four) that provides a causal narrative of the environment, what needs to be achieved, and why it will work. This approach often creates frameworks that guide (or bound) departmental and agency planning. This approach has several positives and negatives:

Negatives:

- Does not seek to provide a direct solution to the strategic problem, like other approaches.
- If not applied with discipline, *strategy as a framework* can become a meaningless framework.

Positives:

- When done effectively, provides a disciplined approach to problem-framing thinking. This helps the strategic artist to engage with multiple viewpoints and consider the environment from different perspectives.
- Considers the wider environment, and creates boundaries for departments, agencies, and task forces to work within.
- Very useful in framing strategy when the 'ends' are difficult to define or enduring in nature.

3.4 Power – A Key Concept

The concept of power is fundamental to understanding both statecraft and strategy. Therefore, understanding what power is, the styles of power, and its relationship to the nation is an integral part of strategic art. This section provides an overview of the concept of power. The section then leverages the concept of power to discuss some of the limitations of the DIME construct. This discussion will lead into the following section: the *foundations of national power*.

3.4.1 Power: The Concept and the Dimensions of Power

The concept of power is seen in many disciplines. Political science, international relations, strategic studies, war studies, economics, leadership studies, and law all employ the concept of power subtly differently. Nevertheless, all these disciplines draw their concept from a foundational idea: *power is the capacity to influence*.

Understanding power as a generalised concept helps frame many of the theories, concepts, and case studies that inform strategic thinking and strategic culture. Understanding power is also critical in the practical application of strategy and statecraft. Although there are many definitions for power, this handbook leverages the American political scientist Robert Dahl's work. Dahl provides one of the most well-known definitions of power in his 1957 article, 'The Concept of Power'. In that article, Dahl defines ***power*** as:[41]

Power

A has power over B to the extent that A can get B to do something that B would not otherwise do.

In 1974, Steven Lukes wrote *Power: A Radical View*. Lukes' work builds on Dahl and others' definitions to create a three-dimensional view of power. The three dimensions of power build on each other, as seen in the concept box below.[42]

The Three Dimensions of Power

Decision-Making Power. The most observable form of power and is directly linked to Dahl's definition of power. Decision-making power is the capacity to force oneself or another party to make a specific decision through explicit power.

Non-Decision-Making Power. This is often a form of unobservable power. Non-decision-making power is the capacity to influence the agenda of a decision-maker. This form of power is often implicit. Such power leverages influence chains, institutional norms, and group dynamics. By influencing what decisions will be made, or the decision-maker's agenda, non-decision-making power influences the types of decisions that others could make.

Ideological Power. This form of power influences a group's thoughts and collective mental models, or worldviews. This power can shape culture, education, understanding of history, and people's worldviews.

It is easy to see how the concept of ideological power relates to strategic culture. It is also relevant to the foundations of national power, discussed below. Effective leveraging of ideological power, and by extension, strategic culture and national power, requires an understanding of what worldviews underpin a person's or group's thinking. Because of this, Lukes argues

> ...is it not the supreme and most insidious exercise of power to prevent people, to whatever degree, from having grievances by shaping their perceptions, cognitions, and preferences in such a way that they accept their role in the existing order of things, either because they can see or imagine no alternative to it, or because they see it as natural and unchangeable, or because they value it as divinely ordained and beneficial? To assume that the absence of grievance equals genuine consensus is simply to rule out the possibility of false or manipulated consensus.[43]

The above concepts of power relate well to the four causal logics put forward by Parsons (Chapter Two). One can see the links between structural logic and decision-making power. Similar links can be drawn between institutional logic and non-decision-making power. Ideological power and ideational logic also overlap. Understanding the links between power and causal logic highlights some limitations related to viewing a nation's power through the instruments of the state.

3.4.2 The Component View of National Power: DIME and its Limitations

Before discussing what makes up national power, it is helpful to define it. This handbook uses the ADF doctrinal definition:

> *The total capability of a country to achieve its national objectives, devoid of external constraints and without being subject to coercion.*[44]

Military doctrine, policy papers, and academic monographs further explain national power through a nation's instruments of state and national activities. Such writings present national power as the amalgamation of explicit forms of national capacity. Each component is known as an *instrument of national power*. These instruments are often represented through one (or more) of the nation's official agencies or departments, such as the military, the diplomatic corps, or the finance and natural resources departments. The ADF's capstone doctrine, *ADF-C-0 Military Power*, is useful for succinctly

describing this component view of national power.[45] As the doctrine makes clear, four broad instruments underpin this component view of national power:

- D – *Diplomatic* Instrument
- I – *Information* Instrument
- M – *Military* Instrument
- E – *Economic* Instrument.

This view of national power is standard for tactical and campaign/task force (operational) level discussions and planning. DIME helps tactical and operational planners, be they military or other government agencies, to think about orchestrating and synchronising different agency actions towards a common goal. This component view also helps form operational groups, such as Joint Inter-Agency Task Forces. DIME provides an explicit framework that forces agencies and lower-level planners to consider what different groups can provide, and how they may be integrated to achieve a greater outcome. However, it can be problematic at the inter-departmental and higher level.

DIME's tactical and operational benefits can become limiting at the strategic and national-political levels. Such thinking can stifle strategic analysis because the component view of national power often assumes:

- There is a broadly structured view of national power;
- The instruments are often synchronised to focus on a single problem; and
- Synchronising the components may achieve the optimised solution to the problem.

The above assumptions do not explore why a nation has greater or lesser power than another, nor how that power may be generated or lost, other than through the explicit attrition of assets and resources. Several academics, including David Jablonsky, further explore this point. Jablonsky considers the factors influencing national power and how it might be evaluated. He discusses how natural and social determinates can influence national power.[46] Such thinking leads to a broader understanding of how national power is developed, enhanced, and leveraged.

3.5 True National Power – The Foundations of National Power

Jablonsky's ideas concerning the fundamental factors of national power are not new. Similar ideas can be found in Thucydides, Machiavelli, and Mahan's writings.[47] Chapter Two of the *New Makers of Modern Strategy*, entitled 'Thucydides, Polybius, and the Legacies of the Ancient World', illustrates this point. The chapter captures how social, political, and economic issues work in tandem to support the power of Athens or the Roman Republic. The chapter speaks to how, during the Peloponnesian War, Athens failed to manage political issues and lost social cohesion, undermining Athenian national power and strategy.[48] Meanwhile, the Roman Republic cultivated the 'three capacities' of citizens and armies, civic institutions, and national culture. Such cultivation maintained Roman strength, allowing Rome to recover from significant losses during the First and Second Punic Wars. Further, this cultivation of power enabled Rome to defeat Carthage in all three Punic Wars.[49] Paul Kennedy's seminal work, *The Rise and Fall of Great Powers*, argues how economic, social, and political tensions drive national power more than any specific instrument of a nation.[50] Other scholars have further expanded on Kennedy's work.

3.5.1 The Foundations of National Power: Defining the Foundations

Andrew Phillips has built on Kennedy's original thesis.[51] Phillips' work creates a framework for national power, its generation, and its enhancement over time. Phillips identifies three foundational elements of national power. The first is *internal political control*, or a stable governmental system. Next is *internal ideological cohesion*. This concept relates to the broad ideological cohesion surrounding statehood, government, and the nation's (people and leader) broad worldview. The final element is the need to *leverage economic potential*. These elements are known as the objective, or enduring, foundations of national power. As enduring elements, they can be applied to any structured grouping that generates power: large tribal, non-state actors, city-states, nation-states, and multi-national groupings. This concept of enduring themes that manifest in different ways for different groups and at different points in time is similar to the objective and subjective aspects of Clausewitz's Wonderous Trinity and Machiavelli's National Triumvirate.[52] These enduring elements are illustrated in Figure 3.5.

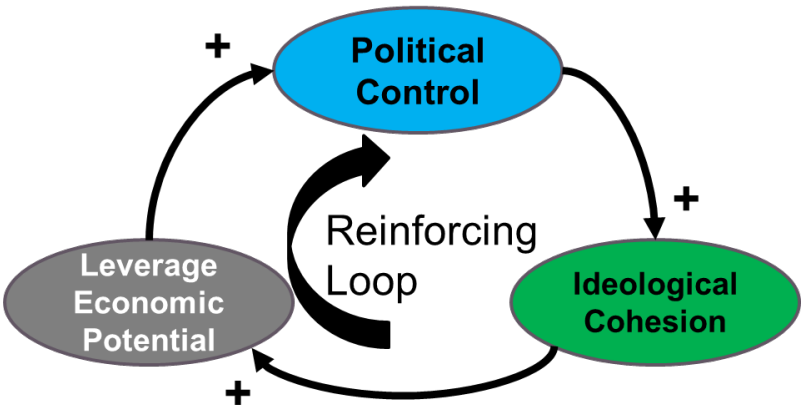


Figure 3.5: The Objective Foundations of National Power

Phillips' analysis highlights a cycle in national power generation. In systems theory, this cycle would be known as a 'reinforcing loop', as illustrated in Figure 3.5. As a loop, cultivating one aspect of the foundation helps strengthen the next, and so on. The opposite is also true. Weaken one aspect, and that weakness can cascade through the foundations of national power at an exponential rate.

3.5.2 The National Power Triangle: The Foundations and the State Construct

For nation-states, Phillips' outlines how these foundational elements manifest as three activities: *state-building*, *nation-building*, and *economy-building*. The relationship between these activities is seen in Figure 3.6.

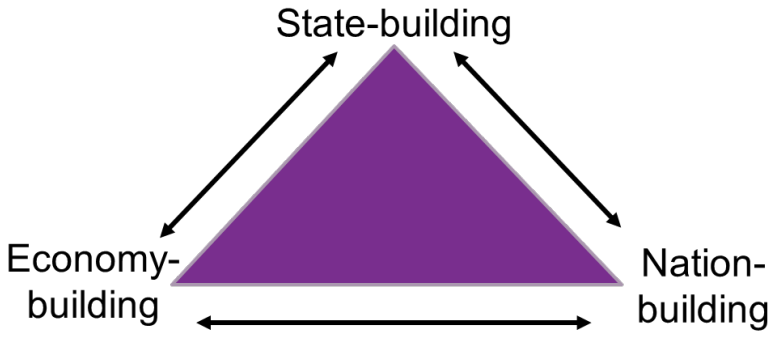


Figure 3.6: A State's Foundations of National Power

Phillips' explains that political control manifests within nations as the activity of *state-building*. Here, state-building sees the centralisation of power under a stable political system. This stable system requires the successful management of political elite competition. This management may look different from state to state, and political system to political system. However, there are some common threads across all successful nations. The first is that the political system is stable. Next is the successful management of political discourse. This discourse could be open debate, as seen in liberal democracies. Another method may be a managed political discourse through a single-party "back-room" system with a defined politburo construct. No matter the approach, successful state-building has a known political discourse system that does not result in, or rely on, violence through coup, putsch, or revolution. Finally, successful state-building ends with a nation that can change leadership through a managed approach that does not significantly disrupt the nation. Through these activities, the nation achieves political control and enables the other foundations of national power to manifest.

A stable political system allows leaders to enhance and develop ideological cohesion. Phillips outlines that activities related to this are known as *nation-building* activities. Nation-building is the development of the population's link to their nation. Nationalism and patriotism are examples of ideological cohesion. Leveraging ethnic links, common histories, or shared beliefs (religious or secular) are also examples of developing ideological cohesion. A political elite may use a range of activities to achieve national ideological unity. Often, this unity also manifests as a nation's strategic culture. Successful nation-building helps reduce the risk of internal rebellion. These activities also help minimise external actors' capacity to access and subvert the nation's political systems. Nation-building, done well, also minimises radical political elites gaining support, while enhancing the state's capacity to harness popular commitment. Such commitment leads to the last element: economy-building.

With political control and ideological cohesion, a nation can leverage its economic potential well. This potential is leveraged through *economy-building* activities. These activities include exploiting geographical resources to the best effect and creating internal domestic markets. To further support economic growth, nations also carefully participate in relevant and supportive international markets. Such growth is reinforced through fostering innovation to increase the value (or value-add) of national resources. Leveraging economic potential further strengthens political control and ideological cohesion. Phillips' analysis and framework reinforces Kennedy's conclusion:

> …the history of international affairs of the past five centuries has all too frequently been a history of warfare, or at least of preparation for warfare – both of which consume resources which societies might use of other "goods", whether public or private. …It has also recorded a debate about how best to enhance national prosperity, not only because of the individual benefits which increased wealth brings, but also because of the recognition that economic growth, productivity, flourishing finances, will all affect a Great Power's relative prospects if another international conflict occurs.[53]

Phillips' framework for the foundations of national power helps broaden one's thinking about power, national power, and the use of strategy and statecraft. Understanding the interplay Phillips identifies is vital to understanding a nation's power. Such understanding helps define a nation's capacity to leverage and exploit its power, as well as its potential to achieve its desired ends. A strategy that provides a framework that guides action can help navigate this interplay. However, Hoffman highlights that '…despite a wealth of published books on strategic theory …[there is] limited guidance on how to enhance the application of theory to practice.'[54] Chapter Four discusses some of the techniques needed to translate theory into practice. Furthermore, Part Two presents an approach to strategy development.

The Foundations of National Power

To overcome the limitations of the component view of national power (the Instruments of National Power), this handbook presents the *foundations of national power*.

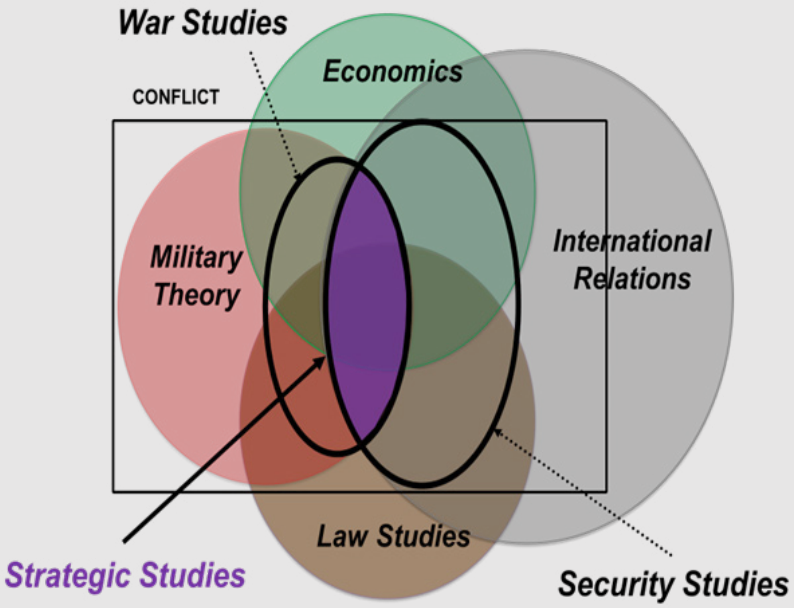
The foundations of national power are three interrelated concepts that can be related to any group or state. These concepts reinforce each other. Harnessing them allows a group to increase their national power, and leverage that power to achieve a range of outcomes. The three concepts are:

- **Political Control.** A group's capacity to manage political discourse and transitions of power. Within a state, this is known as *State-Building*.
- **Ideological Cohesion.** A group's capacity to inculcate and manage group identity, belief, belonging, and cohesion. Within a state, this is known as *Nation-Building*.
- **Leverage Economic Potential.** A group's capacity to leverage the economic potential of their territory and people. Within a state, this is known as *Economy-Building*.

Additional Information
Situating this Handbook: A Grounding in Strategic Studies

This handbook approaches strategy and strategic art through a strategic studies lens. Strategic studies differs from the other major contemporary field that considers strategy: security studies. The differences between these two areas of study are important, as practitioners grounded in one will have different worldviews and mental models that will influence their thinking about the theory and the practice of statecraft. Understanding these differences helps provide context for how different people think about the relationship between statecraft, strategy, competition, and conflict.

Security studies is a sub-discipline of International Relations. Security studies views war as the failure of statecraft. Therefore, statecraft is primarily about averting war. By extension, strategy is often seen as a deliberate action subordinate to statecraft and often relegated to conflict and war. This view contrasts with strategic studies. *Strategic studies* is a sub-discipline of war studies. As such, strategic studies views war as a deliberate choice of political groups (particularly nations) to further their political affairs. Therefore, war is a part of statecraft. By extension, strategy is often directly related to, and integrated within, statecraft. The interplay between security studies, strategic studies, and the multiple disciplines that inform statecraft is illustrated below.



Noting the above, some argue that strategy, particularly grand strategy, is synonymous with statecraft. This argument may be a valid point. However, as Milevsky argues in *The Evolution of Modern Grand Strategic Thought*, grand strategy morphs to meet the circumstances of the time. Where there are few direct threats to a nation, grand strategy and (often military-only) strategy may be separate and considered different. Grand strategy and strategy quickly become fused when a nation is under threat. Because this handbook considers statecraft and strategy from the perspective of strategic studies, both statecraft and strategy relate to the use of national power to achieve the affairs of the state, including war. As such, strategy occurs before, during, and after war.

[1] Lawrence Freedman, "Strategy: The History of an Idea," in *The New Makers of Modern Strategy: From the Ancient World to the Digital Age*, ed. Hal Brands (Princeton, New Jersey, USA: Princeton Unviersity Press, 2023), 22.

[2] For a succinct exploration of the history of the term strategy, see: Freedman, "Strategy: The History of an Idea."

[3] Brands, "Introduction," 9.

[4] Lukas Milevski, *The Evolution of Modern Grand Strategic Thought*, Kindle eBook ed. (Oxford, England, UK: Oxford University Press, 2016), Loc 4080-146, 217-235, 254.

[5] Bosio summarises the debates that inform this analysis. See: Bosio, *Understanding War's Theory*, 001, 21-27.

[6] M.L.R Smith and John Stone, "Explaining Strategic Theory," *Infinity Journal* Fall, no. 4 (2011), https://www.militarystrategymagazine.com/article/explaining-strategic-theory/.

[7] Smith and Stone, "Explaining Strategic Theory."

[8] For summary of the debate and analysis, see: Bosio, "Relationshop between Military Theory and Systems Thinking," 23-24.

[9] Definitions outline in annex A. Drawn from: Bosio, "Relationshop between Military Theory and Systems Thinking," 19-25.

[10] For a succinct overview of this analysis see: Freedman, "Strategy: The History of an Idea."

[11] Brands, "Introduction," 1.

[12] This definition is based on Brands' original definition, that grand strategy is '…the intellectual architecture that gives form and structure to foreign policy.' Brands' discussion and analysis further builds on the definition, and guides the definition breakdown seen in subsequent paragraphs. This definition, which links both theory and practice, aligns with of the analysis of the other scholars listed. Gray, Murray, and Milevsky have already been discussed in other sections of the handbook. Freedman notes that strategy best captures the idea of thinking about, linking, and advancing actions – both theoretically and practically. Heuser discusses the fact that strategy is both theory and practical art, towards outcomes (mainly in a military sense). definition leads to this handbook's definition that definition for grand strategy. See: Hal Brands, *What Good is Grand Strategy: Power and Purpose in American Statecraft from Harry S. Truman to George W. Bush* (London, England, UK: Cornell Univeristy Press, 2014), 3-7; Lawrence Freedman, *Strategy: A History* (New York, USA: Oxford University Press, 2013), x-xi; Beatrice Heuser, *The Evolution of Strategy: Thinking War from Antiquity to the Present* (Cambridge, UK: Cambridge University Press, 2010), 5-28.

[13] Andrew Ehrhardt and Maeve Ryan, "Grand Strategy is No Silver Bullet, But it is Indispensable," Ryan Evans ed. *War on the Rocks*, *War on the Rocks Media*, 19 May, 2020, https://warontherocks.com/2020/05/grand-strategy-is-no-silver-bullet-but-it-is-indispensable/.

[14] Gole, *The Road to Rainbow*, 158; Murray, *Military Adaptation in War*, 1.3-1.5, 4.28-4.35; Williamson Murray, *War, Strategy, and Military Effectiveness*, Kobo eBook ed. (New York, New York, USA: Cambridge University Press, 2011), 6.1-6.56 (Ch 6), 7.13-7.15; Peter R. Mansoor, "US Grand Strategy in the Second World War," in *Successful Strategies: Triumphing in War and Peace from Antiquity to the Present*, ed. Williamson Murray and Richard Hart Sinnreich (Cambridge, England, UK: Cambridge University Press, 2014), 11.48 (Habit of Thinking).

[15] For greater analysis, and summary of the multi-discipline research into habits-of-mind, see: Bosio, "Relationshop between Military Theory and Systems Thinking," 59-60.

[16] This definition comes from Loizos Heracleous, cited in: Michael Ryan, *Thinking About Strategic Thinking: Developing a More Effective Strategic Thinking Culture in Defence*, ed. Cathy Moloney, PDF ed., ed. Fiona Mackrell, The Vanguard, (Canberra, ACT, Australia: Centre for Defence Research, 2021), 5.

[17] Bosio, *Understanding War's Theory*, 001, 39-40.

[18] For the purposes of this discussion, a modified version of Colin Gray's definition of strategic culture is used: Colin S. Gray, "Strategic Culture as Context: The First Generation of Theory Strikes Back," *Review of International Studies* 25, no. 1 (1999): 50.

[19] Gray, "Strategic Culture as Context," 50.

[20] Smith, "Why is the West so Rotten at Strategy?," 10-14 (PDF Version).

[21] A historical example of this is the early Athenian strategy during the Peloponnesian War. The initial strategy, the Pericles Strategy, was one of delay and exhaustion. As Thycudicies highlights, this strategy was probably the best approach for Athens. However, this strategy did not align with the Athenian culture of adventurism, nor the political dynamics of the city-state. Such dynamics led to divergence from the strategy, an over-extension through the Sicily Campaign, and strategic failure. For a summary of the work on this matter see: Richard Lacquement, "The Many Traps of Thucydides and the Virtue of Complexity," Andrew Hill ed. *War Room*, *US Army War College*, 30 August 2017, 2017, https://warroom.armywarcollege.edu/articles/thucydidean-traps-and-the-virtue-of-complexity/; Bosio, "Relationshop between Military Theory and Systems Thinking," 166-67.

[22] The relationship between theory and mental models is explained by several scholars. A summary of the research is provided at: Bosio, *Understanding War's Theory*, 001, 11-14; Bosio, "Gaming to Win," 46-48.

[23] The concept of an area of study being both a process of inquiry and a body-of-knowledge is discussed at: Bosio, "Relationshop between Military Theory and Systems Thinking," 27.

[24] Brands and Gray highlight similar themes, at various aggregation, in the 'Introduction' of *The New Makers of Modern Strategy* and the 20th Maxim within *Fighting Talk*, respectively See: Colin S. Gray, *Fighting Talk: Forty Maxims on War, Peace, and Strategy* (Virginia, USA: Potomac Books, 2009), 82-85; Brands, "Introduction."

[25] Arthur Lykke, "Defining Military Strategy," *Military Review* Jan-Feb 97 (1997).

[26] This is known as a conceptual metaphor, as discussed in Chapter Two and defined in Annex A.

[27] Adapted from Figure 1.1 of: US Army TRADOC, *FM 3-39 Armies, Corps, and Division Operations*, ed. Department of Army, Field Manual, (Washington DC, USA: US Army, 2021), 1.4.

[28] Bosio, "Relationshop between Military Theory and Systems Thinking," 176-79, 83, 87-89, 96.

[29] Jeffrey Meiser, "Ends+Ways+Means=(Bad) Strategy," *Parameters* 46, no. 2 (2016).

[30] Mark O'Neill discusses similar issues from a practitioner perspective. See: M.L.R Smith, "The Roots of Bad Strategy," *Military Strategy Magazine* 9, no. 1 (2023), https://www.militarystrategymagazine.com/article/the-roots-of-bad-strategy/; Smith, "Why is the West so Rotten at Strategy?."; Mark O'Neill, "The 2024 National Defence Strategy: Getting it Right," Peter Gearin ed. *The Mandarin*, *Private Media Pty Ltd*, 2023, https://www.themandarin.com.au/233867-2024-national-defence-strategy-getting-it-right/.

[31] Iain King, "Beyond Ends, Ways, and Means: We Need a Better Strategic Framework to Win in an Era of Great Power Competition," John Amble ed. *Modern War Institute*, *United States Military Academy*, 09 March, 2020, https://mwi.westpoint.edu/beyond-ends-ways-and-means-we-need-a-better-strategic-framework-to-win-in-an-era-of-great-power-competition/.

[32] Michael Hatherell, "The Crux: How Leaders Become Strategists (Book Review)," *Australian Journal of Defence and Strategic Studies* 4, no. 2 (2022).

[33] Figure from annex A to: John R. Boyd, *A Discourse on Winning and Losing*, 2018, with Introduction, Electronic (PDF) ed., ed. Grant T. Hammond (Maxwell, Alabama, USA: Air University Press, 1987), 384.

[34] Andrew Carr, "Strategy as Problem-Solving," *Parameters* 54, no. 1 (2024).

[35] Discussion and definition on leverage points drawn from several systems thinking sources. The definition is from McLucas. Senge's seminal book, The Fifth Discipline, provides an accessible look at mental models, learning, leverage points, and problem framing and problem solving. See: Senge, *The Fifth Discipline*; McLucas, *System Dynamics Applications*, 239.

[36] This is known as strong pluralism. See: Bosio, "Relationshop between Military Theory and Systems Thinking," 56-58.

[37] Bosio, "Relationshop between Military Theory and Systems Thinking," 187-89, 96.

[38] Frank G. Hoffman, "The Missing Element in Crafting National Strategy: A Theory of Success," *Joint Force Quarterly*, no. 97 (2020).

[39] Hoffman, "A Theory of Success," 58-59.

[40] Jeffrey Meiser and Sitara Nath, "The Strategy Delusion," Steven L. Foster and Diane L. Maye eds. *The Strategy Bridge*, *The Strategy Bridge*, 09 August, 2018, https://thestrategybridge.org/the-bridge/2018/8/9/the-strategy-delusion.

[41] Robert Dahl, "The Concept of Power," *Behavioral Science* 2, no. 3 (1957): 202-03.

Dahl, 202-203

[42] These definitions are drawn from Lukes work. See: Steven Lukes, *Power: A Radical View*, 2nd Expanded (PDF) ed. (Hampshire, England, UK: Palgrave MacMillan, 1974; repr., 2005), 16-19, 29 (Decision Making Power); 19-25, 29 (Non-Decision-Making Power); 25-28, 29 (Ideological Power).

[43] Lukes, *Power*, 28.

[44] Australian Defence Force, *ADF-C-0 - Australian Military Power*, ed. Lessons and Doctrine Directorate, Capstone, (Canberra, ACT: Department of Defence, 2022), 10.

[45] Australian Defence Force, *ADF-C-0*, 13-19.

[46] David Jablonsky, "National Power," in *US Army War College Guide to National Security Policy and Strategy*, ed. Boone Bartholomees (Carlisle, Pennsylvania, USA: US Army War College, 2004), 104-11.

[47] Mahan's discussion on the interplay between maritime power, the economy, and a nation's capacity provides similar context. Also see Chapter 4 of the *New Makers of Modern Strategy* for a summary of social, economic, and political issues informing national power from a Machiavelli perspective. See: Matthew Kroenig, "Machiavelli and the Naissance of Modern Strategy," in *The New Makers of Modern Strategy: From the Ancient World to the Digital Age*, ed. Hal Brands (Princeton, New Jersey, USA: Princeton University Press, 2023), 102-11, 14-15.

[48] See earlier endnote (Endnote 21) for a discussion on the Athenian inability to sustain their strategy.

[49] Walter R Mead, "Thucydides, Polybius, and the Legacies of the Ancient World," in *The New Makers of Modern Strategy: From the Ancient World to the Digital Age*, ed. Hal Brands (Princeton, New Jersey, USA: Princeton University Press, 2023).

[50] Paul M. Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict from 1500 to 2000*, Reprinted ed. (London, England, UK: Unwin Hyman, 1988), 536-37.

[51] The author is indebted to Associate Professor Andrew Phillips for his support, guidance, and development of the foundations of national power and its relationship to statecraft and strategic art. The following is a summary of Phillips' ideas and research.

[52] There are similarities between these *foundations of national power*, Clausewitz's trinity, Thucydides views of human nature, and Machiavelli's triumvirate. The triumvirate is of importance here. The triumvirate consists of virtue (*virtù*) and necessity (*necessitia*) which combined to confront fortune (*fortuna*). For Machiavelli, fortune is a malign influence that undermines the state. For discussion on these different interplays, both within Machiavelli, and across Clausewitz, Thucydides, and Machiavelli, see: Bosio, "Relationshop between Military Theory and Systems Thinking," 162-71.

[53] Kennedy, *Rise and Fall of Great Powers*, 536-37.

[54] Hoffman, "A Theory of Success," 59.

Chapter 4

4 ON DESIGN

The Foundations of Strategy Development

> *What you see and what you hear depends a great deal on where you are standing. It also depends on what sort of person you are.*
>
> C.S. Lewis, *The Magician's Nephew*[1]

This chapter introduces Design as the basis for strategy development. Design can be used to support strategy development through the *strategy as problem-solving* and *strategy as a framework* approaches. This handbook adapts Design into the *Australian Strategy Formulation Framework* (ASFF) in Part Two. To set the scene for Part Two, this chapter provides a brief overview of Design. Next, the chapter describes the fundamental concept underpinning *strategy as a framework* and the ASFF: *theory of success*. Linked to any *theory of success* are the *theories of challenge* and *failure*. The chapter then outlines the two styles of strategy that nations like Australia may wish to pursue. The first is a strategy that reacts to a situation. The second common strategy seeks to shape the environment for advantage.

4.1 Design Methodology – The Foundation of Strategy Development

Design provides a disciplined approach to interrogate, analyse, and consider an environment (or problem space) and the problems that reside within it. The methodology often integrates various tools, techniques, and methods from different disciplines to achieve this analysis. In summary, Design allows practitioners to view problems from multiple angles, using various theories and techniques. It is a multidisciplinary approach to problem-framing thinking.

4.1.1 Design: An Overview of the Methodology

Many books, doctrinal documents, and articles discuss Design and its relationship with planning. Scholars such as Aaron Jackson, Celestion Perez Jr, and Ben Zweibelson, provide extensive analysis and explanation concerning Design.[†] When these and other works are considered, Design is seen to be particularly suited for helping practitioners frame complex problems and determine a way forward, also known as a 'theory of change'. This theory of change is a framework that guides others in their detailed analysis, problem-solving, and action. In effect, Design is a disciplined approach to problem-framing/war-as-art thinking, leading to a common understanding. This shared understanding is known as a 'bounded worldview' within Design and system thinking. This bounded understanding is required to enable problem-solving/war-as-science planning and action. The general theory of Design can be used at any level, with much of the academic research focused on its utility at the operational level of planning and conflict. However, Design's innate problem-framing foundation makes it relevant to strategic art.[2] Figure 4.1 illustrates how Design can be adapted to strategy, with the Key Take Away box providing a summary of Design in the strategic context.[3]

[†] See the recommended reading list in annex F for these readings.

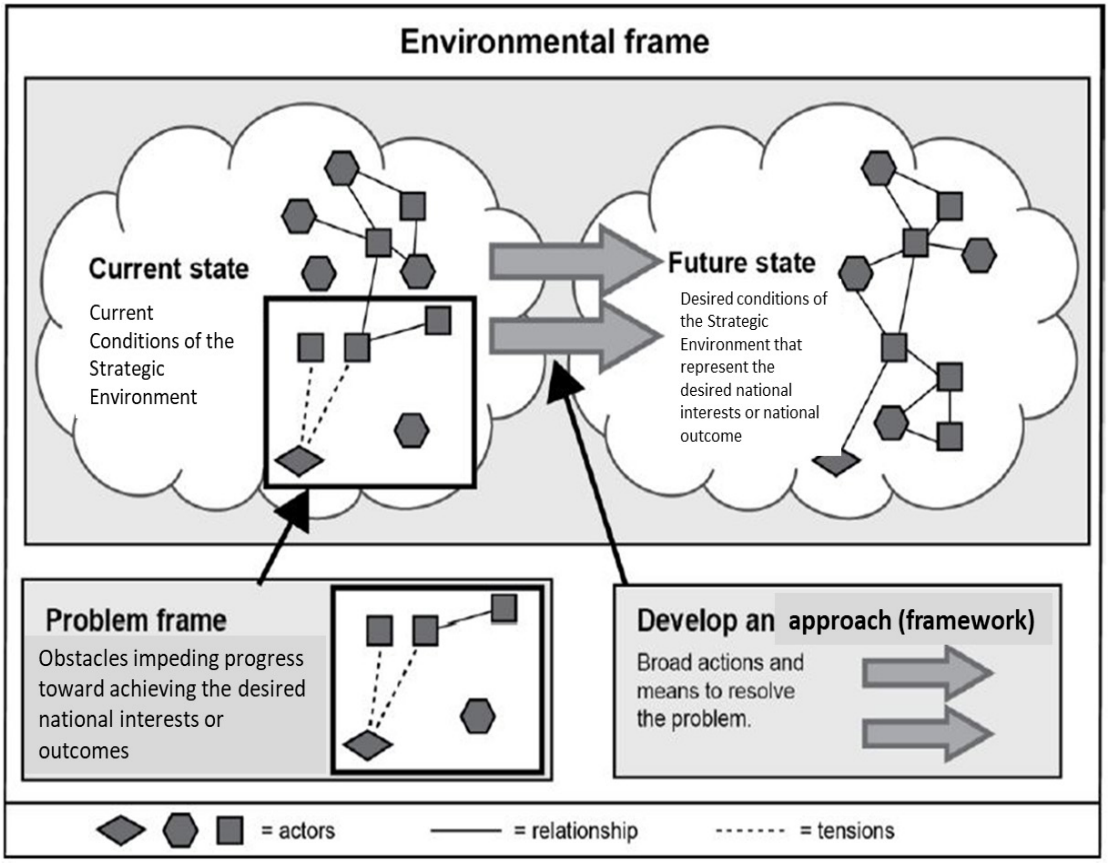


Figure 4.1: Design Methodology in a Strategic Context

Design in the Strategic Context

Many readers will be aware of Design from operational planning. When adapted to strategy, there are several subtle changes seen in Figure 4.1, and outlined below:

- The **Environmental Frame** seeks to frame the strategic environment, identify the desired futures, and ensure the strategic artist understands the national interests and values. The Environmental Frame consists of:
    - The **Current State** considers the conditions of the strategic environment as it currently is. Leveraging the tools, theories, and techniques of strategic theory, international relations, and causal logic, practitioners can analyse and better understand the different actors, relationships, and goals of those in the environment.
    - The **Future State** consists of understanding the possible futures: the likely future if nothing changes, and the desired future one seeks. Such analysis should also include developing an understanding of national values and interests. This frame integrates an inward reflection and a range of futures analysis techniques.
- The **Problem Frame** seeks to understand the opportunities and obstacles in the environment that help or hinder a nation's interests. This analysis defines the strategic problems, risks, implications, and opportunities to be leveraged.
- The **Strategic Approach** is developed from the analysis of the above. In general Design theory, this is known as the *theory of change*. Within strategy, the *theory of success*, discussed later, fills this role. The strategic approach, grounded in a *theory of success* (or generalised theory of change), guides departmental, inter-agency, and operational planning and action.

4.1.2 Design, Planning, and Thinking: Disciplined Approach to Problem Framing

Design draws on experience, knowledge, different perspectives, and the specialties of the participants to help generate creativity in problem framing. Design requires people to accept different worldviews and ways of thinking. Through Design, a group can share differing views, and integrate and enhance these views with other people's perspectives. Yet, Design does not solve problems alone. Design and planning are a spectrum, as seen in Figure 4.2.[4]

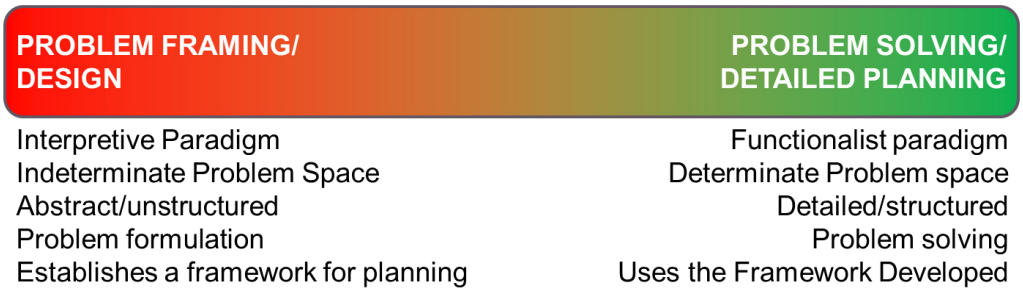


Figure 4.2: The Spectrum of Design and Planning Thinking

As the figure above illustrates, Design and planning are interlinked. Both leverage a practitioner's or group's mental models and natural decision-making skills (Chapter Two). To effectively combine a creative methodology like Design with the systematic processes seen in planning, practitioners must balance and use different paradigms and ways of thinking. As Chapter Three outlined, this is known as a pluralist habit-of-mind. Design's power comes from looking at an issue through multiple perspectives and different theories. A single idea; be it a paradigm, theory, or worldview; leads to functionalist and structured thinking, undermining the power of Design.

Design and Planning

Design's power comes from looking at an issue through multiple perspectives and different theories. This approach helps create an understanding of the environment and the problems within it, known as a bounded problem space. Such bounding enables more structured planning processes, such as the Military Appreciation Process, to focus on solving the right problems.

When Design and planning are combined, they provide a powerful framework that can help develop collective mental models and understanding, frame complex problems, and solve a discrete part of that complex problem. This is what some academics call the fusion of single, double, and triple loop learning [see Chapter Nine and Zweibelson, 2023:1-44].

4.2 Theory of Success – The Strategy Hypothesis

Design, and the ASFF, are supported by the concept known as a *theory of success*. A theory of success is a specific theory of change that guides strategy. This section discusses the concept, its relationship with, and its differences to, a *theory of victory*. The section also discusses the linked concepts of *theory of challenge* and *theory of failure*. These three concepts help guide the ASFF and strategy development more broadly.

4.2.1 Theory of Success and Theory of Victory: Guiding Strategy Development

The concept of a theory that outlines how and why a goal can be achieved is not new. Gray, Hoffman, Lawrence, Heuser, and Meiser all trace this concept through several military and strategic theorists

across history.[5] Some scholars have called this concept a *theory of victory*. Meanwhile, others call it a *theory of success*. Reviewing the literature and historical case studies highlights the similarities and differences between these ideas.

Both theories of success and victory help guide strategy development and strategic art. Both, in different ways, provide a broad 'mental sketch' of what a nation wants to achieve, and the possible approaches available. As such, theories of victory/success help frame the strategic narrative, structure possible strategic effects, and guide the development of strategic options.[6] When well developed, these theories also guide strategy testing and analysing known adversary strategies.[7] Finally, when time is short, these theories may be employed as an initial strategic framework guiding agency and operational action.

There are examples of this concept throughout history. For example, Mansoor highlights how Rainbow Plan Five, the US combined plan to defeat Japan and Germany, can be seen as a successful use of a theory of success through its 'Germany First' framing.[8] This theory then influenced all theatre strategies and campaigning under the Rainbow Five guidance. The above benefits of these theories highlight both their similarities and power. However, there are also key differences that can directly influence strategy development.

4.2.2 Theory of Victory: An Idea on How to Overcome a Specific Crisis

Theory of Victory

A theory (idea) on how a specific war or crisis can be overcome.

Theories of Victory are normally focused on military actions. They are often objectives-based, time-bound, and are different for each situation (context-dependent).

A theory of victory differs from a theory of success through its focus. Athanassios Platias and Constantinos Koliopoulos describe a ***theory of victory*** as an idea for how a specific war can be won.[9] Meanwhile, Brad Roberts indicates that it is an idea about how to shape a crisis or conflict.[10] What can be drawn from the writings is that a theory of victory is a theory outlining how to succeed. However, as Gray – one of the founding authors of the contemporary concept – explains, '…notwithstanding its declamatory appeal, …[theory of victory and decisive victory] strictly refers to favorable military achievement which forwards achievement of the war's "political objective"'.[11] Some scholars argue for a broader perspective: the *theory of success*.

4.2.3 Theory of Success: The Hypothesis of Good Strategy

Theory of Success

A theory (idea) on how and why (causal logic) a given set of actions will cause the desired outcome in the environment, or within a specific crisis or conflict.

A theory of success is a form of explanatory theory, relevant to the strategic environment and the nation's interests and values. A theory of success is often expansive and enduring (not time-bound), and linked to long-term national interests. A theory of success may guide one or more *theories of victory*.

As Chapter Three indicates, good strategy requires a clear vision. Steven Heffington states:

> Good strategy is more than a collection of objective instrument packages, or a list of acceptable initiatives loosely bound to the pablum of fluffy objectives. Good strategy must have a clear, well-considered vision of the world combined with a uniting theory that focuses action on viable objectives and creates power and clarity amid uncertainty and complexity.[12]

What Heffington speaks of is causality. A strategy should have causal logic that links what needs to be done, how it will be done, and – most importantly – why this will work.[13] It is the 'why this works' that demonstrates the causality of a strategy. This causal logic is called a ***theory of success***, or a hypothesis on '[h]ow and why a given set of actions will cause a desired outcome to occur.'[14] Meiser explores how a theory of success works in his article 'Bringing a Method to the Strategy Madness'. Here, Meiser explains that a theory of success should be thought of as some intervention (an active verb), and the causal processes of how that intervention overcomes a challenge. Meiser represents this causal chain in Figure 4.3.[15]

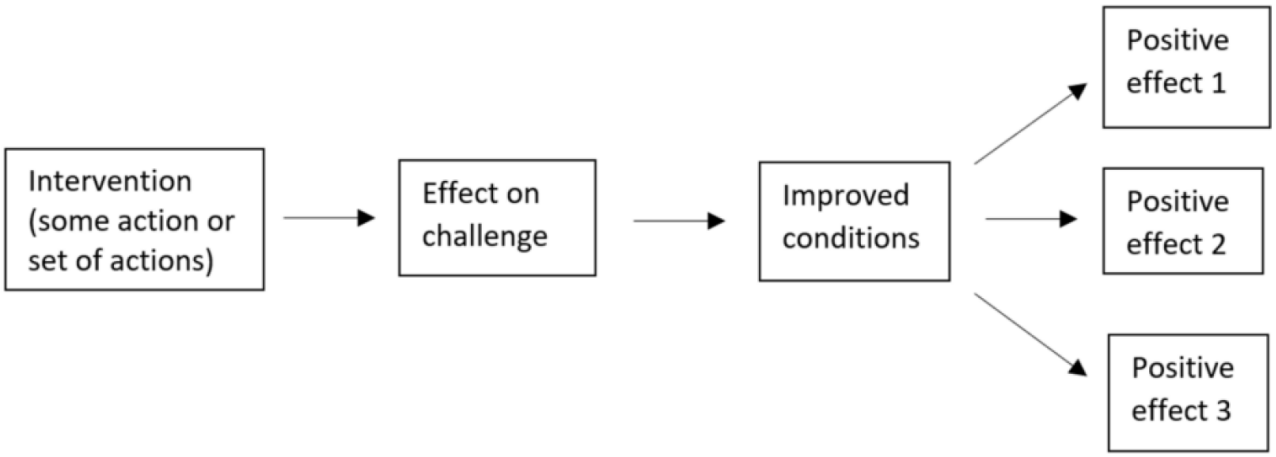


Figure 4.3: The Causal Logic of a Theory of Success

The above also indicates the different characteristics of, and interplay between, theories of victory and a theory of success, as outlined in Table 4.1. Both Figure 4.3 and the characteristics in Table 4.1 highlight how a theory of success may guide a series of theories of victory, or how a specific action should occur.

Table 4.1 – Characteristics of Theories of Victory and Theories of Success

Theory of Victory Characteristics	Theory of Success Characteristics
A theory of victory is a method: the concept that guides action	It is a (working) hypothesis: both how and why
A theory of victory is a principle for options and actions to overcome the situation	A principle that guides the development of the strategic framework. This strategic framework will provide the necessary operational/agency guidance
Theories of Victory are often time-bound	Often long-term (or enduring)
Theories of Victory are often discrete with an expected endstate	May be discrete, but more likely expansive
Each theory of victory may be different for each situation.	Theory of success linked to strategic culture
Theories of victory are derived from values and objectives.	Derived from interests and values

Each theory of victory is a form of integrated national-level ***effect***.[‡] Meanwhile, the theory of success provides the causal link between each national-level effect and why these effects, when combined, achieve success. The obstacles that a theory of success seeks to overcome are derived from Meiser's second part of his strategic theory framework.

4.2.4 Theory of Challenge: Finding Strategic Obstacles and Opportunities

Theory of Challenge

The causal logic (explanation) of the problems within the strategic environment, covering root causes, proximate causes, and negative effects.

A theory of challenge should consider the causes of a strategic problem or situation, both the immediate causes (proximate) and the original root causes. This is sometimes called 'up-stream' or 'left of bang' causality. Then, the theory should explain the effects that the strategic problem or situation has on the environment. This is sometimes called 'down-stream' or 'right of bang' causality.

A key point in effective strategy development is understanding what needs to be done. Identifying critical problems is the *problem frame* aspect of Design (Figure 4.1). However, one of the challenges of strategy is ensuring the 'right problems' and their causes are targeted and addressed. It is often easy to identify a problem. The hard part is understanding that problem, diagnosing how it developed, and tackling the root causes.[16] Once again, understanding the causal logic as a narrative and a causal chain is essential for successful strategy. This causal explanation of the strategic problem is known as a ***theory of challenge***, depicted in **Figure 4.4**.[17]

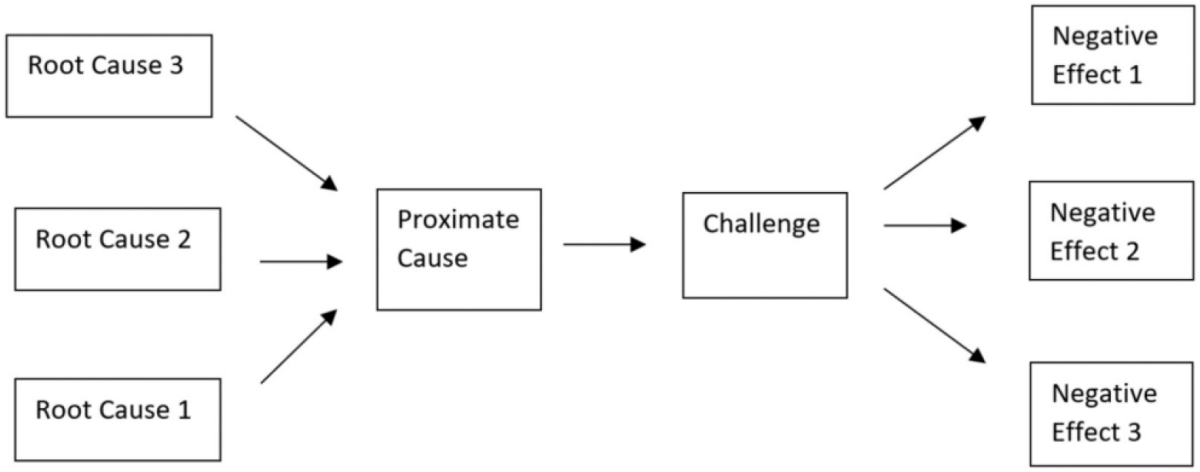


Figure 4.4: The Causal Logic of a Theory of Challenge

Meiser explains:

> …articulating the challenge as a theory or "causal explanation" with the challenge situated at the center of a [causal] process that starts with the causes of the challenge and ends with its negative effects [Figure 4.4]. In defining these elements of the challenge, there are likely to be **root causes** and **proximate causes**, as well as multiple negative effects. The purpose of situating the challenge in the middle of the causal process is to demonstrate the possibility of creating a strategy response on either side of the challenge (or both). On the left [root cause] side, strategies of interdiction can eliminate or lessen the magnitude

[‡] ***Effect*** is defined as: A result or impact created by the application of military or other power. See annex A.

> of the challenge. On the right [negative effect] side, strategies of mitigation can influence the negative effects of the challenge. [emphasis added][18]

Additionally, understanding the causal nature of strategic problems helps identify possible intended and unintended consequences.

Additional Information
The Similarities Between *Theories of Challenge* and *Strategy as Problem-Solving*
and
How Multiple Theories of Challenge support *Strategy as a Framework*

There are many similarities between the theory of challenge and *strategy as problem-solving*. These similarities exist because a theory of challenge is, in effect, the process of *strategy as problem-solving*. A theory of challenge, and by extension, *strategy as problem-solving*, is a bounded problem space focused on the causality of a single strategic problem. One of the key differences that separates *strategy as problem-solving* and *strategy as a framework* is the interplay between multiple theories of challenge and a single theory of success. Well-developed theories of challenge with identified strategic problems and causal narratives help ensure that the theory of success explains what actions to take at different points of the challenge chain, and why these actions will disrupt – or break – the challenge's causal links.

4.2.5 Theory of Failure: The Pre-Mortem of Strategy

Theory of Failure

The causal logic (explanation) of the intended and unintended consequences of a strategic action (intervention).

A theory of failure should explain the positive and negative effects of an action, the changes these effects cause, and the positive and negative consequences.

The final theory that underpins effective strategy development is the ***theory of failure***. As Meiser and other scholars explain, '[t]he real source of [strategic] risk is almost always a misunderstanding of causal effects, which is characteristic of a flawed theory of success.'[19] Thinking through the unintended consequences of actions is necessary to overcome this misunderstanding of causal effects. Such thinking may consider what could happen if the actions have a greater or lesser effect than expected. This causal analysis may also consider unintended consequences – even for successful actions. Either way, Meiser explains that the intent of developing theories of failure, as seen in **Figure 4.5**, is to think through what could go wrong and possible responses.[20] He states: 'In essence, this is a structured approach for performing a "pre-mortem".'[21] Such analysis is a powerful way of testing and enhancing a strategy. These three theories for success, challenge, and failure are helpful in developing strategies that respond to events or seek to shape the environment.

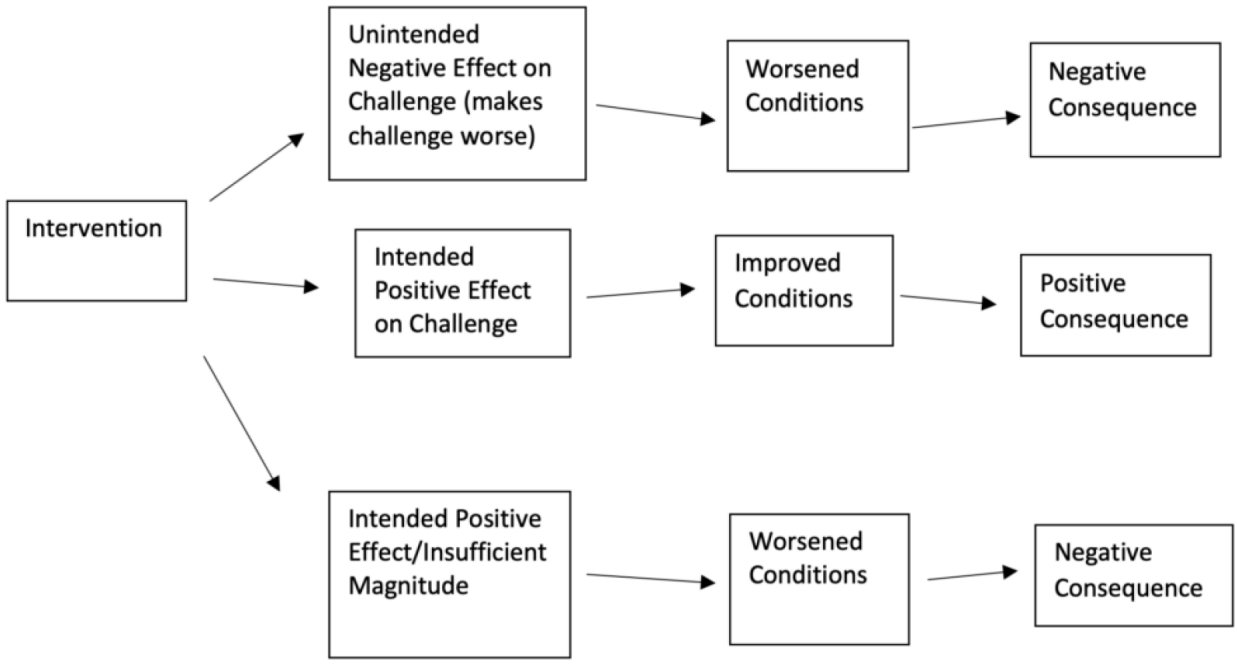


Figure 4.5: The Causal Logic of a Theory of Failure

Theories of Success, Challenge, and Failure

Theories of success, challenge, and failure are critical to strategy development. Each helps the strategic artist build a stronger understanding of the strategic environment, its actors, and the problems a strategy must overcome.

A *theory of success* is a theory (or idea) that outlines what actions to take, and why those actions will achieve strategic success. The theory provides a broad 'mental sketch' of what a nation wants to achieve, and the possible approaches available. As such, a theory of success helps frame the strategic narrative, structure possible strategic effects, and guide the development of strategic options. Theories of success typically relate to national interests and values, and have enduring relevance.

A *theory of challenge* considers the causes of a strategic problem or situation. Such a theory explains a situation's immediate (proximal) and original root causes (upstream causality). The theory should also outline the negative effects (downstream causality). Through this causal explanation, a theory of challenge indicates possible areas of strategic action to interdict the problem (root and proximal targeting), or mitigate the effect (negative effect targeting). Theories of challenge support the development and refinement of a theory of success.

A *theory of failure* should explain an action's positive and negative follow-on consequences. They can be used to test a theory of success.

4.3 Strategic Context – Environmental Shaping or Response

Several documents, such as the UK Royal College of Defence Studies *Making Strategy Better*, speak of two broad strategies. These two broad strategies are best described as ***ideal-types***, or concepts that outline common characteristics and elements of a strategy.[§] The first strategy seeks to shape the strategic environment to give a nation greater advantage. The second is a reaction to an event to enable the nation to return to the status quo, or achieve an advantage after the event.

[§] ***Ideal-Type*** is defined as: an outline of the common characteristics and elements of phenomena. See annex A for more details.

Both strategies can be relevant to a nation, and often can guide more traditional but subordinate strategic concepts, such as a defensive, offensive, or balancing strategies.

4.3.1 Shaping the Environment: Strategy au Milieu

Strategy au Milieu

Strategy *au milieu* seeks to adjust the wider strategic environment to increase a nation's relative advantage, and make it easier for the nation to sustain their enduring national interests. Such strategies are often enduring.

The first strategic style is ***strategy au milieu*** (Strategy of the Middle, or Middle Power). Strategy *au milieu* seeks to adjust the wider strategic environment, as explained below:

> [An *au milieu*] …strategy is one in which a …power does not target a specific state but seeks to shape the international environment to make it congenial with its long-term security and interests. …[This might entail] building the "infrastructure" of international cooperation, promoting trade and democracy, and establishing partnerships, allies, and client states that reinforce stability and liberal order.[22]

Such a strategy is often enduring. As an enduring strategy, it is not possible to give the same degree of guidance, direction, or certainty that some agencies or departments may seek, particularly when compared to a positional strategy, discussed later. *Au milieu* strategies are often framework-based, with national interests and values guiding the framework. The framework and strategic culture of the nation then guides individual agencies and operational planning efforts. Strategy *au milieu* may be challenging for some to appreciate due to its open-ended nature and limited direction and codification. However, it is the cultural norm of many contemporary liberal democracies, and has been the norm throughout history.[23]

4.3.2 Reacting to Crisis: Positional Strategy

Positional Strategy

A Positional Strategy seeks to deal with a specific challenger, threat, or crisis. Such a strategy is often time-bound and linked to specific objectives and geographical areas.

The next is ***positional strategy***, where a '…power seeks to counter, undercut, contain, and limit the power and threats of a specific challenger state or group of states.'[24] Positional strategies are reactive for most Western and Western-like nations, who seek to maintain the existing Rules-Based Order. As such, positional strategies usually respond to shocks to the international system. Meanwhile, for maligned and autocratic regimes, positional strategies may seek to change the status quo fundamentally. The Russian Invasion of Ukraine is an example of such a strategy – at least a strategy that probably did not 'go as planned'.

Positional strategies often relate to national goals and objectives, derived from national interests, to guide thinking and strategy formulation. Additionally, positional strategies can be broken down into traditional military strategies: offensive, defensive, deterrence, and compellance.[25] The above indicates that a positional strategy may be expansive. The United States' approach to the Pacific Theatre during the Second World War is a historical example of an expansive positional strategy. Positional strategies may also be very discrete and specific, such as the strategic response to a specific event or action. Either way, positional strategies have definitive starts and ends. History also indicates that it is possible to have both.

4.3.3 Strategy *au Milieu* Guides Positional Strategies

It is possible to overlay and integrate these two broad strategies. A strategy *au milieu* can be developed to guide overall action. Meanwhile, discrete positional strategies may be nested within the *au milieu* strategy for specific environmental events and actions. An illustrative example of this may be the Allied approach to the Second World War. As mentioned above, Rainbow Plan Five, known as the 'Germany First' strategy, can be seen as a broad *au milieu* strategy. Within this over-arching strategy were discrete theatre strategies, each being positional strategies. Another example is the 'containment strategy' enacted by the United States and allies throughout the Cold War. The containment concept is, in hindsight, similar to an *au milieu* strategy. The concept guided specific positional strategies in Europe and Asia. Although not every positional strategy was successful, the broad *au milieu* framework of containment allowed the United States to continually achieve advantage within the global environment – particularly from a diplomatic and economic perspective.

While the above to examples illustrate success, it is useful to also consider how integrated *au milieu* and positional strategies may fail. Many commentators and academics would state that throughout the Bush Administration, the United States followed a grand strategy to liberalise the global environment. This strategy, according to these scholars, was guided by the values and paradigms of neo-realism and neo-conservativism.[26] The invasions of Afghanistan and Iraq would be positional strategies within this broader US *au milieu* strategy. This example highlights two points. First, it continues the trend of the first two examples, illustrating that *au milieu* and positional strategies can be intertwined. This third example also illustrates the importance of framing the environment and the problem space, as well as being realistic in strategic expectations. Such expectations should understand where a nation *must*, *should*, or *may* act.

4.4 Geo-Strategic Context – Where Nations Must, Should, and May Act

The two broad strategies discussed above are also influenced by a nation's perception of where it must act, should act, or may wish to act selectively. The requirement to act is often linked to how a nation conceptually views its national, regional, and global geographical context. This conceptual view is seen in Figure 4.6.[27] Figure 4.6 also illustrates how strategy *au milieu* and positional strategy may relate to how nations visualise their environment.

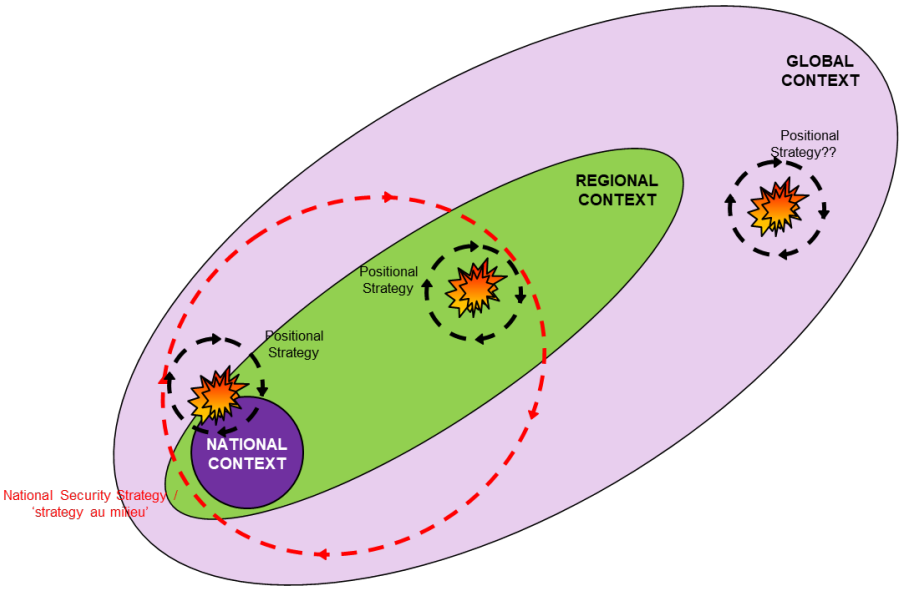


Figure 4.6: A State's Conceptual National, Regional, and Global Contexts

What constitutes a state's national, regional, and global context will differ between states. A nation like Australia may have a national context that extends to its Economic Zone. Meanwhile, Australia's regional context could be as large as the Indo-Pacific because of security and economic ties. Finally, due to Australia's trade, alliance, and economic interests, it may have a global context that is global. Another nation would look different. Smaller nations may have very narrow regional contexts that include their immediate neighbours, while their global context is a specific geographical region, such as continental Africa, the Pacific, or the wider Indo-Pacific. Nevertheless, no matter a state's size or international standing, these three contexts; national, regional, and global; often relate to where a nation believes it *must act*, *should act*, or *may act*, respectively.

4.4.1 The Requirement for Action: How Nation's Visualise the Environment

The concepts of *must act*, *should act*, or *may act* provide good rules of thumb for the strategic contexts seen in Figure 4.6. If an adverse event happens, and the nation feels obligated to do something, then that helps define the national context. For some nations, this will only be a domestic consideration. However, others may believe there is a need to respond beyond their state's borders. A nation may believe it must react to events in a neighbouring nation because of significant cultural, social, and economic ties between nations. Sometimes, nations may view geographical regions close to their borders in similar fashions, often due to resource issues, lines of communication, or other social or economic ties. In such examples, the nation perceives the neighbouring state or geographical region as part of the national context. It is also possible that this view may be contested. One nation may believe it must act for a range of reasons. However, such action may not align with the views of other nations or the broader global community. Strategic context is always subjective; each nation views its context differently. This national context may sometimes be known as a *sphere of influence*.

Regional and global contexts relate to a nation's desire to act. Suppose something occurs, and the nation believes it should act (as opposed to must act). In that case, such locations are part of a state's regional context. The global context of a nation is where the state has greater choice. Locations where a state believes it *may act* if it wishes – as opposed to should or must – indicate global context. From this discussion, it is possible to see how some nations may believe they have significantly large national and geographically expansive regional contexts. These extensive geographical contexts exist because the nation may feel it must or should act in a broader area to maintain its position in the international system. However, non-physical domains do not easily fit within specific geographical contexts.

4.4.2 Additional Domains: Cyber and Space Considerations

How a nation interprets non-physical domains, such as space and cyber, within their *must act* (national), *should act* (regional), and *may act* (global) contexts is a strategic choice. Does the originator's location or the effect's location and outcome matter more? These are the questions that the strategic artist must consider. As a rule of thumb, the location of the effect/outcome of the non-physical action typically matters more than the originator. Although not always the case, this is a helpful starting point for analysis and discussion.

For example, consider a massive cyber-attack on a middle or regional power. Such an event would require the nation's government to respond somehow (note that this does not have to be offensive).[**] This would be a 'must do' action. It would not matter if the attack came from a domestic source, somewhere in the near region, or another location in the globe. No matter the originator's location,

[**] Please note, a response does not have to be against the actor. It could be a domestic recovery and resilience response. Not all strategic actions must be directed against an adversary.

the middle/regional power must do something. Therefore, such an event relates to its national context. However, the requirement to act may not be the case if the attack occurred elsewhere.

Would this imaginary middle/regional power have to respond if a significant cyber-attack occurred in a different nation? What if the attack occurred in a near neighbour versus another global location? These are the questions that confront the contemporary strategic artist. It is easy to see how the location of the outcome/effect may drive strategic thinking more than the originator, particularly in the first instance of analysis. Considering the strategic environment's national, regional, and global context is important. Defining these contexts helps the strategic artist understand which actors are important, how they influence the environment, and why they may act in particular ways. As mentioned in earlier chapters, this framing requires interpretive analysis conducted through a disciplined approach. Part Two discusses such an approach: the *Australian Strategy Formulation Framework*.

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[1] Clive S. Lewis, *The Magician's Nephew*, 27th Imprint ed., vol. 1, The Chronicles of Narnia, (Glasgow, Scotland, UK: Lions, 1955; repr., 1990), 116.

[2] For a summary and analysis of Design and its links to *war-as-art / problem-framing* thinking, see: Bosio, "Relationshop between Military Theory and Systems Thinking," 151-55.

[3] This is Modified from: Department of the US Army Headquarters, *ATP 5-0.1 Army Design Methodology*, Army Techniques Publication, (Washington DC, USA, 2015), Figure 5-1.

[4] This figure is adapted from Figure 2.1 of Australian Defence Force, *ADF-P-5*, 15.

[5] For a summary and analysis of the debate, see: Heuser, *The Evolution of Strategy*.

[6] For a summary of this discussion, see: Colin S. Gray, *Defining and Achieveing Decisive Victory*, ed. Strategic Studies Institute, Strategic Studies Institute Monographs, (US Army War College, Carlisle, USA: Strategic Studies Institue, 2002); Meiser, "Ends+Ways+Means=(Bad) Strategy."; Hoffman, "A Theory of Success."; Jeffrey Meiser, "Bringing a Method to the Strategy Madness," Ryan Evans ed. *War on the Rocks*, *War on the Rocks Media*, 02 May, 2024, https://warontherocks.com/2024/05/bringing-a-method-to-the-strategy-madness/.

Hoffman, Gray, and Meiser.

[7] For an example of this, see: Meiser and Nath, "The Strategy Delusion," https://thestrategybridge.org/.

[8] Eliot A. Cohen, "The Strategy of Innocence? The United States, 1920-1945," in *The Making of Strategy: Rulers, States, and War*, ed. Williamson Murray, MacGregor Knox, and Alvin Bernstein (Cambridge, United Kingdom: Cambridge University Press, 1994), 462; Mansoor, "US Grand Strategy in the Second World War," 11.4-11.6, 11.48; Williamson Murray, "US Naval Strategy and Japan," in *Successful Strategies: Triumphing in War and Peace from Antiquity to the Present*, ed. Williamson Murray and Richard Hart Sinnreich (Cambridge, England, UK: Cambridge University Press, 2014), 10.39; John Lillard, *Playing War: Wargaming and U.S. Navy Preparations for World War II*, Online eBook ed. (Lincoln, Nebraska, USA: Potomac Books, 2016), 137.

[9] Athanasios G. Platias and Kōnstantinos Koliopoulos, *Thucydides on Strategy: Grand Strategies in the Peloponnesian War and their Relevance Today* (New York, New York, USA: Columbia University Press, 2010), 6.

[10] Brad Roberts, "On the Need for a Blue Theory of Victory," Ryan Evans ed. *War on the Rocks*, *War on the Rocks Media*, 17 Sep 2020, 2020, https://warontherocks.com/2020/09/on-the-need-for-a-blue-theory-of-victory/.

[11] Gray, *Defining and Achieveing Decisive Victory*, 12.

[12] Steven Heffington, "Channeling the Legacy of Kennan: Theory of Success in Great Power Competition," John Amble ed. *Modern War Institute*, *United States Military Academy*, 08 Feb 2022, 2022, https://mwi.westpoint.edu/channeling-the-legacy-of-kennan-theory-of-success-in-great-power-competition/.

[13] Meiser, "Ends+Ways+Means=(Bad) Strategy," 86-87; Heffington, "Theory of Success in Great Power Competition," https://mwi.usma.edu.

[14] Meiser and Nath, "The Strategy Delusion," https://thestrategybridge.org/.

[15] Meiser, "Bringing a Method to the Strategy Madness," Figure 2, http://warontherocks.com.

[16] Carr, "Strategy as Problem-Solving," 128-31; Meiser, "Bringing a Method to the Strategy Madness," http://warontherocks.com.

[17] Meiser, "Bringing a Method to the Strategy Madness," Figure 1, http://warontherocks.com.

[18] Meiser, "Bringing a Method to the Strategy Madness," http://warontherocks.com.

[19] The quote is from Meiser. However, this concept is presented by many of the systems thinking scholars cited in Chapter Two. Quote: Meiser, "Bringing a Method to the Strategy Madness," http://warontherocks.com.

[20] Meiser, "Bringing a Method to the Strategy Madness," Figure 3, http://warontherocks.com.

[21] Meiser, "Bringing a Method to the Strategy Madness," http://warontherocks.com.

[22] John G. Ikenberry, "From Hegemony to the Balance of Power: The Rise of China and American Grand Strategy in East Asia," *International Journal of Korean Unification Studies* 23, no. 2 (2014): 48.

[23] Although there are several texts that illustrate this point, *The New Makers of Modern Strategy* provides several illustrative examples within its pages. The French and English strategies of equilibrium of the 16th and 17th centuries (Chapters 11 and 12), Anit-Imperial resistance (Chapter 18), and the development of American grand strategy (Chapter 22) are illustrative examples. See: Hal Brands, ed., *The New Makers of Modern Strategy: From the Ancient World to the Digital Age* (Princeton, New Jersey, USA: Princeton University Press, 2023).

[24] Ikenberry, "From Hegemony to the Balance of Power," 48.

[25] Platias and Koliopoulos, *Thucydides on Strategy*, 7-10.

[26] For summary of the debate and analysis, see: Bosio, "Relationshop between Military Theory and Systems Thinking," 233-34.

[27] The author is indebted to Air Vice-Marshal Phil Lester, Royal Air Force (UK). This diagram is from his RCDS presentation on the UK Strategy Formulation Framework.

PART 2 – THE PRACTICE OF STRATEGIC ART

Chapter 5

5 ON STRATEGY FORMULATION

The Australian Strategy Formulation Framework

> *If a military force and its leaders have failed to prepare themselves and their forces with honesty, imagination, and a willingness to challenge fundamental concepts, then they will pay a dark price in the blood of their sailors, soldiers, marines, and airmen. This is largely because such military organizations will attempt to force reality to fit the assumptions about war they have developed in peacetime, rather than adapt their preconceived notions to the reality they confront.*
>
> Williamson Murray, "US Naval Strategy and Japan" [1]

Although the quote above relates to military thinking, it is just as relevant to the strategic artist. Contesting one's thinking is critical for the successful development of national strategy. Part One considered the theoretical frameworks that underpin strategic art and strategy development. These frameworks should be coupled with other strategic, political, and international theories. International relations worldviews such as *realism*, *liberalism*, and *constructivism* provide different ways to consider the causal reasons for the actions of, and relationships between, states. Geopolitical and geoeconomic theories help provide practical examples of the interactions between states, and how states enhance – or undermine – the foundations of national power. Strategic empathy is another critical area of study that leverages the first principles theory of Part One. ***Strategic empathy*** is the capacity to put oneself '…into the minds of others, strategic empathy may be essential to understanding the interests of, the motivations of, and the constraints on adversaries.'[2] Strategic empathy requires problem-framing thinking, inductive analysis, and a willingness to learn about, and see the world from, another group's historical and cultural identity. Such analysis helps strategic artists understand another group's ideological and psychological causal logic, be it a person, sub-national, national, or multi-national state. To be a strategic artist is to engage with the context and width of the strategic environment while leveraging multi-disciplinary approaches to explore and understand it. However, such thinking requires discipline. A disciplined approach to such unbounded analysis helps strategic artists view issues through different lenses while also achieving a valid framework that guides operational action.

Part Two of this handbook provides a disciplined approach to strategy development, known as the *Australian Strategy Formulation Framework* (ASFF). The ASFF is grounded in Design. As Chapter Four outlined, Design provides a disciplined approach to making mental models explicit, testing those models, developing new ideas, and synthesising this work into a common understanding of the environment and problem space. When the theory and concepts of Part One are employed within a Design methodology, Design becomes a valuable framework for strategy development.

This chapter introduces the *Australian Strategy Formulation Framework*. The chapter starts by providing an overview of the ASFF. Next, the chapter discusses how the ASFF relates to problem-framing thinking and planning. The chapter then explains why questions help drive strategic planning. Using questions to frame analysis helps achieve problem-framing and enables others to engage with strategy development. Finally, the chapter outlines how to use the ASFF for future contingency planning.

5.1 The Australian Strategy Formulation Framework – An Overview

The ASFF consists of six steps that help the strategic artist frame the environment and its strategic problems, and develop a strategic approach. Figure 5.1 illustrates an overview of the ASFF, with annex B providing a more extensive version of the framework. Chapters Six to Eight discuss each step. Additionally, annex C lists a range of strategic questions by step. Although Part Two does not explain the tools for each step, annex D provides an overview of several techniques that may assist a strategic artist's analysis. Finally, annex E suggests a format for capturing the analysis as a strategic plan, also known in Australian doctrine as a Level 1 Plan.

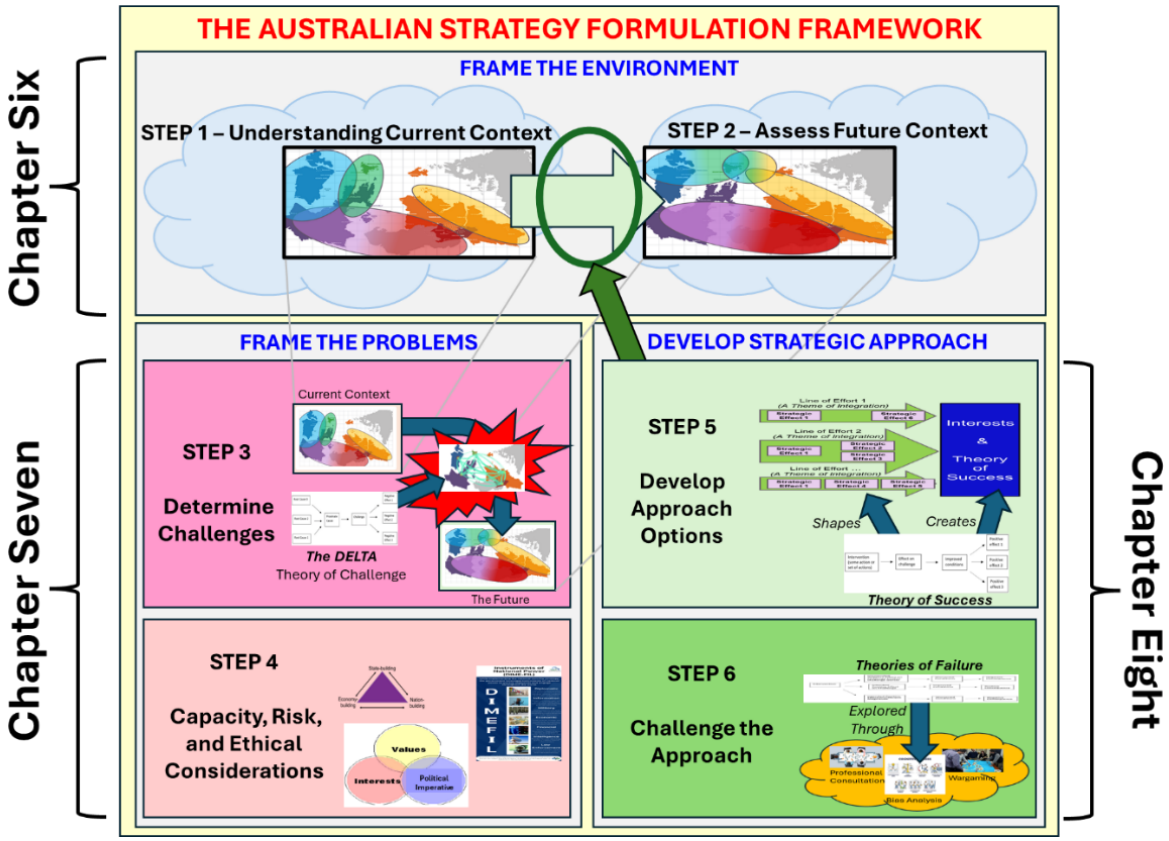


Figure 5.1: The Australian Strategy Formulation Framework

The framework illustrated above has similarities with other frameworks, particularly the UK strategy framework.[3] As a framework grounded in Design, the ASFF guides the use of different methods and techniques, all underpinned by problem-framing/war-as-art thinking. Similarly to the UK strategy framework, the ASFF can be used to formulate strategy and guide research in strategic theory.

5.1.1 The ASFF: A Disciplined Approach to Strategic Thinking

As seen in Figure 5.1 and annex B, there are six steps to the ASFF. Although these are presented as steps, they are iterative and may be non-linear in application. Furthermore, experience and knowledge will help a strategic artist determine when to skip parts of the framework or delve deeper into key aspects. The first two steps (Steps 1 and 2) seek to develop an understanding of the strategic environment. This assessment includes the current situation and the possible future environments. Next, Steps 3 and 4 seek to determine the nation's strategic challenges. Such analysis is drawn from comparing the current and future environment, and finding the differences between the current, likely, and desired futures. Another aspect of the strategic analysis in these steps is the need to consider the assets at a nation's disposal and the risk that political leadership is willing to accept. Such analysis leads

to **Steps 5 and 6**. These final two steps leverage the previous analysis to develop and test a strategic approach. The above overview of the ASFF also implies that a strategic artist's thinking shifts throughout strategy development.

The ASFF, Strategy *au Milieu* and Positional Strategies

There are nuanced differences in strategy development between a nation seeking advantage within the environment and a nation reacting to a crisis. As discussed in Chapter Four, these broad strategies are Strategy *au Milieu* and Positional Strategy, respectively. Strategic artists should know these nuanced differences when framing their analysis and the ASFF. The following provides guidance on framing the ASFF and strategic analysis when undertaking a Strategy *au Milieu* or a Positional Strategy. The principles are:

- **Time Frame, Scope, and Interests or Objectives.** A Strategy *Au Milieu* is often enduring. As such, the strategy will often seek to develop, maintain, and sustain several strategic effects over years and decades. Therefore, Strategy *Au Milieu* is focused on interests, strategic effects, and leveraging a *theory of success* to frame analysis. Meanwhile, a positional strategy seeks to overcome a specific event. They are time-bound and limited in scope. In such circumstances, the ASFF should be framed around defined objectives, aligned with broader national interests, and possibly use a *theory of victory* to frame analysis.
- **Strategic Environment Context.** As discussed in Chapter Four, the strategic environment may be framed around national (must do), regional (should do), and global (may do) contexts. Positional strategies may frame the three contexts around the crisis or situation. Meanwhile, Strategy *Au Milieu* is likely to consider a broader interpretation.
- **Futures Analysis.** Analysing the desired future compared to the current environment may also indicate the required strategy. Where the analysis indicates that incremental environmental adjustments are necessary to achieve the desired future, then the strategy is likely an *au Milieu*. Meanwhile, returning to the previous environment after a significant event is usually a Positional Strategy.
- **Strategic Guidance or Strategic Detail.** When the strategic options for Government (or a single strategic approach, if time is short) are developed in Step 5, it is customary to write a narrative for the strategy, known as a scheme of action. Strategy *au Milieu* typically presents this narrative as a broad framework that bounds and guides departmental, agency, and operational task force planning. Often, Positional Strategies provide greater detail in their schemes of action.

5.1.2 The ASFF: Using Problem-Framing Thinking to Guide Problem-Solving

Although the ASFF is grounded in problem-framing and war-as-art thinking, there are points in the analysis that require the clarity of war-as-science's structured and functionalist thinking. It is possible to see these transitions in the ASFF by recasting the Design-Planning spectrum of Chapter Four (Figure 4.2), overlayed with the steps of the ASFF, seen in **Figure 5.2**.

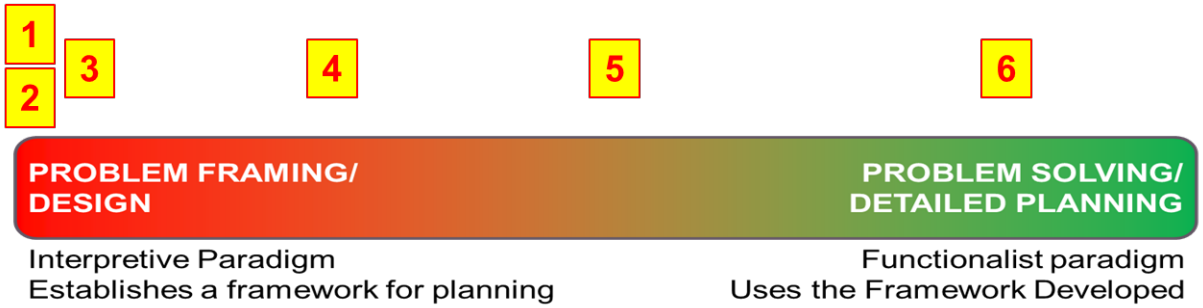


Figure 5.2: Thinking Tendencies Required for ASFF

Much of the ASFF, and strategic planning more broadly, is weighted towards problem-framing thinking. Investigating the environment and leveraging imagination to think about possible futures requires unstructured and interpretive thinking. Furthermore, developing an understanding of national values, interests, and challenges requires the integration of multiple points of view. As such, the first three steps of the ASFF are heavily influenced by problem-framing thinking. As the strategic artist starts to investigate domestic and international capacity, there is a need for a degree of functionalist analysis. As such, Step 4 integrates selected elements of problem-solving/war-as-science thinking within a war-as-art paradigm. This analysis also helps identify the limits of action and confirms the priority of challenges that must be addressed. These limits act as environmental and problem boundaries. These boundaries help structure the strategic response, and are essential to agencies and operational task force planning and action.

Step 5 is the pivot point that transitions the analysis of earlier steps into a strategic approach, or framework to guide operational action. Strategy's role, in part, is to bound problems and provide direction and guidance to the operational level and national agencies. As such, Step 5 represents a transition between strategy's predominantly problem-framing and the operationally relevant problem-solving thinking. To ensure that the strategic artist leverages the right thinking style for strategy development, the ASFF uses questions to help guide analysis.

The Australian Strategy Formulation Framework

The ASFF is a disciplined approach to strategic thinking. It is a framework that is grounded in problem-framing and war-as-art thinking. The framework consists of six steps that help the strategic artist frame the environment and the strategic problems, and develop a strategic approach. Although these are presented as steps, they are iterative and may be non-linear in application. These steps are:

1. Understanding Current Context (see Chapter Six);
2. Assess Future Context (see Chapter Six);
3. Determine Challenges (see Chapter Seven);
4. Capacity, Risk, and Ethical Considerations (see Chapter Seven);
5. Develop Approach Options (see Chapter Eight); and
6. Challenge the Approach (see Chapter Eight).

The framework is based on Design. Therefore, the framework helps make mental models explicit, test those models, develop new ideas, and synthesise this analysis into a common understanding of the environment and problem space. The ASFF works best when it draws on a wide range of views, identifies commonalities, and interrogates the areas of difference to help develop a strategic approach.

Additional Information
The ASFF and Strategy as a Framework

The ASFF is grounded in interpretive, indeterminate, and unbounded paradigms that seek to understand an environment and its causal relationships from various perspectives. When compared to *strategy as problem-solving* approaches, the key difference is the bounding of thinking. While *strategy as problem-solving* and *strategy as a framework* are interpretive and indeterminate in their analysis, the first has (implicit or explicit) assumed boundaries. Meanwhile, the latter seeks to determine those boundaries for follow-on analysis and planning by others. The ASFF, as well as the UK and select US frameworks, is a *strategy as a framework* approach.

5.2 ASFF Analysis – Using Questions over Processes

To assist strategic artists in their analysis, each step includes a series of questions, detailed in Annex C and further discussed in subsequent chapters. Questions are valuable tools to support collaborative effort, elicit the thinking of others, and identify common and divergent perspectives.

5.2.1 Asking Questions: The Benefits of Questions in Strategic Analysis

Questions provide significant benefits to the strategic artist. Tactical and operational planning often focuses on specific outputs, products, and defined synchronised actions. To achieve these outcomes, tactical and operational planning leverages specific tools, structured techniques, and standard processes. However, as already discussed, strategic planning and thinking are more subjective and inductive. As such, strategy development does not lend itself to strict and specific processes. Instead, most strategic planning revolves around considering and answering questions. Such questions allow strategic planners to explore different ideas, concepts, and ways of analysis without being tied to a specific process or output. Questions also allow the strategic artist to use various tools and techniques – including those not listed in this handbook – to explore the environment and problem space. Analysis through questions allows individuals to present different answers. Questions also ensure that different views are captured and considered in strategy development, enhancing problem-framing thinking. There are other benefits to questions.

Another benefit is that questions, structured in broadly open-ended ways, are less confronting. Often, a strategic planning group will consist of individuals with no education in war or strategic studies, nor any training in planning. Nevertheless, such individuals will have unique insights into the environment, the problems a nation faces (both domestic and international), and possible solutions to those problems. Questions, rather than a dedicated planning process, help these individuals engage. The final benefit of questions over a structured process is that they help a strategic artist guide the analysis and planning group, even when not the planning lead.

5.2.2 When Not the Lead Planner: How Questions Help Value-Add

There will be times when many in the planning group do not wish to use a framework like the ASFF. The reasons will vary. For instance, it may be a coalition environment with no common lexicon. In inter-departmental planning, the lead department may not be used to planning, and therefore finds the ASFF or other planning frameworks foreign and overwhelming. Sometimes, partners find frameworks like the ASFF (or the Military Appreciation Process) too "military" and are resistant and less inclined to engage. In all these circumstances, it is essential that the strategic artist **does not** "take over", as this will undermine the lead department. Nevertheless, simply asking questions can help the group capture and test a range of ideas without undermining or overpowering any individual or group. For all these reasons, the ASFF uses questions to guide the analysis.

Questions Support Strategic Analysis and the ASFF

Questions provide significant benefits to the strategic artist. Because strategy development does not lend itself to strict and specific processes, using questions allows a strategic artist to explore different ideas, concepts, and ways of analysis without being tied to a specific technique, tool, or outcome. There are three benefits to using questions to guide strategic analysis:

- Analysis through questions allows individuals to present different answers. This enables different views to be presented and considered, enhancing problem-framing thinking.
- Open-ended questions can be less confronting for those not educated in strategic art than dedicated processes, structures, and outputs. Questions allow these individuals to engage, eliciting broader viewpoints.
- For various reasons, a strategic planning group may not wish to use a planning framework (like the ASFF). In such cases, simply asking questions can help the group capture and test a range of ideas without undermining or overpowering any individual or group.

5.3 The ASFF for Strategic Contingency Planning – Planning for Future Crisis

The theory of Part One and the tools and techniques listed in annex D can be used to frame possible strategic contingencies. History provides several examples of such strategic contingency planning. The best-known include the 1930s United States *War Plan Orange* and *Rainbow Plans*.

Such planning requires creativity, imagination, and a willingness to develop a plausible (though possibly unlikely) future. There are many tools for creating possible futures, with the quadrant method often being the best for contingency planning (discussed in annex D). No matter the method used, contingency strategy development follows the same steps as the ASFF. The difference is that the selected future problem from the quadrant analysis is used as the current environment for framing in Step 1, as illustrated in the figure below (Figure 5.3)

For any strategic contingency to be effective, the plan's scenario must be illustrative of a potential crisis. An illustrative scenario must include the common themes of the possible crisis problem, not the specifics of a single, geo-strategically locked, bounded scenario. Often, the illustrative scenario is likely to have a specific location (i.e., a specific offshore territory) to enable thinking and planning. However, the problem set should be generalised enough to capture the strategic themes associated with similar problem spaces in different geographic localities.

An example may be a plan concerning the response to the seizure of an offshore territory. Such a plan may use a specific location. However, it should use a generalised problem to allow the plan to be adapted to other territories. In effect, the scenario is a form of ideal-type (see Chapter Four and annex A) that allows the plan to be adjusted for different real-time situations. Whether the strategy is a contingency, a response to an event, or an attempt to seek greater advantage in the environment, all strategy development must start with understanding the environment. Chapter Six delves into the environmental framing.

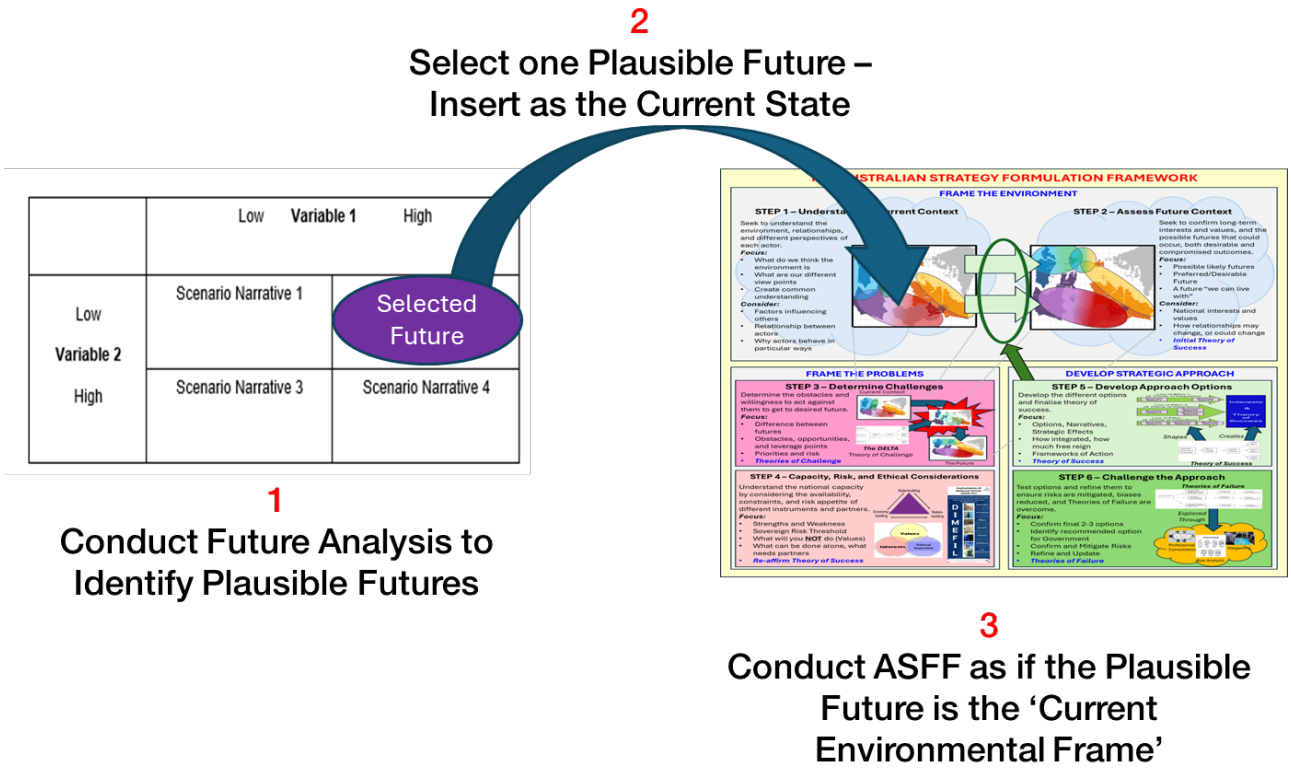


Figure 5.3: Futures Analysis and Strategic Contingency Planning

Additional Information
A Professional Methodology for Both Strategy Development and Research

The ASFF is a professional methodology. Therefore, the ASFF can be used for both practical actions and research within the profession. First, the ASFF is a qualitative analysis methodology that allows a person to explore a range of factors and perspectives. Further, the methodology is grounded in first-principles theory, discussed in Chapters Two and Three, that is epistemological in nature. The methodology guides various methods, techniques, and tools to assist research and validate outcomes. Therefore, the framework is similar to other research methodologies used in academia and policy development, including *within-case comparison*, *comparative-historical methodology*, and *causal-pattern analysis*. However, unlike the abovementioned methodologies, the ASFF is a methodology that relates directly to the profession of strategy: strategic art. In this sense, the methodology is similar to other professional engineering, medicine, and law methodologies. Such professional methodologies are used for both research and vocational activities.

[1] Murray, "US Naval Strategy and Japan," 10.39-40.

[2] Allison Abbe, "Understanding the Adversary: Strategic Empathy and Perspective Taking in National Security," *Parameters* 53, no. 2 (2023): 20.

[3] Royal College of Defence Studies, *Making Strategy Better: A Guide for more Effective Strategy-Making and its Application*, 1 ed., ed. Phil Lester (Shrivenham, England, UK: Department of Defence, 2022), 42-59.

Chapter 6

6 FRAMING THE ENVIRONMENT

Steps 1 and 2 of the Australian Strategy Formulation Framework

We can chart our future clearly and wisely only when we know the path which has led to the present.

Adlai Stevenson II[1]

The first two steps of the ASFF focus on framing the strategic environment. Understanding the environment is vital for successful strategy. Such analysis allows the strategic artist to understand the actors, their inter-relationships, and the influence of national values and interests. Because understanding the strategic environment is foundational to strategy, these first two steps demand the most detail and often take the most time. As noted later, extensive analysis in Steps 1 and 2 significantly helps the completion and consideration of future steps.

This chapter provides an overview of each step and the broad strategic questions for analysis. These questions are further detailed in annex C, and annex D provides information on several techniques that may assist a strategic artist's analysis.

6.1 Understanding the Current Environment – Step 1 of the ASFF

ASFF Step 1 – Understanding the Current Environment

Step 1 of the ASFF, *Understanding the Current Environment*, seeks to understand the environment, inter-relationships, and different perspectives of each actor.

Step 1 Intent:

- Common understanding of the strategic environment.
- Factors influencing each actor.
- Relationships between actors.
- Why actors behave in particular ways.
- What domestic considerations influence the environment

Step 1 Considerations:

- Make explicit the perspectives of group members concerning the environment;
- Identify commonality and areas of difference in these perspectives;
- Develop a picture from the areas of commonality; and
- Enhance that picture through the analysis of the areas of difference.

The first step in the ASFF is *Understanding the Current Environment*. This step focuses on both the international and domestic context, with the intent being to develop a collective understanding of the environment. Although the time available will affect the level of analysis, the intent should always be to provide a common foundation for planners and decision-makers going forward.

To support the above, two broad questions should be considered in this step: *What are the international factors*, and *what are the domestic factors?* The following discusses these two questions, giving some guidance for analysis.

Strategic Environment and the National, Regional, and Global Context

As discussed in Chapter Four, a key part of Step 1 is confirming the *national* (must do), *regional* (should do), and *global* (may do) contexts. This analysis should include the non-physical domains. Defining these contexts helps scope the environmental analysis, particularly when time is limited.

6.1.1 ASFF Step 1 Strategic Questions: International Factors

International factors cover all aspects of the environment external to the nation. Annex C provides a list of indicative sub-questions for the strategic analysis. The *foundations of national power* (Chapter Three) also help frame an understanding of actors. Annex D lists several methods; including Causal Narratives, Actor Policy Dials, PESTLE Analysis, and Power Matrices, among others; that can help the analysis. When looking at the international factors, considerations may include:

- Situational Knowledge. Key to this consideration is *what is known* and *what is not known*. It is useful to find out how and why people see the situation the same or differently. Similarities in the planning group help find common areas of understanding. Meanwhile, differences allow the strategic artist to tease out the divergences and find new answers and viewpoints.

- Actor Relative Power. Consider the relative power of different actors. The *foundations of national power* are a valuable way to consider an actor's power potential and the relative power between actors.

- Actor Relationships. Next is the collective understanding of the sub-national, national, and international relationships. Understanding how much power actors have relative to each other and the historical and cultural links between actors is essential. Also, considering how actors react or seek to influence each other can be insightful.

- Leverage Over Actors. Understanding which international actors hold leverage and power over each other and the strategic artist's nation is also useful. This leverage may be drawn from a range of tangible and intangible sources. Some examples may include international law, treaties, resource dominance, trade, cultural, and other historical links. Strategic artists should also question what it may mean to break these ties or how these ties limit strategic action.

- The Causal Narrative. As Chapters Two and Three indicated, a causal narrative is a good method to capture the above analysis. Developing a short narrative that explains the causal aspects of the environment helps consolidate analysis. Furthermore, the narrative becomes a form of 'storytelling', often making the analysis 'more real' for decision-makers. Illustrative examples of the dynamic situation can help people engage and relate to the

situation's complexity.[††] Such narratives help translate the analysis into shared mental models.[2]

6.1.2 ASFF Step 1 Strategic Questions: Domestic Factors

The domestic factors cover all aspects internal to the nation. Annex C provides a list of indicative sub-questions for the strategic analysis. The *foundations of national power* (Chapter Three) also help frame an understanding of domestic potential. Annex D lists several methods; including Causal Narratives and PESTLE Analysis, among others; that can help the analysis. When looking at the domestic factors, considerations may include:

- Constraints on Thinking and Action. The first area to consider is how 'unbounded' strategic planning is and the individuals within the planning group. Are there explicit and implicit constraints on thinking and action? Such constraints directly limit strategic imagination, and may result in an over-reliance on strategic cultural norms. Some constraints may include legal, ethical, resourcing, and values.

- Foundations of National Power: Strengths and Weaknesses of the Nation. Consider the *foundations of national power*: political control, ideological cohesion, and economic potential (Chapter Three). Consider the initial strengths and weaknesses of the nation and its national systems within the context of the foundational elements of power. Such analysis should draw out the nation's areas of strength, capacity for growth, and ability to harness state-building, nation-building, or economic-build activities to increase national power. This analysis is an initial assessment of the nation's strengths and weaknesses, and will help inform later steps (particularly Step 4). However, it provides a baseline that informs possible futures and the relative power of different actors within the environment. Furthermore, this analysis will directly inform later thinking if time is short.

- Own Gaps in Knowledge. It is also helpful to consider and tease out what knowledge gaps exist about the domestic arena and the nation. Does the strategic planning team understand their nation's resources, mobilisation, responses, and resilience systems? Such questions may be extended to community groups and public sentiment. Not all strategic plans may require such information. However, asking the question also helps tease out where biases and implicit assumptions may influence thinking and planning.

ASFF Step 1 Key Outcomes

The analysis of the current strategic environment should allow the planners and decision-makers to consider, understand, and define:

- The nation's strategic context (national, regional, global).
- The current strategic environment, including:
  - Factors that influence the nation and other actors;
  - The relationships between actors; and
  - Why actors behave in particular ways.
- Initial identification of assumptions, strengths, and weakness.

[††] Examples should be events that have occurred, or could occur, to illustrate the dynamics of the situation. See annex E for more advice on using illustrative examples within a strategic document.

6.2 Assess the Future Context – Step 2 of the ASFF

ASFF Step 2 – Assess the Future Context

Step 2 of the ASFF, *Assess the Future Context*, seeks to ensure there is an understanding of the nation's long-term interests, values and concept for strategic success.

Step 2 Intent:

- Confirm nation's long-term interests and values.
- Identify the likely, desired, and compromise futures.
- Develop the initial 'common goal/vision' and 'strategic mental sketch' as an initial *Theory of Success*.

Step 2 Considerations:

- Political imperatives and requirements.
- Strategic culture, history, and likely reactions of the nation.
- Different futures that allow the team to explore a range of alternatives.
- How relationships may change, or could change, over time.

The next step in the ASFF is *Assess the Future Context*. The analysis from this step develops a common understanding between planners and decision-makers on the desired future. The step also clarifies the nation's interests and values. This analysis helps align the strategy to the nation's strategic culture, history, and future direction. Furthermore, leveraging national interests *and* values helps give strategy relevance, acceptability, and longevity.

A key part of this step is futures analysis. Although there are many tools to assist in developing different futures, with two discussed in annex D (Quadrant Analysis and Semiotic Squares), strategic artists should consider, at a minimum, three broad futures. The first is the possible *likely future* given the current environment and trends. This is the future if no intervention occurs. Next is the *desired future* that the strategy should seek to achieve. A desired future normally meets a nation's interests and values. The third future is the *compromise future*, where the strategy cannot achieve all its outcomes. In this future, a nation may need to compromise on its interests. Typically, such compromises should be guided by national values and strategic culture.

To frame the future environment, two broad questions should be considered: *What are the national political imperatives, interests and values*, and *What are the different futures?* The following discusses these two questions, giving some guidance for analysis.

Step 2 Develops the Initial *Theory of Success*

An important outcome of this step is the initial *theory of success*. This initial theory of success supports strategy development in several ways. First, it helps focus analysis in future ASFF steps. Second, it may provide an early 'strategic mental sketch' that can help maintain a unified purpose across departments and agencies. Next, this initial theory of success may assist parallel operational and agency planning during dynamic situations. Finally, this early theory ensures that any operational or agency actions that must occur during strategy development remain aligned to the future strategy.

6.2.1 ASFF Step 2 Strategic Questions: National Interests and Values

Understanding national interests and values is critical when assessing risk, options, and ethical considerations. Annex C provides a list of indicative sub-questions for the strategic analysis. When looking at the national interests and values, considerations may include:

- The Political Imperative. The strategic artist should consider what the government has stated and directed. Based on this knowledge, the artist should confirm if the direction is clear and what additional guidance is required. If guidance can not be quickly sought, the strategic artist should make assumptions based on strategic culture and historical knowledge in the first instance. These assumptions need testing as soon as practicable.

- National interests and Values. Understanding national interests and values requires an appreciation of the environment, relationships, history, culture, and the political imperative. Awareness of strategic culture and historical norms helps draw out national values. Meanwhile, circumstances and values often combine to form interests. Finally, comparing national interests and values with the political imperative helps highlight if there is a change from the historical norm.

6.2.2 ASFF Step 2 Strategic Questions: Assessing Different Futures

Considering futures requires imagination to create the futures, and a willingness to explore how they differ. Annex C provides a list of indicative sub-questions for the strategic analysis. Annex D lists two futures methods: Quadrant Analysis and Semiotic Squares. If time allows, the Semiotic Squares method is recommended as it will draw out the likely, desired, and compromise futures. However, Quadrant Analysis is very useful for dynamic futures development. When assessing the different futures, considerations may include:

- Current Geo-political and Strategic Trend Direction. The first step of futures analysis is to consider what the future may look like without intervention. This future may be suitable. Alternatively, such a future could reduce the nation's security and standing, risking national interests and values. Considering how the likely future influences the *foundations of national power* is helpful in this analysis. Exploring where the future is likely to go is a critical element in defining the desired and compromise futures.

- Desired Future. It is possible to project a desired future based on national interests and values. This future should include an analysis of how the nation's power has grown over time (leveraging the *foundations of national power*).

- Defining Success (initial *Theory of Success*). Based on the analysis to date, it is useful for the strategic artist to consider what success may look like overall. This analysis is best presented as an initial theory of success that can help guide follow-on analysis. This theory will be adapted and confirmed in later stages and tested through theories of challenge and failure. Establishing this early theory of success helps to make the strategy's vision and direction explicit and contestable in future steps.

As indicated in Step 1, the futures developed in this step should be explained through a causal narrative (Chapter Two). These causal narratives help tell the story of why the future looks like it does and how it affects the international order.[‡‡]

[‡‡] As per Step 1, illustrative examples can help people engage with the complexity of the future situation, and understand how the future relates to different aspects of national power. See annex E for more advice on using illustrative examples within a strategic document.

ASFF Step 2 Key Outcomes

The analysis of the possible futures should allow the planners and decision-makers to consider, understand, and define:

- National interests and values;
- The likely, desired, and compromise futures;
- If required, national objectives (normally related to a positional strategy); and
- The initial *Theory of Success* (or *Theory of Victory* in selected positional strategies).

[1] Speech, Richmond, Virginia during the 1952 United State Presidential Election where Stevenson was the Democratic Candidate.

[2] See Chapter Two for a summary of mental models and cognition. For how narratives support understanding, see: Klein, *Sources of Power*, 177-96.

Chapter 7

7 FRAME THE STRATEGIC PROBLEMS

Steps 3 and 4 of the Australian Strategy Formulation Framework

> *But in war, as in life generally, all parts of the whole are interconnected and thus the effects produced, however small their cause, must influence all subsequent military operations and modify their final outcome to some degree, however slight. In the same way, every means must influence even the ultimate goal.*
>
> Carl von Clausewitz, *On War*[1]

Where the first two steps of the ASFF seek to frame the environment, Step 3 (*Determine Challenges*) and Step 4 (*Capacity, Risk, and Ethical Considerations*) tease out the strategic challenges and opportunities. Combined, these two steps would be known as 'problem framing'. These two steps are influenced by the initial theory of success from Step 2. Some scholars and practitioners call this initial theory of success an emergent strategy.[2] Steps 3 and 4 review and refine this initial theory, thereby helping to structure the strategic options developed in Steps 5 and 6.

Generally speaking, problem framing identifies relevant problems by analysing the differences (sometimes called 'deltas' in some works) between futures. Steps 3 and 4 of the ASFF are no different. Problem-framing, done effectively, provides the strategic artist with ideas for possible strategies that can be developed and tested in future analysis. Fundamental to this analysis is the *Theory of Challenge* (Chapter Four), leading to a causal narrative of challenges and opportunities. There is also a need to consider how interests and values may enable or limit strategic options.

This chapter explains Steps 3 and 4 of the ASFF. The chapter provides an overview of each step and the broad strategic questions for analysis. These questions are further detailed in annex C, and annex D provides information on several techniques that may assist a strategic artist's analysis.

7.1 Determine Challenges – Step 3 of the ASFF

ASFF Step 3 – Determine Challenges

Step 3 of the ASFF, *Determine Challenges*, seeks to understand the strategic challenges and opportunities within the environment.

Step 3 Intent:

- Identify the differences between the identified futures (Step 2) and the current environment (Step 1).
- Identify the strategic challenges through *Theories of Challenge*, including:
  - Identifying the proximal and root causes of challenges and opportunities;
  - The effect of challenges on the environment and national interests/values;
  - The possible effect of opportunities if leveraged; and
  - Initial insights into the unintended consequences of action.
- Identify the leverage points for action drawn from the *Theories of Challenge*.
- Priorities and risks drawn from national interests, values, and political requirements.

Step 3 Considerations:

- Make explicit the perspectives of group members on the strategic challenges, opportunities, and risks within the environment;
- Identify commonality and areas of difference in these perspectives;
- Develop a picture from the areas of commonality to identify the strategic challenges that must be overcome; and
- Enhance the understanding of the strategic challenges through the analysis of the areas of difference.

Determine Challenges, the third step in the ASFF. This step seeks to tease out the root and proximal causes of the nation's challenges, and determine if the nation can or should deal with these challenges. This analysis also provides early thinking concerning how the nation may deal with different challenges. Although confirmed further in Step Four, this Step may identify that certain instruments of national power lend themselves to specific problems better than others. To achieve the above, it is necessary to explore relevant questions.

Once more, questions help guide the analysis. The first series of questions relates to the challenges *between the current environment and the future.* The next group of questions considers *what opportunities, threats, and considerations do the challenges represent.* Linked to this second question is another: *which challenges, given our values, will we not act on?* The following discusses these questions, giving some guidance for analysis.

Step 3 Develops *Theories of Challenge*

Much of the analysis in Step 3 can be summarised through *Theories of Challenge*. As Chapter Four explained, these theories illustrate the causal logic of a challenge, from root cause to negative effect. Similar to previous steps, these challenges should also be expressed as narratives. Using the theories of challenge figure in Chapter Four (Figure 4.4) is an excellent method of capturing the analysis. It will assist in translating the analysis into a narrative. Using illustrative examples in the narrative helps audience engagement. See annex E for further guidance.

7.1.1 ASFF Step 3 Strategic Questions: What are the Strategic Challenges

Identifying the strategic challenges requires comparing the current environment (Step 1) and the futures developed in Step 2. Annex C provides a list of indicative sub-questions for the strategic analysis. Annex D lists several methods; including Causal Narratives, Five Whys, Dialectic Devil's Advocacy, and Six Hats, among others; that can help the analysis. When looking at what challenges exist between current, future, and desired outcomes, considerations may include:

- Current Environment Effect on Nation. Consider how the nation's interests and values are affected in the current environment. Such considerations help focus the strategy on the national interest and identify which challenges may need addressing early. This analysis will help with prioritisation in later steps.

- Likely Future Effect on Nation. Understanding how the likely future, the one that will occur if nothing is done, affects the nation is important. This analysis answers the questions: *do we have to act*, and *how much should we act?* It also helps draw out the common themes between the current environment and the future. These common themes may relate to the root causes of strategic problems, risks, and threats.

- Commonalities and Differences Between Futures. Turning to the nation's desired future, it is possible to compare and contrast the differences and similarities between all three futures. Finding similarities between the three futures helps confirm what should *not* be changed. These similarities may also represent opportunities with partners for multi-lateral development, or to achieve positional advantage quickly. Meanwhile, the differences between futures help identify where action may need to occur, and what style of action may be required.

7.1.2 ASFF Step 3 Strategic Questions: Opportunities and Threats

When considering the strategic challenges and the overall environment, strategic artists should also identify opportunities and areas of risk. Annex C provides a list of indicative sub-questions for the strategic analysis. Many of the tools used in the previous series of questions remain relevant for this analysis. When looking at what opportunities, threats, and considerations do the challenges represent, considerations may include the following:

- Compare Theories of Challenges and Theory of Success. Compare the Theories of Challenge with the initial Theory of Success. This comparison helps identify which challenges the theory of success is appropriate for. Such analysis identifies any adjustments needed to the Theory of Success to address critical challenges.

- Values Influence the Responses to Challenges, or the Seizing of Opportunities. Carefully consider the possible responses to challenges. Not every challenge needs to be dealt with. Some can be ignored, and others can be managed through compromise. However, there will be some challenges (or opportunities) where taking action may breach national values. At this point, there is a fundamental ethical question: should the nation accept such short-term breaches for longer-term gains? Such considerations will be influenced by proportionality, prudence, legal frameworks, international standing, and national interests – all aspects of the Just War tradition. National survival may even be a consideration in extreme situations. There are several historical and contemporary examples of this dilemma. Nor is this assessment static. These dilemmas shift over time, and may be viewed differently over a longer term.[3]

- Initial Consideration of Approaches and Strategic Effects: The analysis of challenges and opportunities will likely identify different broad approaches. This analysis should be captured to help frame capacity analysis (Step 4) and possible strategic options (Step 5).

ASFF Step 3 Key Outcomes

The analysis of the current strategic environment, futures, and strategic challenges should allow the planners and decision-makers to consider, understand, and define:

- What challenges are faced by the nation (and their respective *Theories of Challenge*).
- Which challenges must be dealt with, and which ones can be lived with.
- What priority, agnostic of resourcing, should be applied to these different challenges.
- Initial assessment on who may be best positioned to 'own', or coordinate, the strategy. This may include how different Instruments of National Power, agnostic of capacity (see Step 4), may be better suited for specific challenges.
- Reviewed *Theory of Success*.

7.2 Capacity, Risk, and Ethical Considerations – Step 4 of the ASFF

ASFF Step 4 – Capacity, Risk, and Ethical Considerations

Step 4 of the ASFF; *Capacity, Risk, and Ethical Considerations;* seeks to develop a collective understanding of which instruments of national power are available, their capacity to support, and the broad framework of options available.

Step 4 Intent:

- Review and consider the national capacity of different instruments and partners by considering:
  - the availability,
  - constraints, and
  - risk appetite.
- Consider the benefits and risks associated with integrated actions compared to common goals and guidance.
- Refine and update the *Theory of success*

Step 4 Considerations:

- The *theory of success* and the *theories of challenge*.
- The strengths and Weakness of the nation.
- National (sovereign) risk threshold based on interests, values, and strategic culture.
- How values influence which actions the nation will or will not take.
- The need for partners and allies, and how integrated such coalitions should be.

Step Four, *Capacity, Risk, and Ethical Considerations*, is about the nation's capacity and willingness to accept risk, including trade-offs, compromises, and opportunity costs.

Step 4 explores the capacity of the national instruments of the state and defines two critical parts of strategy management. The first is ***strategic risk***, which is caused by national and geopolitical trends. These risks may affect Government decisions on capability, policy, and strategy. Strategic risks limit a nation's sovereign decision-making and freedom of action. How a nation's freedom of action is limited is known as ***strategic implications***. These implications are the policy, capability, and national preparedness issues caused by the strategic risks. These implications may be limited to a single instrument, such as defence and security. However, more significant strategic implications directly affect a nation's capacity to leverage one (or more) of the *foundations of national power* (Chapter Three): political control, ideological cohesion, and leveraging economic potential.

To frame the analysis, two broad questions should be considered: *understand the national instruments*, and *understand integration and risk appetite?* The following discusses these two questions, giving some guidance for analysis.

Step 4 and the Ends-Ways-Means-Risk Matrix

A recommended way of capturing the analysis of Step 4 is the Ends-Ways-Means-Risk Matrix, discussed in annex D.

The End-Ways-Means-Risk Matrix is a method to capture information about, and explore the potential use of, different national instruments. This analysis can help identify how each instrument may support the theory of success and confirm any associated risks. A well-structured matrix can also assist in developing a range of strategic options (Step 5) and explore different risk mitigation approaches (Step 6).

7.2.1 ASFF Step 4 Strategic Questions: Understand National Instruments

Understanding the national instruments helps define current and future capacity. Steps 1 and 2 explored the *foundations of national power* for the nation. Such analysis would have highlighted the nation's areas of strength, capacity for growth, and ability to harness state-building, nation-building, or economic-building activities to increase national power. In Step 4, the analysis turns to the tools of the State – the instruments of national power – and their capacity to wield national power. Annex C provides a list of indicative sub-questions for the strategic analysis. Annex D lists several methods; including Causal Narratives, Actor Policy Dials, PESTLE Analysis, and Ends-Ways-Means-Risk Matrix, among others; that can help the analysis. When looking at the understanding of the national instruments, considerations may include:

- Availability of Instruments. Understanding the current capacity, tasking, demand, and reach of existing instruments and key capabilities is critical in developing any strategy. For example, there is no point in developing a strategy that leverages the military instrument if it is already fully committed, and its reallocation would undermine ongoing national interests. This analysis may be enhanced by explaining how each instrument contributes to the growth (or maintenance) of the three *foundations of national power*. Such a discussion helps highlight the remaining capacity of each instrument, and the potential risks to national power if the instruments of state are re-directed.

- Use of Instruments. The next series of questions should seek to understand how different instruments could be employed to overcome the challenges. This analysis is not about creating a strategic approach. Rather, it is about understanding the 'art of the possible'. Tools like the Ends-Ways-Means-Risk Matrix (annex D) can be helpful to ensure the analysis is robust, yet does not become solution-specific.

- Constraints on Instruments. The next series of questions seeks to understand what may be constraining capacity. Understanding what constrains the nation helps identify what may be self-imposed or imposed by others. Laws and policies may be changed. Resource dependence may need review. Ethical frameworks and strategic culture exist for good reasons. Understanding these points helps clarify real constraints versus self-imposed biases.

7.2.2 ASFF Step 4 Strategic Questions: Integration and Risk Appetite

Identifying how integrated a strategy must be is intrinsically linked to the level of risk associated with the environment and the strategic challenges. These links exist because integration can provide significant benefits and potentially limit flexibility. Step 4 explores these related issues. Annex C provides a list of indicative sub-questions for the strategic analysis. The Ends-Ways-Means-Risk matrix listed earlier

continues to be valid for risk analysis. Additionally, annex D lists several other methods; including Causal Narratives, Five Whys, Dialectic Devil's Advocacy, and Six Hats; that can help the analysis. When looking at the degree of integration and risk appetite for action, considerations may include:

- Integrated or Common Guidance. A key area for discussion is the balance between integrated agencies to achieve specific strategic effects, versus providing guidance and allowing for independent action within parameters. Some challenges will require significant integration across the nation. Meanwhile, others may be achieved through several departments acting independently within the broad parameters of strategic guidance. Both approaches have benefits and risks. Independent action is often more flexible and responsive to change. However, it may not achieve the desired effect quickly, or with sufficient weight. Balancing these needs will influence the final strategic approach.

- Requirement for Partners and Allies. Linked to integration, there is a need to consider partners and allies: how much of the strategy can or should be done alone? What challenges require partner support? How integrated should the coalition be? These are all points to consider. See the Additional Information box at the end of this chapter for further discussion.

- The Initial Strategy Sketches. The analysis throughout Steps 3 and 4 should allow the strategic artist to draw out some initial viable concepts, or 'strategic sketches' (see Ends-Ways-Means-Risk Matrix, annex D), that can inform Step 5 development. As previously discussed, using a narrative helps explain these initial strategic sketches (see annex E for more information). A tool like the Ends-Ways-Means-Risk Matrix can assist in this analysis and help capture some practical issues associated with specific strategic effects.

- Ethical Considerations of Strategy. Building on the analysis in Step 3 concerning national values, a critical question must be asked: is the cost worth the outcome? As mentioned in Step 3, the Just War tradition guides many of these considerations. However, these are not the only ethical considerations. Weighing up the cost of life, material, and standing compared to national interests and risks requires careful consideration. In some cases, national and strategic leaders may also need to consider the possible risk of escalation. Such escalation may be caused through action or failure to act. Ultimately, it is necessary to consider how far a nation will go to achieve its national interests.

The Importance of Considering the Ethical Dilemma

The need to consider values and ethical dilemmas within strategy is significant.

Questions that explore the potential loss of life, and, to a lesser degree, national standing, economic capacity, and material resources, must be asked. First, are these potential losses worth the national interest? If the national interest calls for such loss, the next question must be: does this align with national values? Finally, strategic and national leaders should always consider the circumstances that will change such considerations. If such questions are not explored, it is tough for leaders to understand when change is required, or to recognise that the nation is 'slipping'. As a strategy is executed, these ethical questions will continue to evolve.

There are many historical examples of these ethical considerations. Often, changes are slow, and sometimes occur without national leaders realising. Considering, preparing, and discussing what a nation may have to do, and under what circumstances these requirements may change, ensures decision-makers and planners understand the ethical risks associated with the strategy over time.

ASFF Step 4 Key Outcomes

The analysis of capacities, risks, and ethics should allow the planners and decision-makers to consider, understand, and define:

- What priority should different challenges be given.
- What assets and capacity are available to overcome the challenges, including:
  - The strengths and weaknesses of the nation, and
  - what needs to change to achieve the outcomes.
- What are the strategic risks both action and non-action, including:
  - What are the linked strategic implications,
  - What is the nation's risk threshold to different challenges, and
  - What is the nation's risk threshold for independent action.
- What can be achieved as a nation, and what requires partner or allied assistance.
- How integrated should the responses be, and is there a scale of integration.
- A range of possible strategic sketches that can help inform strategy options development (Step 5).
- Confirmed *Theory of Success.*
- **Note:** It is recommended that an *Ends-Ways-Means-Risk* matrix is developed as this will help with analysis, information capture, development of strategic options, and risk mitigation considerations.

Additional Information
Balancing Integration with Common Alignment

Often, planners assume that full integration of all national assets is essential to success. Chapter Three indicated that this mindset is often a hallmark of *strategy as process*. If not interrogated, such a mindset can lead to a belief in one fully integrated approach that is often overly complicated and unwieldy to execute [Smith, 2023].

Such thinking is caused by a failure to appreciate context: environment, problem space, and realities of national action. Without context, strategy becomes captured by other "contexts" – namely ideology [Smith, 2024: 12-16]. Such idealistic views limit strategic analysis to "what we believe is right" rather than "how we think things work". Such limited, often idealistic, thinking leads to idealistic solutions, which Smith calls the 'total war mindset' that

> …places the notions of proportionality and prudence at a discount and, ...reduces them to second-order concerns or neglects them entirely. It is a lens through which any socio-political problem, no matter how limited or potentially containable, has to be met with an overwhelming response [Smith, 2024: 19].

Within a coalition environment, the question remains similar: does integration provide a greater outcome given the limitations on freedom of action? Sometimes, strategic planners believe it is vital for a coalition to be fully integrated from the strategic to the tactical level. However, different nations have political and governmental differences that can complement each other. Full integration under a single system would limit these complementary overlaps. Similarly, the different approaches can diffuse collective action. Recognising how integrated the strategy must be across partners is as important as across the nation.

Balancing integration requirements with independent flexibility is an assessment that must occur throughout strategy development and execution.

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[1] Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret, Indexed eBook ed. (New Jersey, USA: Princeton University Press, 1989), 158.

[2] Royal College of Defence Studies, *Making Strategy Better*, 50-51.

[3] Strategic and war studies, as well as international relations and political science theory, highlight the risks, benefits, and costs of such dilemmas. However, these ethical questions must be answered, particularly in a time of strategic competition and grey-zone/asymmetric/political warfare. As Machiavelli highlights on his analysis of the triumvirate of *virtú-necessitià-fortuna* and *raison d'état* of a nation, sometimes statespersons and strategists must '…love his city more than his soul …[they must] learn how not to be good', particularly when there are few other choices. For discussion on Machiavelli's triumvirate and its relationship to strategic analysis, see: Bosio, "Relationshop between Military Theory and Systems Thinking," 168-70.

Chapter 8

8 THE STRATEGIC APPROACH

Steps 5 and 6 of the Australian Strategy Formulation Framework

> *The war with Japan had been enacted in the game rooms at the War College by so many people and in so many different ways that nothing that happened during the war was a surprise …except the kamikaze tactics toward the end of the war. We had not visualized these.*
>
> Fleet Admiral Nimitz [§§]

The last two steps of the ASFF, *Develop Approach Options* and *Challenge the Approach*, seek to build and refine the strategic framework, respectively. Previous steps' analysis has developed a common understanding of the environment, its challenges, and initial solutions. If Steps 1 to 4 have been done effectively, and the *Theory of Success* is robust, the identification and development of strategic options in Steps 5 and 6 should be relatively straightforward. The overall theory of success, strategic options, risks, and likely effects and authorities should be apparent from the previous analysis of the environment and the problem space.

This chapter details Steps 5 and 6. For each step, the chapter provides an overview of the strategic questions for analysis. These questions are further detailed in annex C, with annex D providing information on several techniques that may assist a strategic artist's analysis. Before discussing Steps 5 and 6, explaining what a strategic option means is useful.

8.1 Strategic Options – Different Approaches to the Theory of Success

Strategic options are different ways of achieving the theory of success and overall strategy. Each strategic option provides a different approach to applying national power and how to integrate the instruments of the state.

In a practical sense, strategic options can be characterised as different 'cause-and-effect packages'.[***] Each option provides a way to group strategic effects and identify the integration requirements. One strategic option may see a highly integrated approach, with each instrument of national power undertaking directed strategic effects and working in a fused whole-of-government coordination system. Another may emphasise a specific group of strategic effects, such as diplomatic effects, integrated with selected other effects (e.g. economic and military). In such a situation, there is an integrated effort led by one instrument of national power, while other instruments (and related departments and agencies) have a degree of freedom to achieve other supporting effects. The integrated and supporting efforts all work towards the theory of success in a whole-of-nation, but not necessarily integrated whole-of-government, approach. A third approach may be more

[§§] Reportedly stated in a private letter to the Present of the Naval War College. Cited by Secretary of Navy, Donald Winter. See: Donald C. Winter, "Remarks by Secretary of Navy" (paper presented at the Naval War College's 2006 Current Strategy Forum, Newport, Rhode Island, USA, 13 June 2006), 1.

[***] The author is indebted to Colonel Grant Motley, NZ Army, for this explanation of a strategic option.

disaggregated. Such an approach may see selected strategic effects directed. However, each instrument (department and agency) executes independently under a common framework.

> ***Strategic Option***
>
> A strategic option is defined as: a way of applying national power, and how the instruments of national power are integrated, to achieve the theory of success and strategy.
>
> Each strategic option provides a different approach to applying and integrating national power. Each option represents a different cause-and-effect package of strategic effects. An option can be highly integrated, integrate some instruments while providing freedom to others, or disaggregated. The scheme of action of the strategic option (Step 5) should explain how the option applies national power, the degree of integration, and why this option achieves the *theory of success* and strategy.
>
> Where strategic options are provided to government, the Government-selected strategic option is the *Strategic Approach.*

As an illustrative example of the above, consider a nation that may seek a better position within its strategic environment. For illustrative purposes, such a nation may have a theory of success that seeks to:

> *Become a regional leader through regional influence. Such an action enables the nation to grow its economic prosperity and security, maintain social cohesion, while increasing regional stability.*

The above theory of success could be achieved by leveraging different national instruments and elements of national power. Assuming the strategy team developed an Ends-Ways-Means-Risk Matrix (annex D), identifying these differences may be simple. Figure 8.1 is an illustrative matrix for this simplified example.

Figure 8.1 illustrates a 'Diplomacy-Focused' Option. The strategic effects highlighted in blue require integration and coordination. Such integration and coordination may be further articulated by grouping the strategic effects into relevant lines of effort (annex D). Additionally, the military and economic instruments have freedom to undertake additional strategic effects, listed in black, within the broad framework of the strategy. Finally, select economic and military strategic effects, marked with a red cross, are not to be undertaken. It is possible to see how an economic-focused option could be viable, as well as an integrated option that leverages several strategic effects from different instruments in a highly coordinated manner.

The illustrative example above highlights how each strategic option, or cause-and-effect package, provides different approaches to achieving the theory of success. The suitability of each approach will depend on several factors, many of which are explored in Steps 5 and 6 of the ASFF.

Theory of Success:

Become a regional leader through regional influence. Such an action enables the nation to grow its economic prosperity and security, maintain social cohesion, while also increasing regional cohesion

	Diplomatic	Economic	Military	Etc
ENDS *linked to Theory of Success*	Become a regional leader through alliance-building and trade development treaties that creates a multi-lateral system with nation in centre	Become a regional leader through economic development that increases commercial development domestically and regionally	Become a regional leader through military partnerships that have regional partners make nation a "security partner of choice"	
WAYS *approaches, may be a Theory of Victory*	• Exploit existing regional links to generate bi-lateral groups • Extend bi-lateral groups into multi-lateral forums • Communicate national support for regional peace and prosperity • Support trade development	• Develop domestic industry capacity for primary and secondary goods • Enhance domestic infrastructure to enable greater trade export • Invest in regional infrastructure to increase trade potential • Invest in regional manufacture to link nations economically	• Support Diplomatic overtures • Support domestic investment through local capabilities • Provide security initiatives to bi-lateral groups	
MEANS *capacity and assets*	• TBC	TBC	• TBC	
RISKS *Domestic and international*	• TBC	• TBC	• TBC	

Figure 8.1: Example Ends-Ways-Means-Risk Matrix (Indicative Only)

8.2 Develop Approach Options – Step 5 of the ASFF

ASFF Step 5 – Develop Approach Options

Step 5 of the ASFF, *Develop Approach Options*, seeks to develop a range of viable strategic options. Each strategic option represents a way of applying national power, and how the instruments of national power are integrated, to achieve the *theory of success*.

Step 5 Intent:

- Develop strategic options that meet the *theory of success*;
- Identify how integrated each option should be; and
- Confirm the strategic effects, strategic narrative, and lines of effort of the strategy.

Step 5 Considerations:

- *Theory of Success*.
- How options best match the national interest and values.
- Balancing the need for integration and flexibility.
- Consider how the strategy may be reviewed and measured when executed.
- The risks associated with different options and the strategy overall.

The fifth step in the ASFF, *Develop Approach Options*, reviews the analysis of the previous four steps and develops a range of strategic options for Government consideration. Each strategic option outlines what effects need to be generated, which instruments of national power are integrated, which agencies lead and support, and how each option relates to the national interests, values, and *theory of success*. When the government selects a strategic option, that option becomes the strategic approach.

The strategic approach, or the Government-selected strategic option, helps articulate the strategy to the wider government. The strategic approach translates the *problem-framing* analysis, undertaken in Steps 1 to 4, into a framework that guides the actions of others. In effect, Step 5 provides the bounded strategic environment and clarifies the national challenges that individual departments, agencies, and integrated task forces develop operational or contingency plans to overcome.

Step 5 is about understanding how each strategic option is framed. As such, Step 5's questions are more granular than previous steps. The two broad questions the step explores are: *What does the option look like*, and *how do we manage the option?* The following discusses these two questions, giving some guidance for analysis.

Additional Information
Developing Strategic Options or a Single Strategic Approach

The ASFF assumes that the government will review the strategic options and select one as the strategic approach. Therefore, the strategic artist should provide the government with viable, valid, and relevant strategic options that meet the theory of success, national interests, and values.

Governments and political leaders typically want multiple options to weigh the risk that they – the political leaders – are accepting on behalf of the nation's people. The government may indeed request a single strategic approach. Furthermore, some strategy development texts suggest that the role of any strategy formulation framework is to provide a single solution for the government. Although this may occur, in practice, it is rare and usually occurs in times of great crisis. As such, the strategic artist should seek to provide options to the government, unless directed otherwise.

Providing a recommendation on which strategic option is preferred is expected, and assists government in decision-making. This recommendation should also explain why the option is preferred over others. Step 6, discussed later, helps identify this recommendation.

8.2.1 ASFF Step 5 Strategic Questions: Strategic Options Development

Determining the strategic options requires an analysis of the different ways of applying national power to achieve the theory of success. Annex C provides a list of indicative sub-questions for the strategic analysis. There are several structured methods in annex D; including Ends-Ways-Means-Risk Matrix, Lines of Effort, FASS-A/D, and Policy Dials, among others; that can help the analysis. If the matrix were developed in Step 4, this would significantly enhance analysis. When looking at what do the strategic options look like, considerations may include:

- Develop the Various Strategic Options. Time and government direction will influence the number of strategic options developed. Steps 3 and 4 analysis may have already identified some possible concepts (or strategic sketches) that can be used to frame the strategic options. See the previous section for an illustrative example of strategic options development.

- Assess Strategic Options Against Interests, Values, and Theory of Success. Next, each strategic option should be assessed in relation to national interests, values, and the *theory of success*. This assessment helps frame the narrative of different options, or its scheme of action.

- Develop Schemes of Action (often as a narrative). The scheme of action for each strategic option guides how the option works. These schemes of action are not the detailed 'how' some may be familiar with in operational and tactical planning (often called schemes of manoeuvre). Instead, a strategic scheme of action is a narrative that explains the strategic framework, and how the option relates to the theory of success. This narrative includes which strategic effects are significant, the order of those effects (if required), and which departments have lead or support at different times. If only a strategic approach is developed (a single strategic option), often due to time pressures or government direction, the scheme of action is for the strategy overall.

- Assess Initial Viability. Finally, the strategic artist should consider each option and assess its viability given resources, risks, and national constraints and values. Annex D discusses a simple test, called FASS-A/D, that may assist in this assessment. The intent here is to remove strategic options that do not align with the theory of success, or cannot be sustained over the required timeframe.

The above four questions ensure that the analysis and deductions of this step are explicit for the testing in the next step.

Balancing Guidance and Detail in the Scheme of Action

The scheme of action must carefully balance the need to provide a strategic framework and the desire for a detailed plan. The narrative of each option's scheme of action must capture the strategic framework and effects without creating too many operational action limitations. Once more, using narratives to explain what is required and how it works is powerful. As annex E explains, illustrative examples can be helpful to help draw out the level of integration within the strategy, as well as the authorities required.

8.2.2 ASFF Step 5 Strategic Questions: Strategy Management

Either concurrently with the above questions or separately, the strategic artist should consider how authorities, risks, and strategy execution will be managed. Annex C provides a list of indicative sub-questions for the strategic analysis. Furthermore, the Ends-Ways-Means-Risk matrix listed earlier supports the analysis of authorities. Additionally, annex D lists several other methods; including Causal Narratives, Five Whys, Dialectic and Socratic Devil's Advocacy, and Six Hats; that can help the analysis. When looking at how the strategy is managed, considerations may include:

- Authorities and Control. With an understanding of the strategic options, it is necessary to consider how each option will be coordinated. If the strategic option has lines of effort, there may also be a need to consider if there are also line of effort coordinators. Such coordination may include who has the authority to execute tasks, and how often the authorities should be reviewed.

- Strategy Measurement. National interests and futures analysis indicate what success looks like. The theory of success captures how and why the strategy will work. The issue is how to measure that success over time. Caution must be taken in measuring strategy. Measures of effectiveness can often be very structured and deterministic.††† Such structure may not be appropriate for measuring strategy.[1] Because of strategy's subjective and dynamic nature, it is strongly advised that Judgement-based analysis be used to measure

††† As several systems theory authors cited in Chapter Two indicate, most measures of effectiveness are grounded in problem-solving/hard systems thinking. Jackson summarises this in his Systems of Systems Methodologies model. This is based on the works of other scholars. See: Jackson, *Creative Holism for Managers*, 20-22.

a strategy. Such measurement systems are often based on strategic judgement, professional assessments, and causal narratives.[2] For more information, see the Additional Information box below.

- Risk Identification and Confirmation. A final part of option development is to consider and confirm what risks exist, and how these risks can be explored to identify mitigation strategies. In preparation for the next step, it is also worth considering which testing tools may be helpful to explore the risks and enhance the strategic options. These tools should be qualitative and support unstructured thinking.

ASFF Step 5 Key Outcomes

The analysis and development of strategic options should allow the planners and decision-makers to consider, understand, and define:

- The final *Theory of Success*, presented as a narrative.
- The viable and relevant strategic options.
- The scheme of action for each strategic option that explains:
  - How the strategic option relates to the *Theory of Success*.
  - Relevant strategic effects relating to the option.
  - The relevant national instruments, agencies, assets, and resources required.
  - Which instruments/agencies are in the lead, and which are supporting (and when if applicable).
  - Coordination, control, and authorities for both integrated and independent action.
  - If applicable, how the strategic effects are organized across time, space, and whole-of-nation (normally as a narrative)
- Risks for each strategic option.
- Any key testing requirements.

Additional Information
The Importance of Qualitative Measures for Strategy

Developing useful and relevant measures of effectiveness for strategy is difficult. Measures of effectiveness, by their very nature, are often grounded in war-as-science/problem-solving thinking. Overcoming this limitation is critical to ensure the measurement and execution of strategy does not devolve into tactical analysis.

Tactical; and to a lesser degree, operational; measures of effectiveness are often easier to understand. Normally, tactical measures of effectiveness are directly observable and quantifiable. Many of these tactical measures relate to adversary action, terrain, and successful missions. Meanwhile, operational measures of effectiveness are a mixture of qualitative and quantitative considerations. Some success criteria relate to directly observable elements: terrain, actions, and adversary responses. Others relate more to indirect measures, often called 'proxy' or 'shadow' measures. Such measures attempt to gauge the causal linkages between intangible issues through linked observable events or activities. It is these qualitative measures that are the norm when measuring strategy.

Strategy is almost exclusively qualitative, of the mind, and indirect in its causal logic. As such, the use of quantitative and direct measures is often unadvisable, unless the strategic problem space is a clear, bounded, and a well-understood situation or scenario. Because most strategic situations are unbounded and indeterminate, using quantitative measures may cause decision-makers and agencies to focus on tactical actions and structured thinking. Such thinking leads to functionalist outlooks, which limits strategic art.

Judgement-based analysis often allows greater unstructured, unbounded, thinking. Therefore, qualitative measurement systems may be more appropriate. Such measurement systems are often based on strategic judgement, a range of professional assessments, and causal narratives.

8.3 Challenge the Approach – Step 6 of the ASFF

ASFF Step 6 – Challenge the Approach

Step 6 of the ASFF, *Challenge the Approach*, seeks to enhance and refine the strategic options, as well as prioritise the options as recommendations to Government.

Step 6 Intent:

- Develop *Theories of Failure*;
- Confirm and mitigate strategic risks;
- Refine and update the strategic options;
- Identify a recommended option for Government; and
- When required, update a strategic contingency plan for the current situation.

Step 6 Considerations:

- *Theories of Failure*.
- How much risk needs to be mitigated or accepted.
- Biases and implicit assumptions identified.
- Political imperatives, national interests, and values.

The final step of the ASFF, *Challenge the Approach*, tests the thinking that has led to the strategic options, and then identifies recommendations for the government.

Step 6 Develops *Theories of Failure*

Sound testing and challenging helps confirm known, identify unknown, and consider mitigations for, risks and agile responses. *Theories of Failure* (Chapter Four) are useful in exploring risks and challenging analysis. As such, they are fundamental to this step.

Using the theories of failure figure in Chapter Four (Figure 4.5) is an excellent method of capturing the analysis of this step. The causal mechanisms identified in different theories of failure can be used to explore specific risks, identify likely mitigations, and develop scenario-specific strategic games (normally seminar or matrix tabletop exercises) to test thinking and the theory of success.

At the strategic level, testing theories of failure and strategic options often include undertaking professional consultation (judgement) and strategic wargaming (sometimes called tabletop exercises, or matrix/seminar games). Through rigorous testing and challenging, the strategic artist can identify which strategic option is the recommended option and why that option is considered the most appropriate. Annex D lists a series of tools that can be used within this step.

Strategic experimentation and wargaming are not covered in detail in this handbook. However, appropriate gaming techniques can be powerful in testing and refining the theories of failure, strategic risks and implications, and identifying mitigations and enhancements to the strategy. Chapter Ten provides some guidance on strategic gaming. That chapter's information should be used to help strategic artists best leverage experimentation and wargame experts.

To frame the analysis of this step, two broad areas should be considered: *identification and mitigation of risk*, and *refinement of strategic options and make a recommendation.* The following discusses these two questions, giving some guidance for analysis.

ASFF Step 6 and Strategic Contingency Plans

Additionally, this Step can be very useful when a strategic contingency plan is activated. When a contingency plan activates, it requires immediate review and update for the current situation. By reviewing the strategic contingency through the lens of Step 6, the strategic artist can:

- Adjust the plan scenario to meet the current situation;
- Adjust the plan options for the current situation;
- Update the risks and mitigations; and
- Confirm the coordination and authorities of the plan.

8.3.1 ASFF Step 6 Strategic Questions: Identification and Mitigation of Risks

Confirming, mitigating, or accepting risk is a part of strategy. Step 6 helps strategic artists consider how to overcome or plan around these risks. Annex C provides a list of indicative sub-questions for the strategic analysis. Annex D lists several methods; including Causal Narratives, Semiotic Squares, Five Whys, Socratic Devil's Advocate, Six Hats, and FASS-A/D, among others; that can help the analysis. When looking at the identification and mitigation of risks, considerations may include:

- Analysis Free of Bias. To tease out additional risks and concerns, review the analysis to date and consider if there are any areas of unidentified bias. Not all biases must be mitigated. However, making them explicit helps minimise strategic risk.

- Understanding Risk. The next area to explore is how well the risks are understood. Reviewing the remaining assumptions is also essential. Each remaining assumption is a form of risk. It should be noted that not all assumptions will be removed. All policy and strategy require assumptions, particularly given strategy's complex, subjective, indeterminate, and unbounded nature. Furthermore, the common understanding developed through the analysis of the ASFF is a group mental model. Therefore, understanding what assumptions remain and their risk is important when considering strategic viability and the potential for strategic shock.

- Mitigation of Risk. The next consideration is risk mitigation and acceptance. Not all risks can be mitigated. Strategy is about choice and risk, and accepting risk is expected. The strategic artist may consider whether the danger is acceptable, and how flexible the strategy is if the risk materialises. As discussed in previous steps, using narratives to explain the mitigation can be helpful.

8.3.2 ASFF Step 6 Strategic Questions: Option Refinement and Recommendation

With an understanding of risk and possible mitigation, it is possible to refine the strategic options and identify one as the recommended option. Theories of failure are critical to this process, and will help identify areas for refinement. Annex C provides a list of indicative sub-questions for the strategic analysis. When looking at the refinements and recommendations, considerations may include:

- Modifications to Strategic Options. Based on exploring questions about risk, the team should seek to refine and modify options as required. Not every option will require modification. Nor is modification mandatory. An answer may be to develop standalone contingency plans based on select theories of failure and accepted risks. Linked to this review should be the strategy's authorities, coordination, and compartments.

- Recommendations to Government. Based on the analysis and final adjustments, the strategic artist must consider which strategic options will go to the government and which option is recommended. Such recommendations should include why the option is considered the best strategic approach. The Theory of Success and the analysis of theories of failure should provide the evidence for this recommendation.

Although there are many ways to present a strategy, annex E provides a format that captures the ASFF analysis logically for presentation to a government. No matter how the analysis is undertaken, the ASFF – and Design more broadly – relies on imagination and a willingness to accept various views. Part Three explores some methods to build this vital creativity in strategic artists.

ASFF Step 6 Key Outcomes

The analysis of risk and *Theories of Failure* should allow the planners and decision-makers to consider, understand, and define:

- The different *Theories of Failure* for each strategic option.
- The strategic risks and implications of each option.
- The refined strategic options to be presented to Government.
- A recommended strategic option, outlining why this option is considered the most appropriate strategic approach.

[1] This has been illustrated by several scholars over the last three decades across a range of historical situations, including Vietnam War, Gulf War, Bosnian/Serbian Air Campaign, Afghanistan, and Iraq. Case studies on these matters are extensive. For an illustrative summary, see: Bosio, "Relationshop between Military Theory and Systems Thinking," 127-55, 224-30, 31-68 (Case Study).

[2] Such judgment and qualitative systems often use indirect measures to gauge causal links. This is reinforced by previously cite systems scholars and the research into the relationship between the military arts and systems theory by Bosio. Also see: Nicholas J. Bosio, "Realistic Balanced Scorecards: Systemic Understanding via the Balanced Scorecard Cascaded Construction Method" (Master of Engineering Science University of New South Wales, 2005), 54-62, 71-72, 144-50, App 1-15.

PART 3 – THE BUILDING OF STRATEGIC ART

Chapter 9

9 DEVELOPING STRATEGIC ART

The Theory of Developing Strategic Imagination and Education

> *The nation that will insist on drawing a broad line of demarcation between the fighting man and the thinking man is liable to find its fighting done by fools and its thinking done by cowards.*
>
> Lieutenant General Sir William Francis Butler, *Charles George Gordon*

A common theme in this handbook is the importance of strategic imagination. Imagination helps strategic artists leverage Design and the ASFF. Imagination also enables strategic artists to consider, reflect, and create new ideas. As Chapter Two indicated, imagination is intrinsically linked to the breadth of mental models a person holds. Therefore, creating and enhancing individual and collective mental models can help grow strategic art and imagination. Chapter Two also indicated that physical and mental (decision-making) experiences help individuals adapt and generate new mental models. Although physical experiences can be powerful, they often relate to previous adverse events, leading to a question: how does one grow their repertoire of strategic mental models without experiencing significant strategic failure? The answer lies in two parts. The first is the development of the *strategic art professional*. The second is the varied ways to experience decision-making without necessarily making real-world decisions. History, fiction, simulations, and exercises are all methods of simulating decision-making before practising strategic art. This final part of the handbook discusses how strategic artists can build and enhance their professional knowledge and strategic imagination.

This chapter focuses on the development of the strategic artist. The chapter considers the theory behind how an individual increases their strategic art and imagination. The chapter also explores the development principles that underpin a professional education in strategic art. The chapter starts with an overview of knowledge. Understanding the relationship between strategic art's *how*, *what*, and *why* helps highlight the importance of decision-making experiences, and how such experiences enable the strategic artist to adapt theories and ideas to different situations. Next, the chapter discusses the value of introspection, examination, and reflection. When reflection is focused on both the framework used to guide action and the context that action occurs within, it is known as triple-loop learning. Such learning is not new. Professionals throughout history have followed similar approaches to learning and development. This approach is known as *praxis*.[‡‡‡] The chapter concludes with a discussion on strategic art praxis and the principles for educating the strategic art professional.

[‡‡‡] This definition of praxis is taken from the original philosophical concept, as presented by Aristotle.

9.1 Knowledge – The Foundations of Theory and Mental Models[1]

Theory and knowledge are interlinked. The scholarly literature on this relationship is extensive, extending back to ancient philosophy. Broadly, theory is seen to be the foundation of knowledge. Meanwhile, applying knowledge helps expand theory, thereby building more knowledge.[2] From the literature, it is commonly accepted that there are two broad areas of knowledge: *Procedural* and *Propositional Knowledge.*, as seen in Figure 9.1.[3]

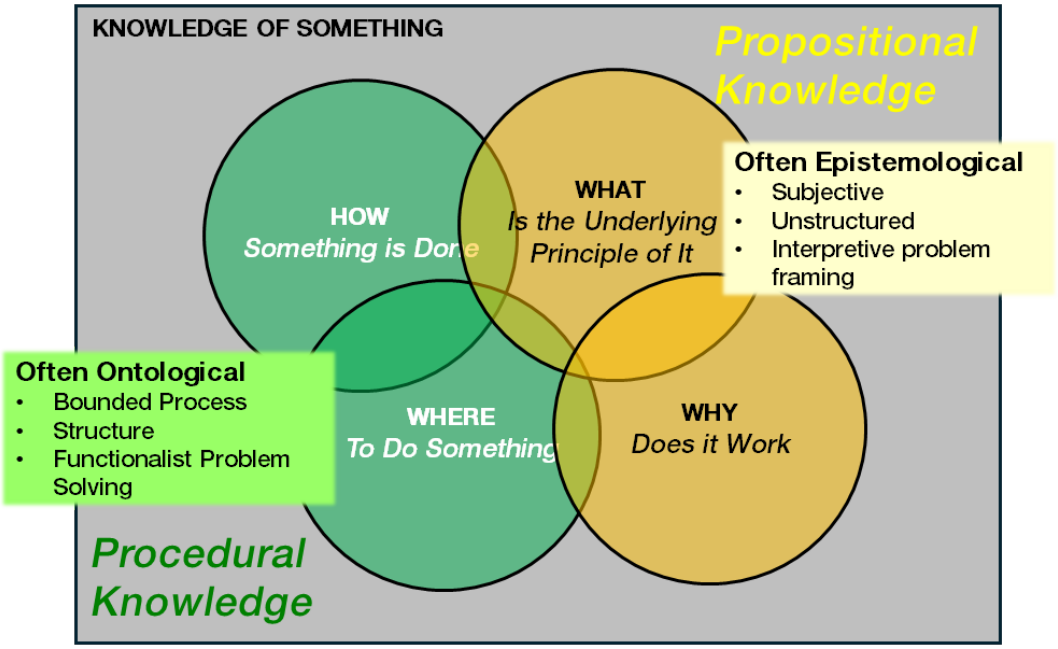


Figure 9.1: How Procedural and Propositional Knowledge Overlap

Procedural knowledge is sometimes referred to as 'knowledge of how'. Procedural knowledge focuses on *how* to do things, and *where* and *when* to do them. This knowledge informs a person's physical and mental skills. Such skills are typically learnt through physical experience and practice. This style of knowledge relates to the idea that '10,000 hours of practice make a master of a craft'. Because of this, procedural knowledge may also be referred to as 'knowledge of the hand'. For procedural knowledge to be effective, boundaries, structured thinking, and an understanding of process (functionalist thinking) are required. As such, procedural knowledge is often grounded in ontological and problem-solving thinking.

The other form of knowledge is *Propositional Knowledge*. Such knowledge focuses on *why* things work in particular ways and *what* are the causal theories and principles that drive action. Although propositional knowledge can be derived from physical experience, it is usually developed through mental experiences that challenge a person's paradigms and thinking. Research highlights that demanding education is one key method of enhancing propositional knowledge. Another is confronting the effects of decision-making. Interestingly, the decision-making experience can be real or simulated, as long as the simulated decision-making is immersive (discussed more in Chapter Ten).[4]

Propositional knowledge, known sometimes as 'knowledge of that' or 'knowledge of the mind', is very powerful. Propositional knowledge allows a person to change procedural knowledge on the fly, without new physical experiences. Because propositional knowledge is grounded in one's understanding of the world, it can be subjective, interpretive, and epistemological. Therefore, propositional knowledge has strong links to problem-framing thinking. Propositional knowledge is drawn on when making decisions and developing strategy.

9.2 Reflection and Synthesis – Updating and Creating Mental Models

Behind knowledge are mental models. Therefore, increasing and enhancing propositional knowledge requires updating and creating new mental models. As discussed in Chapter Two, people's mental models influence decision-making and the capacity for imagination. How well those mental models are considered, examined, updated, and created anew drives future thinking and decision-making. Such development requires a process of decision-making reflection and inquiry, known as triple-loop learning (Figure 9.2).[5]

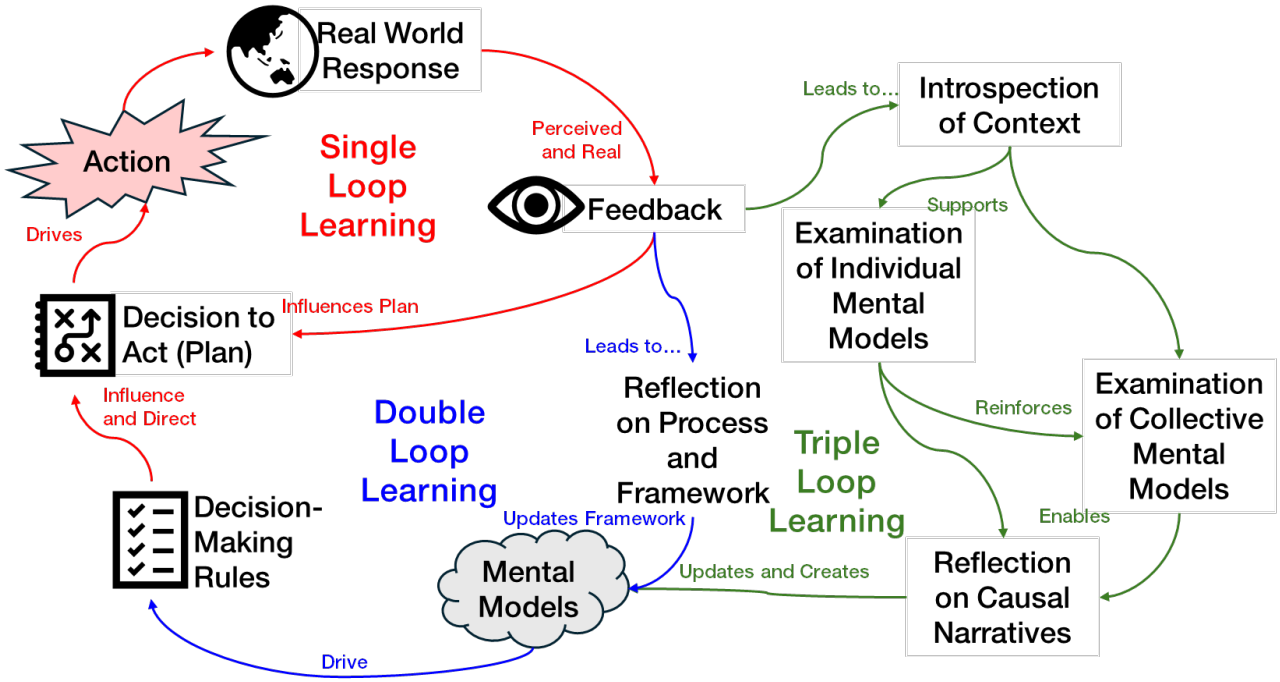


Figure 9.2: Single-Double-Triple Loop Learning and Enhancing Mental Models

Ben Zweibelson calls the above a reflective practice that

> …swings critical self-inquiry not just towards one's processes and institutional biases [Single and Double Loop Learning], but towards abstraction on how and why humans socially construct a rich, dynamic tapestry of ideas, belief systems, values, and language upon a naturally complex world.[6]

What Zweibelson's quote highlights is the importance of reflection. First, one must reflect on the *framework* that guides planning (or how mental models inform decision-making rules). The second area of reflection is the *context* of the environment. The synthesis of both framework and environment – perceived and actual – relates to problem-solving and problem-framing thinking (Chapter Two). Single-loop learning follows the same path as problem-solving (Figure 2.4). Feedback from the real world influences the next iteration of the plan, but not the way the world is perceived. Meanwhile, double-loop learning adjusts the framework that guides action (Figure 2.5). Updating this framework adjusts the decision-making rules, influencing the plan of action. However, updating the framework does not necessarily influence the analysis that informed the framework (the *Analysis* part of Figure 2.5). Although double-loop learning helps enhance the frameworks that mental models create, it does not necessarily create new mental models. New mental models and causal views of the world require synthesis of two reflections: reflection on the framework, and reflection on the context of the situation. This synthesis is achieved through triple-loop learning.[7]

The above applies to both in-crisis reflection and long-term professional development. Leveraging triple-loop learning to consider, analyse, and reflect on case studies, theory, and the historical record helps

contest previously-held ideas and grow new mental models through challenging education. When considering the above, three elements are required to achieve triple-loop learning:

- The need to accept challenges to one's thinking,
- The need to reflect on that challenge, and
- The need to synthesise that reflection into new thinking.

The above elements are part of a learning-to-learn pluralist habit-of-mind (Chapter Three). The historical record and contemporary research in psychology, education, and the cognitive sciences indicate that studying theory, practicing it, and reflecting on that practice helps develop the necessary habits-of-mind for triple-loop learning in crisis and conflict.[8]

9.3 Praxis – Professional Learning Through Theory-Practice-Reflection

Praxis, or translating theory into practice, is not a new concept for professionals. Most contemporary professions, such as engineering, medicine, teaching, and law, undertake their professional learning, development, and practice through praxis. Although every profession is different, they all follow a praxis model of theory-practice-reflection.[§§§] This approach also helps build the habits-of-mind necessary for triple-loop learning. Becoming a professional in the strategic arts (and the military arts) is, conceptually, no different.

Although it may seem strange to cover the topic of 'how to learn to be a strategic artist' so late in this handbook, the concept of praxis is directly related to enhancing strategic art. Through these three parts, this handbook has, conceptually, followed a similar pattern to praxis learning. Professional strategy courses, such as the UK's Royal College of Defence Studies, US military war colleges, and the Australian War College's Defence and Strategic Studies Course, follow variations of learning strategy through praxis. The following broad principles guide the theory-practice-reflection model for the education and professional development of strategic artists:

- Professional vocational education. The study of the strategic (and military) arts is best achieved through an education that is structured and scaffolded like other professional education experiences.[9] Each subject builds on the last, with opportunities to explore the theory of strategic art through scholarly and practitioner activities. Longitudinal assessments that build over time and practicals in strategic application help build an understanding of how to apply theory in practice. Facilitated and individual reflection is a crucial part of the course, particularly for the practical aspects of strategic art.
- First Principles Theory. All professions are grounded in theory. Each profession's theory is different. Nevertheless, such foundational theory provides ways to think about the world and understand causality.[****] These principles allow a professional to consider and examine a situation, adapt frameworks and processes, and develop guidance for action. Unlike engineering and medicine, which are founded in the sciences, the first-principles theory of the strategic artist is often grounded in the humanities, strategic studies, and international relations. Part One of this handbook introduces the first-principles theory underpinning strategy and strategic art.
- Applied History. All professions study their respective case studies to understand the profession's theory in practice, and how to apply it in different circumstances.

[§§§] These themes are: scaffolded professional education that develops knowledge of first-principles theory, practicing that theory in realistic situations, and reflecting on these situations.

[****] This is known as explanatory and descriptive theory, respectively.

Case studies also help professionals understand some of the causality within different environments. Strategic art is no different. Applied history, or analysing history to draw out lessons for the contemporary world, provides a rich tapestry of case studies for the strategic artist. Such study should consider the *width* of case studies across history, and the *context* of each case study. Then, strategic artists should study selected case studies in *depth* to understand how the themes of strategic art (Chapter Three) can be applied in different ways.[10]

- **Broad Subject Matter.** As this handbook has highlighted, strategic art is a multi-discipline. Luckily, the broad theories of strategic studies, war studies, and international relations already provide a solid multi-disciplinary grounding. Additionally, many strategic artists come from other professions, giving them depth of knowledge in another discipline. Often, strategic artists can use this depth to enhance their strategic thinking. To continue to grow such multi-disciplined thinking, strategic artists should be aware of a *wide* range of subjects and their *contexts* (particularly philosophical groundings). Overviews in geo-economics, cultural studies, capability development, and mobilisation are examples of such *width* and *context*. An overview of such knowledge helps the strategic artist recognise the benefits different professions, worldviews, and approaches may provide. Furthermore, *width* and *context* enable the strategic artist to be a facilitator of other specialists and subject matter experts within strategy development.

- **Abstracted Realistic, but not Overly Detailed, Practicals.** As discussed briefly in Chapter Ten, a significant part of growing and enhancing mental models is putting theory into practice. Practicals are a key differentiation between a structured professional education, and an academic or research educational experience. Realistic practicals that allow strategic artists to explore theory in practice come in many forms. Common examples include field trips (and staff rides), historical 'what-if' discussions and similar seminars, dedicated debates on strategic theory and the issues of a case study, and strategic exercises.

- **Reflective Discussion and Synthesis.** Reflection and synthesis are the last and most important part of any professional education. Good reflection, or triple-loop learning, is achieved through individual, group, and facilitated reflection, analysis, and synthesis.

Learning through the above theory-practice-reflection model helps build an understanding of first-principles theory, and how to adapt that theory to different situations. In essence, the praxis model of learning helps build knowledge of how to develop strategy, what principles guide strategy, and why these principles matter. Research and the historical record provide several methods to complement the praxis model, enhancing mental experiences, reflection, and synthesis. These methods, including historical analysis and strategic gaming, are discussed in Chapter Ten.

Additional Information
The Praxis Method and the Operational Artist

The principles for praxis education listed in above are applicable to the wider study of the military arts.

For context, a nation's staff college is normally the first formal grounding an officer may have in the military arts. Prior to staff college, students would have studied many military sciences through junior officer training. These military sciences are necessary for tactical art. However, it is the staff college that provides the deep grounding in military theory and history necessary for military and operational art. Although the above-listed principles focus on strategic art, they can be recast to guide the development of an operational artist through a staff college institution.

For the operational arts, *first-principles theory* will often emphasis a deep exploration of war studies, military history, and military coalition operations. Operational art's foundational theory comes from the key theorists of war studies: Clausewitz, Jomini, Liddel Hart, Sun Tzu, Mahan, Corbett, Douhet, Mitchell, and Boyd, to name a few. Such a grounding helps establish professional mastery of the military arts. This professional mastery of the military arts can then be built on through education in strategic art, enabling a strategic artist to consider the interplay between military theory, political science, and international relations theories on politics, actor relations, and strategy.

Applied history case studies for the operational arts often focus on campaigns, coalitions at war, and the themes of operational art. Such case studies should illustrate the development of operational art over time. Studying select military campaigns and wars in depth helps build both an understanding of theory in practice, as well as mental models for different approaches to campaigning and warfare.

Next, the principle of *broad subject matter* must be balanced with the need for deep understanding in military art. Many military officers enter a staff college with broad subject matter knowledge due to undergraduate and self-initiated graduate studies (often master-degree coursework in engineering and business studies). Such pre-staff college education often provides the broad subject matter knowledge needed to support military art. Therefore, within an operational art-focused course, additional breadth in subjects comes from studying the military institution and its development. Such subjects may include capability, technology development, culture change, and similar subjects that broaden the military arts within a coalition and inter-agency (as opposed to inter-departmental) environment.

Practicals are just as important for the operational artist as they are for the strategic professional. Such practicals should manifest as both coalition and campaign planning exercises, as well as traditional wargames focusing on campaigns and theatre operations.

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[1] The following section is a summary of several sources. The summary is drawn from Bosio. See: Thomas S. Kuhn, *The Structure of Scientific Revolutions*, ed. Otto Neurath, International Encyclopedia of Unified Science, (Chicago, Illinois, USA: University of Chicago Press, 1962; repr., 1970); Reynolds, *Theory Construction*; Bosio, *Understanding War's Theory*, 001, 12-14.

[2] Bosio, *Understanding War's Theory*, 001, 12.

[3] Ryan, *The Ryan Review*, 40 (Figure 6).

[4] For a summary of the research, as well as an extension of that research into the profession of arms, see: Bosio, "Gaming to Win," 46-52.

[5] Zweibelson, *Beyond the Pale*, 37 (Figure 6).

[6] Zweibelson, *Beyond the Pale*, 37.

[7] This discussion is a fusion of the work of Bosio's research into military thinking and Zweibelson's work. See: Bosio, "Relationshop between Military Theory and Systems Thinking," Chapters 7 and 8; Zweibelson, *Beyond the Pale*, Chapters 5 and 6.

[8] The US military's adaptation and development within the interwar period is an excellent example of this. For illustration of the depth of research into this, see: Cohen, "Strategy of Innocence?."; Craig Felker, *Testing American Sea Power: U.S. Navy Strategic Exercises, 1923-1940*, ed. Joseph G. Dawson III et al., ePub (Online) ed., vol. 107, Texas A&M University Military History Series, (College Station, Texas, USA: Texas A&M University Press, 2007); Mansoor, "US Grand Strategy in the Second World War."; Murray, "US Naval Strategy and Japan."; Lillard, *Playing War*; Nicholas J. Bosio, "Moulding War's Thinking: Using Wargaming to Broaden Military Minds," *Australian Army Journal* XVI, no. 2 (2020).

[9] The distinction between professional education courses and academic education courses is deliberate. Professional education courses (and professional degrees) are aligned to a vocation/profession. These degrees include the first principles theory of the profession, research methodologies relevant to the practice of the profession, case studies of the profession across history for contemporary analysis, and practical experiences that allow students to translate theory into practice. Many professional courses are guided, and in some cases certified, by professional institutions and bodies.

The other style education and course is an academic or 'exploratory' course (or degree). These courses prepare students for research-oriented careers. Although they may be discipline specific, these courses are not focused on the application of the discipline *per se*. Instead, the focus of an academic course is to provide broad research skills that are often discipline agnostic. Although there are knowledge and paradigm differences between the humanities, social, information, and natural sciences; academic courses in these streams all provide a foundation for research-oriented activities and careers. Research degrees (all disciplines) are considered academic degrees.

[10] This is an adaptation of Michael Howard's guidance for studying history. See: Michael Howard, "The Use and Abuse of Military History," *Parameters* 11, no. 1 (1981).

Chapter 10

10 ENHANCING STRATEGIC ART
Developing Strategic Imagination

The most important six inches on the battlefield is between your ears.

General Jim Mattis (rtd)[1]

High office teaches decision making, not substance. It consumes intellectual capital; it does not create it. …Most high officials leave office with the perceptions and insights with which they entered; they learn how to make decisions but not what decisions to make.

Henry Kissinger[2]

This handbook has considered both theory and practice. As Chapter Nine indicated, this interplay is known as praxis. A crucial part of praxis is reflecting on the framework that guides decision-making and the context that informs and influences actions and perceptions. Through such reflection, mental models can be enhanced and created, leading to greater strategic imagination. Many methods are available to help an individual consider and reflect on the context of a situation and then synthesise that analysis to develop new ways of thinking about the world. Many of these methods are relatively simple and can easily be incorporated into the ongoing professional development of any strategic artist.

This chapter provides an overview of some methods strategic artists can use to enhance and grow their strategic imagination. The methods listed in this chapter are not exhaustive. Nor does the chapter provide detailed explanations of each method, particularly gaming. However, the information in this chapter provides a starting point. This information can be built on through professional educational courses, engagement with subject matter experts, expert facilitators, ongoing professional development, and/or self-paced interest and study. The chapter builds on the theory presented in Chapter Nine by providing an overview of three techniques for enhancing mental models: historical analogy, deliberate reading of fiction, and spatial thinking. Then, the chapter covers some key points concerning strategic simulations, gaming, and wargames.

10.1 Reinforcing and Enhancing Mental Models – History and Fiction

There are many techniques and methods to help an individual reflect on their frameworks, actions, and the environment. Some Red Team techniques are discussed in annex D and books such as Charles Vandepeer's *Applied Thinking for Intelligence Analysis* (see annex F). Three methods can be used to test one's thinking and learn how to apply strategic art in different situations. These three methods are: historical analogy, deliberate reading (fiction), and spatial thinking.

10.1.1 Developing Mental Models through Analogy: The Study of History

A strategic artist may be called upon to act in situations where they have no physical experience. History can help in such situations. Michael Howard advocated for teaching military history to the military and strategic artist alike. His conclusions were:

> …the study of military history should not only enable the civilian to understand the nature of war and its part in shaping society, but also directly improve the officer's competence in his profession. But it must never be forgotten that the true use of history, military or civil, is, as Jacob Burckhardt once said, **not to make men clever for next time; it is to make them wise for ever.** [emphasis added][3]

The above quote reinforces the importance of history for developing an understanding of strategy and strategic art. In effect, history is '…much like case law for a lawyer. It provides the required context, width and depth to understand past ways and means in the absence of physical …experiences.'[4] Much like case law, history can be used in two ways. The first, as articulated by Howard, is to understand strategic theory and its practice further. The second is using history to help frame the causal narrative of a contemporary situation. This second approach is known as analogical reasoning.

Henry Kissinger once said:

> History is not, of course, a cookbook offering pretested recipes. It teaches by analogy, not by maxims. It can illuminate the consequences of actions in comparable situations, yet each generation must discover for itself what situations are in fact comparable.

The above quote highlights both the benefits and dangers of historical analogy. In their book *Thinking in Time*, Richard Neustadt and Ernest May highlight how historical analogy can help practitioners quickly identify similarities between contemporary situations and the historical record. Such similarities can then be used as the basis for causal analysis.[5] Yuen Foong Khong, in *Analogies at War*, takes this discussion further. Khong first outlines the theory behind historical analogy (**Figure 10.1**).

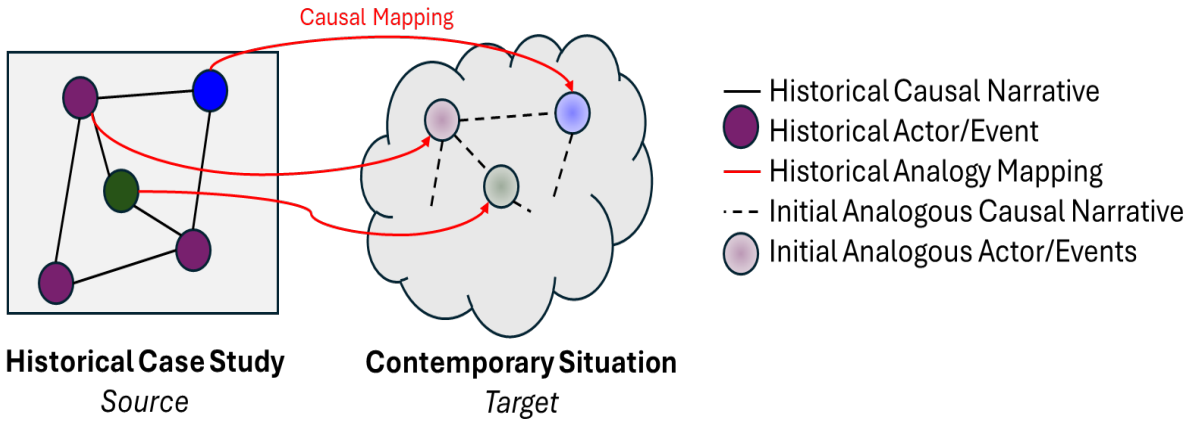


Figure 10.1: Historical Analogy in Action

In the above figure, a historical case study with some similarities to the contemporary environment is selected. The case study's causal narratives and actor intentions are 'mapped' to similar events and actor intentions in the contemporary environment, giving an initial causal narrative.[6] However, as Khong and others explain, no historical case study represents a contemporary situation. As such, the causal mapping is never complete. Khong's work highlights the dangers of assuming that historical analogy completely captures the complexity of a contemporary situation. Nevertheless, Khong recognises the use of historical analogy in framing thinking. Khong, Neustadt, May, and others offer the following advice for using historical analogy:[7]

- Historical analogy should never be taken as a 'given', or assumed to match the contemporary situation. Such an assumption can be very dangerous.
- Historical analogy can create a shared understanding of the environment and potential problems.
- Always try to use more than one analogy. Multiple case studies help create diversity in causal mapping and reduce the likelihood of over-reliance on a single historical account.
- Historical analogy, used appropriately, can help frame the current environment to enable further analysis through other tools (such as those in annex D).
- Multiple historical case studies can help develop alternative futures, increasing strategic imagination.
- Historical analogy is a helpful way of framing the initial strategic challenges (*Theory of Challenge*) that can be further developed through other tools (such as those in annex D).
- Historical analogy should not be used to solve a problem directly. However, it can be used to identify possible unintended consequences of actions (*Theory of Failure*).

To be effective, historical analogy is best used when the strategic artist focuses on the commonality *and differences* between the historical case study and the contemporary environment. Using the common themes between multiple historical case studies and the contemporary situation can help collective thinking. However, it is the differences between the case studies and today that, if properly investigated, will help tease out the causal narratives and build new mental models. A similar approach is required for fiction.

10.1.2 Considering Alternatives: Using Fiction to Explore Reality

Another area that allows individuals to explore the similarities and differences over time is fiction. Fiction, engaged professionally and reflectively, can help generate different ways of thinking about the world and contemporary strategic problems.

Over the last few decades, there has been an increased interest in reading Science Fiction to think about the problems of today.[8] Fiction, notably Science Fiction, has even influenced capability and future warfighting concepts.[9] However, mental model development and strategic imagination do not come from reading fiction alone. Much like the study of history, fiction must be read, reflected on, considered, and synthesised by the strategic artist. Such an approach is known as *deliberate reading*.

Deliberate reading is engaging with and reflecting on the themes and ideas within a text. Often, fiction allows a writer to explore ideas and themes, particularly ethical themes, that can not be easily discussed in historical or factual works. Such themes often counter the prevailing narrative of the time of writing. Therefore, deliberate reading allows practitioners to engage with these ideas systematically, furthering their knowledge and imagination. In reality, this means reading the fiction, drawing out the key themes, and relating those themes to contemporary theory, thinking, and problems. Such deliberate reading can be self-reflective, or done through a professional book club. No matter the approach, such reading should be about reflection, examination, and synthesis of ideas. Nor does the reading need to be limited to a single genre.

Much of the recent writing about the importance of fiction focuses on Science Fiction. However, many of the themes explored in science fiction can be seen in other genres, such as fantasy and modern fiction. There is even a genre of alternative history. Such books take historical situations and provide a 'what if' storyline if certain events turn out differently. An example is Timothy Venning's *An Alternative*

History of Britain: The English Civil War. This book explores how the English Civil War may have changed if specific battles and points in time had played out differently. Such alternative histories help individuals develop imaginative futures and explanations for contemporary situations. The key takeaway is this: reading fiction can help the strategic artist see the world differently and from different perspectives.

10.1.3 Understanding Geographic Perceptions: The Importance of Spatial Thinking

Part One discussed cognitive biases and perceptions. These biases also link to how individuals view the physical world through maps. Reconsidering how maps influence thinking is a form of spatial thinking.

Strategic imagination can often be limited due to perceptions of geography. Before the Second World War, the French failed to imagine the Germans would invade through the Ardennes, a heavily forested region of France. This failure was partly because the French did not believe the geography would allow vehicles and large troop movements. This geographical bias influenced pre-war French capability development, force posture, and planning, leading to disastrous results.

Andrew Rhodes highlights the value of spatial thinking for national security decision-making. He argues that:

> Thinking in space has long been an essential tool for thinking critically and communicating clearly when it comes to national security decision-making. The importance of mental maps and geographic communication are only growing in an era of new global challenges and renewed great power competition. Strategists and diplomats would benefit from gaining greater insight into the ways geographic information shapes national security decision-making.[10]

The importance of understanding how maps may influence thinking and perception can be seen in Figure 10.2.



Figure 10.2: Different Map Perspectives

Figure 10.2 shows two images. The first is a map of Australia north-up. A different perspective on Australia's strategic environment is seen when the map is tilted to have Southeast Asia at the top of the map. As John Blaxland states, this second perspective:

> …gives you a sense of Australia hanging off Asia, and what Indonesia's President, Joko Widodo, called the maritime fulcrum. When you think about the left-hand side and the right, you've got the Indo and the Pacific.[11]

Each individual's spatial awareness and geographical knowledge are shaped by their physical experience and the maps they use. Sometimes, the best way to create an imaginative thought is to turn the map around and look at the world from another nation's or group's perspective. Another way to explore other perspectives is through games.

10.2 Building and Testing Mental Models – Strategic Exercises and Games[12]

Education, psychological, and cognitive research shows that simulations, exercises, and games can be a powerful driver for building and enhancing mental models and imagination. There is also a significant body of knowledge on how wargames, simulations, and similar activities directly support military and strategic practitioners.

This section provides some guidance on what makes a good strategic exercise. However, this guidance comes with caveats. First, this section is an introduction only. Next, this handbook takes the benefits of simulations, exercises, and gaming as a given. For additional information, there are a range of people within government, academia, and the wider workforce who are experts in the design and facilitation of simulations and games.

Noting the above, the guidance this section provides may help the strategic artist determine when these activities may be useful and how they should be framed. The section may also help the strategic artist see the dangers of too much detail or complexity within an exercise or simulation system. Research highlights that simulations, exercises, and games provide a simulated practical environment to challenge thinking and achieve praxis. However, these simulations must be framed correctly to be useful.

10.2.1 Where Strategic Exercises Fit: The Spectrum of Simulations and Gaming

All exercises and simulations are models. As the adage states: all models are wrong to a degree. The question is not the accuracy of the simulation or game. Rather, it is whether the simulation is a useful representation of the style of decision-making the professional may have to undertake, now or in the future. This usefulness is linked to the spectrum of abstraction in simulation and gaming (Figure 10.3).[13]

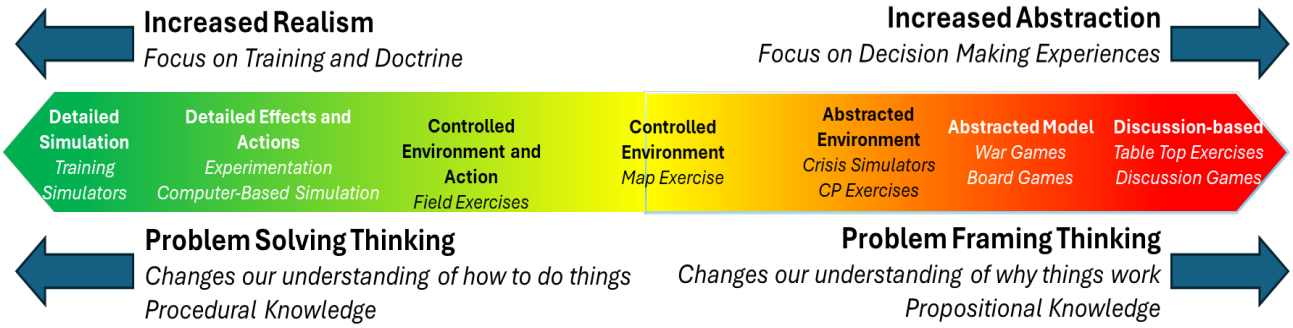


Figure 10.3: Spectrum of Simulation and Gaming Abstraction

The spectrum of abstraction illustrates how exercises, games and simulations relate to problem-solving and problem-framing thinking. The realism end of the spectrum provides detailed simulations that are highly suitable for finding specific answers. Many simulations at this end of the spectrum are computer-based, with some board games. These simulations, exercises and games have high amounts of data that give depth, but – because of their data size – have to be bounded within specific time-frames, geographical areas, and/or scale of activity. Because of this bounding, they represent structured, functionalist, and reductionist thinking. Examples of such simulations include capability experiments, training simulations, and field training exercises. Because of the bounded nature of the simulations, these systems are very good at generating procedural knowledge and related mental models. However, to challenge propositional knowledge, more abstraction is required.

At the other end of the spectrum are abstracted simulations and games. These styles of exercises focus on creating mental experiences. These exercises do this by allowing people to undergo similar decision-making experiences that they may have to make in real life, either now or at some future point in their careers. Such decision-making experiences work by replicating the critical elements of the decision-making situation, not every aspect. Because these experiences are 'of the mind', the activities influence individual perception and the application of mental models to practical situations. Such activities are grounded in interpretive, subjective, and indeterminate thinking. These simulations and games often limit the data used to enable greater focus on decision-making. Examples of such activities include mock role-play activities, tabletop exercises, many board games, and professional seminar/matrix crisis activities. Because of the problem-framing nature of such activities, these styles of games help people learn how to think, rather than providing specific answers.

10.2.2 Making Games Useful: Immersive Games

To be valid, a simulation, exercise, or game needs to be immersive. Immersive activities have four key elements. First, the activity is *real-time play between real players*. Second, the simulation should *model the key aspects of decision-making*. Research highlights that, due to cognitive load, detail in a simulation can undermine mental model development. Nevertheless, the right level of abstraction within a simulation/game allows the brain to make decisions similarly to the real world. Next, the game must focus on the *right level, such as geo-political, strategic, operational, or tactical*. Finally, the simulation requires *'free-play'*. Players need to be unrestricted in their planning and thinking within the context of the game. Such free play does not mean there are no constraints – there will be simulation rules and constraints on how far a player may go. However, under the constraints, players can plan and execute any desired action. They are not 'rail-roaded' towards a specific solution. These four elements; real-time play, relevant decision-making model, right level of focus, and free-play; provide an immersive environment that enables challenging mental experiences. Typically, such mental experiences occur due to failure in decision making. Luckily, simulations and games allow such decision-making without the risks of real-world failure. Strategic games are no different.

10.2.3 Making Good Strategic Experiences: Right Approach, Style of Thinking and Game

Strategic exercises and games can be used in two ways. The first is within Step 6 of the ASFF to test strategy development. The second and more powerful approach is to use games in the praxis learning model to explore theory, thinking, and its practical application. Either way, strategic games must be framed appropriately.

Game abstraction must be aligned with the problem context and the best game method for that context. A problem context is the style of problem a person faces or wishes to experience. Problem contexts relate to complexity (Chapter Two), extending from simple, bounded problems to highly complex, unbounded, and dynamic problem spaces (wicked problems). Figure 10.4 illustrates this alignment.[14]

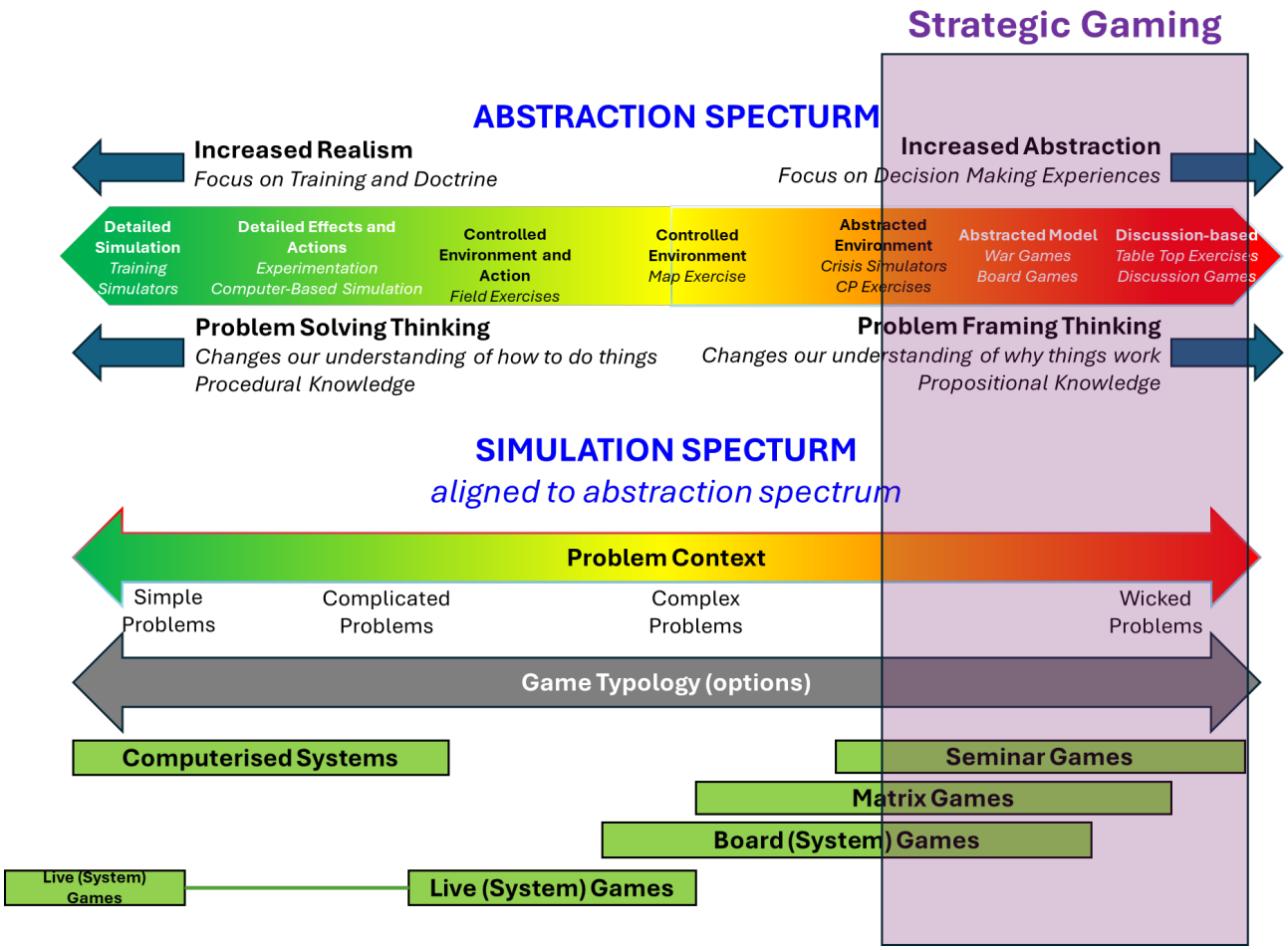


Figure 10.4: Aligning Abstraction, Problem Contexts, and Games for Strategic Exercises

Figure 10.4 illustrates how games that provide greater abstraction and flexibility support strategic thinking and analysis. The figure highlights that seminar games (or syndicate/role-playing games), matrix games (or debate/action-reaction games), and board games (or system games) are more likely to support strategic thinking, policy making, and strategic art. In a professional context, using strategic games to put theory into practice is known as *deliberate professional gaming*. Deliberate professional gaming is normal in a range of professions. Deliberate gaming consists of people actively choosing to play and practice games to advance their professional development and education. Five tenets should be observed for deliberate strategic games, being:[††††]

- **Immersion.** The elements of game immersion should be employed. In the case of strategic games, the relevant levels should be military-strategic, geo-strategic, or geo-political.

- **Good Facilitators and Rules Flexibility.** Next, the simulation requires good facilitators, or *Game Masters*, who are empowered to adjust rules and the scenario. Such adjustments help game masters manage the game's responses to player actions. Dynamic rule adjustment also allows game masters to empower player flexibility, enabling immersion.

- **Professional Adjudication.** Professional adjudication is another key trait of good strategic games. This style of adjudication may be based on a set of principles (known as *semi-rule-based adjudication*) or the professional consensus of the game masters. This second

[††††] It is worth noting that these five tenets are just as relevant to tactical and operational level military education and training wargames, with some modification to immersion level (tactical or operational) and rules flexibility.

approach is most often seen in syndicate and matrix games. This professional, less structured, approach is contrasted with operational and tactical games, which generally have more structured adjudication systems.

- **Facilitated Post-Game Debriefs.** To assist in player development, facilitated debriefs post-game are vital to consolidate understanding. Unlike operational and tactical games, where the learning is derived from pre-game planning and in-game experience, strategic games often have little pre-game development.[15] Instead, in-game experiences are further developed through post-game facilitated reflection, analysis, and discussion. This approach is best because strategy in-game experiences are perception-based and subjective, requiring post-game sharing and discussion. Such sharing allows all players to understand how others perceive each action. Facilitated debriefs are crucial to deliberate professional gaming and enable triple-loop learning. These debriefs help separate deliberate simulations from hobby-game experiences.

- **Willing Players.** The final requirement for successful strategic games is willing players. A willing player is a person who is willing to undertake deliberate gaming to develop their professional knowledge and mental models. Willing players thrive in a culture that accepts, and is willing to use, games to support professional development and decision-making.

Strategic games that leverage the above tenets provide the 'practicals' of the praxis approach (Chapter Nine). Such games provide abstract, realistic environments that allow people to translate first-principles theory into practical knowledge and outcomes. Combined with historical analogy, deliberate reading, and spatial thinking, such experiences can be a powerful way to create new mental models and strategic imagination. The challenge for the strategic artist is to leverage these methods in times of peace to prepare their thinking for potential crisis.

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[1] This quote is believed to have been said while Mattis was a Major General commanding the 1st Marine Division during the 2003 invasion of Iraq.

[2] Henry Kissinger, *White House Years*, EBook ed., 3 vols., vol. 1 (New York City, New York, USA: Simon and Schuster Paperbacks, 1979).

[3] Howard, "Military History," 14.

[4] Ryan, *The Ryan Review*, 89.

[5] Richard E. Neustadt and Ernest R. May, *Thinking in Time: The Uses of History for Decision Makers*, Kobo eBook ed. (New York, New York, USA: The Free Press, 1986), 13.1-13.27; Yuen Foong Khong, *Analogies at War: Korea, Munich, Dien Bein Phu, and the Vietnam Decisions of 1965* (Princeton, New Jersey, USA: Princeton University Press, 1992), 24-46.

[6] See above cited references. This mapping is similar to Conceptual Metaphors (see Chapter Two and annex A).

[7] See previously cited works above.

[8] Michael Ryan, "Why Reading Science Fiction is Good for Military Officers," Clare O'Neill et al. eds. *Grounded Curiosity*, *WordPress*, 23 March, 2016, https://groundedcuriosity.com/why-reading-science-fiction-is-good-for-military-officers/; Michael Ryan and Nathan K. Finney, "Science Fiction and the Strategist 3.0," Heather Pace and Katherine H. Voyles eds. *The Strategy Bridge*, *The Strategy Bridge*, 2021, https://thestrategybridge.org/the-bridge/2021/10/20/science-fiction-and-the-strategist-30.

[9]Franz-Stefan Gady, "The Impact of Fiction on the Future of War," *The Diplomat*, Online 07 Dec 2019, 2019, https://thediplomat.com/2019/12/the-impact-of-fiction-on-the-future-of-war/; Andrew Liptak, "The US Military is Turning to Science Fiction to Shape the Future of War," *Medium*, *A Medium Corporation*, 29 July, 2020, https://onezero.medium.com/the-u-s-military-is-turning-to-science-fiction-to-shape-the-future-of-war-1b40d11eb6b4.

[10] Andrew Rhodes, "Thinking in Space: The Role of Geography in National Security Decision-Making," *Texas National Security Review* 2, no. 4 (2019): 91.

[11] John C. Blaxland, "Speech - Australian Regional Engagement: A Historical and Strategic Perspective," *Australian Army Journal* 20, no. 1 (2020): 138.

[12] This section is drawn from several scholarly and practitioner resources. For a summary of the wider research into games, their benefit for mental development, see Bosio. As an illustration of the research into military and strategic gaming uses, see: Matthew B. Caffrey Jr, *On Wargaming: How Wargames have Shaped History and How They May Shape the Future*, ed. Robert C. Ayer, PDF ed., vol. 43, The Newport Papers, (Newport, Rhode Island, USA: United States Naval War College, 2019); Bosio, "Moulding War's Thinking."; Bosio, "Gaming to Win."; Carsten F. Roennfeldt, Daniel E. Helgesen, and Bjørn Anders Hoffstad Reutz, "Developing Strategic Mindsets with Matrix Games," *Scandinavian Journal of Military Studies* 5, no. 1 (2022); Damien O'Connell, "Progress and Perils: Educational Wargaming in the US Marine

Corps," Damien O'Connell ed. *The Warfighting Society*, *DecoDameDesign*, 22 December, 2023, https://www.themaneuverist.org/post/progress-and-perils-educational-wargaming-in-the-us-marine-corps-by-damien-o-connell; Saikat K. Bose and SK. Gadeock, "Potential of Wargaming in Enhancement of Professional Military Education," *Indian Defence Review*, Online 12 February 2024, 2024, https://indiandefencereview.com/potential-of-wargaming-in-enhancement-of-professional-military-education/; Amanda M. Rosen and Lisa Kerr, "Wargaming for Learning: How Educational Gaming Supports Student Learning and Perspectives," *Journal of Political Science Foundation* (2024).

[13] This figure is an expansion of Alme (2020), cited in Roennfeldt, Helgesen, and Reutz, "Developing Strategic Mindsets with Matrix Games," 259.

[14] The author is indebted to Darren Huxley, Director Strategic Wargames of the Department of Defence, for helping in developing this alignment.

[15] See the research of: Anders Frank, "The Instructor Role during Educational Wargaming," in *The Shift from Teaching to Learning: Individual, Collective and Organizational Learning Through Gaming Simulation*, ed. Willy C. Kriz, Tanja Eiselen, and Werner Manahl, Proceedings of the International Simulation and Gaming Association (Dornbirn, Austria: 2014); Rosen and Kerr, "Wargaming for Learning."

ANNEXES

ANNEX A – GLOSSARY

Key and Other Related Terms

This glossary provides the definitions for the key terms and phrases marked with ***bold-italics*** throughout the work. Additionally, the annex defines several related terms for ease of reference. Referencing is only used within this annex for either direct quotations or where the body of this handbook does not provide relevant references and/or definitions. Where a word is ***bold-italics*** within a definition, the ***bold-italics*** refers to another definition within this glossary.

Competition. The continuation of a group's; be it a tribal element, community, nation-state or super-state; policy that uses the threat of violence (as seen through deterrence and posture), and other non-violent means to both coerce and persuade others to achieve a political objective or end.

Conceptual Metaphor. A conceptual metaphor is an '…understanding [of] one conceptual domain [idea/concept] in the terms of another conceptual domain.'[1] Conceptual metaphors work by mapping a known, often physical, experience onto an abstract idea/concept to assist in describing it.[2] The known experience is referred to as the ***source domain***, which is used to map expressions onto the *target domain*.

Conflict. The continuation of a group's; be it a tribal element, community, nation-state or super-state; policy where violence is one method that either complements another primary means of coercion, or rotates primacy with other non-violent means throughout the conflict, to achieve a political objective or end.

Delay (Systems Concept). A time-lag between an action and a subsequent follow-on/counter-action that affects how future actions and outcomes may occur.

Effect. A result or impact created by the application of military or other power.

Emergence (Systems Concept). Emergence, sometimes called *emergent properties*, occurs when the ***feedback*** interactions of individual elements and actors within a specific context (a situation, force, event or endeavour) that results in the 'whole' being greater than the sum of the individual elements. Each element may be a 'whole' in its own right, made up of smaller feedback interactions.

Feedback (Systems Concept). The nonlinear situation where the outcome or ***effect*** of an action (event, deed or endeavour); either fully or partially; further influences the situation or environment, making the next outcome better or worse in a potentially disproportionate way.

Habit-of-Mind. See Pluralist Habit-of-Mind.

Hard Systems Thinking. Hard systems thinking is a school-of-thought within ***systems thinking***. It is the perception, or ***worldview***, that the 'world', a defined problem space, is a set of ***systems***. The ***conceptual metaphor*** of *the world (idea/concept) is a system* that represents this ontological view of the world. Conceptually, theorists can isolate systems from the 'world system', with each system having a defined boundary and identifiable interrelationship between the isolated system, other systems and the world as a whole. Hard-systems thinking is often relevant in well-defined situations where a practitioner has a high degree of knowledge of the situation, the self-organising structure, and the goals of the actors involved.[3] It is related to metaphysical realism

Hierarchy. Hierarchy is a sub-concept within the systems concept known as ***emergence***. It is '…[t]he principle according to which entities [***systems***] meaningfully treated as wholes are built up of smaller entities which are themselves wholes ...and so on. In hierarchy [of a system], emergent properties denote the levels.'[4]

Ideal-Types. Ideal-Types outline the common characteristics and elements of phenomena. They are not pure examples of a scenario. However, they can be used to compare and consider cases, theories and methods to identify which conform broadly with a phenomenon.[5]

Interdependence (Systems Concept). The requirement for a wider perspective that considers the situation as a whole, rather than specific parts in isolation; and recognises that all elements (actors, actions, event, deed, or endeavour) are linked, either directly or through other elements.

Leverage Point. A leverage point is where a small change can make large differences in the situation at hand. Leverage points, if targeted effectively, provide the nucleus of ideas and strategic approaches, and help overcome the complexity of the strategic environment.[6]

Mental Model. Mental models are defined as '…deeply ingrained assumptions, generalisations, or even pictures or images that influence how…' an individual, organisation or discipline understands theories, concepts and the real world.[7] These directly influence actions by shaping the decisions made under routine human cognitive decision-making. *Schemas* are mental models of organised patterns of thought. *Stereotypes* are mental models of patterns of understood human behaviour. To make decisions, humans compare mental models to current situations through the cognitive process known as heuristics.[8] Mental models for organisations or disciplines are known as *shared mental models*.

National Power. National power is defined in doctrine as the '…total capability of a country to achieve its national objectives, devoid of external constraints and without being subject to coercion.'[9] National power relates to ***power***, and is a nation's capacity to influence others.

Operational Art. Operational art is defined as the capacity and ability to both frame and solve problems within a strategically bounded environment (by geography, time, and/or extant policy. Good operational art is the application of operational theory and a form of ***pluralism*** known as *strong pluralism*, guided by the environmental bounding provided by ***strategic art***. Operational art frames the problems within a campaign, thereby providing structure and bounded problems for tactical problem solving.

Paradigm. Paradigm is defined in its dictionary sense, being '…an intellectual framework of shared preconceptions and governing ideas which shapes research and analysis.'[10] A paradigm is an intellectual tradition and is interchangeable with ***school-of-thought*** within this thesis. A ***worldview*** is a paradigm placed within a specific real-world context.

Pluralism. The use of different ***paradigms*** or ***schools-of-thought***, and their related theories and methodologies, to consider problems within a field of study. Research into pluralism outlines four styles of pluralism: *limited pluralism*, *loose pluralism*, *complementary pluralism*, and *strong pluralism*.[11]

Pluralist Habit-of-Mind. Having or using thinking dispositions that accept ***pluralism***, are willing to consider alternative views, and can accept and integrate a wide range of ***paradigms***/schools-of-thought and ***worldviews***.

Positional Strategy. A positional strategy is one of two ***ideal-types*** of strategy. A positional strategy is where a '…power seeks to counter, undercut, contain, and limit the power and threats of a specific challenger state or group of states.'[12] Positional strategies are often time-bound and linked to specific objectives and geographical areas. Also see ***Strategy au Milieu***.

Power. Power is defined as the power one actor (Actor 1) has over another actor (Actor 2), to the extent that Actor 1 can get Actor 2 to do something that Actor 2 would not otherwise do. Power is viewed to have three dimensions. The first is Decision-Making Power. Next is Non-Decision-Making Power, also known as agenda-setting power. The third is Ideological Power.

School-of-Thought. An intellectual tradition within a field of injury or discipline. Also, see ***paradigm***.

Soft Systems Thinking. Soft-systems thinking is a school-of-thought of ***systems thinking***. Soft-systems thinking does not view the world as a specific ***system*** construct as the world is too complex to be understood directly. People's perceptions of the 'world' shape their views.[13] To assist in

understanding the concept of a system can be used. In effect, *a system is a conduit for understanding* the real world. This use of a system to understand the situation takes the form of a ***conceptual metaphor*** of a conduit. This metaphor consists of three elements: *ideas/concepts are objects, systems are containers, modelling techniques are sending*.[14] Soft-systems thinking usually generate frameworks that explain ideas and concepts in terms of systems, with commonly defined modelling techniques, to assist understanding and knowledge dissemination.[15] It is related to metaphysical *idealism*.

Source Domain. This is a conceptual domain, or idea/concept, that is used to understand another conceptual domain (***target domain***) through the mapping of ***conceptual metaphors***. Source domains are '…typically less abstract or less complex than target domains. For example, in the conceptual metaphor LIFE IS A JOURNEY, the conceptual domain of journey is typically viewed as being less abstract or less complex than that of life.'[16]

Strategic Art. Strategic art is defined as the capacity and ability to frame problems within an unbounded environment (not bound by geography, time, and/or current policy), thereby bounding the problem space for lower (operational) thinking. Good strategic art leverages ***strategic theory*** and a form of ***pluralism*** known as *loose pluralism* to frame the strategic context, thereby helping provide practical context and environmental bounding to ***operational art***.

Strategic Behaviour. Strategic behaviour is defined as '…the behaviour related to the threat or use of force, and other coercive means, for political purposes.'[17]

Strategic Culture. The underlying national (group) culture that is the root of, and influences, ***strategic behaviour***. Strategic culture is often the preferred approach a nation takes to strategic problems.

Strategic Empathy. The capacity to put oneself '…into the minds of others, strategic empathy may be essential to understanding the interests of, the motivations of, and the constraints on adversaries.'[18]

Strategic Implication. Strategic implications are policy, capability, and national (or Departmental/Agency) preparedness issues that are derived from ***strategic risks***.

Strategic Option. A strategic option is a way of applying national power, and how the instruments of national power are integrated, to achieve the theory of success and strategy. Each strategic option provides a different approach to applying and integrating national power.

Strategic Risk. Strategic risks emerge from national and geopolitical trends. They may impact Government decisions on capability, policy, and strategy. The causes of strategic risk are often external to the Department and Nation.

Strategic Theory. A military theory area of study that covers grand strategy and ***strategy***. It includes the theory, practice, and historical development of the interplay between national and military power.

Strategic Thinking. Strategic thinking is defined as '…discovering and committing to novel strategies which can re-write the rules of competitive arena and necessitates relaxing at least part of conventional wisdom.'[19] As such, strategic thinking is seen to be thinking about complexity from different perspectives.

Strategy. The intellectual framework guiding how a political community develops and applies diverse forms of power in order to achieve its political ends.

Strategy au Milieu (Strategy of the Middle, or Middle Power). Strategy *au milieu* is one of two ***ideal-types*** of strategy. Strategy *au milieu* seeks to adjust the wider strategic environment to increase a nation's relative positional advantage, and make it easier for the nation to sustain their enduring national interests. Such a strategy is often enduring. Also see ***positional strategy***.

System (systems concept). An entity, physical or metaphorical, that maintains its existence through the mutual interaction of its parts to achieve a specific goal or goals.

Systems Thinking. The field of inquiry relating to the phenomena of causality that seeks to understand its structures and related features; through the medium of a ***system*** (real or metaphoric); and provide a framework for the creation and dissemination of knowledge concerning causality.

Target Domain. Target domains are the conceptual domains, or ideas and concepts, that uses another conceptual domain – a ***source domain*** – to understand better the abstract idea presented by the target domain through ***conceptual metaphor*** mapping. Target domains are '…typically more abstract and subjective than source domains.'[20] In the example of LIFE IS A JOURNEY, although the concept of life is considered more complex than a journey, life can be better understood through the experience of the source domain: 'journey'.

Theory. Theory is defined as '…a coherent group of general propositions used as principles of explanation for a class of phenomena.'[21] It forms the foundation of ***mental models***. Within a specific discipline or field of study, theory defines the field of study; bounds its problem space; and brings order by categorising the phenomena under consideration – also known as the field's taxonomy and typology.[22]

Theory of Challenge. A theory of challenge is defined as the causal logic (explanation) of the problems within the strategic environment, covering root causes, proximate causes, and negative effects. A theory of challenge should consider the causes of a strategic problem or situation, both the immediate causes (proximate) and the original root causes. This is sometimes called 'up-stream' or 'left of bang' causality. Then, the theory should explain the effects that the strategic problem or situation has on the environment overall. This is sometimes called 'down-stream' or 'right of bang' causality. Through this causal mapping, a theory of challenge indicates possible areas of strategic action to either interdict the problem (root and proximal targeting), or mitigate the effect (negative effect targeting). Theories of challenge support the development and refinement of a **theory of success**.

Theory of Failure. A theory of failure is *the causal logic (explanation) of the intended and unintended consequences of a strategic action (intervention).* A theory of failure should explain the positive and negative effects of an action, the change they cause, and the positive and negative consequences. When conducted well, a theory of failure is '…a structured approach for performing a "pre-mortem".'[23]

Theory of Success. A Theory of Success is a theory (idea) on how and why (causal logic) a given set of actions will cause the desired outcome in the environment, or within a specific crisis or conflict. A theory of success is a form of explanatory theory, relevant to the strategic environment and the nation's interests and values. A theory of success is often expansive and enduring (not time-bound), and linked to long-term national interests. A theory of success may guide one or more ***theories of victory***.

Theory of Victory. A theory (idea) on how a specific war or crisis can be overcome. Theories of Victory are normally focused on military actions, often objectives-based, are time-bound, and are different for each situation (context-dependent). Also see ***theory of success***.

War. The continuation of a group's; be it a tribal element, community, nation-state or super-state; policy using violence as the primary means of coercion to achieve a political objective or end.

War-as-Art. War-as-art is a military theory school-of-thought that believes '…reality does not conform to universal laws or principles.'[24] It views knowledge of war as dependant on observer and human interaction, meaning knowledge of war is dependent on understanding and specific context. Under this paradigm, military theory is a framework that may guide understanding in different situations, but cannot provide direct solutions. It is related to metaphysical *idealism*.

War-as-Science. War-as-science is a military theory schools-of-thought that believes specific rules and principles can be deduced to guide the conduct of war. This generates a view that knowledge of war is independent of observation and broader human nature. Therefore, military theory can provide principles and rules that directly support solutions, either within a specific area of study or across the field of inquiry. It is related to metaphysical *realism*.

Worldview. A worldview '…is a grand paradigm including the beliefs and philosophical preferences' of a person or group.[25] A worldview is made up of ***mental models*** and ***theories***. A worldview is based on a specific ***paradigm*** (or sets of paradigms) placed within a real-world context. It drives how one perceives the real world when considering problems or situations.

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[1] Zoltan Kovecses, *Metaphor: A Practical Introduction*, eBook ed. (Oxford, UK: Oxford University Press, 2002), 4.

[2] Lakoff and Johnson, *Metaphors We Live By*, 10-11; Beyerchen, *Why Metaphors Matter*, 5, 1-2.

[3] Checkland, Checkland, *STSP*, Loc 163-84; Checkland and Scholes, *SSM in Action*, A10-A12; Jackson, *Creative Holism for Managers*, 16-17.

[4] McLucas, *Decision Making*, 213.

[5] Matthew Lange, *Comparative-Historical Methods*, Kindle ed., ed. Chris Rojek (London, England, UK: Sage Publications, 2013), 39.

[6] Bosio, "Realistic Balanced Scorecards," Appendix 1, Page 11.

[7] Senge, *The Fifth Discipline*, 8.

[8] Bosio, "Realistic Balanced Scorecards," 30-32.

[9] Australian Defence Force, *ADF-C-0*, 2.

[10] "Paradigm," in *Macquarie Complete Dictionary*, ed. Susan Butler (iPad App, Sydney, NSW, AUST: Macquarie Dictionary Publishers, 2014).

[11] For summary of the scholarship, and explanation of the different styles of pluralism, see: Bosio, "Relationshop between Military Theory and Systems Thinking," 56-58.

[12] Ikenberry, "From Hegemony to the Balance of Power," 48.

[13] Checkland and Scholes, *SSM in Action*, A10.

[14] In this case, there are three 'sub-metaphors' within the overall conduit metaphor. First, objects form the source domain for the target domain of ideas and concepts. This makes ideas entities that can be bounded and placed into containers. The next metaphor is then the 'container' that can 'carry' an idea. This container (source domain) is a system (target domain). The final part of the metaphor is the transmission of the container, achieved by the modelling technique. A full discussion of the conduit metaphor is at Lakoff and Johnson, *Metaphors We Live By*, 10-12, 126-27.

[15] Checkland, *STSP*, Loc163-84; Checkland and Scholes, *SSM in Action*, A10; McLucas, *Decision Making*, 220; Jackson, *Creative Holism for Managers*, 22-23.

[16] Kovecses, *Metaphor*, 252.

[17] Gray, "Strategic Culture as Context," 50.

[18] Abbe, "Understanding the Adversary," 20.

[19] This definition comes from Loizos Heracleous, cited in: Ryan, *Thinking About Strategic Thinking*, 5.

[20] Kovecses, *Metaphor*, 252-53.

[21] The dictionary definition is also supported by Skyttner. Lars Skyttner, *General Systems Theory: Ideas and Applications*, Reprint 2002 ed. (London, England, UK: World Scientific Publishing, 2001), 88; "Theory," in *Macquarie Complete Dictionary*, ed. Susan Butler (iPad App, Sydney, NSW, AUST: Macquarie Dictionary Publishers, 2014).

[22] Reynolds, *Theory Construction*, 10-11; Skyttner, *General Systems Theory*, 88; Rich Ganske, "Personal Theories of Power: Theory Properly Constructed," *Offiziere.ch: Security Policy – Armed Forces – Media*, *Swiss Landmarks*, 2014, http://www.offiziere.ch/?p=16961.

[23] Meiser, "Bringing a Method to the Strategy Madness," http://warontherocks.com.

[24] Vego, "Science vs Art," 67.

[25] Skyttner, *General Systems Theory*, 88.

ANNEX B – AUSTRALIAN STRATEGY FORMULATION FRAMEWORK

The ASFF in Overview

THE AUSTRALIAN STRATEGY FORMULATION FRAMEWORK

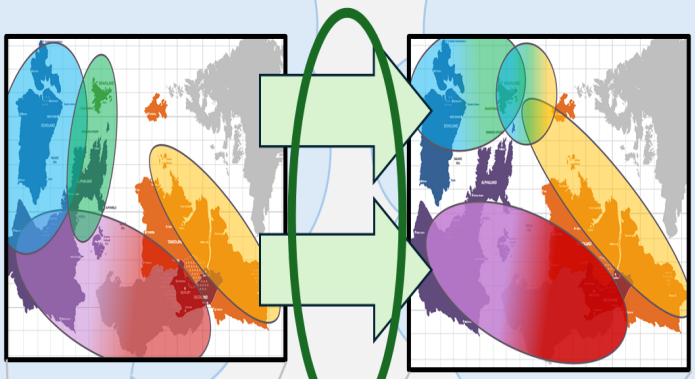
FRAME THE ENVIRONMENT

STEP 1 – Understanding Current Context

Seek to understand the environment, relationships, and different perspectives of each actor.

Focus:

- What do we think the environment is
- What are our different view points
- Create common understanding
- Factors influencing others
- Relationship between actors
- Why actors behave in particular ways



STEP 2 – Assess Future Context

Seek to confirm long-term interests and values, and the possible futures that could occur, both desirable and compromised outcomes.

Focus:

- Possible likely futures
- Preferred/Desirable Future
- A future "we can live with"
- National interests and values
- How relationships may change, or could change
- ***Initial Theory of Success***

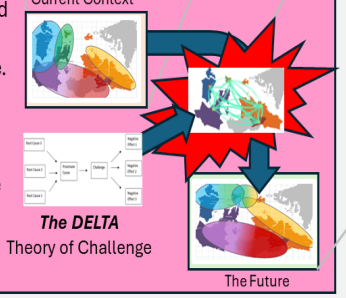
FRAME THE PROBLEMS

STEP 3 – Determine Challenges

Determine the obstacles and willingness to act against them to get to desired future.

Focus:

- Difference between futures and current
- Challenges and leverage points
- Priorities and risk
- ***Theories of Challenge***

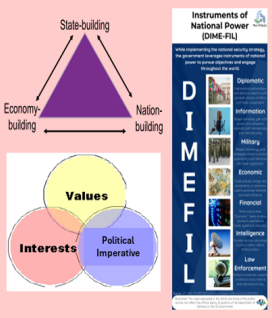


STEP 4 – Capacity, Risk, and Ethical Considerations

Understand the national capacity by considering the availability, constraints, and risk appetite of different instruments and partners.

Focus:

- Strengths and Weakness
- Sovereign Risk Threshold
- What will you **NOT** do (Values)
- What can be done alone, what needs partners
- ***Re-affirm Theory of Success***



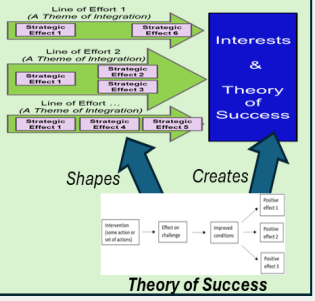
DEVELOP STRATEGIC APPROACH

STEP 5 – Develop Approach Options

Develop the different options and finalise theory of success.

Focus:

- Options, Narratives, Strategic Effects
- How integrated, how much free reign
- Frameworks of Action
- ***Theory of Success***

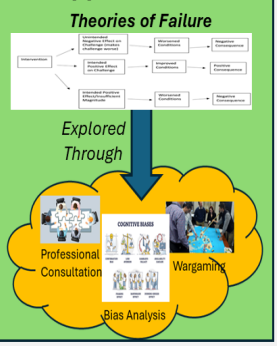


STEP 6 – Challenge the Approach

Test options and refine them to ensure risks are mitigated, biases reduced, and Theories of Failure are overcome.

Focus:

- Confirm final 2-3 options
- Identify recommended option for Government
- Confirm and Mitigate Risks
- Refine and Update
- ***Theories of Failure***



ANNEX C – ASFF STRATEGIC QUESTIONS

Strategic Questions for Analysis by ASFF Step

This annex provides additional strategic questions and sub-questions that can be used by strategic artists to guide discussion and analysis.

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Step 1 – Understanding Current Context

- Questions for the Wider Environment: What are the key international factors?
  - What do we understand about the situation we are attempting to affect?
    - What gaps do we have? Can we improve these gaps?
    - How do other actors see the situation (either inferred or explicitly stated)?
    - Do we understand why others see the situation that way?
    - Do we understand how others may react to us?
  - Actor Relative Power?
    - How effective are the *foundations of national power* for different actors?
    - Looking at different actors, do they have greater capacity to enhance their *foundations of national power*? Are there weaknesses in these foundations?
    - What are the relative strengths compared to other actors?
  - What are the relationships we seek to preserve, disrupt, develop or mitigate if we are to succeed?
    - What relationships exist between actors?
      - Which actors have power?
      - Which actors are allied to each other?
      - Which actors have band wagoned with malign influences?
      - Which actors belong to which alliance/international groupings?
      - How powerful are different blocs?
    - Considering these relationships, which ones are worth:
      - Preserving,
      - Disrupting,
      - Developing, and/or
      - Undermining/Mitigating against?
  - Which actors hold what leverage over us?
    - This may include treaties, policies, and other commitments.
    - It may include trade, manufacture, and other resources dominance issues.
    - Can we change these, can we break them?
    - How do others view us changing/breaking these leverage points?
    - How might these constraints limit our thinking?

- Questions for Ourselves: What are the key domestic Factors?
  - Upon initial review, do we have the capacity to be 'free-thinking'? Are we constrained by:
    - Policy
    - Resources
    - Legal Framework
    - National values and ethics
  - How strong are our foundations of national power? What are our initial strengths and weaknesses?
    - Consider the foundations and their current strengths and weaknesses. What areas could be grown? What areas a weak and require investment?
    - *Think of this as the Strengths/Weaknesses section of SWOT*
  - What gaps do we have in our knowledge about ourselves? Do we understand our (as examples):
    - Manufacturing Capacity; Critical National Infrastructure
    - Community structures and responses; Community feeling for different international actors

Step 2 – Assess Future Context: Strategic Questions

- Understand Our Nation, Interests, And Values
  - The Political Imperative:
    - What has been stated, what is known?
      - Is the above understood?
      - If not, what additional guidance is required from ministers?
    - If further guidance is not forthcoming:
      - what assumptions need to be made to continue?
      - When and how are they tested?
  - Are the national interests and values clear:
    - What are the political and historical norms?
      - Consider the environment, the political imperative, and what is known about actor relationships.
      - Consider your understanding of the nation's strategic culture and historical policy norms.
    - Based on the above, what are:
      - National values?
      - National interests?
    - Do the above values and interests make sense?
      - Are they supported by history, or is it a fundamental shift?
      - Do they align with the political imperative, or is the nation undergoing a transition to meet the current context?

- Understand the Different Futures
  - What is the future like: Explain this as a narrative that highlights the "story" from now to the future, drawing out the key causal elements.
    - What does the future look like if the current situation continues?
    - Is that suitable for us?
      - Would this situation align with our national interests? Our values?
      - Can we make that future occur quicker if it aligns?
      - *This is the initial framing of Opportunities and Threats of SWOT*
  - What is our Desired Future: Explain this as a narrative that highlights how national interests and values are met, and the relationships between actors.
    - What do we want the future to look like, given our values?
    - Does this align with the likely future (See previous)?
    - Does this future require ongoing development or are we dealing with a strategic shock:
  - Develop an initial picture of what success looks like:
    - What is success (as a vision statement)?
    - Are there discrete national objectives; do the objectives align with values and interests?
    - How could we make success work:
      - Initial *Theory of Success*.

Step 3 – Determine Challenges: Strategic Questions

- What Challenges Exist between current, future, and desired outcomes?
  - How does the current environment affect our interests?
    - How does the environment undermine our interests? How does the environment complicate our interests? Which actors cause this?
    - How does the environment help or enhance our interests? Who causes this?
    - How does the current environment undermine or enhance our *foundations of national power*?
  - How does the likely future environment affect our interests?
    - What are the key differences between current and likely future?
    - What are the common themes between now and the likely future?
    - How does the environment affect (undermine/ complicate/ enhance) our interests and *foundations of national power*? Which actors cause this?
  - What are the key differences between current environment, likely future, and our desired future?
    - What are the key differences between current and desired?
    - What are the key differences between likely and desired future?
    - What are the common themes between these futures environments?
  - What are the major challenges and opportunities in the environment (values agnostic)?
    - What are the *Theories of Challenge*?
    - Which proximate causes and root causes present opportunities for change? What priorities may be relevant to leveraging/targeting these causes?
    - Use narratives that illustrate key elements of the challenges, "making it real" for decision-makers and planners.

- What opportunities, threats, and considerations do the challenges represent?
  - Which Challenges can our Theory of Success (or Victory) be applied to?
    - Reviewing the *Theories of Challenge*, can we deal with these challenges and still meet our interests?
    - Does our *Theory of Success* need to change?
  - Can we deal with challenges and still maintain our values?
    - Based on these *Theories of Challenge*, is there alignment between our interests, our desired future, and our *Theory of Success*?
    - Do our values allow us to deal with every challenge? Which ones do we not wish to deal with as it may breach our values? Should we accept this?
  - Given our values, what opportunities exist? How does this support us?
    - What common proximal/root cause themes can we leverage?
    - How can we leverage the differences between challenges to our advantage?
    - How will our *Theory of Success* influence international will and popular support? How can we change this?
    - Based on the *Theories of Challenge's* Negative Effects, what are the unintended consequences to our *Theory of Success*?
  - What sort of approaches and strategic effects may be best applied to different challenges? These initial approaches can be expressed as a narrative.
    - Is soft, hard, or a combination of powers best applied, and which challenges?
    - Which assets and instruments of the nation provide the greatest support?
    - Which other assets and instruments help reinforce? Which assets or instruments, if used, hinder our progress?

Step 4 – Capacity, Risk, and Ethical Considerations: Strategic Questions

- Understand Our Instruments of the Nation
  - What Instruments are Available:
    - What capacity is available in the different instruments? How much effort is each instrument currently applying to support, enhance, or maintain the *foundations of national power*?
    - What instruments can be re-directed? What cannot be redirected? How does this risk the *foundations of national power*?
    - Are there any critical strategic capabilities?
  - How could we use these Instruments:
    - What are the strengths and weaknesses of each Instrument?
    - Which instruments best relate to the current dynamics seen in the environment?
    - Which instruments are inappropriate in the current dynamics of the environment?
    - What are the different ways we can use each instrument? Which challenges do they best suit?
  - What are the constraints on the capabilities:
    - Are there any national values that constrain certain uses?
    - Are there any legal or ethical issues with specific instrument usage?
    - Do we need to change any policy, legal, or procedural frameworks?

- Understand Our Level of Integration and Risk Appetite
  - How well orchestrated are we; do we need to be:
    - How do we ensure appropriate complementary and simultaneity of activity?
    - Do we need full integration? Can there be independent action under a unified vision?
    - *NOTE: not every strategy must be "total whole-of-government". Sometimes independent action within broad guidance may provide greater flexibility for the nation.*
  - What can we do:
    - What can we achieve alone?
    - What requires careful national integration, and what can be enacted by agencies independently?
    - Where do we need partners and allies? Will they assist?
    - How integrated do we need to be with partners and allies?
      - Similar goals, different approaches
      - Same goals and vision, independent actions
      - Integrated Coalition
  - How far are we willing to 'go':
    - Which values cannot be broken or adjusted?
    - What can we not stop doing to achieve this strategy?
    - What are the associated risks with each opportunity and challenge?
    - Is there sufficient international and domestic support to pursue different approaches?
    - What is not allowed? Why?
    - Where we must work with partners and allies, what is the trade off? Is this worth it?

Step 5 – Develop Approach Options: Strategic Questions

- Questions for Strategic Option Development: What Does the Option Look Like; Who Does What?
  - What are the various options?
    - What are the viable options? Review the *Ends-Ways-Means-Risk Matrix* from Steps 3 and 4.
    - How many options are really different? Select different ones
    - Which instruments are likely to lead for each? Does it need to be fully integrated?
  - How does the option relate to our interests, values, and theory of success?
    - What is the 'big idea' for each option?
    - How does the option achieve our interests and *theory of success*?
    - Is the option easy to explain? Will we be able to sustain political and popular support (domestic first, international second)?
  - How does the Option Work? Make the narrative 'real' by using illustrative examples of actions on the ground (see annex E) to help people quickly engage with the option and understand the type of actions that support the strategic effects. Such narratives will also help draw out how integrated the strategy needs to be, as well as the authorities required. Consider:
    - What effects/actions must be integrated? Which effects/actions could be enacted independently by agencies?
    - Who is responsible for enacting specific effects/actions in the environment? Who supports the primary actor?
    - How do these effects and actions 'fit together' over time? Does it matter? Can they be independent?
  - What does FASS-A/D say (See Appendix D)?
    - Reduce options to *two-four* if possible.

- Questions for Option Management: How do we Manage this Option?
  - What are the authorities and Control Systems Needed?
    - Who leads the option?
    - If fully integrated, who is the overall control authority?
    - What authorities must be established? At what levels?
    - How often should we review it?
  - What is Success? How do we know?
    - What are the measures of effectiveness and success? These should be qualitative in nature, and based on strategic judgement. Quantitative measures should only be used where there is clear, bounded, and well-understood situations and scenarios.
    - How do these relate to our *Theory of Success* and National Interest?
    - How do we assess/measure this? How do we know we are progressing?
  - What are the risks? How do we Refine the Plan?
    - What risks are drawn from the *Ends-Ways-Means-Risk Matrix*? Are these the only risks?
    - How can we test the plan to identify risks, mitigation, and refining the plan?

Step 6 – Challenge the Approach: Strategic Questions

- Identifying Risks and Mitigating them
  - Analysis Free of Bias:
    - Have we been rigorous and attempted to remove bias?
    - Do we know our biases? How did we overcome them?
    - What measures did we take? Are we happy explaining them?
  - What Are the Risks; Do We Understand Them:
    - What assumptions remain?
    - What risks have we already identified? What are their root causes?
    - Have we tested the capacity of the Instruments? Are we being realistic?
    - Is there an integration risk? Are we too integrated, reducing agility? Are we too independent, leading to diffusion?
    - What are the single points of failure? What Black Swans and Alternatives Actor Actions exist?
  - Can We Mitigate the Risks, Do we Accept Them:
    - What mitigation do we have if assumptions are wrong?
    - How do we mitigate the known risks? Why are we not mitigating some?
    - What spare capacity do we have in different Instruments to react? What are our contingency assets?

- Refining the Options, Identifying the Recommendations
  - What changes need to be made:
    - Based on the risks?
    - Based on the mitigations? Are the mitigations contingencies or integral to the options?
    - Based on analysis and testing?
    - Why are these changes made?
  - Do the Authorities Make Sense:
    - Did we test the authorities conceptually?
    - Do others (executors) understand how the coordination and authorities work? If you are in their shoes, do you think it will work?
    - Is it too compartmented for people to understand?
  - Which Options are Recommended:
    - Which options go forward? Why?
    - Which option is recommended to Government? Why?
    - Is there value in the non-progressed options? Where could they be used? What are the circumstances?
      - Contingencies for this plan
      - Positional Strategies within a wider grand strategy
      - Alternative situations and scenarios (alternative contingencies)

ANNEX D – SELECT TOOLS, TECHNIQUES, AND METHODS

Selected Analysis Tools to Support Strategic Artists

This annex provides a selection of tools, techniques, and methods that support the ASFF and strategic analysis. The tools in this annex are not exhaustive. There is some overlap between the tools and techniques listed in this annex, and those in ADF-P-5 – *Planning*, the UK Royal College of Defence Studies' *Making Strategy Better*, the US National War College's *A National Security Strategy Primer*, and the US Army's *The Red Team Handbook*. Links to these resources are provided in annex F – *Recommended Readings*.

For each technique or method, this annex provides an overview of the method and some additional resources that strategic artists may use to further understand the tool. Many of these resources are direct hyperlinks to websites, articles, and Youtube videos. The annex also lists which ASFF Step the method best supports.

Causal Logic Explanations

Briefly described in Chapter Two, causal logic narratives help explain why actors undertake the actions they do. Causal logic can be developed through a range of concepts and techniques. For example, systems thinking includes several causal techniques. Another example are the four causal logics in Craig Parsons' book, *How to Map Arguments in Political Science* (overview in Chapter Two). These logics provide another method of exploring and capturing causal narratives and explanations. Such narratives can also be drawn from other related disciplines. Some additional concepts that can help develop a causal narrative include:

- **Theories of Success, Challenge, and Failure.** These theories, outlined in Chapter Four, are forms of causal analysis that can be converted into a narrative.
- **Foundations of National Power.** Discussed in Chapter Three, the foundations of national power provide a way to interrogate the interactions within a nation-state, and thereby develop a causal narrative of internal dynamics, and how those dynamics may help or hinder the target's national power and capacity.
- **International Relations Theory.** *Realism*, *liberalism*, and *constructivism* are models that attempt to describe and explain the 'ways' in which the world works. Each offers a theoretical basis for the causality of actions and the relationships between communities in the international order.
- **Systems thinking tools** (hyperlinks included). Systems dynamics, causal loop diagrams, and concept mapping are all tools that can be useful in understanding the causality between actions and actors. These can then be converted into a narrative. To be useful, many of these systems tools require a level of education or facilitation for their effective use.

Many of the theories and concepts taught on a professional education experience, such as a war college or the Australian Defence and Strategic Studies Course, will often support causal logic development.

ASFF Steps Useful For: All Steps. Additional information on using causal narratives, and illustrative examples within such narratives, is discussed in Chapter Two and annex E.

Actor Policy Dials

Policy dials use an analogy of a 'dial' to understand how policy setting may change. The analogy illustrates that policy settings are points on a dial that can be increased or decreased to create new options. The idea helps visualise how actors respond to each other and the environment. The dials have been visually developed by Celestino Perez Jr. of the US Army War College, and are presented at Figure D.1.

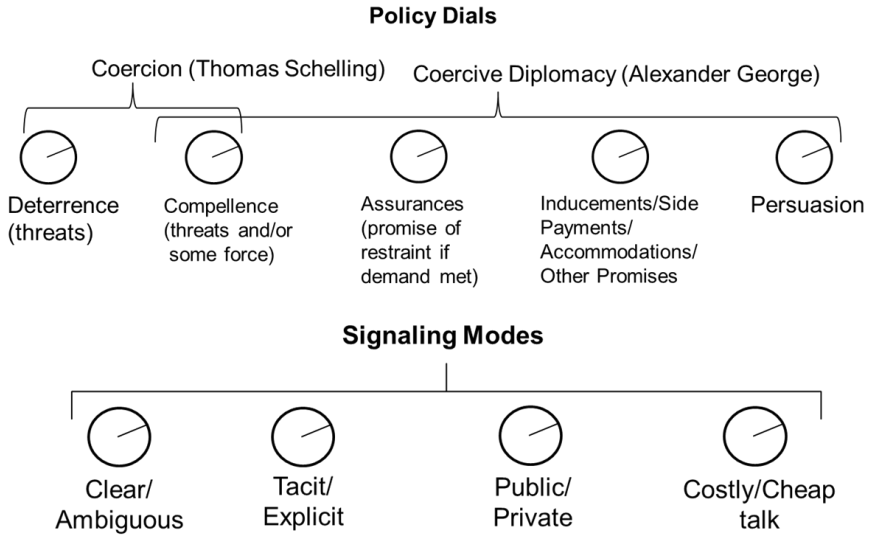


Figure D.1: Policy Dials

ASFF Steps Useful For:

- **Step 1 (Primary).** Used to illustrate how actors are currently attempting to influence the environment, and what 'settings' the actors may be at. Can also be used to illustrate if an actor can change their settings, or have capacity (or desire) to do so.
- **Step 2 (Optional).** Used in a similar fashion to Step 1. However, the dials now illustrate how each actor may have changed their settings in different futures.
- **Step 4 (Primary).** Used to illustrate current capacity of the nation, and what setting the nation is currently at. Also useful to highlight which national instruments relate to which dials. The dials may help visualise how approaches can be changed, and how much effort may be required for success.
- **Step 5 (Secondary).** Pending analysis, policy dials can be a useful way to help illustrate what a strategy may look like 'on the ground'.

PESTLE: Politics/Policy, Economy, Society, Technology, Law, Ethics

PESTLE is a list of six considerations of national/group dynamics. The considerations are: Politics/Policy, Economy, Society, Technology, Law, and Ethics. Although not national power (see Chapter Two), PESTLE represents the observable manifestation of the three elements of national power: *political control*, *ideological cohesion*, and *harnessed economic potential*.

For each consideration, the strategic artist reviews the group's dynamics. The group under analysis may be self, ally, partner, or another actor in the environment. The analysis is conducted through three areas (Figure D.2): *factors*, *deductions*, and *effects on strategy*.[‡‡‡‡]

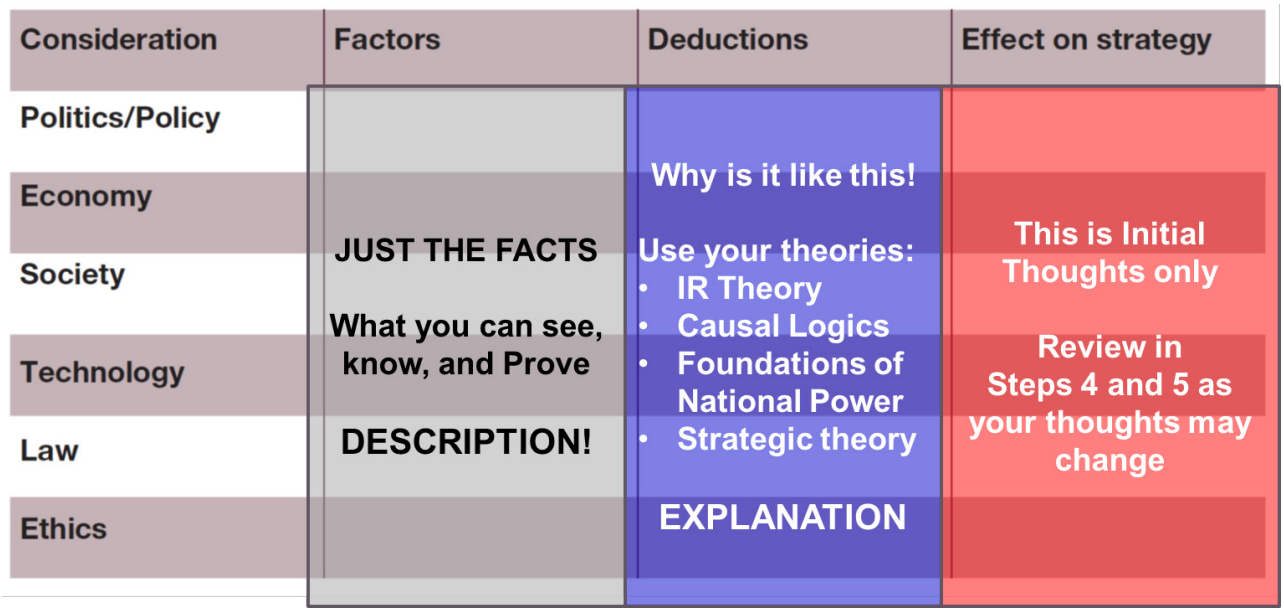


Figure D.2: PESTLE and its Analysis

PESTLE works best when it is used to integrate causal logic. This approach is illustrated in Figure D.2. As an integrating tool, PESTLE allows the analyst to capture their causal analysis in a structured way. To do this, the following is recommended:

- When considering the Factors section of PESTLE, outline only what is known or could be readily inferred. The focus of this section is: *what we see*, *what we know*, and w*hat the actor states is their intention*.

- Deductions then delve into *why the factors* are like they are. This is the section where causal analysis should be captured. Tools such as causal logic and actor policy dials, described above, are useful in teasing out the 'why' of each factor. Additionally, ethical and philosophical considerations may also help explain why different factors exist. Remember to include how history, both of the actor and the history between actors, may have influenced the observable factors.

- The final section is Effects on Strategy. Early in the ASFF, the information in this section will be initial thoughts. As the strategic artist progresses through the ASFF, the points within this section can be updated. This section provides the 'so whats', helping inform the development of the strategic approach. Also remember to include *both* opportunities and threats in this section.

ASFF Steps Useful For:

- Step 1 (Primary). Used to explore different actors. Time available for analysis will dictate how many actors to consider. If time is short, it may be necessary to only consider the most important actors (see *Power Matrix* below for guidance).

- Step 2 (Optional). PESTLE can be used to articulate how actors may change in different futures. This may also highlight where opportunities may exist, or which factors the strategy

[‡‡‡‡] Diagram from: Royal College of Defence Studies, *Making Strategy Better*, 80.

may target to create the required change in the actor. Using PESTLE in Step 2 is only recommended if time is available to explore the future scenarios to this level of detail.

- **Step 4 (Secondary).** PESTLE can be used as a method of self-analysis. It may be a useful tool to capture the analysis of Step 4, identifying strengths and weaknesses within the nation.

Power Matrix

The Power Matrix is '…a straightforward tool to identify the relative power and interests of actors who have a role (or influence)…' in the strategic environment.[§§§§] The matrix is a simpler and faster method of influence and relationship analysis then some other tools, such as Social-Network Analysis.

The matrix is an analysis of relative power within an environment, as defined by the analyst. It may be the strategy's national, regional, or global context (Chapter Four). The environment may also be a sub-region of a larger strategic environment under analysis. For example, if the strategy is focusing on the Indo-Pacific, the power matrix may consider the Indo-Pacific as a whole, or there may be a power matrix for the South-West Pacific, and another for Southeast Asia. The actors within that environment must be defined as they will influence the relative analysis.

Each matrix is a three-axis diagram. The **'y-axis'** represents *relative power when compared to other actors* in the system. The **'x-axis'** illustrates the relative interest different actors have in influencing the outcomes of the environment. The 'z-axis', which is illustrated through +/-symbols, represents the support or opposition the actor has for the strategic artist's own nation. Own nation is **not** part of the analysis.

The matrix is developed by plotting actors relative to their power, interest, and each other, as seen in **Figure D.3**.[*****] For z-axis considerations, notations can be added to each actor. Because the qualitative plotting is based on relative power, selecting which actors to include is important. A Power Matrix of the South-West Pacific without the United States and China will look very different to one with both Great Powers included in the analysis.

The benefit of the power matrix is that each quadrant provides an initial indication of how the strategy may need to deal with different actors. This simplified analysis is:

- **Top Right Actors:** Any actor in the top right quadrant is a key actor in the environment. The nation should *COOPERATE Closely* with those that support, and *OPPOSE* others.
- **Top Left Actors:** These actors may be future 'spoilers' in the environment. Although not engaged now, they have the power to make change if they choose. Therefore, the nation should either *SATISFY* to keep support, or *BLOCK*.
- **Bottom Right Actors:** These actors can be useful partners and allies of any Top Right actor and the nation. Therefore, the nation may wish to keep *INFORMED* supporting nations and *BLOCK* opposing ones.
- **Bottom Left Actors:** Have little power or interest in changing the environment. They should be monitored to see if the situation changes over time.

[§§§§] Royal College of Defence Studies, *Making Strategy Better*, 81.

[*****] Figure from: Royal College of Defence Studies, *Making Strategy Better*, 81.

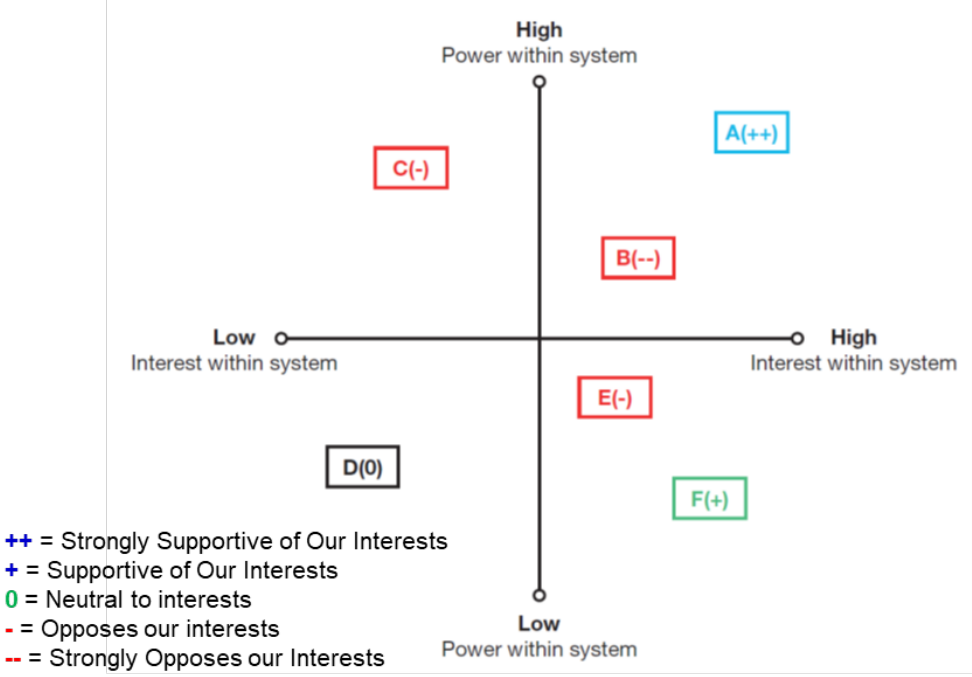


Figure D.3: Power Matrix Example

The Power Matrix provides a simplified analysis for each actor. This analysis can be further tested throughout the ASFF. Because the Power Matrix is relatively quick to produce, it can be used during strategy execution to consider how actors change over time, relative to each other and the strategy overall.

ASFF Steps Useful For:

- Step 1 (Primary). Used to explore current power relationships within the environment. Can be useful in identify key actors (Top Right) to guide PESTLE priorities when time is short.

- Step 2 (Secondary). The Power matrix can be used to illustrate how future environments change. This is a useful way of quickly capturing the expected or desired change, thereby assisting in the development of *theories of challenge* in Step 3.

- Strategy Execution (Optional). The power matrix can be a simple method of qualitative analysis to gauge how well the strategy is affecting different actors and their relative positions.

Futures Analysis: Quadrant Analysis

Futures analysis requires imagination and knowledge of different futures techniques and tools. This annex provides an overview of two techniques, with the first being the Quadrant Method. A short discussion on some of the thinking that may assist in futures analysis is captured in Joseph Voros' article 'A Primer on Futures Studies, Foresight and the Use of Scenarios' (hyperlink added).

The Quadrant Method is part of a larger approach known as *Scenario Planning*, discussed later in this annex. For now, this section provides an overview of the quadrant method as it relates to Step 2 of the ASFF. The approach is useful to either quickly develop a future situation, or to generate a future for a strategic contingency plan (Chapter Five). The conceptual framework for the quadrant method is seen in Figure D.4. A useful ready reconner for the Quadrant Method was developed by Shell NXplorers called 'Scenario Planning Quadrant' (hyperlink to PDF added).

Conceptual Framework

	Low **Variable 1** High	
Low **Variable 2** High	Scenario Narrative 1	Scenario Narrative 2
	Scenario Narrative 3	Scenario Narrative 4

Figure D.4: Conceptual Framework for Quadrant Method Futures

To undertake the method, the strategic artist should:

- Focus on a specific question. This may be 'what does the environment look like in ten-years time', or 'what does a Malign Power's Government collapse look like if it occurred?'
- Develop two critical variables to frame the scenarios. These variables should be critical and will change the environment in different ways. Causal narratives, power matrices, and/or the information in a PESTLE may provide suggestions for what these critical variables are. Figure D.5 provides an illustrative example, where the two variables are:
    - Stability of a Specific Region (stable); and
    - Investment of an Allied Major Power (more or less investment in the region).
- Create a 'matrix' (or table) of the two variables. As seen in Figure D.5, a matrix is built of the two variables to create the foundation for the four futures scenarios.
- Create Futures Narrative. Develop a short narrative, with causal elements between actors and the environment highlighted, that explains what each future looks like.

Illustrative Example

	Stability of the Specific Region *Worse*	*Better*
Higher **Allied Power Investment in Region** *Lower*	Worsening Strategic Competition, leading to War	Allied Power Dominance
	Malign Actor Dominance	Middle Powers Concert

Figure D.5: Illustrative Example of Quadrant Method

A common failing in futures is extrapolating 'what is going on now'. Although one of the quadrants may look like 'today but worse', there should be clear differences between all four quadrants. If they all appear to be different flavours of 'now', then the strategic analysis may not have the right question or variables. Additionally, extrapolating today in more than one scenario may indicate that the strategic planning team is too reliant on existing biases and paradigms. Such over-extrapolation suggests that there may not be enough imagination in the futures analysis. To overcome these concerns, the next section discusses another futures method.

ASFF Steps Useful For:

- Step 2. This method may be used in Step 2 to create the different futures scenarios.
- Contingency Plans. This method is very good at creating the 'current state' for a possible contingency plan, as indicated in Chapter Five.

Futures Analysis: Semiotic Squares

Another tool for future analysis is the Semiotic Square. This tool helps generate divergent futures that can be used to either frame policy options, or test strategy in different circumstances. The approach is discussed in detail by Ben Zweibelson in his article 'The Semiotic Square and Systemic Logic: A Technique for Multiple Futures' (hyperlink provided). The following provides a brief overview of the technique, as explained by Zweibelson.

The framework consists of four possible futures, as seen in Figure D.6. Each future is expressed as a narrative. These four futures should be plausible to ensure they are useful for analysis. The four futures are:

- Future A. This is the preferred/desirable future. It is the future that the nation wants to have, through its strategy. This future fits the national interests and values.
- Future B. This is an undesirable future. The future may be framed as the likely future if no action is taken. Where it is difficult to assess the likely future, Future B should be the opposite of Future A. Either way, the future must be a direct challenge to a nation's interests and values. The tensions between this future and the nation's interests and values should be clear.
- Future C. This is a combination of Futures A and B, and may be seen as a 'compromise future'. In this future, the nation still exists and can operate. However, there are challenges. Compromises may need to be made to national interests, but not values overall. This future allows the strategic artist to explore what interests may need to change, or can be of lower priority, to allow the nation to adapt.
- Future D. A divergent future that has no parts of Futures A, B, or C. This future should be an 'out-of-the-box' future, but still plausible. This future should challenge values, interests, and the cognitive biases of the team. Such analysis helps tease out the real importance of values and interests overall.

A well-developed Semiotic Square allows the strategic planning team to explore different national interests, endstates, outcomes, and *Theories of Success/Victory*. Semiotic squares also overcome the issues of over-extrapolation of the contemporary environment and possible group-think.

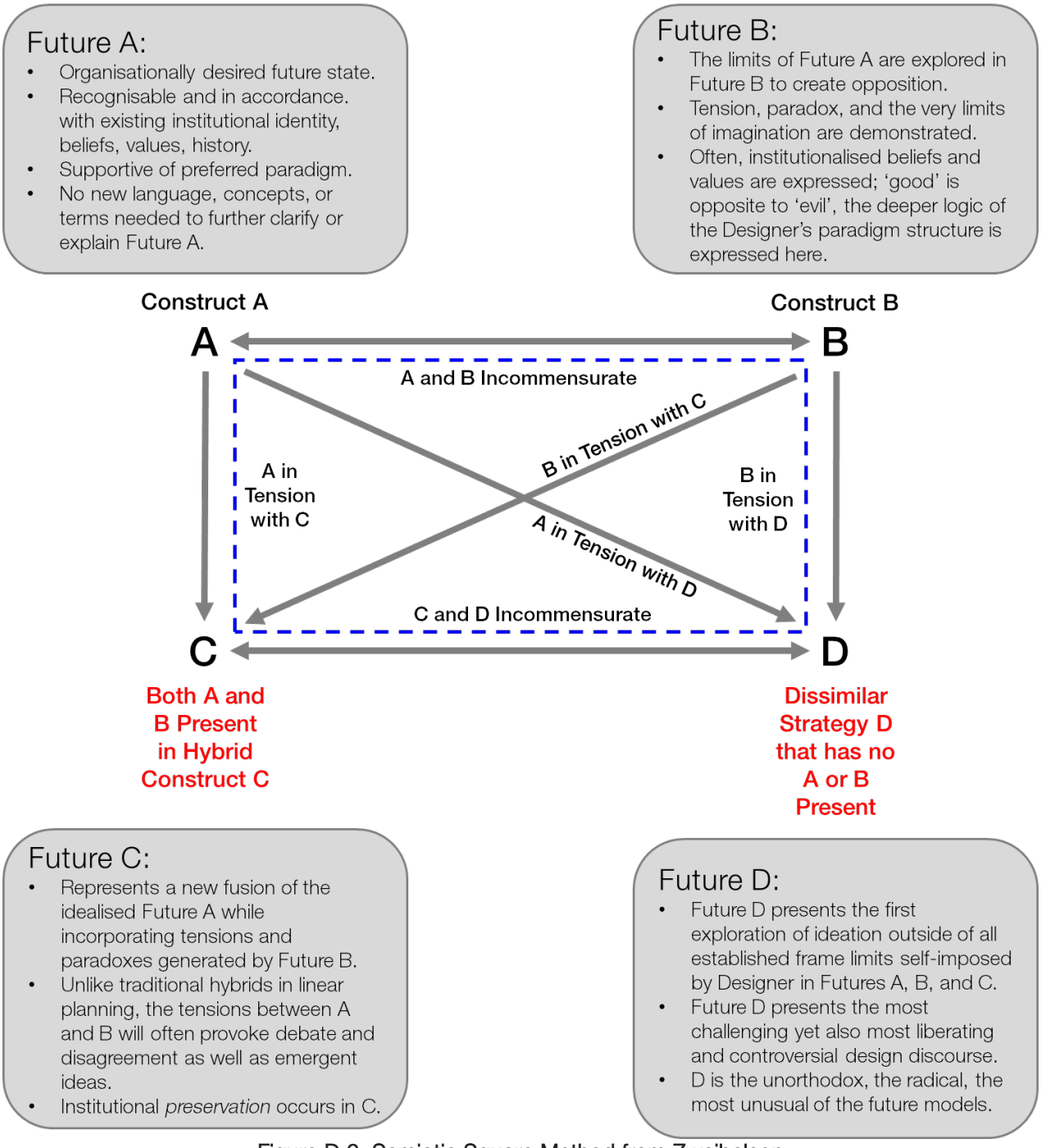


Figure D.6: Semiotic Square Method from Zweibelson

ASFF Steps Useful For:

- **Step 2 (Primary).** This method is used predominantly in Step 2 to create the different futures scenarios.
- **Step 6 (Secondary).** Future D is a useful way of testing the *theory of success* and strategy in extreme circumstances. Future D, when coupled with other tools such as Six-hats or Five Whys (discussed later), can help tease out final biases and unknown risks.

Red Teaming: Five Whys

The *Five Whys* is a red team technique designed to explore the underlying cause-and-effect of a particular problem or challenge. The technique is explained in the US Army *Red Team Handbook* (link in annex F). A blog by Michaela Toneva, entitled '[Unlock the Power of 5 Whys: Root Cause Analysis Made Easy]' (hyperlink provided) explains this technique well. **Figure D.7** is drawn from this blog and illustrates the concept.

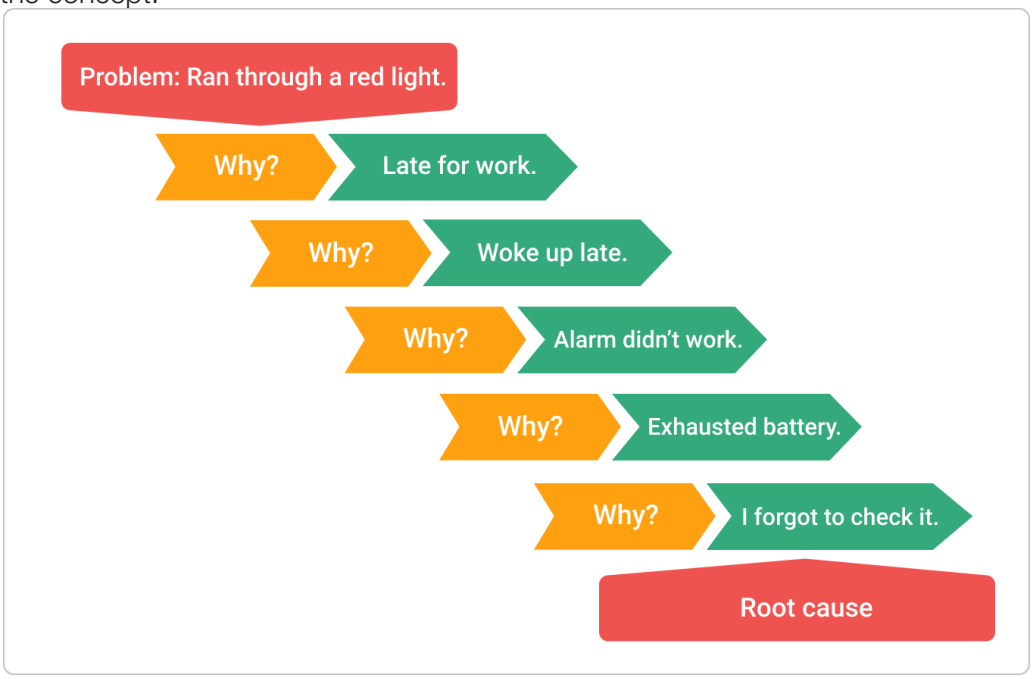


Figure D.7: Five Whys

The *Five Whys* tool seeks to identify the root cause of an issue. The tool can be used in environmental framing. However, it is most powerful in exploring the possible challenges and opportunities within a problem space. As such, it is a useful method in developing the root and proximal causes of a *theory of challenge* (Chapter Four).

To use the method, start by selecting a key challenge in the problem space. Once the challenge is selected ask the question 'why?'. For each level of 'why', the strategic artist should seek to explore what caused the higher level. In the illustrative example in Figure D.7, the second-level why, *waking up late*, was the cause of being *late for work* (first-level why). Doing this analysis five times helps draw out the root cause of the problem.

It is true that a strategic artist could continue asking why until they drill deeply into the problem. This may be appropriate in some cases. However, such additional analysis is more likely to lead to paralysis of the planning team. Although five 'whys' may not produce the absolute root issue, it is a valid approximation that – if addressed – is likely to advance national interests until more information becomes available.

ASFF Steps Useful For:

- **Step 1 (optional).** This method can be used to help draw out the causal narratives of why actors operate in particular ways.
- **Step 3 (primary).** The method is best used to tease out the proximal and root causes of challenges, enabling the development of *theories of challenge*.

- **Step 6 (Secondary).** The method can be used to explore different risks and identify their root causes, sometimes known as risk cascade analysis. Such analysis can help identify risk mitigation options.

Red Teaming: Devil's Advocacy

Devil's Advocacy (or Devil's Advocate) is used to test the assumptions and biases within analysis and thinking. The technique is explained in the US Army *Red Team Handbook* (link in annex F). Although the tool can be overused and misused, when used sparingly, appropriately, and after brainstorming and analysis, the tool can help enhance thinking and identify new approaches.

The tool can be used in two ways. The first is to have a separate team review all evidence and act as the devil's advocate. However, most strategic planning teams will not have the time or depth of personnel to achieve an independent advocate. Rather, most strategy planning teams use the technique in a qualitative and expedient way. In such cases, the two processes most useful are: *Socratic Devil's Advocate*, and *Dialectic Devil's Advocacy*.

The first approach, *Socratic Devil's Advocate*, sees an individual ask the question 'why' and similar critical questions for each statement made by the plans team. This approach forces the team to articulate their thinking and explore their assumptions. This is a variation of the *Five Whys*, and is best used in a group discussion situation. The second approach is more structured, and leverages dialectic analysis.

Dialectic Devil's Advocacy starts by framing the problem, or solution for testing, into a statement of fact. This should be a short narrative with the key elements that explain why the statement is a fact. This statement is called the thesis. Next, re-state the fact as an antithesis, or opposite statement. The team should explain why this opposite exists. Where possible, this explanation should be linked to the analysis from Steps 1 and 2 of the ASFF. In effect, the team is presenting an alternative view and perception of the problem space, potentially from the perspective of another actor in the environment.

Using the antithesis, outline the elements of the thesis (original problem statement) that now appear faulty, or ignored key elements of the environment/analysis. Through this process, draw out a more robust understanding of the problem from different perspectives, its leverage points, risks, and opportunities. This is known as a **synthesis** statement.

Although there is significant scholarly work on the different devil's advocate methods, Youtube provides very succinct explanations. Some useful Youtubes are (hyperlinks added):

- The Devil's Advocate TED Talk by Michael Roberto.
- The Socratic Method – Socratic Debate (Socratic Devil's Advocate) by PhilosophyMT.
- Critical Thinking TED-ED by Erick Wilberding.
- Dialectic Thinking (Dialectic Devil's Advocacy) by Project Liminality.

ASFF Steps Useful For:

- **Step 3 (Dialectic Devil's Advocate).** The method is best used to explore different challenges. The approach helps to draw out both root cause and effect of the challenge, enabling the development of *theories of challenge*. Also useful to identify alternative views on the challenge, and identify opportunities.

- **Step 6 (Socratic Devil's Advocate).** The method can be used to explore different risks and identify their root causes. It can also be used to explore the biases within the planning of a strategic option. It is similar to *Five Whys*. However, the human-to-human interaction often helps identify critical questions and issues.

Red Teaming: Six Hats

The final red teaming tool that this annex provides is the *Six Hats* method. The method is also known as the *de Bono Hat Method* and Role Playing in *Making Strategy Better*.

Figure D.8 illustrates the six hats and what they are used for. This figure is drawn from the de Bono Group website (hyperlink provided). This website also provides a useful summary of the method. The following Youtube videos may also assist in understanding the method:

- What is Six Thinking Hats? By Litmos Heroes.
- Turn a Good Idea into a Great One with the 'Six Thinking Hats' by the Art of Improvement.
- How to Use the Edward de Bono's Six Thinking Hats for Decision Making by BiteSize training.



Figure D.8: The Six Hats Method (from the de Bono Group Website)

The method can be used by a team or an individual to consider a problem from different perspectives. For strategic planning, the method should be approach in the following way:

- Consider the challenge or future scenario through the perspective of the first five hats (White, Yellow, Black, Red, and Green).
    - It is strongly suggested to start with the *Red Hat*. This allows people to discuss their emotive or intuitive views first. Having this discussion early clears thinking and frees cognitive space, allowing engagement with the other hats.
    - It is strongly suggested that the *Green Hat* is last. The ideas of the previous hats will inform the *Green Hat* perspective.
- Once the first five hats are complete, switch to Blue Hat:
    - Bring all the views of the different hats together.
    - Identify common themes between hats.
    - Identify the key differences between each hat's perspective.
    - Explore the differences to identify why they exist and how those differences influence actors, their relationships, and the environment.
    - Determine what styles of national power and which national instruments may be best suited to the problem space.

ASFF Steps Useful For:

- Step 3 (Primary). This method can be used to explore a single future scenario to tease out the challenges and opportunities within the futures analysis. Done to each future (likely, compromise, and desired), the method can help identify the similarities and differences concerning the problem space.
- Step 3 (Optional). In addition to the above, the method can be used to explore a single challenge, thereby helping to develop the *theory of challenge*.
- Step 6 (Secondary). This method can be used to explore a strategic option overall, or individual risks. It is best used when updating a contingency plan for a live strategic event (or shock).

Ends-Ways-Means-Risk Matrix

The End-Ways-Means-Risk Matrix is a method to capture information about, and explore the potential use of, different national instruments. This analysis can help identify how each instrument may support the *Theory of Success*, as well as confirm any associated risks. A well-structured matrix can also assist in developing a range of strategic options. As such, the matrix can assist in the transition from *problem-framing* into *problem-solving* thinking. Ends-Ways-Means-Risk matrices are useful for both *strategy as a framework* and *strategy as problem-solving* approaches to strategy development.

The matrix should consist of all instruments of national power that are relevant to the strategy. The traditional instruments of diplomacy, military, and economic should exist with other relevant national instruments such as police, health, education, industry, infrastructure, and so on. Information, as one of the 'big four' instruments, can be problematic to capture in a strategic plan. This is because the

information instrument can be very broad. Therefore, it may be useful to represent the information instrument through the instrument's primary institutions and agencies. Such agencies may include intelligence, cyber, (state-based) media, and political and diplomatic leaders. Expanding the information instrument into institutions can help strategic artists, decision-makers, and agencies transition from *problem-framing* to *problem-solving*, as well as assist in the development of a strategic framework of action. **Figure D.9** illustrates an Ends-Ways-Means-Risk matrix. This figure includes a possible (simplified) example of the matrix, applied to the *Star Wars* Empire.[†††††]

Starting with how the matrix works, the **Ends** are outlined for each instrument. These ends are couched within the strategy's *Theory of Success*. For each instrument, reframe the *Theory of Success* in the context of the instrument. For the example, the *theory of success* translates into a military (Imperial Navy) ends of *Subdue Outer Rim through military coercive (threat) and offensive (use) actions*.

Next, outline the different approaches, or **Ways**, each instrument could achieve the Ends. For the military example above, these ways may include demonstrations of Imperial might, and actions of compellance against specific worlds and groups. With the Ends and Ways developed, the key assets and capabilities should be outlined.

The **Means** help identify critical areas of vulnerability. Such assets may be broad (i.e. Army), or very specific for selected approaches (i.e., attack submarine). As a minimum, have one Means for each Ways. There can, and should, be assets that support multiple approaches (i.e., national logistics). Next, list the key **Risks** identified. This may include capacity issues, other activities not conducted, and capability risks. These risks may also include national values, ethical, and legal issues.

The Ends-Ways-Means-Risk matrix's power comes from both the capacity to capture data, as well as the ability to **develop initial strategic options and sketches**. Using the information in the matrix, it is possible to consider different strategic concepts and approaches. These different concepts can help the analysis in Step 5. Such analysis helps identify strategic effects, different options, and possible Departmental/Agency tasking and leads. The matrix can act as an initial strategy framework by:

- Helping identify possible primary instruments for different options.
- Selecting different complementary 'ways' for each instrument.
- Tracing links between complementary 'ways'.
- Identifying which 'ways' should not be allowed to occur, as these will undermine the strategic concept.
- Identifying associated risks.

The above may provide a start point for integration through the analysis of linked strategic effects (ways). Unlinked 'ways' may represent scope for independent action.

[†††††] This fictional use of the matrix has been employed to ensure there is no confusion with real-world events.

Theory of Success:

Subdue the Outer-Rim through both influence and compellence. Such an action brings the Outer-Rim into the Empire, ensuring resource dominance. This will bring peace and order to the galaxy, and give the Empire the resources needed to ensure a strong civilisation-state is established, underpinned by human-centric values

	Diplomatic *Darth Vader*	**Military** *Grand Admiral Thrawn*	**ISB** *Colonel Yularen*	Etc
ENDS *linked to Theory of Success*	Subdue Outer Rim through alliance-building and coercive threats that cause bandwagoning	Subdue Outer Rim through military coercive (threat) and offensive (use) actions	Subdue Outer Rim by usurping and destroying insurgent elements	
WAYS *approaches, may be a Theory of Victory*	• Exploit material interest of likely partners • Communicate Imperial capacity to compel weaker powers • Support Imperial resource control	• Demonstrate Imperial Might through selected unification of remaining separatist holdouts • Compel middle powers towards civilisation state through the threat of force • Support Imperial resource control	• Monitor population • Monitor Military • Identify likely insurgent groups • Destroy groups • Communicate destruction to shape wider population • Undermine criminal syndicates through selective support	
MEANS *capacity and assets*	• Aggressive Negotiation • Strong Willed Influence of others • Personal investment in selected relationship	• Imperial Navy, with its own marine elements • Imperial Army for garrison and offensive actions • Storm Trooper Corps as face of Imperial Might • Imperial Military Intelligence	• Collector network • Select Crime Syndicates to monitor black markets • Own crime system to manipulate black market • Own security forces to enable independent action and offset military	
RISKS *Domestic and international*	• Limited support for military operations • Lose sight of Jedi Hunting	• Do not have enough power to coerce a planet quickly • Imperial Navy is very stretched. Further use could undermine it.	• Need links to crime system. Therefore, must keep one active • Limited collector network in cover Outer Rim	

Figure D.9: Ends-Ways-Means-Risk Matrix with Star Wars Empire Example

Using the Figure D.9 *Star Wars* example, a Diplomacy-heavy option can be identified. In this option:

- Diplomacy is the lead instrument for this initial option. All relevant strategic effects that require integration (or *ways*) are seen in Figure D.9 in blue:
    - All Diplomacy Ways are selected as strategic effects.

- There is a single Military Way that complements the Diplomacy actions. This is selected as a military strategic effect that requires integration with the diplomatic effects.
- There are two ISB Ways that complement the Diplomacy actions. These are both selected as ISB strategic effects requiring integration with the diplomatic effects.

- The Ways, or possible strategic effects, that may undermine the diplomacy-heavy strategic option are identified (red crosses listed next to identified Ways).
- The relevant risks for this initial strategic option are highlighted in red. These are the primary risks associated with the diplomacy-heavy option.
- The links (blue lines) show which 'ways', or strategic effects, must be integrated. Other 'ways' may occur through independent operational agency action, under the framework's guidance.

ASFF Steps Useful For:

- **Step 4 (Primary).** The Ends-Ways-Means-Risks matrix is one of the primary tools for Step 4.
- **Step 5 (Secondary).** The matrix provides the grounding and initial framing of the options in Step 5.

Lines of Effort (LOE)

Lines of effort (LOE) are a useful method to articulate the strategic framework, developed in Step 5. LOEs are conceptual models that help group strategic effects and actions, often along thematic integrated lines. These thematic lines (known as 'functional lines' in ADF doctrine) relate to the strategy's *Theory of Success*. A good way of thinking about LOEs is that each line of effort are lower-level *Theories of Victory* that help support the *Theory of Success* and national interests. An illustrative example of this structure is in Figure D.10.

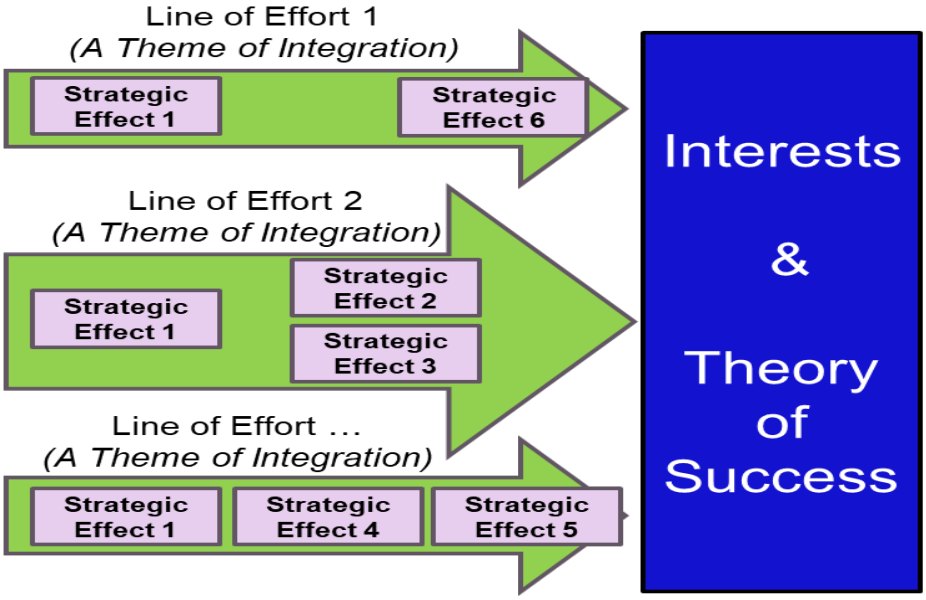


Figure D.10: Conceptual Lines of Effort Structure

ADF-P-5 – *Planning* provides guidance on the development of lines of effort (see ADF-P-5, pages 34-37, and Annex 2C). Using the British support to the Omani Government during the Dhofar Rebellion (1962-1976) as an illustrative example, Annex 2C also discusses campaigns of influence (pages 49-54). Campaigns of influence may assist in framing a LOE within an *au Milieu* strategy. The following additional guidance may be useful in using LOEs for strategic planning:

- Always attempt to frame LOEs as themes of integration, linked to the overall integrated effect (an active verb).
- Each LOE should illustrate which strategic effects must be integrated together, and which can occur independent of each other.
- Even when a LOE is predominantly focused on one instrument of national power, frame the LOE as the primary effect/outcome (active verb) to be achieved.
- Strategic effects may be repeated across the LOEs. This illustrates the causal linkages between LOEs and the wider *Theory of Success*.
- Strategic effects should not be repeated *within* a LOE. This is a key difference between operational planning (lines of operation) and strategic frameworks. Operational planning may have a decisive action occur multiple times along lines of operation.[‡‡‡‡‡] In operational plans, repeating decisive actions illustrates both orchestration and synchronisation. However, strategic effects are not necessarily time-bound in the same way as decisive actions. As such, they should normally not be repeated within a LOE.
- Limit the inclusion of specific events, activities, or tactical tasks. The inclusion of too many events/activities can bound thinking and narrow strategic flexibility.
- Orchestration of strategic effects can occur along LOEs. The position of strategic effects along the line helps with integration and coordination.

ASFF Steps Useful For:

- **Step 5.** LOEs are best suited to illustrate a strategic option (or a final strategic approach) and its links (causal logic).

FASS-A/D: A Simple Test of Strategic Options

FASS-A/D stands for Feasibility, Acceptable, Suitable, Sustainable, and Adaptability/Distinguishable. FASS-A/D is a test that can be used at any time in the ASFF, though best used in Steps 5 and 6. Both ADF-P-5 – *Plans* and *Making Strategy Better* discuss FASS-A/D.[§§§§§]

The tool helps confirm if an option is appropriate for the environment and problem space. The test is qualitative and flexible. The FASS (Feasible, Acceptable, Suitable, Sustainable) aspect of the test is relevant to both strategic plans and strategic contingency plans. Strategic plans normally only use FASS-A (Adaptable). Most contingency plans, due to their illustrative scenarios, are adaptive. Therefore, strategic contingency plans normally use the FASS-D test (Distinguishable). The different elements of the test are listed below:

[‡‡‡‡‡] Decisive actions are defined in ADF-P-5 – Planning. At the operational level, they are known as decisive points. At the tactical level, they are called decisive events. See: Australian Defence Force, *ADF-P-5*, 29-31.

[§§§§§] Australian Defence Force, *ADF-P-5*, 77; Royal College of Defence Studies, *Making Strategy Better*, 36-37.

- **Feasibility (Is this option possible?).** Under feasibility, the strategic artist should consider how easy the strategy can be executed, and if there is enough support for the plan. Some questions may include:
    - Is there sufficient resources, capacity, and time to generate and achieve the effects?
    - Can the required changes to legal, policy, and process be done in time to enable the option?
- **Acceptable (Does the gain in position/environment outweigh the risks?).** This criterion considers if the benefits outweigh the strategic, political, and popular support risks. Some questions to consider are:
    - Will the strategic approach have political and public acceptance (with all the facts)?
    - If it fails, can that failure be understood and explained?
- **Suitable (Does the option align with National Interests and Values?)** The importance of maintaining sight of values, interests, and ideals is key. To help understand if the strategic approach is suitable, consider:
    - Does the strategic approach align with the *Theory of Success*?
    - Are the control measures and authorities suitable, ethical, and lawful?
- **Sustainable (Can the option be, realistically, resourced?)** Sustainability; at the strategic, institutional, and national level; considers both material resourcing as well as moral support. Considering how ethically sustainable the strategic approach is over time is just as vital in strategy development as material sustainment. High moral support will mean the population is more likely to accept lower living standards, rationing, re-allocation of resources, and the harsh realities of high-risk strategy. Some questions to consider are:
    - How long can the strategic effort be sustained? Is that enough?
    - Can the actions be morally sustained? Will decision-makers still agree five to ten years for now (*can we stomach what we did when we look back*)?
    - Will the public understand when the secrets are released?
- **Adaptability – For Strategic Plans (How flexible is the plan?)** For strategic plans, the question of flexibility is paramount. Significant integration may help achieve specific effects, but can also limit tactical and operational opportunities and agility. Weighing up the differences between significant integration and the level of independent action will be different for each situation.
- **Distinguishable – For Contingency Plans (Is the plan different to others?).** For contingency plans, the question is one of difference. The first question may be: *is this approach, plan, or illustrative scenario different enough to others?* Another question to consider is: *if it is similar, why keep it?* These questions help to both tease out the relevance of a strategic contingency plan, as well as the institutional learning that can come from such plans.

ASFF Steps Useful For:

- **Step 5.** FASS-A/D can be used in Step 5 to help reduce strategic options to a select few for testing.

- **Step 6.** FASS-A/D can be used, after risk mitigation analysis, to finalise the recommendations for Government.

Professional Consultation

Consultation can be a powerful tool in challenging strategic thinking and planning. However, for it to be successful it must be robust. Therefore, planners and decision-makers must be willing to listen and consider the consultation advice. Although that does not mean all consultation must be accepted, it does mean that all consultation should be considered equally and reviewed with the same vigour as the plan's strategic analysis. Good consultation, from a wide range of sources, helps provide:

- A wide range of professional views and feedback.

- Confirms if the information presented (normally a written plan) makes sense, and is easy to read (generalist, non-expert, reader).

- Confirms if the concepts presented are achievable.

Furthermore, good consultation can act as a form of institutional education. This is particularly true for strategic contingency plans. These plans often look at issues and situations that may be uncomfortable, beyond policy, or suggest that current policies fail.

There are many **factors that affect consultation**, particular who is involved and how long the consultation occurs. Some of the factors that influence consultation include:

- **Security and Access.** Where possible, consultation with a wide cohort should happen. However, sometimes security will limit some people. A way to elicit ideas from non-cleared personnel is through hypotheticals and syndicate games.

- **Appropriateness.** Not every plan needs to be consulted with all cleared people. It may be pertinent to limit consultation to relevant people, particularly when the strategic plan focuses on a discrete issue.

- **Time.** Time will always limit consultation. Seeking the right people with the right level of access and authority is critical in time-pressed situations. This requires sound knowledge and experience of Government, and the relevant Departments.

Effective consultation can also be a way of **measuring strategic success**. As discussed in Chapter Eight, strategy measurement is often qualitative, and judgement based. Consultation can assist in providing this judgement. Using consultation as a method to tease out different perspectives in intelligence, information, and events – and what they may mean – can help identify different perspectives and possible areas of risk as the strategy is executed.

There are five **principles of good consultation**. These are:

- **Give Enough Time.** A good rule of thumb is two weeks for consultation at each level of authority (Band 1/1-Star, Band 2/2-Star, Band 3/3-Star, Approvals). Where two weeks is not possible, seek to either minimise the levels of consultation or numbers consulted. Always explain why the time pressure exists, and what is being done to help mitigate this

pressure. Some mitigations may include pre-briefs, panel discussions (small group), and parallel efforts.

- **Know What Will Not Change.** There will be aspects of a strategic approach that will not change. These limits may be because of Government direction, classified knowledge, or undisclosed analysis. For strategic contingency plans, these limits may be because the illustrated scenario must be shaped in a particular way to provide a useful analysis outcome. No matter the reason, the strategic artist and decision-makers must know what will not change during consultation. However, these limits should not be provided to the consultees. Providing limits to consultation constrains thinking, and may also lead to negative feedback. Allowing consultees freedom in their feedback is more likely to provide robust feedback that can be used to test assumptions or frame further strategic analysis.

- **Know What Can be Modified and Changed.** Similar to the above, the strategic artist must know what can easily be changed. The reasons for these areas of freedom may be due to limited knowledge within the analysis team, independent strategic effects that are ill-defined, or other reasons. Once more, these freedoms should not be briefed to the consultees to ensure their feedback is not influenced.

- **Stick to the Above Principles.** It may seem odd to make this a principle, but it is important. If planners keep changing what they will and will not modify, consultation will become confused and worthless.

- **Provide Individual Feedback to the Consultees.** Individual feedback achieves two outcomes. First, it demonstrates respect for the consultation. Such respect helps in future strategic planning. Second, it forces the strategic planning team to engage with feedback in a constructive and fair manner. Individual feedback should include, as a minimum:

    - What feedback was accepted;
    - How that feedback changed the strategic framework and strategic options; and
    - What feedback was not accepted and why.

ASFF Steps Useful For:

- **Step 6 (Primary).** Professional consultation is very good at providing robust contestation of strategic ideas.

- **Other Steps (Secondary).** Pending the time horizon for strategy development, the strategic artist may wish to use professional consultation to contest and refine the strategic environment and problems.

Alternative Method: Scenario Planning

An alternative method of developing a strategy is known as the *Scenario Planning Method*. This alternative method leverages the futures *Quadrant Method*, discussed earlier, to identify where a nation sits within the current environment, which scenario is the desired future, and which scenarios the strategy may have to deal with to achieve the desired ends. This section provides a conceptual overview of the method. Some references (with hyperlinks provided) for the method include:

- Scenario Planning (PDF) from TerraNova.org.au (Griffith University).
- The 4-Step Scenario Planning Process (website) by SME Strategy Management Consulting.

Scenario planning is bounded within the four scenarios developed in the *Quadrant Method*. As such, it is a form of bounded problem framing, and therefore forms the basis of *strategy as problem-solving*. Because of this bounding, the scenario planning method is very good for positional strategies that are geographically bound, and discrete strategic contingency planning. Scenario planning is also very useful at developing a strategy quickly when time is short (dynamic strategy development). Finally, scenario planning is a useful method to identify ways to adjust strategy during execution.

The process of scenario planning starts with the four scenarios from the Quadrant Method. Then, the strategic artist 'plots' where they think they are within the two variables. Next, the planners plot their desired endstate, and draw a line between the two positions to illustrate how the strategy will move from the start point to the endstate. This process is illustrated in **Figure D.11**.

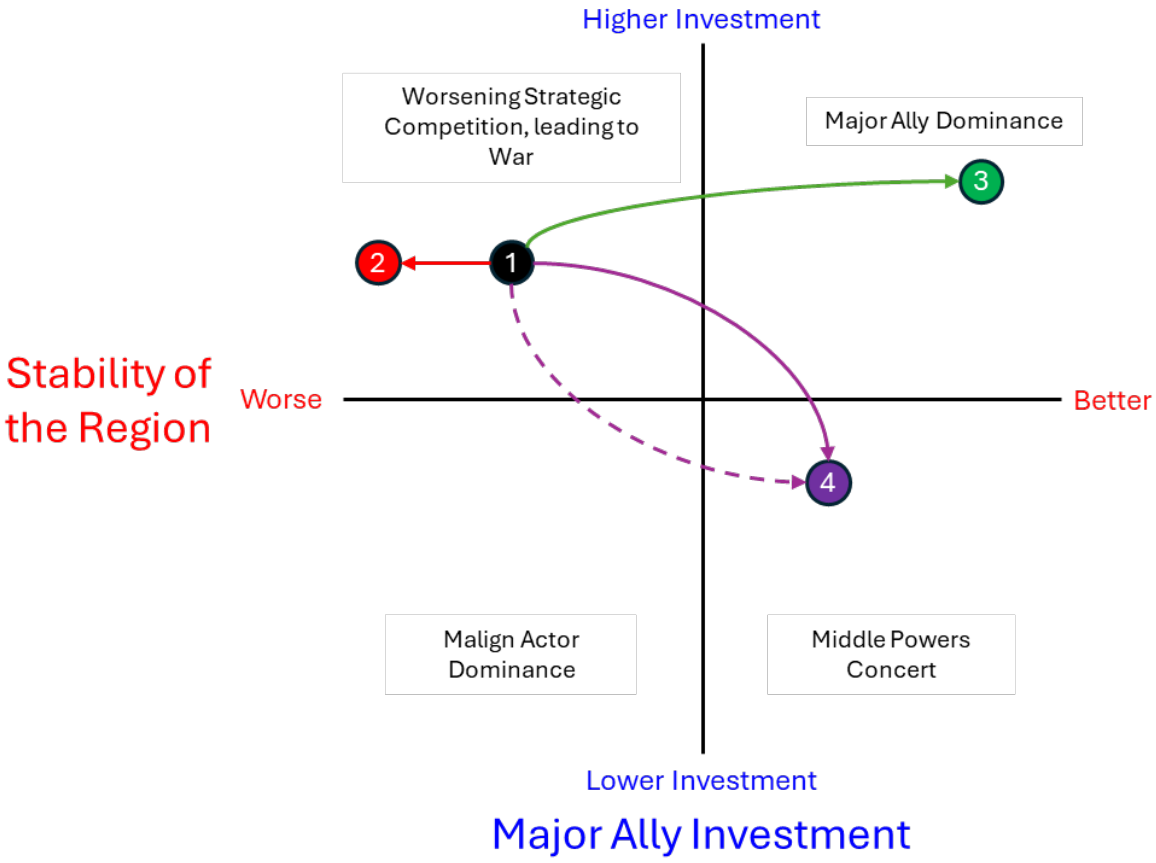


Figure D.11: Illustrative Example of Scenario Planning

Figure D.11 is based on the illustrative example in Figure D.5. For the purposes of this example, the strategy planning team has assessed that their current environment sits within Scenario 1, at **position 1**. From this, the team considers:

- **Likely Future: Position 2.** If nothing is done, the environment will continue to deteriorate to position 2. The team draws a line from position 1 to 2 to illustrate this likely future.
- **Desired Future: Position 3.** The desired future for this planning group is where the major ally is dominant in the region. A line is drawn from Position 1 to Position 3, indicating that the strategic approach must seek to increase regional stability and major ally geo-political investment in the region.

- **Compromise Future:** Position 4. The team identifies that a compromise future is one of middle power concert. They identify that there are two paths towards this future. One goes through a degree of major ally control, followed by major ally step-back as middle powers are able to stabilise the region. This strategic path is mapped as a solid purple line. Another approach, which is less desirable, sees a malign actor achieve situational dominance. This dominance must be overcome through a middle power multi-lateral effort, leading to middle power concert. This path is mapped in a purple dotted line.

Other Tools

The above tools and techniques can be reinforced, or replaced, with other multi-discipline methods. Below are some alternative techniques that may be useful to the strategic artist. For each technique, a brief overview is provided, which steps it may assist in, and, where possible, a reference to the technique.

- **Other Causal Analysis Techniques and Methods.** Some additional techniques that may assist strategic artists are presented by Charles Vandepeer in *Applied Thinking for Intelligence Analysis* (hyperlink provided). The book explains several causal analysis techniques.
    - **ASSF Steps Useful For:** All Steps
- **Historical Analogy.** Historical analogy, briefly discussed in Chapter Ten, is a useful way to quickly frame thinking and identify possible causal links between groups and the environment. Although care must be taken, historical analogy, done well, helps generate common frameworks and mental models quickly. The method can be used to understand the current environment, picture future environments, explore challenges, and frame strategic options.
    - **ASSF Steps Useful For:** Steps 1, 2, 3 and 5.
- **Social Network Analysis.** This is a technique that maps the type and strength of relationships between actors and groups.[******]
    - **ASSF Steps Useful For:** Step 1
- **SWOT Analysis.** SWOT; or *Strengths, Weaknesses, Opportunities, Threats*; is a well-known technique. The technique helps identify possible options and leverage points, as well as identify which effects and styles of power (soft, hard, combined) may be useful. SWOT analysis can be conducted on oneself or other actors within the environment.
    - **ASSF Steps Useful For:** Step 1 (analysing other actors), Step 3 (opportunities and threats), Step 4 (strengths and weaknesses).
    - **Reference:** US Army *Red Team Handbook* (pages 197-198)

[******] A dedicated study guide on how to undertake Social Network Analysis in a simple (and analogue) way is available from the author and the Defence and Strategic Studies Centre, Australian War College.

- **Centre of Gravity Analysis.** Centres of gravity can be useful at the end of analysis to summarise and capture opportunities (critical vulnerabilities).

    - **ASSF Steps Useful For:** Steps 1 and 4.

    - **References:**

        - ADF-P-5 – *Planning*, pages 25-29.

        - An alternative approach is presented in the Land Power Forum 'Clausewitz and the CoG: Marriage Stability for Over 180 Years' (hyperlink provided).

- **Strategic Exercises, Simulations, and Gaming.** As discussed in Chapter Ten, strategic gaming is a powerful method in developing thinking and contesting strategic ideas. However, effective gaming requires good facilitation. As such, the running of such games is beyond the scope of this handbook. In the Australian Defence context, groups such as the Directorate of Strategic Wargaming (Strategic Policy and Industry Group), and Joint Experimentation Directorate (Force Integration Division) have expertise in this area.

- **Specific Planning Tools.** Tools such as main/supporting efforts, phasing, and task-purpose statements may be useful in select positional strategies. For more information, see ADF-P-5 – *Planning*, Chapter 3.

ANNEX E – STRATEGIC PLAN FORMAT

Writing and Presenting a Strategy or Strategic Plan

There are many approaches to writing and presenting a strategy. In most Australian contexts, the developed strategy is often referred to as a *Strategic Plan* or a *Strategic Contingency Plan*. Within ADF-P-5 – *Planning*, these documents are known as Level 1 Plans or Military Strategic Plans.[††††††] However, such documents are not developed by the military alone. The concept of a strategic plan, its structure, and how the analysis of the ASFF relates to aspects of the document is useful for any departmental or inter-departmental strategy.

In most departments, strategic plans broadly follow a similar format. Table E.1 provides an overview of the six ASFF steps and their relationship to a generic strategic plan format. As can be seen, strategic plans consist of two parts: the *Strategic Estimate* and the *Options for Government*. Many of the components of a strategic plan are directly drawn from the analysis and deductions of the ASFF. For example, the scenario may be drawn from futures analysis in contingency planning, or the causal narrative of the situation developed from ASFF Step 1. The broad *Scheme of Action* is a narrative of the strategy developed in Step 5.

TABLE E.1 – ASFF Steps Aligned with Strategic Plan Structure

ASFF Steps	STRATEGIC PLAN (Document)
1 – Understanding Current Context	**Strategic Estimate**, including: • Situation or Scenario • Environmental Summary • Adversary Capabilities • ***Strategic Risks*** • ***Strategic Implications*** • ***Considerations for Government*** (single department plans only)
2 – Assess Future Context	
3 – Determine Challenges	
4 – Capacity, Risk, and Ethical Considerations	

5 – Develop Approach Options	**Options for Government,** including:
	• Strategy Narrative
	• Values, Interests, Outcomes
	• Strategic Scheme of Action, including:
	  • Strategic Effects
	  • Instruments, Agencies and Resources Required
	  • Lines of Effort (if applicable)
	  • Phases, Main/Supporting Efforts, etc (if applicable)
	• Resource and Capability Analysis
	• Risks relevant to this strategy/option
	• Capability Gaps and Opportunities
	
	Note: The above is provided for each strategic option presented to Government.

6 – Challenge the Approach	

The format in Table E.1 can be used in inter-departmental or departmental plans. Often, such plans are department-centric: providing a strategic plan for how the department will support national interests and Government within a particular situation or scenario. In effect, department-centric plans provide instrument-led options for Government: diplomatic-led, military-led, etc.

There are three elements of a strategic plan that are unique to strategic planning. These are:

[††††††] Australian Defence Force, *ADF-P-5*, 94.

- ***Strategic Risks*** emerge from national and geopolitical trends. They may impact Government decisions on capability, policy, and strategy. The causes of strategic risk are often external to Defence and the Nation.
- ***Strategic Implications*** are policy, capability, and national (or Departmental/Agency) preparedness issues that are derived from strategic risks.
- ***Considerations for Government*** consist of non-departmental or other departmental activities Government may wish to pursue.[‡‡‡‡‡‡] These actions may either complement a department-centric strategic plan, or the strategic plan could reinforce. For example, a military strategic plan written by Defence, and therefore consisting of the military component of a strategy, may have *Considerations for Government* that relate to diplomatic and economic actions.

The use of illustrative examples to assist in understanding is discussed in the concept box below.[§§§§§§]

Using Illustrative Examples within a Document

As mentioned in Chapter Two and throughout Part Two, illustrative examples can be useful in helping audiences engage with, relate to, and understand the strategy. There are three main purposes for illustrative examples within the ASFF and a strategic plan:

- **Help audiences understand the environment (Steps 1 and 2).** Illustrative examples of events that have occurred, or could occur, can help highlight the dynamics of the situation. Using 'on the ground' examples; such as military actions, diplomatic exchanges, individual elements of trade, etc; are often useful in helping audiences – both decision-makers and operational planners – engage with the analysis and understand the environmental dynamics.
- **Help audiences engage with strategic Challenges (Step 3).** In a similar vein to Steps 1 and 2, using illustrative examples of the challenges helps reader and decision-maker understanding. 'On the ground' examples will depend on the challenge. Some examples include diplomatic tensions, inability to engage with individuals, political elite capture or re-alignment, military relationship, and issues with technological or human-based tradecraft. These issues are concrete examples that help others engage with the abstract nature of strategic problems.
- **Help audiences understand what actions can be undertaken (Step 5).** One of the difficulties for strategic artists is ensuring operational planners understand the requirement. Illustrative examples that highlight how strategic effects may manifest help explain what the strategy looks like *on the ground*. Such examples also help illustrate what style of actions achieve the strategic effects and advance the strategy. This is particularly important where agencies have freedom of action to generate effects. Finally, providing illustrative examples of how the strategy may manifest at agency, and tactical/small group level helps build confidence in the analysis in decision-makers, lower-level planners, and unit or team leaders.

Illustrative examples are best placed within a text box, or similar technique, to separate them from the main text. Such separation helps ensure the illustrative example is not taken as the only example. This technique of text separation between example and main text is particularly important when using examples or scenarios to illustrate possible actions that could be undertaken under the strategy.

[‡‡‡‡‡‡] This refers to other departments not part of the strategic planning group.

[§§§§§§] This is similar to *use cases* and *operational scenarios* in military concept development, providing an illustrative situation that helps explore the tactical and operational methods that may support the strategy overall. See: R. Ian Faulconbridge and Michael J. Ryan, *Systems Engineering Practice* (Canberra, ACT, AUST: Argos Press, 2014), 60-61, 90-91.

ANNEX F – RECOMMENDED READING LIST

Additional Resources and References

This handbook has provided extensive referencing throughout each chapter. These references supply readers with a range of sources to further develop strategic thinking and strategic art. This annex provides a selection of readings that can directly support the practitioner. Where possible, a hyperlink to the document is provided.

Additional Practitioner Readings:

ADF-P-5 – *Planning*

- **Reference:** Australian Defence Force. *ADF-P-5 - Planning.* 5 Series - Planning. Edited by Lessons and Doctrine Directorate. Canberra, ACT: Department of Defence, 2022.
- **Summary:** The top-level planning doctrine for the ADF. The document includes the theory of planning, the links between design and military planning, and a range of tools that may be of use to the tactical, operational, and strategic artist.

Making Strategy Better (PDF Hyperlink here)

- **Reference:** Royal College of Defence Studies. *Making Strategy Better: A Guide for more Effective Strategy-Making and its Application.* Edited by Air Vice Marshal Phil Lester. 1 ed. Shrivenham, England, UK: Department of Defence, 2023.
- **Summary:** The UK RCDS strategy development primer. The handbook contains a discussion on strategy, the instruments of national power, and the UK RCDS strategy development framework. There are several tools and methods for analysis within the book.

A National Security Strategy Primer (PDF Hyperlink here)

- **Reference:** Heffington, Steven, Adam Oler, and David Tretler, eds. *A National Security Strategy Primer*. Washington DC, USA: National Defense University Press, 2019.
- **Summary:** The US National War College primer on strategy development. Provides an alternative approach for strategy development.

Red Team Handbook (Version 8.1 [2016] available at this PDF Hyperlink)

- **Reference:** United States Army. *Red Team Handbook.* 9th ed.: University of Foreign Military and Cultural Studies, 2019.
- **Summary:** Contains a range of red team and analysis tools that can be used in strategy development.

Applied Thinking for Intelligence Analysis (PDF Hyperlink here)

- **Reference:** Vandepeer, Charles. *Applied Thinking for Intelligence Analysis - A guide for practitioners.* Edited by Air Power Development Centre. PDF ed. Tuggeranong, ACT, AUST: Air Power Development Centre, 2014.
- **Summary:** Considers a range of red team and causal analysis techniques to support intelligence and strategic analysis.

Additional General Readings:

The New Makers of Modern Strategy (book review hyperlink here)

- **Reference:** Brands, Hal, ed. *The New Makers of Modern Strategy: From the Ancient World to the Digital Age*. Princeton, New Jersey, USA: Princeton University Press, 2023.
- **Summary:** An excellent book covering both the theory of, and a range of case studies for, strategy across history.

On Strategy: A Primer (Hyperlink Here)

- **Reference:** Finney, Nathan K., ed. *On Strategy: A Primer*. Edited by Diane R. Walker and Amanda M. Hemmingsen, Combat Studies Publications. Fort Leavenworth, Kansas, USA: Combat Studies Institue Press, 2020.
- **Summary:** A useful edited book that explores strategic theory and practice. The primer focuses on strategic theory.

Thucydides on Strategy

- **Reference:** Platias, Athanasios G., and Kōnstantinos Koliopoulos. *Thucydides on Strategy: Grand Strategies in the Peloponnesian War and their Relevance Today.* New York, New York, USA: Columbia University Press, 2010.
- **Summary:** Helps frame the interplay between *war-as-art* and *science* (*problem-framing* and *problem-solving* thinking, respectively) in strategy, as well as the links between military and grand strategy.

Beyond the Pale (Hyperlink Here)

- **Reference:** Zweibelson, Ben. *Beyond the Pale: Designing Military Decision-Making Anew.* PDF ed. Maxwell Air Force base, Alabama, USA: Air University Press, 2023.
- **Summary:** This work delves deeply into the interplay between triple-loop learning, growing understanding, and applying that understanding to the military and strategic arts.

"Bringing a Method to the Strategy Madness" (Article Hyperlink Here)

- **Reference:** Meiser, Jeffrey, "Bringing a Method to the Strategy Madness," Ryan Evans ed. *War on the Rocks*. *War on the Rocks Media*, 02 May, 2024.
- **Summary:** A key article that helps explain *theories of success*, *challenge*, and *failure*.

"The Roots of Bad Strategy" (Article Hyperlink Here)

- **Reference:** Smith, M.L.R. "The Roots of Bad Strategy." *Military Strategy Magazine* 9, no. 1 (2023): 10-18.
- **Summary:** This article highlights some of the issues with always assuming a fully integrated whole-of-government response. The article sets the foundation for the next suggested reading.

"Why is the West so Rotten at Strategy?" (Article Hyperlink Here)

- **Reference:** Smith, M.L.R. "Why is the West so Rotten at Strategy?". *International Affairs* 100, no. 4 (19 June 2024 2024): 1591-614.
- **Summary:** This article captures the issues with ideology, failure to consider context, and an over-reliance on 'total war', or fully integrated whole-of-government, thinking. Explores some of the concerns of the previous decades.

Strategic art is an intellectual exercise that leverages theory to help understand the strategic environment and its challenges. Yet, strategic art is also a disciplined approach to problem-framing thinking. Therefore, strategic art is both an intellectual exercise and a practical method of inquiry. Given this, strategic art requires an appreciation of both theory and practice. This means strategic art is the praxis of strategy, or the practical application of strategic theory.

On Strategic Art is a handbook for the student, the scholar, and the practitioner of strategy. The handbook's three parts discuss the theory, practice, and learning of strategy. Combined, the handbook represents strategic art: the translation of strategic theory into practical reality. This handbook is both a learning companion for the students of the Defence and Strategic Studies Course, as well as being of utility for the wider National Security community and international partners. Given the challenges of the strategic environment, it is vital to remember that the practice of strategy is a national endeavour. As such, this handbook is a first step towards helping strategic professionals think about and plan strategy.



Australian War College

The Australian War College delivers joint professional military education in the military arts and capability management for middle and senior ranked officers, public servants, and international partners. The College provides a range of residential and remote courses, including the Australian Command and Staff Course focused on military and operational art; and the Defence Strategic Studies Course centred on strategic art.

The Defence and Strategic Studies Course is a residential course for senior military officers and public servants. The course explores strategic and defence policy, senior leadership and management, and security issues of global, regional and national importance. Underpinning this education is the Strategic Art Program that seeks to provide senior military and civilian officials with the knowledge, awareness and skills to operate at the highest levels of policy and strategy formulation, leadership, and command.